



INVEST IN  
**CANBERRA**

Space Sector  
Capabilities

AUGUST 2022





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GPO Box 158, Canberra City 2601

[canberra.com.au/space](https://canberra.com.au/space)

[spaceCBR@act.gov.au](mailto:spaceCBR@act.gov.au)



## Acknowledgement of Country

Our work is on Ngunnawal Country.

We recognise Ngunnawal people as the traditional custodians of the land on which this publication was created. We honour their deep and ongoing connection to the land, waters and skies, and everything within.



Ngunnawal people have long relied on the night sky to navigate across Country. Aboriginal people were the world's first astronomers. Tens of thousands of years of culture and heritage are reflected in the night sky. The Emu in the Sky is a well-known Aboriginal Astronomical constellation that's outlined by dark areas of the night sky, not the stars.

To find it, first locate the Southern Cross constellation above the southern horizon. Two bright stars directly above due south are “the Pointers” to the Southern Cross. The Southern Cross is to the right of “the Pointers”.

On the left-hand side of the Southern Cross, try to find a dark oval shape, called the Coalsack Nebula. This is the head of the Emu with the beak pointing downward. The long neck stretches to the left through the middle of “the Pointers”. The body and legs of the Emu stretch halfway across the horizon towards the east.

Photo credit: Barnaby Norris

# CANBERRA IS THE NATURAL HOME OF SPACE FOR AUSTRALIA

Canberra has had a long and direct involvement with some of the biggest events in international space exploration, providing critical support from Apollo 11 to the Phoenix landing on Mars.

Today, our space industry unites innovative players across government, industry, educational institutions and the research community.

The ACT is horizontally integrated across the space industry.

There are deep connections with all levels of government, academia, research institutions and businesses large and small, working together to achieve common goals for space that benefit all in our society.

**Businesses thrive here because we have smart people with good ideas located next to decision makers and talented researchers.**

## Working together to advance our space industry

The Australian National University (ANU) and UNSW Canberra signed a Memorandum of Understanding in 2017 to advance Australia's space industry.

This collaboration is advancing the space sector nationally, with both institutions working together to provide end-to-end capability for mission and payload design, assembly and testing.

The ACT Government has a history of working closely with the Australian Space Agency and other states and territories to successfully design, develop and grow end-to-end space capabilities.

# THE INDUSTRY

Canberra's space industry capability is internationally renowned, with a track record of commercialising space research and technology.

We are on the cutting edge of space research in the areas of design, testing, verification (of satellites and payloads) and data analysis (including AI applications), which is helping Australia build toward viably competing for global market share through to 2040 and beyond.

Our local sector is working on research and commercialisation of technology, ensuring Australia capitalises on the burgeoning global space economy and has a sovereign end-to-end space capability that protects our data, space assets and infrastructure, and our way of life.

The ACT Government's \$60 million capital investment in early-stage commercialisation has, over time, contributed \$382 million in economic output for the ACT.

The ACT Government continues to invest in advanced technologies and job creating industries, including the space sector, through its \$30 million Future Jobs Fund.



# CANBERRA'S SPACE ECOSYSTEM

The ACT space sector is mature and delivers safe, capable and consistent products and services to market.

We have an established space ecosystem that can provide end-to-end capability for design, manufacture, operation, test, verification and delivery of space products and services.

Some of the exceptional space capabilities we have in Canberra include:

- > UNSW Canberra Space and the Australian Concurrent Design Facility (ANCDF).
- > ANU Institute for Space, the National Space Qualification Network and the Australian Centre for Space Governance.
- > Canberra Institute of Technology provides quality vocational education and training for the space industry.
- > The Advanced Instrumentation and Technology Centre (AITC) at the ANU Mount Stromlo Observatory – the most sophisticated space testing facility in Australia.
- > Australia's most advanced Optical Ground Station to be established at Mount Stromlo in 2023.
- > Headquarters of CSIRO's Centre for Earth Observation.
- > Canberra Deep Space Communication Complex (CDSCC) in Tidbinbilla, managed on behalf of NASA by CSIRO.
- > MSATT, Canberra's first astronomical teaching observatory for use by students in Years 9-12.
- > Geoscience Australia's Positioning Australia Program, supported by the National Computational Infrastructure at ANU.
- > The Australian Satellite Manufacturing Hub (ASMH) to be established just outside of Canberra in 2025.

- > Strong ties to multiple Commonwealth Government departments and agencies located in the ACT with active roles and interests in space.
- > Home of multiple leading space start-ups and rapidly growing mid-tier space companies, including Skykraft, Infinity Avionics, Liquid Instruments, Quintessence Labs, Nominal Systems, EOS, Clearbox, Shoal and others.
- > Home of Questacon, Australia's National Science and Technology Centre.

# RESEARCH AND INNOVATION

There's momentum and excitement surrounding projects being undertaken here.

Canberra has two of Australia's leading space research institutions that consistently develop spin-off companies producing commercially viable products using cutting edge technology and research. Cutting edge scientific research starts in the ACT.

## Testing and Verification

Canberra's space facilities are key enablers of any future space missions, able to provide professional mission assurance standards and principles unlike anywhere else in Australia.

We have an established space ecosystem that can provide end-to-end capability for design, manufacture, operation, test, verification and delivery of space products and services, which makes us the natural home for space.

## Highly Professional

The local industry's capability is internationally renowned. Canberra's research and education institutions, innovative local businesses, global exporters and multinational primes with large space programs make a significant contribution to the global space industry.

## Values-based Approach

The ACT Government is committed to a values-based approach to space industry development. It is responsible and sustainable. It focuses on promoting a culture that gives equitable access, encourages women and youth in space, and is intent on understanding and actively incorporating Aboriginal and Torres Strait Islander voices.

This professionalisation of space supports the ACT industry to grow and thrive nationally and internationally.



# KEY STRENGTHS

**We work close to decision makers.** Canberra is the home of the Australian Parliament and Government departments. You'll find it easy to access top-class talent with many smart, driven, highly educated, and curious people concentrated in one place.

**We are highly connected.** Only in Canberra will you find cutting edge space research such as at UNSW Canberra and ANU, high performing industry partners, and skilled workers all within easy reach.

**We value knowledge-based economic growth.** Canberra is Australia's knowledge capital, and a hub of innovation and creativity. We have a commitment to values-driven economic development, sustainability and the environment, which naturally positions us as leaders in the space industry.

**We are well positioned for international engagement and collaboration.** In addition to more than 100 embassies and high commissions located in Canberra, our higher education and research institutions, key space primes and industry players have strong international connections and presence in the global space industry.



# LEADING THE NATION

## Optical Communications

The ACT is home to ANU, who are leading the development of the Australasian Optical Ground Station Network for 2023. This is a national initiative for an integrated network of ground stations across Australia and New Zealand that will provide next generation communications capability, particularly to remote and regional areas, and drive industry growth.

## Earth Observation

Canberra is well-positioned to lead Earth observation for Australia with UNSW Canberra and local innovators working to develop new capabilities and create applications to predict bushfire risk, assess crop yields, and monitor climate and weather patterns.

This growing capability is led by our scientific research talent, ensuring the success and commercial viability of future space missions through the development of satellite payload technology for imaging, communications, and data capture and processing.

ANU continues to develop its facilities to build on existing excellence in infrared detector technology, with plans well underway to develop a Spacecraft Detector Characterisation Facility. This facility will enable industry-wide advances in Earth observation.

Businesses in Canberra can also work alongside CSIRO and Geoscience Australia to contribute to successful outcomes for the National Space Mission for Earth Observation program.

## Space Governance

Space governance is becoming increasingly important due to the mounting contestation and congestion in space. This sits across all space technological capabilities and is important for the entire industry moving forward. Embedded within InSpace is the Australian Centre for Space Governance. Space governance expertise at ANU seeks to unify siloed national capability into a single source of advice and advocacy for industry, Defence, and wider government, through the Australian Centre for Space Governance.

## Cyber, Space and Advanced Technology Hub

Creating a Cyber, Space and Advanced Technology Hub will be transformative for Canberra businesses as identified in *CBR Switched On: ACT's Economic Development Priorities 2022-2025*.

We have already demonstrated excellence in the delivery of industry hubs with the launch of the Canberra Cyber Hub. This new Hub will expand on the collaborative model between government, industry, research and the tertiary education sector. In doing so, it will:

- > develop and attract a skilled workforce
- > accelerate business growth
- > connect researchers with local business
- > promote our capability to clients and potential clients across the world.

# CAPABILITIES

Canberra's space capabilities are internationally renowned.

Do business here and you'll have access to:

- > Australia's most advanced space qualification and testing facilities
- > a highly skilled workforce, with access to graduates
- > leading national data sets and facilities
- > the top-ranked universities and research institutions that are leading space efforts, astronomy research and education
- > a supportive business ecosystem, backed by the Canberra Innovation Network
- > one level of government, helping you get set up quickly and have decisions made faster.

With an established space ecosystem, access to decision makers and world-class facilities all within easy distance from our major civic centre, Canberra offers businesses opportunities unlike anywhere else when it comes to the domestic space industry.





# GET IN TOUCH WITH US ABOUT YOUR BUSINESS AND INVESTMENT GOALS.

We're ready to advise, provide leads and make introductions to help you grow your business in Canberra.

We can:

1. Provide tailored economic and business information about Canberra for your planning needs.

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2. Facilitate introductions to key contacts in the Canberra business and innovation community.

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3. Guide and support your understanding of ACT Government legislation and how to operate a business in Canberra.

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Email: [spaceCBR@act.gov.au](mailto:spaceCBR@act.gov.au)

[canberra.com.au/space](http://canberra.com.au/space)



**ACT**  
Government

