

Australia - A Nation Embracing its Geospatial Future

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The Despite having a population which is relatively small to its geographic side, Australia is a country which punches well above its weight on the global geospatial stage. In this article, Niall Conway provides an overview of the Australian geospatial industry, its active community, as well as the many geospatial initiatives which are taking place in the land Down Under.

Although Australia's first map by Western definition can be traced to the relatively recent date of 1810, it is actually a land with a long, rich history of maps. The second largest continent in the world contains a complex web of Aborigine migration routes known as Songlines which were used by indigenous tribes for essential seasonal migration through the lands of other tribes. According to this tradition, each tribe owns a verse of the 'song'

which contains rich metaphorical language to describe the local landscapes of the tribe. By sharing Songline verses with one another, other tribes would be able to navigate the unfamiliar landscape by reciting the borrowed verses, thereby ensuring their tribe's survival.

While such customs are less well known today, it is fair to say that maps still remain as important as ever to the continent's people. In many ways, it is the success of the Australian natural resources industries which helps to explain why the local geospatial industry is as strong as it is. Since Australia's early agricultural and mining days, through to the resources boom in states such as Queensland and Western Australia over the past decade, industry leaders have a strong history of investing in the mapping profession in order to protect the nation's natural and man-made wealth.

Growing Community

The Australian geospatial community, together with the space sector, provides direct employment to approximately 100,000 people (PwC, 2013). The country boasts a thriving geospatial community which receives strong support from local bodies like the Spatial Industries Business Association (SIBA), Surveying & Spatial Sciences Institute (SSSI), and it has an active representation on international bodies such as Geospatial Information & Technology Association (GITA). Perhaps a most recent indication of the country's emerging status on the global geospatial stage is that in March 2017, Sydney attracted industry leaders to the city when it merged the International Society for Digital Earth (ISDE) annual conference with Locate17, the spatial and surveying conference of Australia and New Zealand.

The geospatial industry receives broad support from the Australian government at all levels - federal, state, and local, and with bodies such as ANZLIC (the Australian and New Zealand Spatial Information Council) leading the development of the Australian Spatial Data Infrastructure (ASDI), this nation seems well on course to fulfil its Smart Cities and energy security agendas. Furthermore, Australia is using its expertise in the geospatial field to help overcome its relative geographic isolation, and it is now actively involved in the international geospatial community. At the inter-governmental level, Australia is represented on the UN Committee of Experts on Global Geospatial Information Management (UN-GGIM), the Group on Earth Observation (GEO), and it has an active membership base within the Open Geospatial Consortium (which recently made Geoscience Australia one of its Principal Members). With regards to other overseas involvement, the Australian Cooperative Research Centre for Spatial Information (CRCSI) has recently announced a collaborative research project with the Japanese Aerospace Exploration Agency which is focused on using satellite positioning to assist the agricultural industry. Australia has also established working agreements with both the European Space Agency (through which it receives data from the Sentinel satellites) and with NASA (which recently helped Australia to launch three earth observation satellites, the nation's first satellites to go into orbit in over 15 years).

Domestically, Australia is also sowing the seeds for home-grown geospatial innovation. The Australian government regularly supports corporate hackathon events which encourage entrepreneurs and innovators to solve real world problems using geospatial solutions, and it has recently simplified its procurement process in order to help smaller tech businesses to tender for public contracts. The government has a strong commitment to providing open data through its data.gov.au portal, and earlier this year the government-owned company PSMA launched the groundbreaking Geoscape platform which will soon provide high-resolution geo-coded built environment datasets for the whole country. Perhaps one final indication of the opportunity which the geospatial field now presents, is the notable example of Campbell Newman's, the former Premier of Queensland, forays into the industry. Not long after introducing world leaders to Brisbane for the G20 Summit in 2013, Newman stepped away from political life in order to focus his attention on the business of location-driven agricultural robotics. Considering Australia's attempts to scale up its agricultural industry and become the 'food bowl' of Asia, this move into the geospatial world by Newman, and others like him, could be a very wise one.

In relation to the idea that Australia's geographic isolation from international markets is a disadvantage for the industry, Igor Stjepanovic, local entrepreneur and founder of the popular crowdsourcing platform Gruntify, disagrees. His business has exported and partnered right across the Middle East and North America, with Asia and Europe soon to follow. According to Igor, Australia's opportunities are now global, and he believes that a business's success simply comes down to its ability to compete in terms of ideas as well as to attract the attention of clients.

Nevertheless, the Australian geospatial industry is not without its challenges. Despite currently boasting a strong geospatial community, Australia will require more IT and surveying skills if the industry is to scale to its full potential. However, with recent immigration reforms requiring employers to favour locally sourced skills over those from overseas, some question marks regarding the industry's ability to do so remain. Although Stjepanovic, whose company has previously used the 457 Visa system to sponsor overseas workers, respects the government's decision, he does warn of growing competition for professionals with the right mix of skills. He adds: "In our particular field, the skills shortage is compounded by not having enough graduates study surveying, spatial and software development courses. We are hopeful that young Australians will step up to the challenge and start to fill the skills gap that is emerging."

Despite facing potential hurdles to the industry's growth, Australia is a nation which 'gets' the importance of geospatial technology and information. The industry has so far played a key role in helping the country to avoid recession for some 25 years, and Australia boasts a thriving geospatial community which receives widespread support. Perhaps due to the sheer size of the country and the long association which it has with maps, the Australian people understand the value of location, as well as the many opportunities which it presents.

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