



UNITED NATIONS
WORLD GEOSPATIAL INFORMATION CONGRESS

Forum conducted by the UN-GGIM Academic Network

A Sustainable and Resilient World: Capacity Building and Geospatial Research for Implementing the SDGs

11:00 - 12:00

Wednesday 21 Nov 2018

Deqing, China

Role of National Professional Body supporting SDG's through Certification and CPD – An Australian Perspective

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PRESIDENT

Surveying & Spatial Sciences Institute (SSSI), Australia



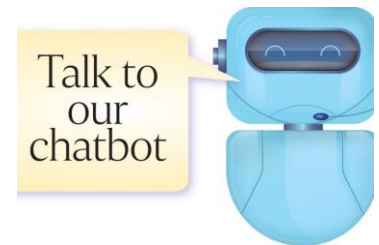
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Global Government Policy making trends*

“Its clear that status quo is insufficient to address the nature of today’s challenges” - OECD

- **The wide availability and uses of data saves money and lives** (Eg: London uses data to predict which children will be abused saves council \$1 Million in early intervention; Eg: Ukraine saves \$37 Million on drugs using anti-corruption app)
- **Government delivers more with less using AI while developing systems to assess its impact** (Eg: Singapore, *Chatbots* show the way in using tech to boost health care: Patients who are unwell could, in the future, be chatting with software that can assess their conditions and *advise them to visit the right hospital or clinic*)
- **User centred co-creation, design & implementation are an integral part of policy making – inline with citizen expectation** (Eg: Estonia’s data exchange lets you pay *taxes in 5 minutes!*)
- **Experimentation forms the basis for evidence and even iteration happens in the open** (Eg: Canada’s open *default procurement: Open procurement process hopes to improve open by default pilot portal, speed up innovation*)
- **Governments increasingly leveraging the Private and Philanthropic and civic sectors to deliver more with less** (Eg: US Government & IBM –PTech programme train a *generation of technologies to schools. The school, partly funded by IBM and training students to suit the company’s needs* (14 Australian schools are being trained))
- **Every year, Global Government spends \$8 Trillions goods and services**
- **Cities leading the way on innovative policymaking**



* Source policy workshop at PMC by Ms Nitika Agarwal, COO Apolitical on 31-10-2018

SDGs Learning, Training & Practice

Organized during the [High-level Political Forum on Sustainable Development \(HLPF\)](#)

The Division for Sustainable Development, UN Department of Economic and Social Affairs (UN DESA) and the United Nations Institute for Training and Research (UNITAR) organized the **SDGs Learning, Training & Practice** - a series of capacity building and knowledge workshops, featuring speakers and experts from academia and other sectors on crucial topics related to the implementation of the 2030 Agenda for Sustainable Development.

The **SDGs Learning, Training & Practice** workshops aimed to advance:

- Knowledge and skills acquisition
- Networking
- Sharing experiences and peer to peer collaboration
- Learning about practical actions and best practices
- Capacity building
- Practical policy integration and coherence

The report of the 2018 Edition of the SDGs Learning, Training and Practice can be found [here](#)

PROGRAMME MORE INFORMATION

More information

The meeting of the High-level Political Forum on Sustainable Development in 2018, convened under the auspices of the Economic and Social Council, will be held from Monday, 9 July, to Wednesday, 18 July 2018; including the three-day ministerial meeting of the forum from Monday, 16 July, to Wednesday, 18 July 2018.

The theme will be "*Transformation towards sustainable and resilient societies*". The set of goals to be reviewed in depth will be the following, including Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development, that will be considered each year:

- Goal 6. Ensure availability and sustainable management of water and sanitation for all
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12. Ensure sustainable consumption and production patterns
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

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9 - 13 JULY 2018
CONFERENCE ROOM 5, UNHQ



Regulation for geospatial practitioners global outlook

- Industry Regulation Models
 - Government regulation
 - Self-Regulation or
 - Hybrid model
- Regulation facilitates professional capacity development and maintenance
- Requires Political commitment
 - To promote capacity development and maintenance
 - Supported by sustained resourcing will yield longer term results
- Requires Personal commitment
- Requires Business commitment



Survey and Spatial Sciences Institute (SSSI), Australia

Peak body of Geospatial disciplines



Land Survey

Remote Sensing &
Photogrammetry

Engineering &
Mining Surveying

Spatial
Information &
Cartography

Hydrography

Certification Program Principles

1. AQF Level 7 qualification
2. 4 years Experience under a licenced / certified professional
3. Compliance with Code of Ethics
4. Maintained through Continuing Professional Development

Streams

- 3D & BIM
- Drones

Licensing – authorize a practitioner to perform specified tasks.

Certification – certify that a practitioner is capable of performing a task.

Regulation – regulate aspects of a practitioner's work.

CPD – Continuing Professional Development



Survey and Spatial Sciences Institute (SSSI), Australia



Peak body of spatial disciplines

International

FIG

ISPRS

URISA

National

Survey Boards

Partner Organisations

Government

Other Disciplines

Commissions

Certifications

LS

HS

SIC

RS&P

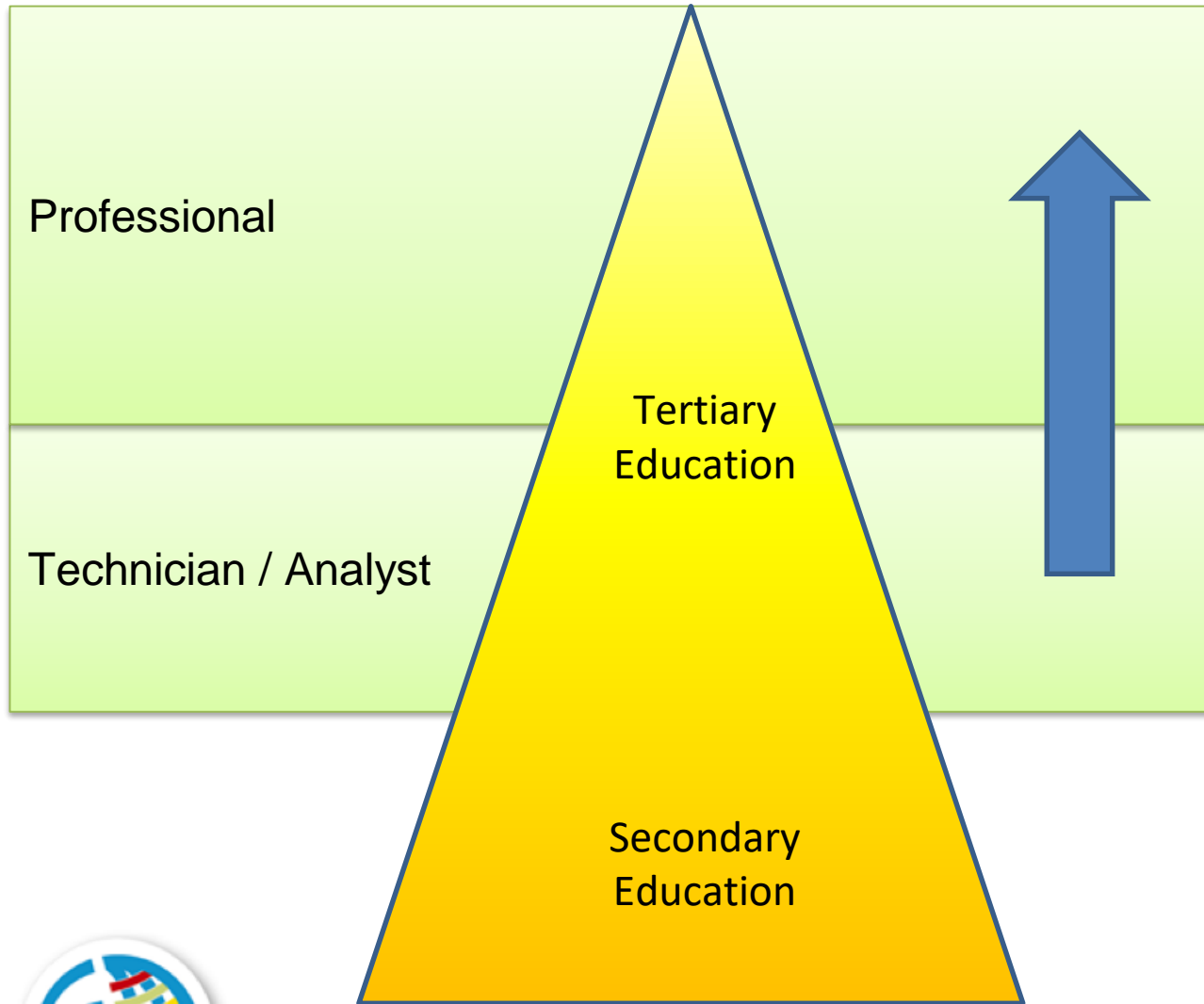
E&MS

Committees

Regions



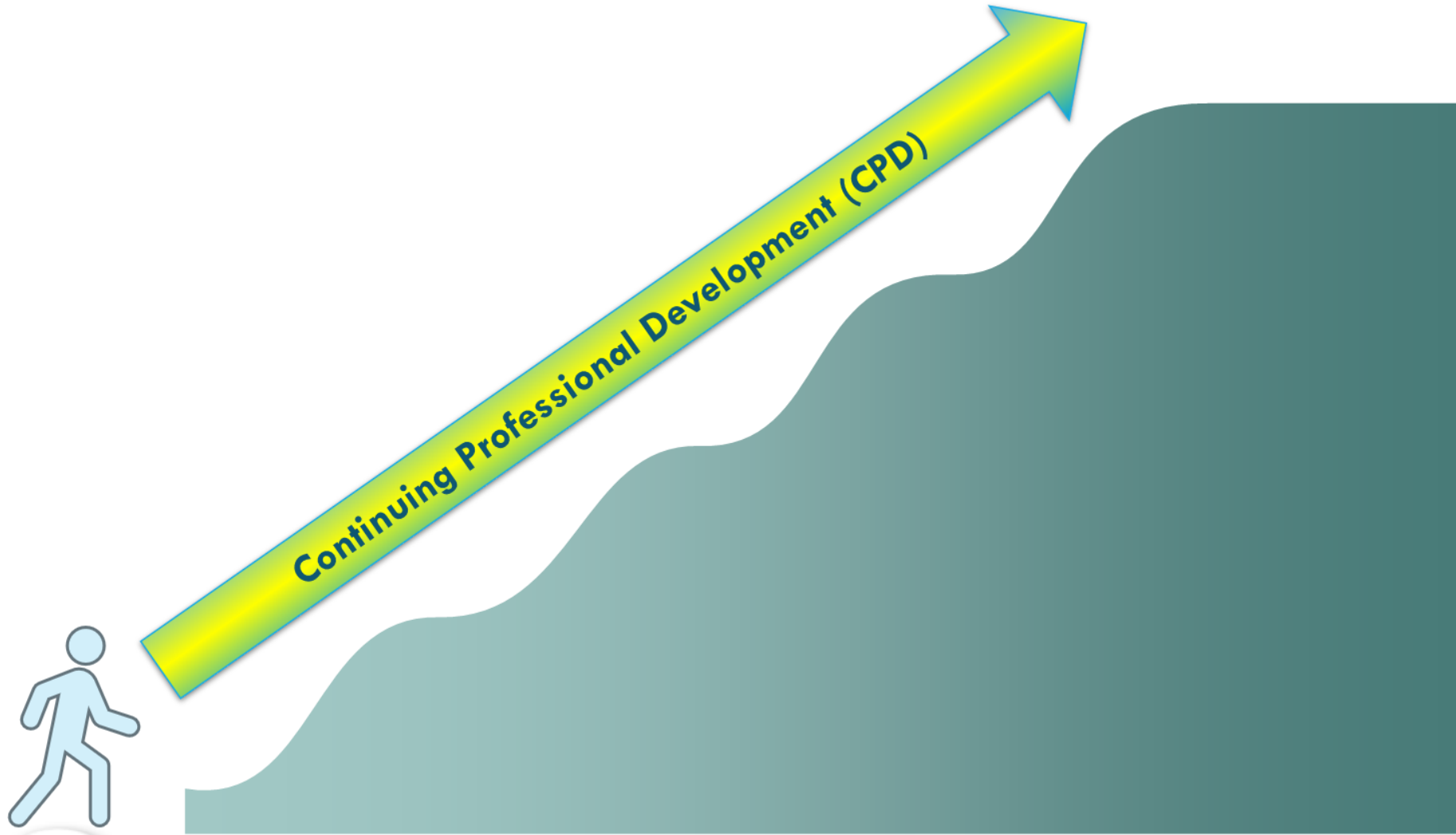
Context for Certification of Geospatial Professionals



- Occupational
Upgrading pathways
- Non-Formal training
 - Short Courses
 - Recognition of Prior Learning



Professional CPD

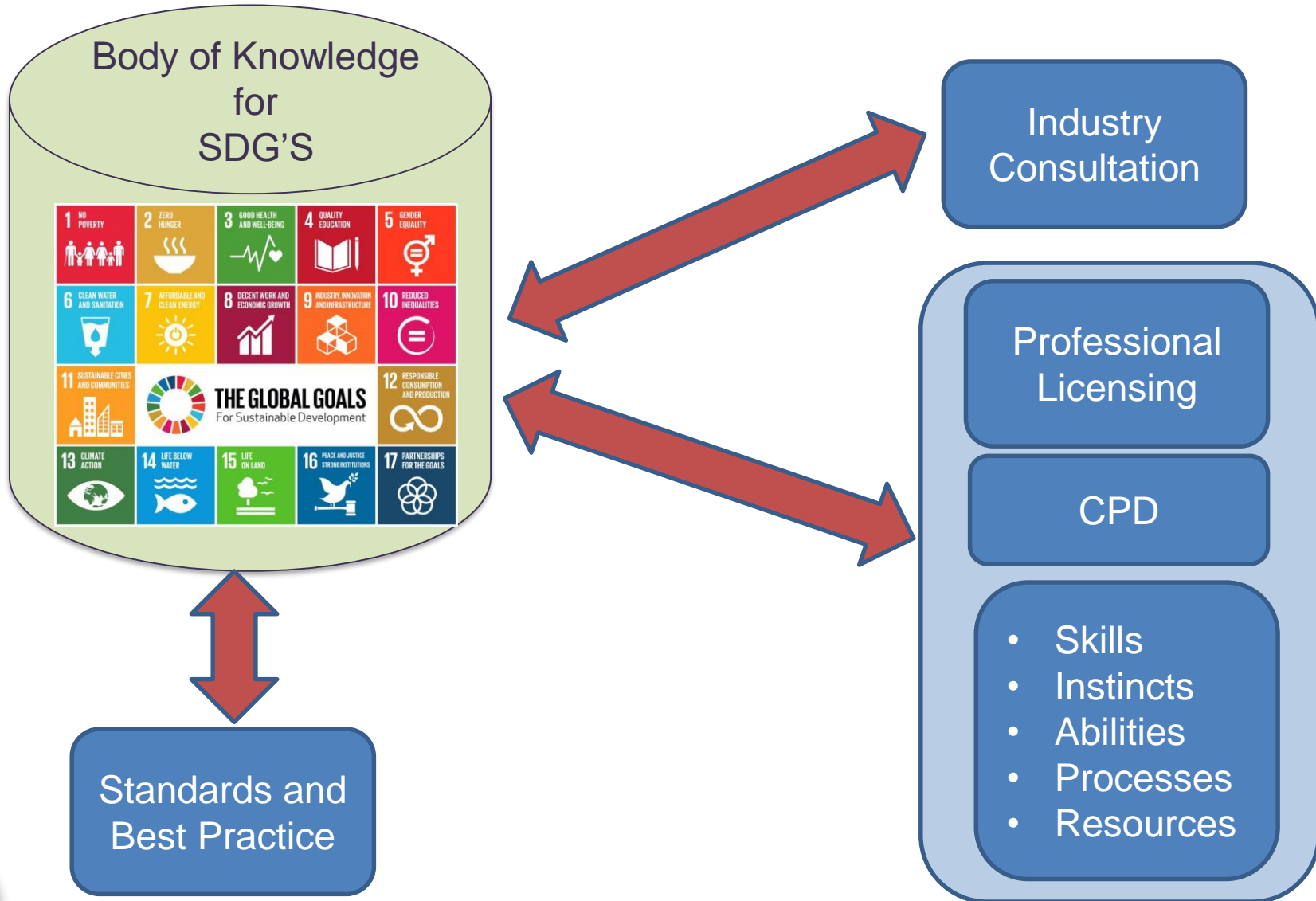


Body of Knowledge

- A body of knowledge (BOK or BoK) is the complete set of **concepts, terms and activities** that make up a **professional** domain (e.g. Geospatial), as defined by the relevant **learned society or professional association**. It is a type of knowledge representation by any knowledge organization.
- It is a focused slice out of the National Qualifications Framework
- Ownership of the Body of Knowledge is a key element of Professional Licensing / Certification



BoK SDGs



SDG's in Certification process

GISP-AP example

Geospatial Data

<p>GD1 Earth geometry 1-1 History of understanding Earth's shape 1-2 Geoids 1-3 Spheres and ellipsoids</p> <p>GD2 Land partitioning systems 2-1 Unsystematic methods 2-2 Systematic methods</p> <p>GD3 Georeferencing systems 3-1 Geographic coordinate system 3-2 Plane coordinate systems 3-3 Tessellated referencing systems 3-4 Linear referencing systems</p> <p>GD4 Datums 4-1 Horizontal datums 4-2 Vertical datums</p> <p>GD5 Map projections 5-1 Map projection properties 5-2 Map projection classes 5-3 Map projection parameters 5-4 Georegistration</p> <p>GD6 Data quality 6-1 Geometric accuracy 6-2 Thematic accuracy 6-3 Resolution 6-4 Precision 6-5 Primary and secondary sources</p> <p>GD7 Land surveying and GPS 7-1 Survey theory and electro-optical methods 7-2 Land records 7-3 Global Positioning System</p>	<p>GD8 Digitizing 8-1 Tablet digitizing 8-2 On-screen digitizing 8-3 Scanning and automated vectorization</p> <p>GD9 Field data collection 9-1 Sample size selection 9-2 Spatial sample types 9-3 Sample intervals 9-4 Field data technologies</p> <p>GD10 Aerial imaging and photogrammetry 10-1 Nature of aerial image data 10-2 Platforms and sensors 10-3 Aerial image interpretation 10-4 Stereoscopy and orthoimagery 10-5 Vector data extraction 10-6 Mission planning</p> <p>GD11 Satellite and shipboard remote sensing 11-1 Nature of multispectral image data 11-2 Platforms and sensors 11-3 Algorithms and processing 11-4 Ground verification and accuracy assessment 11-5 Applications and settings</p> <p>GD12 Metadata, standards, and infrastructures 12-1 Metadata 12-2 Content standards 12-3 Data warehouses 12-4 Exchange specifications 12-5 Transport protocols 12-6 Spatial Data Infrastructures</p>
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Future proposal GISP-AP

Geospatial Data

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GD13 SDG's Practice
13-1 SDG Understandings
13-2 SDG Compliance
13-3 SDG Metrics

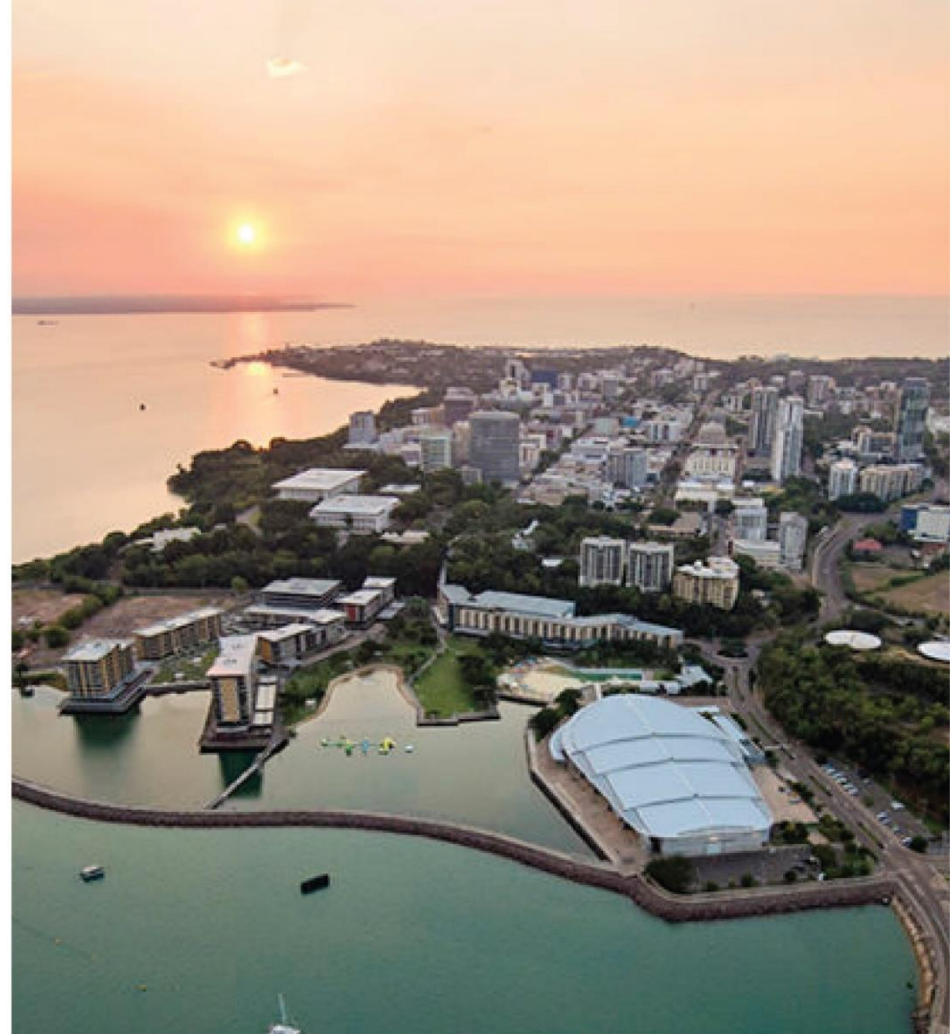




Locate

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DARWIN

National Professional bodies to ensure that the Geospatial Community has the capacity to deliver Geospatial services to the community now and into the future, according to International Best Practice, in order to support the SDGs!!!!

Thank You!

Developing an enduring and positive impact on our society using survey & spatial information!!!

