



## WHY ACCESS TO SPACE SHOULD MATTER TO YOU

Space-based advanced manufacturing and services (SAMS) are critical to Australia's economy and security. Already, essential functions such as communications services, navigation and earth observation, weather tracking and remote sensing (to name a few) are enabled in space. Australia has the opportunity to capitalise on the increased access to space with pharmaceutical manufacturing in space and semiconductor devices for space, which are becoming valuable secondary growth areas.

The Future of Space CRC will be heavily focussed on how an industry, research, government and community partnership can support national priorities, such as advanced manufacturing technologies and a sustainable returns economy at scale. It is of utmost importance to The Future of Space CRC to embed industry-driven policy and governance frameworks along with First Nations knowledge and voices into all efforts from the start.

Australia's world-class innovative research and technology community is poised to deliver robust and internationally relevant, space-based capabilities that provide for our collective security, enhance the technology landscape and positively impact the Australian economy.

## WHY BUILD A CRC?

A Cooperative Research Centre (CRC) promotes long-term, industry-led research collaborations to tackle significant challenges and seize opportunities within Australian industries.

Going for bid round 27, the Future of Space CRC aims to ensure that the industry is central to the collaborative model by bringing together researchers, government and communities.

# LEADING SPACE INNOVATION

Increased access to space is poised to have a major impact on sectors such as pharmaceuticals and semiconductors. Australia needs to accelerate its sovereign manufacturing and space capabilities together with embedded policy frameworks to capitalise on the new commercial opportunities arising from the reduced cost of access to space.

The Future of Space CRC will bring together a unique group of stakeholders from industry, research, government and First Nations communities to drive this acceleration.

FUTURE OF  
**SPACE**  
COOPERATIVE RESEARCH CENTRE



## THE FUTURE OF SPACE CRC WILL DEVELOP FOUR THEMATIC AREAS

### ENABLING THE MICROGRAVITY ECONOMY

Innovating advanced technologies to support a growing microgravity manufacturing economy via return to Australia.

Key focus areas:

- Developing technologies to enable in-orbit manufacturing across multiple application areas including pharmaceutical, biotechnology, regenerative medicine, synthetic biology and life sciences.
- Pioneering economic strategies to uplift the microgravity economy to make it scalable and viable.

### SEMICONDUCTOR DESIGN & IP

Growing the domestic semiconductor industry within space applications.

Key focus areas:

- Enabling Australia's semiconductor design and IP sector to develop new semiconductor chips, which have been purpose-built for in space applications, increasing device longevity and robustness.
- Leveraging existing space qualification infrastructure to decrease the time-to-market for new semiconductor designs and IP.

### SAFE AND SCALABLE RETURNS AND RECOVERY

Enhancing technologies and services to support a microgravity returns economy at scale while ensuring safe and sustainable operations.

Key focus areas:

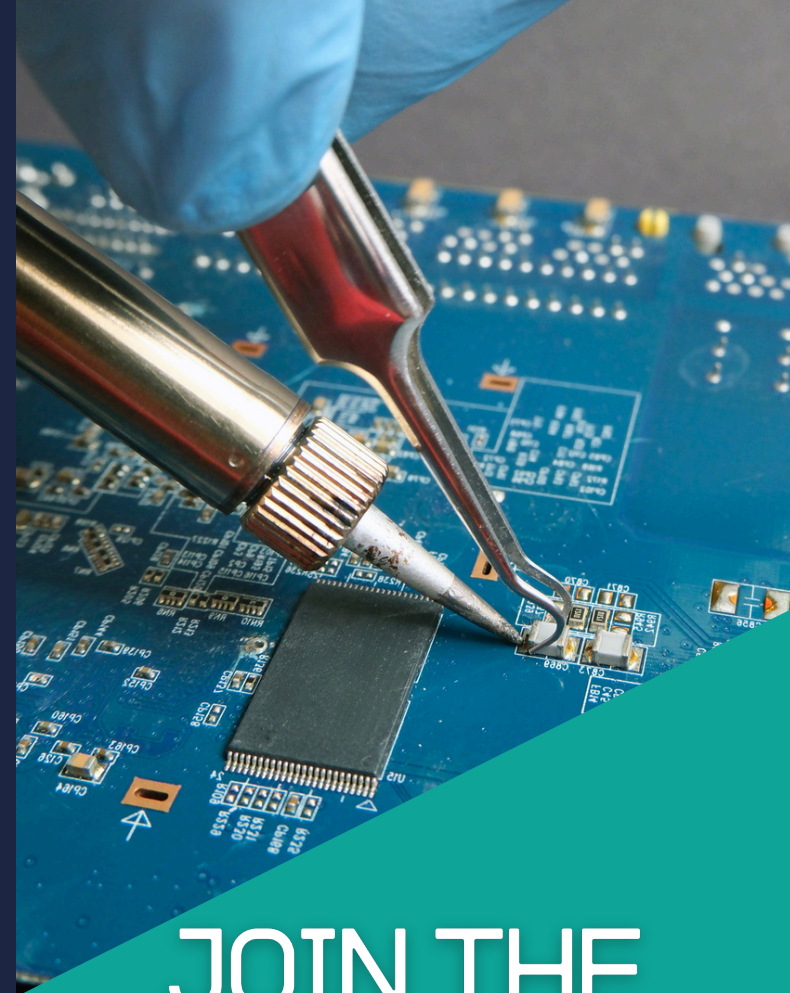
- Robust monitoring and alert systems for objects during re-entry to ensure accurate landing, safety and sustainability.
- Design and development of new materials to improve the re-entry process. Understanding how different materials behave during re-entry and how this affects re-entry trajectories.

### FIRST NATIONS COMMUNITIES AND A SOCIAL LICENCE FOR SPACE

Embedding First Nations knowledge and voices into space technology development.  
Constructing a social license for space activities.

Key focus areas:

- Ensuring space-related activities embrace Indigenous perspectives on land stewardship, sustainability and cultural heritage to create new economic and educational pathways for Indigenous communities.
- Enabling wider community knowledge about the importance and economic benefit of space technologies across adjacent sectors.



# JOIN THE BID

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