

Scott Schneider, Regulatory Lead
scott.schneider@southernlaunch.space

Peter Williams, General Manager – Sales
peter.williams@southernlaunch.space

SOUTHERN LAUNCH 



Regulatory and Market Considerations of EO and Australia

EARSC
27 January 2021

Version 1.1

Outline

EO market in Australia

Doing business in Australia

Where to learn more



Part 1: EO market in Australia

EO market in Australia

Key points

- Australia's EO capabilities exclusively depend on foreign-owned satellites
- EO applications in Australia worth equivalent of 178 million euro in 2020
- Australia has a niche demand for EO applications

Australian EO capabilities

integration of EO data with
on-ground data



data analytics



ground stations



EO applications in Australia

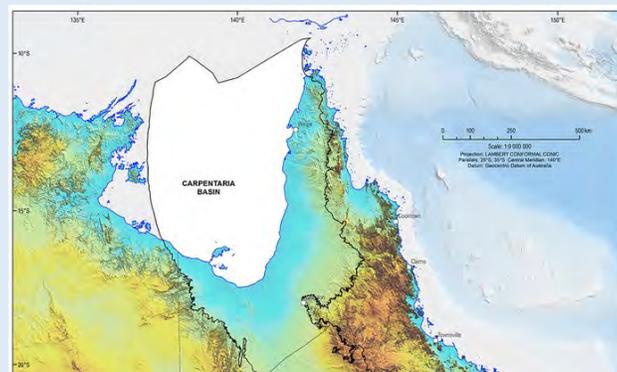
Relevance

unique marine, coastal, terrestrial and atmospheric environments



Breadth

140 programs rely on EO data (across public and private sectors)



Output

economic benefit of 2.5 billion AUD
(1.58 billion euro)



Primary EO users - (67% of civil market)

Bureau of Meteorology



- Himawari-8 and Himawari-9
- MTSAT
- NOAA POES
- Aqua and Terra
- Feng Yun
- Meteosat
- GEOS

CSIRO Centre for Earth Observation



- central point for international EO activities



NovaSAR-1

Geoscience Australia



- public source of geological and geographical information
- evidence-based support for a strong economy and sustainable environment

Ambitions

Community / Associations

Australian Earth Observation Community Plan 2026

- develop EO capabilities to deliver high-quality information, infrastructure and services for use domestically and internationally
- become an essential component of the international EO capability, delivering benefits to the international community and securing access to and involvement in EO programs

Industry and Research

AusCaVal

ESTABLISHING AUSTRALIA AS A
GLOBAL LEADER IN DELIVERING
QUALITY ASSURED SATELLITE
EARTH OBSERVATION DATA

- demonstrate Australia's commitment to international partners through investment in the provision and quality assurance of high value satellite EO data products

Department of Industry, Science, Energy and Resources

Advancing Space

Earth Observation from Space

ROADMAP 2021-2030

- build on Australia's leadership as a data integrator for EO through roles on international coordination bodies
- sovereign EO satellite capabilities

Demand (as recognised by the government)

water information

- specific combinations of spatial, spectral, radiometric and temporal resolutions that allow collection against the typically small inland water bodies and narrow rivers found across the Australian land mass

vegetation information

- standing eucalyptus forests have specific spectral signatures not currently targeted by existing EO satellites

Government as customer

- Government needs are expected to evolve, including: mapping, climate and weather, support to sustainable development, environmental management, biosecurity, disaster management, security and surveillance, and location-based services

see, <https://www.industry.gov.au/data-and-publications/earth-observation-from-space-roadmap-2021-2030>

Southern Launch and EO

Core pillars

Launch

- technology testing and orbital access

Land

- environmental conservation and community

Leadership

- education, outreach and law reform

Koonibba Test Range

- vehicle, payload and component testing
- recovery operations
- 145 km downrange capacity
- rapid succession of launches

Whalers Way Orbital Launch Complex

- direct ascent to polar and sun synchronous orbits
- development and integration facilities on site
- just in time launch activities
- only licensed space launch facility in Australia

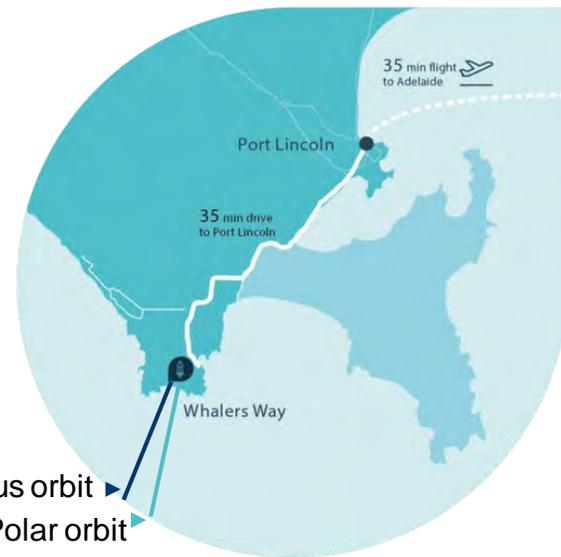


Supporting government strategy

- by 2030 Australia intends to have developed domestic missions to deliver EO data downstream
- Southern Launch provides access to space for technologies which obtain EO data

Whalers Way Orbital Launch Complex

Located at the tip of the Eyre Peninsula in SA

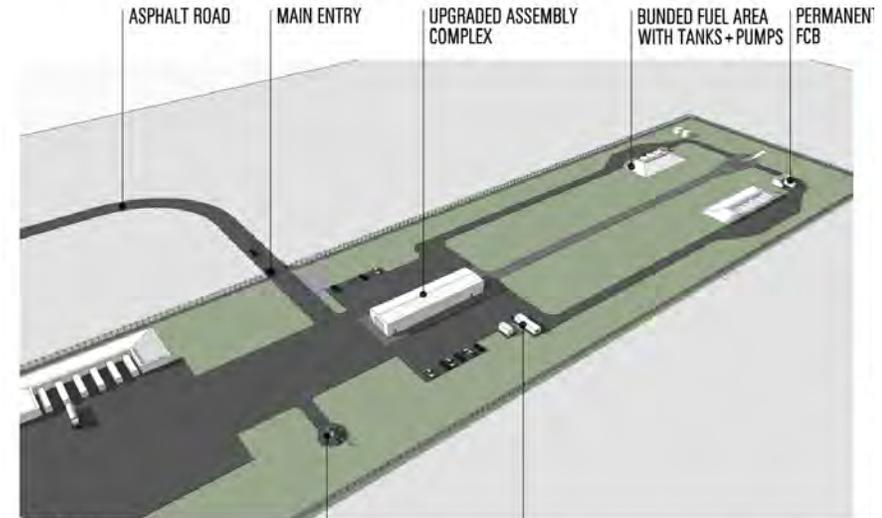


Whalers Way Orbital Launch Complex Overview

- Launch within **48 hours notice**
- SA Premier appointed **Task Force** created to **guide** and **accelerate** Major Project development **process**



Launch infrastructure that grows with the requirements of small rocket manufacturers



VIEW 01



VIEW 03

GREENWY
ARCHITECTS
PROJECT NO: G19058

NTS

Whalers Way Orbital Launch Complex

Direct Ascent to Orbit

- Range enables direct ascent to orbit
- No lateral (“dog-leg”) turns required
- Stage drops occur in open ocean
- Orbit inclinations to around 60 degrees possible
- Tracking through to payload separation from Kangaroo Island (proposed)
- 1200 Ha with 6km ocean frontage
- 35 min drive from Port Lincoln



Koonibba Test Range

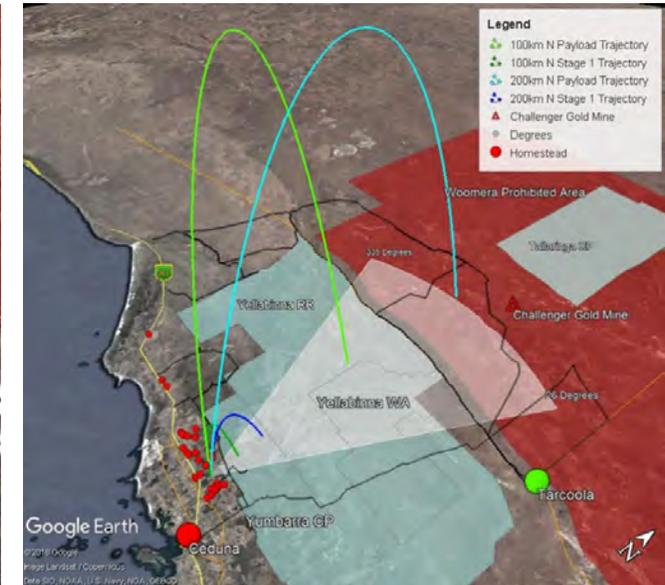
Suborbital Test Range located in the western part of SA, a key enabler for Whalers Way



Koonibba Test Range Overview

- Australia's first ever licensed space Launch Facility
- Unique opportunity to develop and test new rocket technologies
- Available for specific tests of civilian and military technologies
- 145km north trajectory down-range
- Starting discussions with DoD to extend into Woomera Prohibited Area (WPA)

Building one of the world's longest civilian overland rocket test ranges



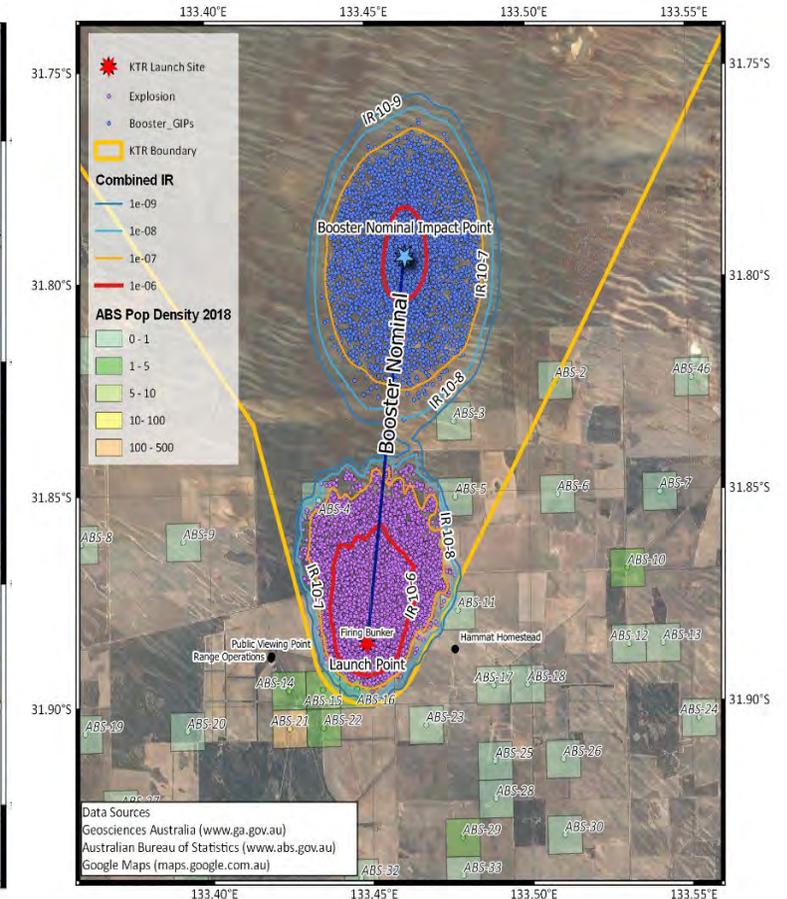
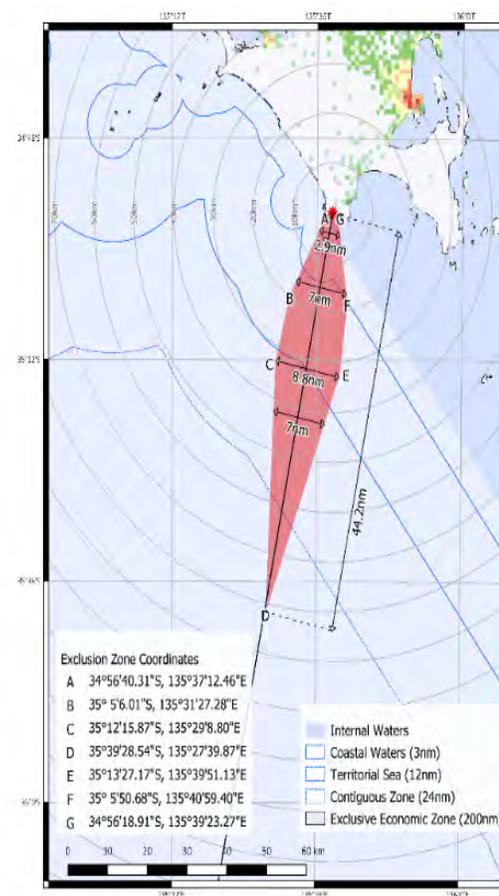
TED-02 Launch – September 2020



Launch Services

Rocket vehicle design & trajectory optimisation

Modelling & range safety methodology optimisation





Part 2: Doing business in Australia

Doing business in Australia

Key points

- determine if you need to establish a business presence in Australia *or* establish a commercial relationship with an Australian national
- Australia's export control laws apply to military items, dual-use items and items which contribute to military items
- Australian organisations must consider the national and state privacy laws and may be subject to GDPR.

Establishing a business presence in Australia

Branch office

- required when a foreign organization “carries on business in Australia”
- the foreign company remains the legal entity responsible for the activity
- must register with the federal government and make periodical reporting to the federal government.

Subsidiary

- involves setting up a public or private company in Australia which is separate legal entity to the foreign company
- at least one shareholder is required for an Australian company
- requirement some directors to reside in Australia.

Acquisition

- private treaty, takeover or scheme of arrangement?
- strict requirements under federal law usually requires assistance from a legal service provider
- requirements and limitations depend on level of ownership sought and the level of ownership held by existing owners.

Commercial relations with Australian entities

Contract law

- which jurisdiction governs the relationship?
- is the UN Convention on Contracts for the International Sale of Goods relevant?
- if the contract concerns the launch of a space object, how will liability, insurance and cross waivers be arranged?

Sanctions and trade arrangements

- EU-Australian Partnership Framework (2008)
- Australian-EU free trade agreement under negotiation
- UN Security Council resolutions and unilateral autonomous sanctions.

International business conventions

- UN Conventions Against Corruption
- OECD Convention on Combating Bribery of Foreign Public Officials in International Business
- *Criminal Code Act 1995 (Cth)*.

Australia's export control laws

Defence Export Controls

- a government agency under the Department of Defence
- regulates the *export, supply, publication and brokering of military and dual-use* items
- *military* concerns items for defence purposes or which are inherently lethal; *dual-use* concerns physical goods as well as information.

Defence and Strategic Goods List (DSGL)

- specifies the goods, software or technology regulated by Defence Export Controls
- delineates between military items and dual-use items
- items may be exempt if items are in the public domain,

Legislation

- *Customs Act 1901* (Cth) is the primary instrument governing the export of military and dual-use items
- *Customs Act 1901* (Cth), section 112BA: Military End-Use
- *Defence Trade Control Act 2012* (Cth)

Australia's privacy laws

General Data Protection Regulation (GDPR)

- established business in EU
- offer goods or services in the EU
- monitor the behaviour of individuals who are in the EU.

Privacy Act 1988 (Cth)

- intended to “promote the protection of the privacy of individuals”
- applies to Australian government agencies and to business or non-for-profits with more than 3 million AUD annual turnover
- administered by the Office of the Australian Information Commissioner.

13 Australian Privacy Principles

- governs the collection, use and release of *personal information*
- *personal information* means information which identifies or could reasonably be expected to identify an individual
- requires entities to make publicly available a *privacy policy*.

Australia's governmental framework





Part 3: Where to learn more

Engagement considerations



Australian Government

Department of Industry, Science,
Energy and Resources

- encouraging Australian capabilities to contribute to international missions
- ensure continued access to trusted international EO data



- matched funding model
- Next Generation Earth Observation Data Services
- “generate image data from sensors and high resolution real-time video”



- peak advocacy body for business opportunities concerning Australia’s special industry
- advocates for Australian industry
- <https://www.spatialbusiness.org/>

(consider whether Australia has an increasing risk of denial of service).

More information and assistance



- administers funding for space public programs
- leads international partnerships regarding public civil space matters
- Att. Karl Rodrigues (Int. Engagement)
enquiries@space.gov.au



- promotes Australian trade and education with the aim to grow the domestic economic prosperity
- information on purchasing from Australia or investing in Australian projects
- <https://www.austrade.gov.au/international>

Earth Observation Opportunities for Space Start-Ups

- Monday, 31 Jan 2022
0755 GMT + 1
- free workshop and panel discussion, in Australian context
- <https://www.eventbrite.com.au/e/italo-australian-workshop-on-earth-observation-for-space-startups-tickets-243357949177>

Summary

- Australia is overly dependent on international services and data for EO matters
- doing business in Australia requires consideration of commercial law, corporate law, export controls and privacy law
- the Australian Space Agency, AusTrade, SIBA and the SmartSat CRC are suggested points of contact to enquire further about engagement with Australia's EO industries

Resources

- *Corporations Act 2001* (Cth)
- *Customs Act 1901* (Cth)
- *Privacy Act 1988* (Cth)
- *European Union – Australia Partnership Framework 2008*

- Australian Earth Observation Community Coordination Group, *Australian Earth Observation Community Plan 2026* (2016, AEOCCG)
- Australian Space Agency, *Advancing Space: Earth Observation from Space* (2021, Commonwealth of Australia)
- Deloitte, *Economic study into an Australian Continuous Launch Small Satellite Program for Earth Observation* (2021, Deloitte Touche Tohmatsu)
- Earth Observation Australia et al, *AusCalVal* (2021, Geoscience Australia)
- Woodgate, Peter et al., *2030 Space and Spatial Industry Growth Roadmap Consultation Paper* (2021, Steering Committee of the 2030 Space and Spatial Industry Growth Roadmap)

- http://www.bom.gov.au/australia/satellite/about_satellites.shtml
- <https://research.csiro.au/cceo/>
- <https://www.ga.gov.au/about>
- <https://www.defence.gov.au/business-industry/export/controls>
- <https://www.oaic.gov.au/>
- <https://asic.gov.au/for-business/>

Nothing in this presentation is or is intended to be legal or financial advice.