

# ANZLIC Strategic Plan 2020-24

Implementation of the roadmap for key ANZLIC initiatives



-  Geocoded Addressing
-  Administrative Boundaries
-  Positioning
-  Place Names
-  Land Parcel and Property
-  Imagery
-  Transport
-  Water
-  Elevation and Depth
-  Land Cover and Land Use

# ANZLIC Strategic Plan 2020-24

*In March 2020, the Australia and New Zealand Land Information Council (ANZLIC) published its Strategic Plan 2020-24 which sets out ANZLIC's strategic and operational context and ANZLIC's strategic priorities for 2020-24.*

*The Strategic Plan provides details of how ANZLIC will measure its success and a roadmap of key initiatives for 2020-24 to deliver on ANZLIC's priorities.*

*The Intergovernmental Committee on Surveying and Mapping (ICSM) is ANZLIC's delivery arm, and is supporting ANZLIC in the delivery of the actions and initiatives outlined in the Strategic Plan.*

## Implementation of the roadmap

*The purpose of this Progress Report is to:*

- ***Share information on progress to implement the short term actions from March 2020 to December 2021 (as at December 2020) for each of the 10 initiatives in the ANZLIC Strategic Plan 2020-24 (noting the Strategic Plan also includes medium and longer term actions and progress on implementation of these will be tracked from January 2022).***
- ***Begin planning how ANZLIC and ICSM will measure the achievement of outcomes in the ANZLIC Strategic Plan 2020-24 (refer last page).***



# Unplanned work during 2020

*2020 has been unprecedented and challenging with regard to the 2019-20 bushfires in Australia and the global COVID-19 pandemic.*

*These crises have placed enormous strain on the wider community, as well as government agencies.*

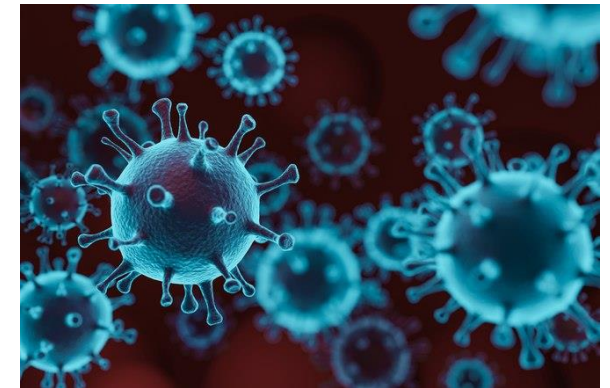
*ANZLIC and ICSM have collaborated across jurisdictions and supported each other to ensure delivery of the required spatial data as part of the responses to the crises, for example:*

- An Australian Land Borders dataset was created to meet urgent national needs. This is an important addition to the existing suite of national datasets and is a nationally consistent and topologically correct representation of the land borders published by the Australian states and territories.*
- During the COVID-19 pandemic, close collaboration has been required to manage a broad range of issues around jurisdictional borders and travel permits. This has included work to define border zones, which has been critical to facilitating border permit applications for travel from origin to destination across the jurisdictions.*

*In addition to this unplanned work, ANZLIC and ICSM have continued to progress work to implement the short term actions (from March 2020 to December 2021) for each of the 10 initiatives in the ANZLIC Strategic Plan 2020-24.*



**Image source:** ABC, <https://www.abc.net.au/news/2019-12-11/indian-ocean-dipole-fuels-dry-australia-bushfires-africa-rain/11787874> (AAP: Dean Lewins)



**Image source:** Carnegie Mellon University, <https://www.cmu.edu/news/stories/archives/2020/october/amd-resources.html>

# Indicators of progress on implementation

- The **percentage indicators** for each action item provide an indication of how far progressed implementation is.
- The **traffic light colours** against each action item provide an indication of whether the work is on track (**green**), yet to be progressed but no issues (**orange**), or whether there are any issues (**red**).
- **Current status** – provides updates on work that has occurred as at December 2020 to implement the 2020 to 2021 actions for each of the 10 initiatives in the ANZLIC Strategic Plan 2020-24.
- **Next steps** – provides updates on work that is planned going forward.





# Modernise ANZLIC's Foundation Spatial Framework (FSDF)

## ANZLIC leads: Commonwealth (Geoscience Australia) and NSW

Actions for delivery between March 2020 and December 2021	Progress as at December 2020
Review the FSDF to align with UN-GGIM's 14 fundamental geospatial themes. Plan to move to updated FSDF. <b>(ICSM Exec Office)</b>	20%
Progress projects on cadastral digitisation, including terminology, linked rights, restrictions & responsibilities. <b>(Cadastre Working Group)</b>	20%
Coordinate recapture of coastlines, land borders and territorial sea baselines. <b>(Elevation, Depth &amp; Imagery Working Group)</b>	50%
Implement 3D data for elevation and imagery. <b>(Elevation, Depth &amp; Imagery Working Group)</b>	20%
Review standards for rural and urban addressing, including AS4819. <b>(Addressing Working Group)</b>	20%



Image source: Geoscience Australia, <http://www.ga.gov.au/news-events/news/latest-news/the-link-to-spatially-located-data-is-here>

### Current Status

ICSM has agreed to build roadmaps for key cross-cutting FSDF issues, including data access policies, standards, 3D and 4D data and data content.

Through GA's Digital Mapping Australia program vocabularies are being defined for FSDF themes including Transport, Built Environment and Physical Infrastructure foundation data.

ICSM collaborated to develop the nationally consistent and topologically correct [Australia's Land Borders dataset](#).

NSW provided a delivery plan to transition from paper to digital survey plans to the industry consultative committee for feedback, prior to public release.

LINZ Basemaps have been released under open licence. Basemaps offer resolution accurate to 5cm in some urban areas.

SA continues to develop a digital survey plan and data lodgement. Standards are being refined and it is expected the first digital data plan will be lodged in late 2020.

GA continues to lead the AusSeabed initiative, a collaborative program across government, the marine hydrographic industry and the university sector to improve the co-ordination of seabed mapping within Australia's marine jurisdiction.

GA is in the final quality assurance phase for Australia's revised Maritime Boundaries, expected to take two years to complete (target 2021-22). Coastline capture relevant to territorial sea baseline is largely complete apart from WA and Qld. Work progressing on outstanding areas.

In consultation with AGD, GA to review domestic implementation of UN Convention on Law of the Sea as it relates to maritime boundaries with a view to declaring Australia's limits and boundaries by geographic location.

ICSM allocated funding to develop a National Strategy for Addressing 2035. Procurement process started to develop strategy and deliver implementation roadmap. Review of AS/NZS 4819:2011 will be considered as part of the roadmap.

### Next Steps

ICSM to finalise FSDF modernisation roadmaps. This includes scoping inclusion of new themes in the FSDF, such as buildings and settlements, population distributions, geology and soils and physical infrastructure.

GA, in collaboration with the Department of Defence, to progress data upgrades for Transport, Built Environment and Physical Infrastructure datasets.

ICSM's Addressing Working Group to develop the 'Addressing 2035' strategy and implementation roadmap.

# Digital Twins and Smart Cities

## ANZLIC leads: NSW, VIC and QLD

Actions for delivery between March 2020 and December 2021	Progress as at December 2020
Develop AUS/NZ 3D and 4D Digital Cadastre Data Model and Roadmap for BIM and GIS integration. <b>(Cadastre Working Group)</b>	10%
Support implementation of 3D/4D cadastral data. <b>(Cadastre Working Group)</b>	10%
Support jurisdictional spatially enabled digital twin proof of concept projects & collaboration. <b>(NSW, VIC and QLD Members)</b>	40%
Engage with the Australian Data and Digital Council (ADDC) on digital twins and eplanning. <b>(NSW, SA and QLD Members)</b>	20%
Collaborate with stakeholders to develop frameworks/guidance /tools for spatially enabled digital twins. <b>(NSW, VIC and QLD)</b>	40%



Image source: digital.nsw,  
<https://www.digital.nsw.gov.au/article/twinning-spatial-services-has-created-digital-twin-nsw>

### Current Status

A Steering Committee consisting of reps from Qld, NSW, NZ, Vic and WA is coordinating the work to progress the 3D Data Model. From 7 August to 18 September 2020, NZ (LINZ) ran a Request for Proposal for this work, and proposals are being evaluated. LINZ has created a web page providing information and updates as they occur on the 3D cadastral survey data model and exchange project.

The ICSM Cadastre Working Group has developed a glossary of cadastral terms to establish consistency in communications and documentation from and within ICSM.

Victoria's \$45 million Digital Cadastre Modernisation project is progressing. Vendors have been appointed for all four stages of the project and 1 million parcels have now been digitised, covering 20 Local Government Areas. Victoria is aiming to launch the Fisherman's Bend Digital Twin in the next few months. Victoria is also progressing a prototype of an automated 3D building assessment tool that uses digital work-flows and digital twin technology, aiming for completion by the end of 2020.

NSW is progressing a range of work related to the NSW Spatial Digital Twin, including working with Infrastructure NSW to integrate NSW infrastructure data into the digital twin to support project monitoring and reporting.

EY developed a business case for the 'Positioning Queensland' initiative, which provides a high-level strategy for the development of a Digital Twin 'foundation', and CSIRO-Data61, with funding through Advance Queensland, has delivered a Framework for Spatially Enabled Digital Twins.

WA is exploring development of a consolidated 4D location information environment to support digital workflows and enable smart city and digital twin capability.

ANZLIC jurisdictions have engaged with their ADDC Senior Officials Group (SOG) jurisdictional representative to promote ANZLIC's work and the value of spatially enabled data.

The NCF Project Agreement has been signed by all parties, funding arrangements are finalised and NZ has recruited a Project Manager.

### Next Steps

Cadastral Data Model Steering Committee to finalise review of submissions for the 3D and 4D Digital Cadastre Data Model.

ANZLIC jurisdictions to continue to engage with the ADDC SOG to promote ANZLIC's work and the value of spatially enabled data.

# Australian Geospatial Reference System (AGRS) Modernisation

ANZLIC leads: Commonwealth (Geoscience Australia), WA and TAS (support)

Actions for delivery between March 2020 and December 2021	Progress as at December 2020
Make Australian Terrestrial Reference Frame (ATRF) and the Australian Vertical Working Surface (AVWS) available. <b>(Geodesy Working Group)</b>	100%
Coordinate release of foundation spatial data on GDA2020. <b>(GDA Modernisation Implementation Working Group)</b>	80%
Progress Survey Marks Enquiry Service (SMES) Proof of Concept. <b>(SMES Working Group)</b>	40%
Coordinate scoping of datum change impacts on legislation. <b>(GDA Modernisation Implementation Working Group)</b>	100%



Image source: ICSM,

<https://www.icsm.gov.au/sites/default/files/DatumMattersFactSheet2.pdf>

## Current Status

The ATRF and AVWS were defined and made available from January 2020 <https://www.icsm.gov.au/australian-terrestrial-reference-frame> and <https://www.icsm.gov.au/australian-vertical-working-surface>. New EPSG codes to support ATRF and AVWS were published in September 2020.

As at September 2020, all ANZLIC jurisdictional have released FSDf data on GDA2020.

ICSM has published a metadata guide to assist users to be compatible or compliant with GDA2020. The guide recommends how to use the existing ISO19115-1 standard and XML schema for immediate adoption of GDA2020 across Australian jurisdictions and considerations in New Zealand whilst the ISO19115-1 and the associated XML schema are officially and universally changed.

GA and ICSM are continuing engagement with ESRI on issues related to promotion of WGS84 over time-based datums.

The collection of tidal observations is in place with the BoM being the national data centre for all standard ports. A central repository of data used for AUSHYDROID is yet to be determined.

NSW DCS Spatial Services continues to work with DELWP to build and validate NSW data into the SMES tables, to be followed by testing against business requirements and distribution of resulting recommendations.

Legislation Review, GDA2020 Legislation Impacts Sub-Committee Project Report\_v7 completed in January 2020.

GA's Positioning Australia (PA) program currently provides precise positioning data streams (<5cm in areas with mobile phone coverage) to hundreds of users across Australia. At least 5 city/regional councils are connected to PA data streams, which will support cadastre and the creation of digital twins.

The Satellite Based Augmentation System (SBAS) program, which will provide 10cm precise positioning across Australia, NZ and its maritime waters, is progressing, with tender evaluation ongoing.

The PA program has recently concluded a Satellite Interferometric Synthetic Aperture Radar (InSAR) project over the Camden region in NSW validating that InSAR and GPS as separate geodetic techniques are consistent when applied to the same area, with millimetre levels of accuracy.

## Next Steps

Communication will continue using webinars, updates to webpages and updates to technical guides for ATRF and AVWS.

ICSM to revise role of GDA Modernisation Implementation Working Group, to cover residual outreach and implementation programs (e.g. including local government level).

Commence workshops to further investigate national requirements and governance for SMES.

The national positioning network of ground stations rollout has been impacted by COVID, however GA are now using contracting arrangements to licence more data, and licensing agreements in the north QLD region are soon to be concluded. GA is working with states on rollout networks.

Complete the SBAS system and time-dependent software and standards.

Data collection for Torres Strait (Prince of Wales Channel) AUSHYDROID model has been determined and to commence in 2020 or 2021 under HIPP. Data collected is over a minimum of 13 months.



# Improved spatial data delivery

## ANZLIC leads: Commonwealth (Geoscience Australia) and WA

Actions for delivery between March 2020 and December 2021	Progress as at December 2020
Support delivery of improved standards and guidance to improve foundation spatial data discoverability. <b>(Metadata Working Group)</b>	30%
Implement spatial data metadata best practice guide and implementation schemas. <b>(Metadata Working Group)</b>	50%
Finalise ELVIS Strategy and plan for future improvements and functions. <b>(ELVIS Steering Committee)</b>	30%
Support initiatives to standardise bushfire and emergency management symbology. <b>(ICSM Exec Office)</b>	20%

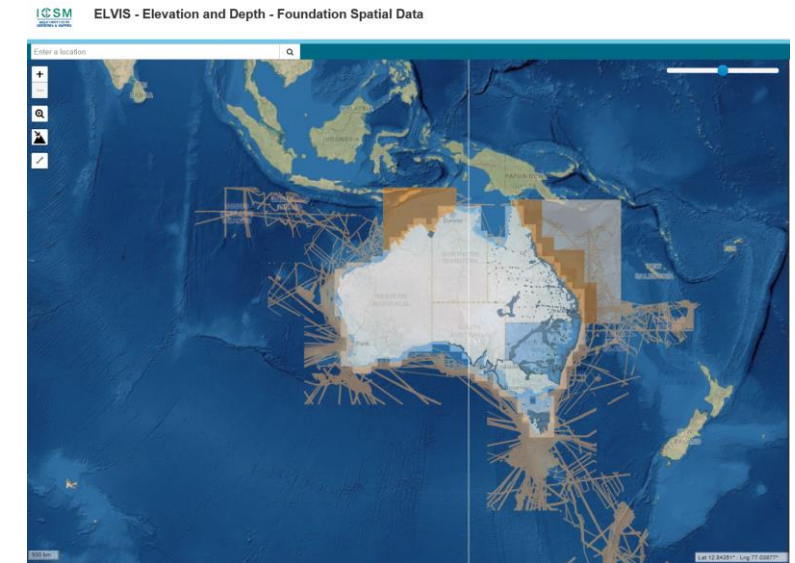


Image source: ANZLIC and ICSM, <https://elevation.fsdf.org.au/>

### Current Status

ICSM has published a best practise guide for spatial data. ICSM is developing XML template for datasets and services and a best practise metadata profile for elevation. GeoNetwork reviewed as tool to support best practise. Found to be suitable with minor update required.

ICSM's Metadata Working Group surveyed users to obtain input to inform development of a new metadata roadmap.

ICSM is continuing work to finalise its strategy for ELVIS.

GA and the Department of Home Affairs (including the Australian Border Force) signed a new Memorandum of Understanding (MOU). A recent activity under this MOU is the development and maintenance of the Bushfire Boundaries dataset, a new government initiative aimed at aggregating spatial extents of bushfires over time.

Following nearly 15 years of design, development and promotion by a number of collaborators across Australia, New Zealand, USA (NASA, UNAVCO) and EU (BKG), GeodesyML (a GML Application Schema) has now been recognised by the International Organization for Standardization (ISO). This recognition comes as a result of the work undertaken by a FrontierSI Project 1003 (with participation from GA, Curtin University and DELWP), which was designed to investigate and document how GeodesyML and other geodetic standards could be optimised/enhanced to deliver FAIR precise positioning data for the expected high use sectors.

### Next Steps

Prepare metadata guidance for imagery data and best practice for inclusion of time within positioning data.

Develop tools and resources to support implementation of metadata standards.

GA to aggregate a series of regularly updated bushfire boundary datasets from state and territory agencies into one national view and publish this over the 2020/21 summer season.

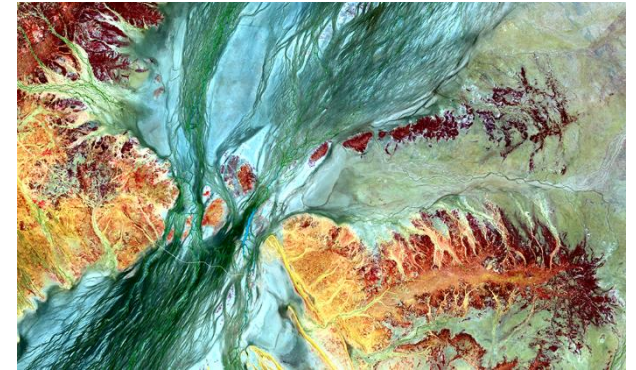
Review and update of ANZMET lite to align with best practise guidelines.



# Coordinated earth observation (EO) data acquisition

**ANZLIC leads: Commonwealth (Geoscience Australia), QLD and WA (support)**

<i>Actions for delivery between March 2020 and December 2021</i>	<i>Progress as at December 2020</i>
<i>Scope options for coordination of national-level imagery. (Elevation, Depth &amp; Imagery Working Group)</i>	10%
<i>Review current EO data acquisition and licencing arrangements. (Elevation, Depth &amp; Imagery Working Group)</i>	20%



**Image source:** Geoscience Australia,  
<https://www.ga.gov.au/dea/products/lsr>

## Current Status

*Sharing of forward capture programs for aerial photography now underway through Elevation, Depth & Imagery Working Group.*

*Updated the Elevation, Depth & Imagery roadmap.*

*Some ANZLIC jurisdictions are scoping options for more coordinated approaches for EO data acquisition.*

*CSIRO and GA recently signed a Letter of Intent to establish an Australian Government Earth Observation Coordination Office (AGEOCO). AGEOCO will help Australian Government agencies coordinate their engagement with the national EO community; coordinate implementation of the National Earth Observations from Space Infrastructure Plan; and participate in international engagement.*

*Digital Earth Australia, with the support of FrontierSI has released its agriculture market research report, 'Harvesting the Benefits of Earth Observation'. The report identifies the benefits and barriers of the adoption of Earth observation data for the agriculture sector and calls on technology, research and government sectors across Australia to help accelerate the growth of Earth observation product use.*

## Next Steps

*Economic study on benefits of openly available imagery to be undertaken by SmartSat CRC.*

*ANZLIC and ICSM will provide input to Steering Committee for the SmartSat CRC work on the Space and Spatial Roadmap 2030.*

*Department for Environment and Water, SA are undertaking a pilot with SmartSat CRC on water monitoring and Earth Observation.*

# Place Names

## ANZLIC leads: NZ, NT, WA, and TAS (support)

Actions for delivery between March 2020 and December 2021	Progress as at December 2020
Develop policies and approaches for indigenous place naming across Australia. <b>(Place Names Working Group)</b>	30%
Develop and implement strategy to update the National Gazetteer of Australia. <b>(Place Names Working Group)</b>	10%



Image source: ANZLIC,  
<https://www.anzlic.gov.au/resources/foundation-spatial-data-framework/fsdf-themes-datasets/place-names>

### Current Status

Place Names data, aggregated from data feeds published by naming authorities, continues to be published through ELVIS. Funding has been set aside for future enhancements.

ICSM's Place Names Working Group is reviewing the existing indigenous place naming principles and documentation with the goal of checking, then expanding the explanations and guidance.

A registry of place names in linked data format has been created, including alternate views and development of ontological data models.

The Tasmanian Place Names Act 2020 came into effect on 1 July 2020. The Act modernises the administrative processes for official place naming and is accompanied by the Tasmanian Place Naming Guidelines which outline the processes for the proposal, consultation and advertising of place names.

Queensland has launched an Indigenous Languages Policy. The policy is a commitment out of the 2018-2021 Queensland Government Reconciliation Action Plan and encompasses the intent to explore strategies for promoting recognition of Aboriginal languages and Torres Strait Islander languages through place naming.

In VIC, DELWP as the major sponsor of the Indigenous Mapping Workshop (IMW) saw IMW On demand being delivered in mid-September 2020. This resource provides ongoing spatial training for Traditional Owners across Australia. VIC is also commencing a Naming rules review in November 2020.

The NSW Geographical Names Board (GNB) has developed resources including a short video outlining the process required for reviewing offensive place names. The NSW Place and Road Naming Proposal System Enhancement Project is continuing. The project will further improve user experience by providing more intuitive functionality, spatial capability and streamlining of workflows for the GNB team. The project will conclude in December 2020.

Department of Infrastructure, Planning & Logistics, NT have developed a derogatory and discriminatory place naming policy and have put together a working group with indigenous peoples and land owners.

### Next Steps

Place Names roadmap to be developed, including future content enhancements.

# Space and Spatial Integration

**ANZLIC leads: SA, Commonwealth (Geoscience Australia) and WA (support)**

Actions for delivery between March 2020 and December 2021	Progress as at December 2020
Support activities of key entities such as the Australian and New Zealand space agencies. <b>(NSW, VIC, SA and Commonwealth - GA)</b>	10%
Scope mechanisms to deliver EO and positioning data to end users. <b>(Commonwealth - GA)</b>	20%
Participate in Australian Space and Spatial Industry Growth Roadmap 2030. <b>(NSW, VIC, SA and Commonwealth - GA)</b>	30%



Image source: Australian Space Agency, <https://www.industry.gov.au/news-media/launching-australian-businesses-into-space>

## Current Status

The SA ANZLIC Member has represented ANZLIC at the Space and Spatial Steering Committee meetings.

On 30 July 2020, SmartSat CRC, presented to ANZLIC on the development of a Space and Spatial Industry Roadmap.

On 6 October 2020, the Space and Spatial Industry Growth Roadmap Steering Committee circulated a draft white paper on key issues relevant to the space and spatial industries for input from Steering Committee representatives.

## Next Steps

The South Australian ANZLIC Member will continue to represent ANZLIC at the Space and Spatial Steering Committee meetings and will provide updates to ANZLIC.

ANZLIC and ICSM Members to provide input during the consultation process to develop the Space and Spatial Industry Roadmap.

Space and Spatial Industry Growth Roadmap White Paper to be further refined and updated by Steering Committee following input in October 2020.

Consultation on the Space and Spatial Industry Roadmap and White Paper is expected to commence in 2021.

# Stakeholder engagement

## ANZLIC leads: All Members, coordination support for national-level approaches provided by ANZLIC secretariat


Actions for delivery between March 2020 and December 2021	Progress as at December 2020
<p>Engage and share information, via ANZLIC and its Member jurisdictions, with key stakeholders across industry, the research sector and government. <b>(All ANZLIC Members to represent ANZLIC within their jurisdictions, coordination support for national level approaches provided by the ANZLIC secretariat)</b></p>	<p>50%</p> 



Image source: ANZLIC, [https://www.anzlic.gov.au/sites/default/files/files/ANZLIC%20Strategic%20Plan%202020-24\\_3.pdf](https://www.anzlic.gov.au/sites/default/files/files/ANZLIC%20Strategic%20Plan%202020-24_3.pdf)

### Current Status

ICSM is developing newsletters to engage with internal and external stakeholders. Content is also being made available on ICSM website.

Engagement with stakeholders has included:

- Some ANZLIC Members have engaged with their ADDC SOG member to highlight the value of ANZLIC’s spatial data work for ADDC priorities.
- Bruce Thompson, ‘Foundational Spatial Data Framework and Spatially Enabled Digital Twins’, Consulting Surveyors National Conference 2020, 5 June 2020
- Craig Sandy, ‘ICSM implementation of the Foundation Spatial Data Framework to support digital twins’, Consulting Surveyors National Conference 2020, 5 June 2020
- Sandy Caruthers represented ANZLIC at the Space and Spatial Industry Roadmap Steering Committee meetings in 2020
- Alison Rose, ‘ANZLIC’s Strategic Plan’ UN-GGIM, 9 June 2020
- Letter from ANZLIC to UN-GGIM on 23 June 2020 in support of the report on [Future Trends in geospatial information management](#) and to share information about ANZLIC’s work
- Bruce Thompson, ‘Spatial Digital Twin – The New Digital Workbench’ Locate Connect, 8 July 2020
- Steven Jacoby, ‘Positioning Queensland: Queensland’s Cadastral Modernisation Program’ Locate Connect, 8 July 2020
- Craig Sandy, ‘A Modernised 3D Digital Cadastre underpins a Smart City’ Locate Connect, 8 July 2020
- Roger Fraser, ‘Lessons learned in Victoria’s Digital Cadastre Modernisation Project – From pilot study to production’ Locate Connect, 9 July 2020
- Melissa Harris, ‘ANZLIC Strategic Directions’, Locate Connect, 20 August 2020
- The inaugural WALIS Community Meetup was held on 23 September 2020. The Meetup connected spatial practitioners across the public sector, showcasing projects and solutions that leverage government data. Updates on ANZLIC’s Strategic Plan 2020-24 and ICSM activities were provided at the Meetup.

The 2020 Victorian Spatial Showcase and eSummit was held online on 18 to 19 November 2020. DELWP, SSSI and SIBA worked in partnership to bring together two well known annual events into one festival for the spatial and surveying sectors. The theme was exploring how the spatial industry is enabling the UN’s Sustainable Development Goals through innovation.

### Next Steps

ICSM is developing a communications strategy.

ANZLIC and ICSM will continue to engage with stakeholders as opportunities arise.



# Diversity and Inclusion

**ANZLIC leads: All Members, coordination support for national-level approaches provided by ANZLIC secretariat**

Actions for delivery between March 2020 and December 2021	Progress as at December 2020
Advocate for greater diversity and inclusion in ANZLIC jurisdictions and the spatial sector. <b>(All ANZLIC Members)</b>	40%
Assist with measuring changes in diversity and inclusion over time. <b>(All ANZLIC Members)</b>	30%
Share information on diversity and inclusion initiatives and progress in ANZLIC jurisdictions. <b>(All ANZLIC Members)</b>	50%



Image source: Geoscience Australia,  
<http://www.ga.gov.au/about/careers/diversity-program>

## Current Status

Following the release of the Diversity and Inclusion Action Plan for the spatial sector in April 2019, the Spatial and Surveying Diversity Leadership Network published several case studies (including one from ANZLIC) on its website, alongside a feature article that appeared in the June/July 2020 edition of Position Magazine.

ANZLIC is partnering with the Spatial Industry Business Association – Geospatial Information Technology Association (SIBA-GITA), the Surveying and Spatial Sciences Institute (SSSI), Consulting Surveyors National (CSN) and Survey and Spatial New Zealand (SSNZ) to develop a diversity and inclusion in the surveying and spatial sector survey.

A Research Steering Committee and project team have been established to progress the work for the survey.

## Next Steps

The Research Steering Committee and project team will:

- Develop a costed proposal and timeline seeking project partners' agreement to provide funding for engaging a social research firm to design and administer the survey and report on survey findings.
- Seek quotes from social research firms to design and administer the survey and report on survey findings.
- Run the survey.
- Publish a report with results and findings.

# Skills and capability

## ANZLIC leads: All Members, coordination support for national-level approaches provided by ANZLIC secretariat

Actions for delivery between March 2020 and December 2021	Progress as at December 2020
Engage with relevant spatial industry peak bodies to scope spatial skill & capability gaps and potential actions. <b>(All ANZLIC Members)</b>	20%
Advocate for, and share information on, important applications of spatial data, skills and capabilities to build awareness and promote the importance of spatial skills & capability. <b>(All ANZLIC Members)</b>	40%



Image source: SSSI, <https://sssi.org.au/events-awards/events/vic-summit-2020>

### Current Status

The proposed survey on diversity and inclusion will include questions on skills and capability.

GA offers a range of education resources to promote geoscience awareness in the community, including; an Education Centre, Teacher Programs, Student Programs, and Classroom Resources.

DNRME offers Aboriginal and Torres Strait Islander cadetships and a Graduate program.

LINZ coordinates a cross sector Geospatial Capability Committee whose activities include promotion of spatial skills, study options and careers to school and tertiary students.

GA advocated and arranged for a young professional to participate in a UN-GGIM meeting as an observer.

### Next steps

ANZLIC to continue to collaborate with key peak bodies including the Survey and Spatial New Zealand, Consulting Surveyors National, SSSI, and SIBA – GITA on the diversity and inclusion survey which will help to inform skills and capabilities future directions.

ANZLIC and ICSM to continue to liaise with key spatial peak bodies to engage with them and identify opportunities to assist with skills and capability in the spatial sector, for example:

- The Surveying and Spatial Sciences Institute (SSSI) has signed a Memorandum of Understanding with the UK-based Association for Geographic Information (AGI). The agreement will see both bodies cooperate on initiatives to develop the capacity of spatial professionals across Australia, the United Kingdom and globally, with a focus on promoting the use of geospatial information to achieve the United Nations 2030 Agenda for Sustainable Development.
- SSSI events, SSSI's Continuing Professional Development (CPD) Program, and SSSI Certification.
- Section 7 of the Surveying Act 2004 requires a licensed surveyor to undertake Further Professional Education or Training (FPET) or Continuing Professional Development (CPD) points to enable annual renewal of registration.
- The Board of Surveying and Spatial Information (BOSSI) and prominent members of the surveying profession conduct a weekend candidate training workshop to assist those financial candidate surveyors preparing for future assessment procedures.
- She Maps advocates for diversity in STEM, by allowing every student the opportunity to engage in digital technology through drone and geospatial programs.

# How ANZLIC and ICSM will measure success

## Metrics and data sources, ANZLIC / ICSM leads for undertaking the work, and due dates

The actions to implement initiatives (as covered in earlier slides) are the ‘outputs’ of the ANZLIC Strategic Plan 2020-24, and the overall success of ANZLIC’s work will be the ‘outcomes’ (e.g. what has changed for the better due to ANZLIC’s work). The table below shows the approach for measuring the ‘outcomes’ identified in the [ANZLIC Strategic Plan 2020-24](#) ‘How ANZLIC will measure success’ page (refer page 6).

Priorities	ANZLIC will measure success based on:	What success looks like (benefits realisation)	Metrics/data source	ANZLIC / ICSM leads	Delivery dates
<b>Modernise foundation spatial information and data</b>	<ul style="list-style-type: none"> <li>Progress to update ANZLIC’s FSDF, providing improved discoverability and accessibility for modernised spatial data.</li> <li>Increased development and adoption of open spatial data standards across jurisdictions and within industry.</li> </ul>	<ul style="list-style-type: none"> <li>Foundation spatial data is discoverable, accessible and of the appropriate quality for the broadest possible range of end users.</li> <li>Modernised spatial data is openly available in 3D and 4D formats and complies with open standards.</li> </ul>	<ul style="list-style-type: none"> <li>Survey end users on the discoverability, accessibility, and quality of FSDF data.</li> <li>Number of hits to FSDF and ELVIS, and number of downloads of the data.</li> <li>Review of jurisdiction and industry spatial data offerings to measure 3D and 4D formats, and open standards.</li> </ul>	<ul style="list-style-type: none"> <li>ICSM Exec Office</li> <li>ICSM Exec Office &amp; GA</li> <li>ICSM Exec Office</li> </ul>	<ul style="list-style-type: none"> <li>December 2024</li> <li>December 2024, should be started from December 2021 to show changes over time</li> <li>December 2024</li> </ul>
<b>Engagement and collaboration</b>	<ul style="list-style-type: none"> <li>Stakeholder engagement by ANZLIC and its member jurisdictions to share information and collaborate.</li> <li>Stakeholders understand ANZLIC’s priorities and key initiatives, and vice versa.</li> </ul>	<ul style="list-style-type: none"> <li>ANZLIC partners with stakeholders to progress initiatives collaboratively for mutual benefit.</li> <li>Increased awareness of the value and potential uses of spatial information.</li> </ul>	<ul style="list-style-type: none"> <li>Case studies of ANZLIC partnering with stakeholders to progress initiatives, e.g. development of the ‘diversity and inclusion in the surveying and spatial sector’ survey with SIBA-GITA, SSSI, CSN, and SSNZ.</li> <li>Log of events where ANZLIC Members share ANZLICs priorities and key initiatives, e.g. stakeholder participation in the ANZLIC Strategy Workshop in October 2019, and ANZLIC Members’ engagement with stakeholders in numerous forums.</li> <li>Case studies to measure awareness of the value and potential uses of spatial information.</li> </ul>	<ul style="list-style-type: none"> <li>ANZLIC secretariat &amp; Contact Officers</li> <li>ANZLIC secretariat &amp; Contact Officers</li> <li>ANZLIC secretariat &amp; Contact Officers</li> </ul>	<ul style="list-style-type: none"> <li>December 2021</li> <li>December 2024, should be started from November 2020</li> <li>December 2024</li> </ul>
<b>Create insights and influence decision making</b>	<ul style="list-style-type: none"> <li>Increased use of spatial data to generate insights and inform service delivery.</li> <li>Increased influence by ANZLIC across key decision-making forums.</li> </ul>	<ul style="list-style-type: none"> <li>Improved government service delivery, decision-making and place-based policy via increased use of spatial intelligence.</li> <li>Greater use of spatial data to develop innovative new products and services.</li> </ul>	<ul style="list-style-type: none"> <li>Case studies of government service delivery, decision-making and place-based policy, using spatial intelligence.</li> <li>Case studies of spatial data being used to develop new and innovative products and services.</li> </ul>	<ul style="list-style-type: none"> <li>ANZLIC secretariat &amp; Contact Officers</li> <li>ANZLIC secretariat &amp; Contact Officers</li> </ul>	<ul style="list-style-type: none"> <li>December 2024</li> <li>December 2024</li> </ul>
<b>Spatial capabilities for the future</b>	<ul style="list-style-type: none"> <li>Progress to promote diversity and inclusion and grow and share spatial capability.</li> </ul>	<ul style="list-style-type: none"> <li>A spatial sector that is innovative and collaborative, with a culture of sharing spatial expertise and capability.</li> </ul>	<ul style="list-style-type: none"> <li>Changes in results of the ‘diversity and inclusion in the surveying and spatial sector’ survey.</li> </ul>	<ul style="list-style-type: none"> <li>VIC (with the Space Spatial and Surveying Diversity Leadership Network) with support from ANZLIC secretariat &amp; Contact Officers</li> </ul>	<ul style="list-style-type: none"> <li>December 2024, will show changes over time</li> </ul>
<b>Future proofing – R&amp;D and technology</b>	<ul style="list-style-type: none"> <li>Increased adoption of new and emerging technologies to harness spatial data.</li> <li>Increased progress on spatial data research and development.</li> </ul>	<ul style="list-style-type: none"> <li>Effective collaboration across government, industry and the research sector to deliver new spatial capabilities, R&amp;D and decision-making tools.</li> </ul>	<ul style="list-style-type: none"> <li>Case studies of government, industry and the research sector collaborating to deliver new spatial capabilities, R&amp;D and decision-making tools, e.g. <a href="#">SmartSat CRC</a>, <a href="#">CSIRO partner on waterway monitoring</a>.</li> </ul>	<ul style="list-style-type: none"> <li>ANZLIC secretariat &amp; Contact Officers</li> </ul>	<ul style="list-style-type: none"> <li>December 2021</li> </ul>