### Enhancing Australian Foundation Spatial Data Framework to support Australia's future

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### Abstract

The Foundation Spatial Data Framework (FSDF) is a framework of ten national authoritative geographic data themes that supports evidence-based social-economic decision making across multiple levels of Australian and New Zealand government agencies, industry, research and the community. The AAA data management principles (Authoritative, Accurate and Accessible), articulated for FSDF, are easily translatable to the FAIR Principles and applied to ensure: \* Ability to Find data through rich and consistently implemented metadata; \* Access to metadata and data by humans and machines while practicing federated data management within trusted data repositories; \* Interoperability of metadata and data through adoption of common standards and application of best practices; and \* Reusability of data by capturing licencing constraints and information about its quality and provenance. The Location Information Knowledge Platform (LINK) was developed in 2016 as a digital catalogue of FSDF content. This governed, online, dynamic, analysis and discovery tool was designed to enhance the discovery of FSDF datasets, support work planning and indicate the legal frameworks, agency priorities and use case associated with FSDF data. More than 73 Australian government agencies and commercial organisations use this Platform. Current work includes: \* Building common high-level and individual lower-level information models (ontologies) for the FSDF and each dataset; \* Development of a new architecture for persistent identifiers and identifier incorporation in the datasets; \* The ISO 19115-1-based Australian and New Zealand Metadata profile and best practices user guides; and \* Testing new workflows for metadata and data governance and integration utilising a set of common cloud-based infrastructure. On realisation, the FSDF will become a necessary component of spatial socio-economic decision making across Australian and New Zealand government agencies and the private sector. FSDF will encourage cross-sector partnerships and enable seamless access to authoritative spatial data across organisational and jurisdictional boundaries, thus contributing to economic growth, improved public safety, meeting legal and policy obligations and sustaining business needs.

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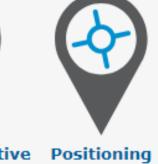


### What is Foundation Spatial Data Framework (FSDF)?

- ✓ Common framework (2010 now) for the integration & maintenance of Australian and New Zealand foundation geo-spatial data in order to serve the widest possible variety of users
- Supports evidence-based social-economic decision making across multiple levels of government agencies, industry, research and the community
- ✓ Aims to deliver open, accessible, affordable and usable a national coverage foundation spatial data
- Consists of ten national authoritative geographic data themes
- ✓ Underpins service delivery and spatial analysis



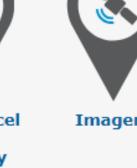


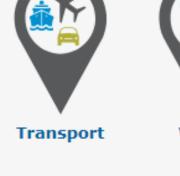












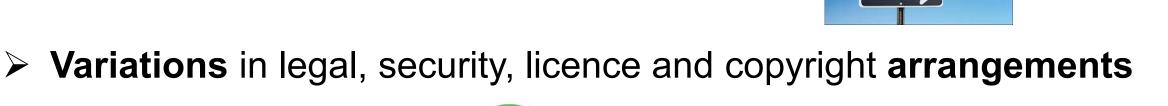






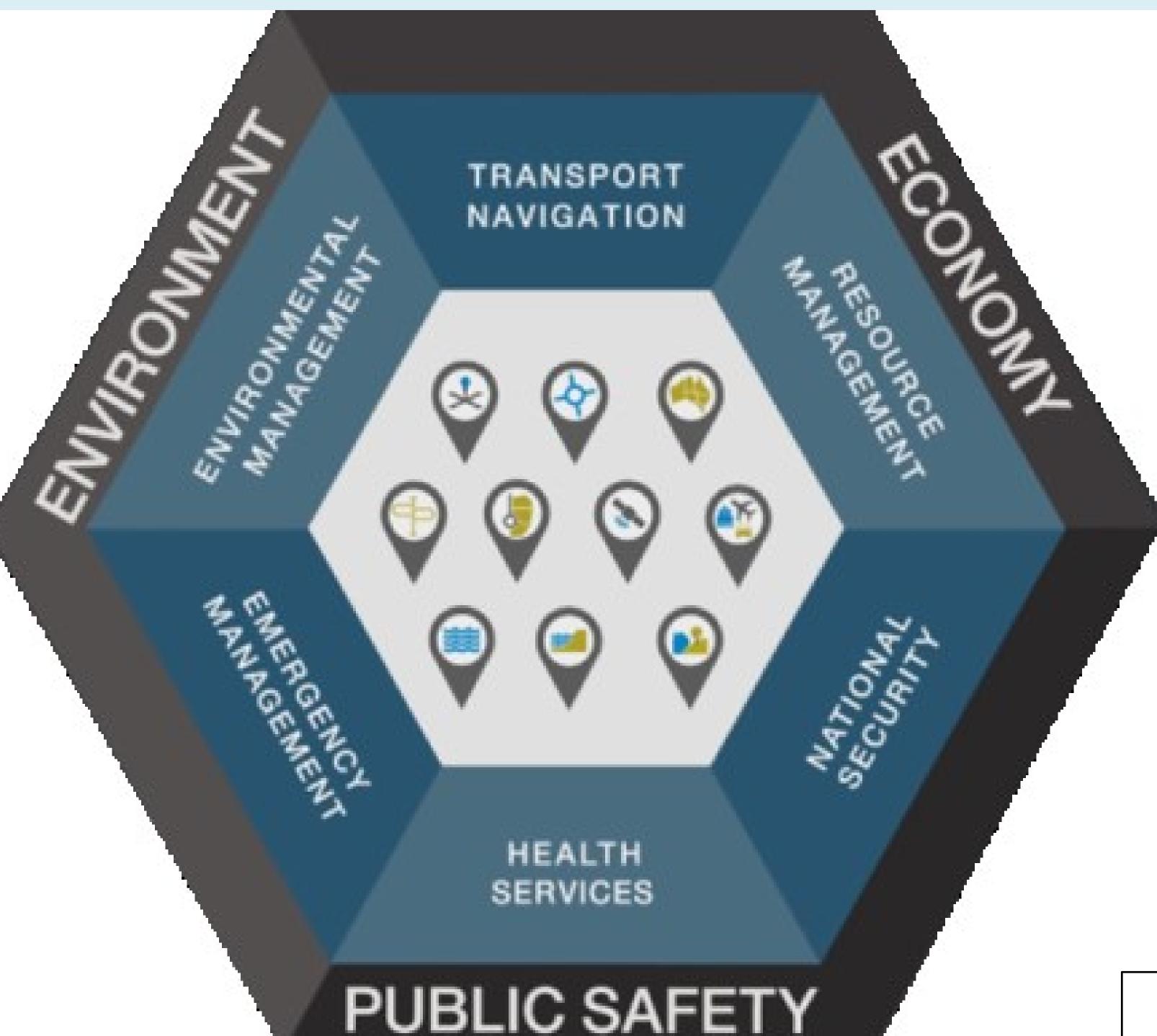
### **Key Challenges**

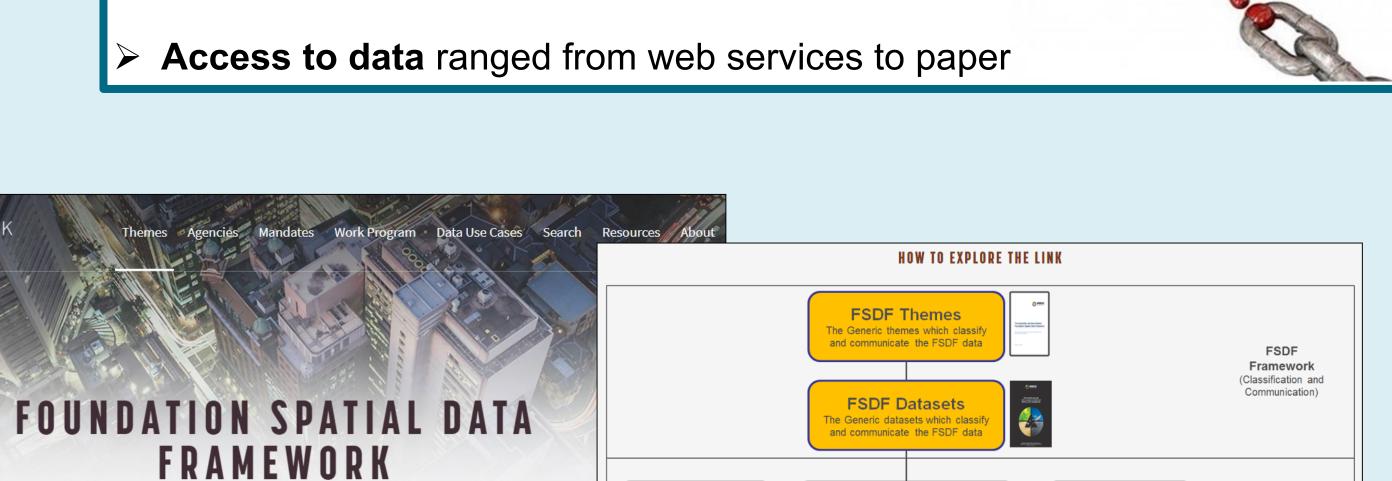
- Complex network of data providers:
- Government (federal, state and local), Private and Research
- Lack of agreements and conflicting priorities





Constant changers in supply chains





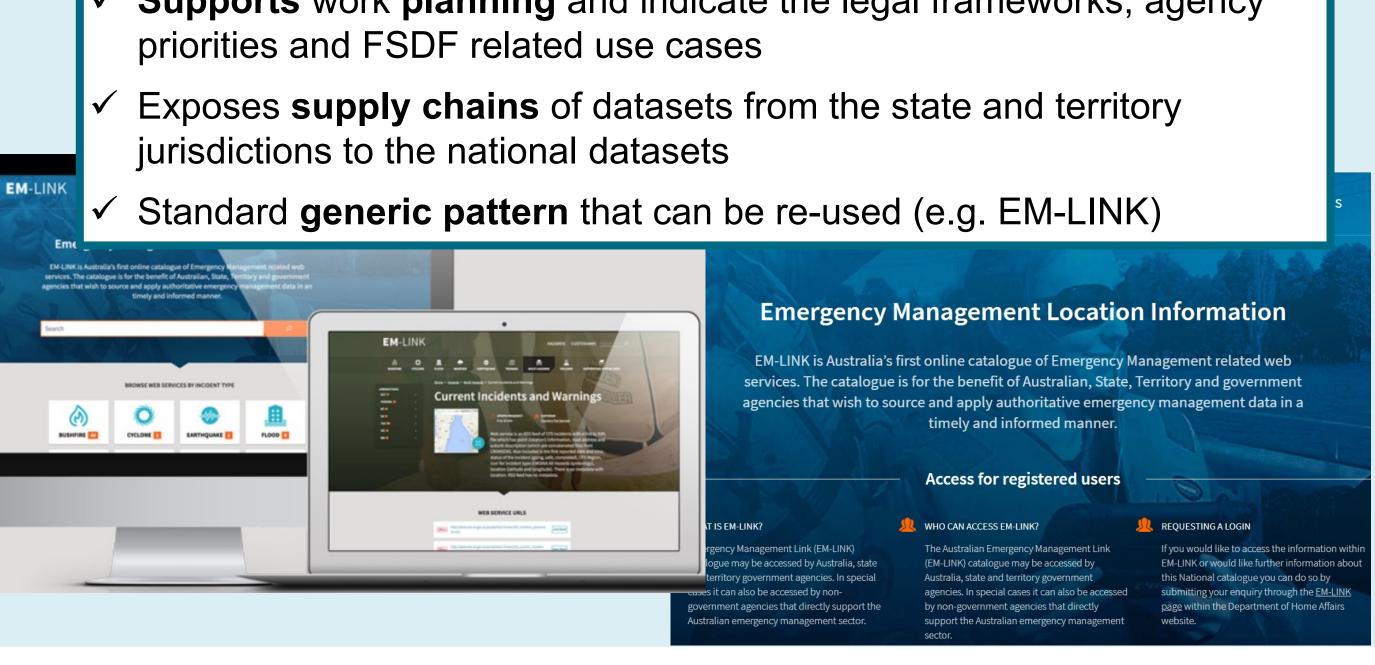
# **PLATFORM**

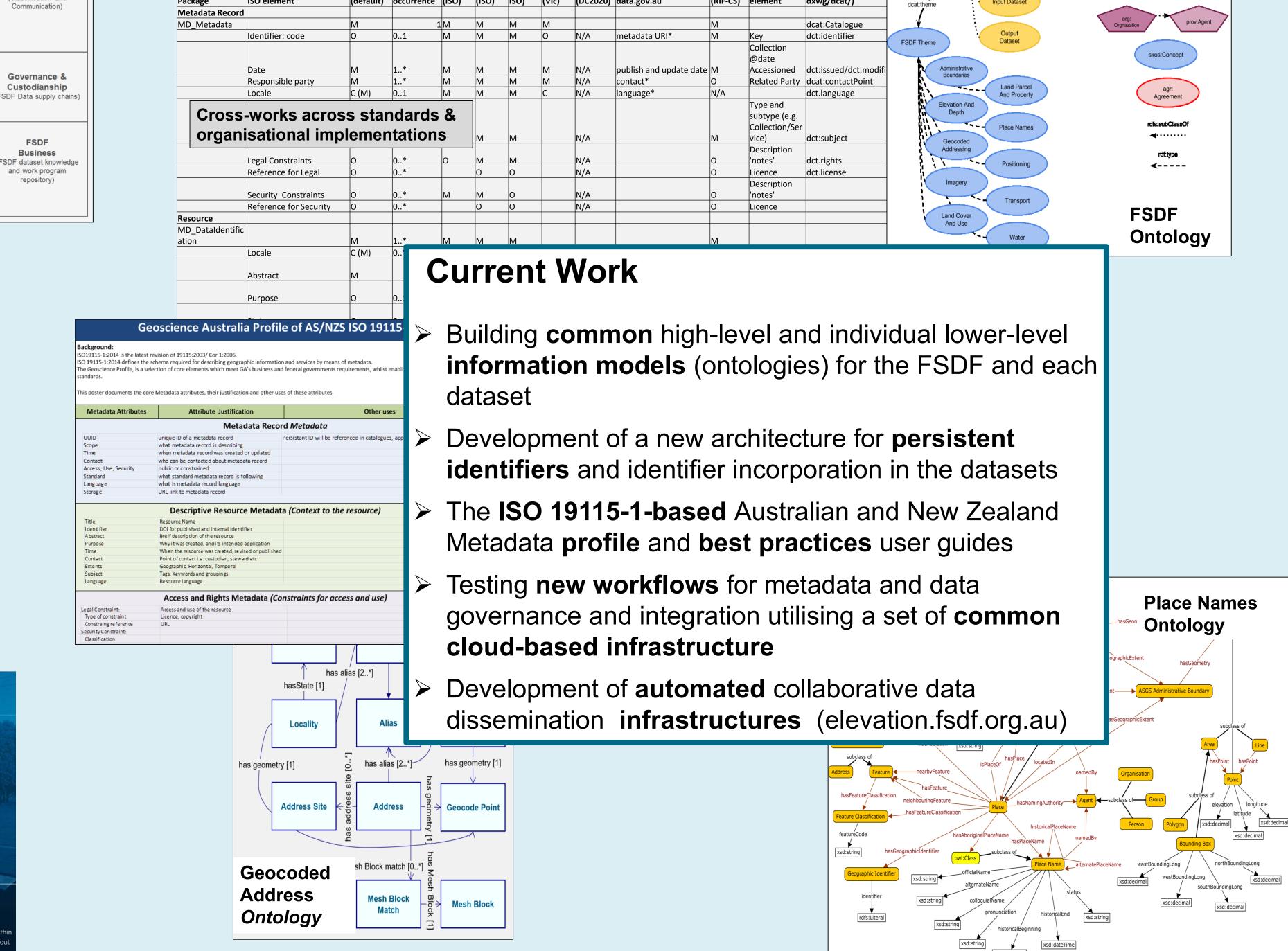
### Location Information Knowledge Platform (LINK) https://link.fsdf.org.au/

- Developed in 2016 online, dynamic, cloud-based analysis and discovery tool to enhance the discovery of FSDF datasets
- Used by 73+ Australian government agencies and commercial organisations
- Classifies over 1200 individual datasets, to enhance discovery through browsing
- business content (e.g. mandates and funding sources)

Knowledge base of FSDF that combines traditional metadata and

Supports work planning and indicate the legal frameworks, agency priorities and FSDF related use cases





# **FSDF** benefits

- Spatial socio-economic decision making support tool: economic growth, public safety, legal and policy,
- obligations & sustaining business needs
- Articulation of **national needs**



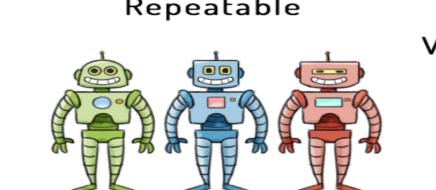
✓ Cross-sector partnerships

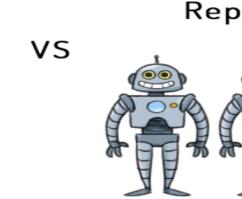


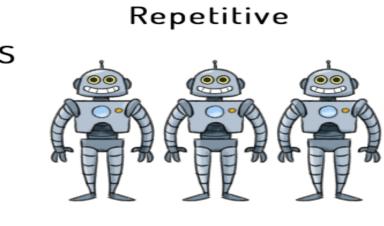


✓ Greater understanding of the end users and their requirements

- ✓ **Seamless access** to authoritative spatial data across organisational & jurisdictional boundaries
- Consistent application of standards
- ✓ Greater number of users & re-uses of the data











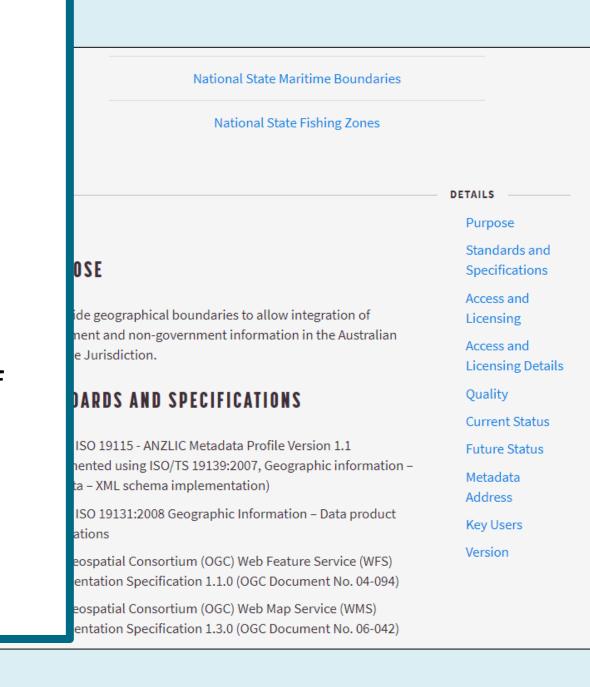


<u>ACCURATE</u>

## **FSDF AAA Data Management Principles** vs. FAIR Principles

Easily translatable and applied to ensure:

- Ability to find data through rich and consistently implemented metadata
- Access to metadata and data by humans and machines while practicing federated data management within trusted data repositories
- Interoperability of metadata and data through adoption of common standards and application of best practices
- Reusability of data by capturing licencing constraints and information about its quality and provenance



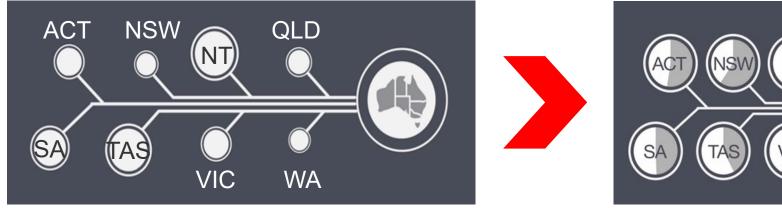
## FSDF Supply Chains - from Inconsistent Ways of delivery to Common Approach

### Attributes surrounding each dataset focus on general business elements:

- What is the dataset and who is the custodian
- Where does it fit within the FSDF
- Why does it exist (mandate) and how was it created
- Is it resourced and is the resourcing sustainable
- How is it made discoverable, accessible and usable to the user



### Understanding of supply chains helps to:





- Develop a common strategy Change jurisdictional priorities
  - Improve resourcing
  - Implement common approach for licencing and costing



