GOVERNMENT OF WESTERN AUSTRALIA

WESTERN AUSTRALIA
IT'S LIKE NO OTHER.

Western Australia

The Southern Hemisphere's global hub for space operations and exploration

Western Australia has played a significant role in the global space industry for over 60 years, supporting international space agencies, the commercial space sector and major space missions.

Home to clear skies, vast land expanses, and ideal geographic latitude and longitude for space activities. Western Australia is involved in a range of space domains, hosts significant space infrastructure for both civil and defence applications and is home to more than 100 international and Australian organisations operating space and space related services.

Leveraging Western Australia's significant space infrastructure, leading space science and research, vibrant space ecosystem, Western Australia is the Southern Hemisphere's global hub for space operations and exploration.

Western Australian Space Snapshot

- Over 100 international and Australian organisations in space and space-related services.
- Home to world-class remote operations centres providing terrestrial and space mission operations services.
- Home to the only space laser optical ground station in the Southern Hemisphere with world-leading phase stabilisation and self-guiding optical technology.
- Co-host of the $3 billion Square Kilometre Array – the largest radio telescope in the world.
- Location of Australia's only Satellite Park designated by the Australian Communications and Media Authority, and the largest radio quiet zone in the Southern Hemisphere.
- Home to the largest planetary research group in the Southern Hemisphere.
- Hosts ground infrastructure for five international space agencies, including two of ESA's four deep space ground stations.
- Home to the most powerful public and commercial supercomputers in the Southern Hemisphere, which also actively support space activities.
- A diverse and strong economy with significant demand for space technology and data across mining, agriculture, defence, energy, and maritime industry sectors.
- Host of the 2024 Asia-Pacific Regional Space Agency Forum.

Western Australia has significant capabilities in the space sector with the following advantages and opportunities:

- Southern Hemisphere location and longitude ideal for launch, space situational awareness and global coverage of space assets.
- Ideal environmental conditions: geologically stable with clear skies, large arid areas with minimal radio interference and radio-quiet zones.
- Partnerships and extensive activity with international space agencies and private space companies.
- Substantial capabilities in space mission operations, Earth observation, big data analytics, space systems, ground stations, astronomy and planetary research.
- World-leading capabilities in remote operations, automation and robotics utilising ultra-low bandwidth satellite communications.
- Emerging capabilities in optical communications; satellite design, construction and operation; and launch.
- Strong economy with a significant demand for space data, satellite services, and technology transfer with Western Australia's key industries (mining, energy, agriculture, defence, maritime).
- Vibrant R&D ecosystem: home to five universities and various research institutions with established expertise in space sciences and related fields.
- Diverse and highly-skilled workforce, with a pipeline of skilled workers in space and space-related fields.

Find out more about the Western Australian space sector and opportunities for your organisation.

wa.gov.au/jtsi
space@jtsi.wa.gov.au

Western Australia Space Infrastructure

Key

- Facilities, organisations, precincts
- Telescopes; Position, Navigation and Timing (PNT); and space situational awareness (SSA)
- Education and public outreach
- Supporting HPC infrastructure and cyber security
- Radio astronomy telescopes, research centres and supporting infrastructure
- Ground Stations
- Defence
- Start-up and SME innovation hubs
- Research centres
- Launch
- Regional calibration sites

*Under development;
**Proposed

Western Australia Optical Ground Station, The University of Western Australia

- Australian Automation and Robotics Precinct
- Space Science Education Centre, Joseph Banks Secondary College

Australian Space Automation, AI and Robotics Control Complex, operated by Fugro

- WA Austcyber Innovation Hub
- Edith Cowan University Security Research Institute

Perth International Telecommunications Centre
- Inmarsat
- Telstra

CSIRO
- Australian Science Operations Centre
- Australian SKA Regional Centre
- Australian Science Processing Centre
- Space and Astronomy
- Pawsey Supercomputing Research Centre

- Scitech
- WA Museum Boola Bardip
- CERI
- CORE Innovation Hub
- DUG Technology
- Australian Remote Operations for Space and Earth (AROSE) consortium
- Space Automation, AI and Robotics Control Complex
- Perth Landing Pad – Spacecubed

Optus Earth Station

Speedcast ground station

Perth CBD

Crawley

Kensington

Bentley

Perth Observatory

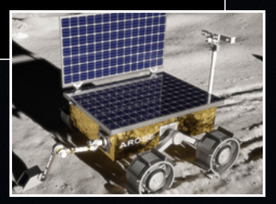
The University of Western Australia
- International Space Centre
- Western Australian Optical Ground Station
- Defence and Security Institute
- International Centre for Radio Astronomy Research
- ERDi Testlab

WA Satellite Technology and Applications Consortium Earth Station

Curtin University
- GNSS Satellite Positioning and Navigation Group
- Remote Sensing and Satellite Research Group
- Space Science and Technology Centre
- Curtin Institute for Radio Astronomy
- Data Science Innovation Hub
- Innovation Central
- Australian Space Data Analysis Facility

Australian SKA Pathfinder Telescope

Binar CubeSat Space Program, Curtin University



AROSE consortium lunar rover (Artist's impression)

- **Cocos and Keeling Islands** Indian Space Research Organisation*
- **Across WA** Geoscience Australia Continuously Operating Reference Stations (PNT)
- **Distributed nationally** Desert Fireball Network, Curtin University

Airbus Space and Defence, High Altitude Pseudo-Satellite (HAPS) flight base

Harold E Holt Communications' Station (Space Surveillance Telescope, C-Band Space Surveillance Radar System)

- Learmonth Solar Observatory
- EOS (SSA laser-optical telescope)

- Carnarvon Space and Technology Museum and OTC dish
- COMSPOC* and ThothX LLC Earthfence Deep Space Radar
- NBN ground station
- ExoAnalytic

Carnarvon

- Australian Square Kilometre Array Pathfinder
- Murchison Widefield Array
- Square Kilometre Array*

Murchison

- DUG Technology*
- MRO Support Facility
- Square Kilometre Array Engineering Operations Centre

- Australian Defence Satellite Communications Station
- Starsite

UWA Space Surveillance Hub – hosting:
- The University of Western Australia Zadko telescope (SSA)
- Ariane Space tracking facility (SSA telescope)
- JAXA (SSA telescope)
- Polish Space Agency (SSA telescope)
- Slingshot Aerospace (SSA telescope)
- US Air Force Pindan Falcon optical telescope (SSA)
- Gravity Discovery Centre and Observatory

Jindalee Operational Radar Network

Kojarena

Geraldton

Mingenew Space Precinct

Mingenew Space Precinct
- CNES DORIS ground station operated by Geoscience Australia (PNT)
- NASA MOBLAS 5 Satellite Laser ranging facility (PNT)
- Swedish Space Corporation, Western Australia Space Centre (SSA)
- University of Tasmania Very Long Baseline Interferometry (PNT)
- Australian Maritime Safety Authority MEOSAR satellite ground station
- Capricorn Space Precinct – WA Teleport:
  - Leaf Space Srl
  - Infostellar
  - Planet
  - ATLAS Space Operations
  - KSAT
- Goonhilly Earth Station*

CSIRO calibration site

Starlink

European Space Agency (Deep Space Network)

Starlink

Orion Satellite Systems

NBN ground station

Gingin

Spacecubed

SEE PERTH REGION INSET

Starlink

Inmarsat Global XpressNetwork Satellite Station

ExoAnalytic Solutions (SSA telescopes)

NBN ground station

Starlink

Cingular Space

LeoLabs, West Australian Space Radar (SSA)