SPATIAL DIGITAL TWINS - AUSTRALIA

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Land Administration Domain Model (LADM) Project Leader – Part 1 & 3
Thank you to hosts & sponsors

- Korean Agency for Technology & Standards (KATS)
- Ministry of Land, Infrastructure & Transport (MOLIT)
- Korea Land Information Corporation (LX)
- Anyang University
ISO/TC 211 56TH PLENARY MEETING

Agenda

• ANZLIC’s Strategic Plan 2020-24
  • Progress Report
• Digital Twin Whitepaper – Standards Australia
• Spatial Digital Twins in Australia
• Resilient, Intelligent Infrastructure Systems in Urban Resources and Energy Sectors
• Smart Cities – Digital Twins – IoT – AI – Metaverse
Spatial sector priority areas

ANZLIC’s consultation with key stakeholders identified the following spatial-related challenges across Australia and New Zealand.

- **Spatial skills and capability**
  - Growing the supply of spatial skills and research capability to enhance the spatial sector’s value and improve linkages with other sectors.
- **Spatial data standards**
  - Increasing the use of open spatial data standards and the creation of accurate 3D and 4D foundational spatial data.
- **Space and satellite capabilities**
  - Growing space and satellite capabilities to provide new sources and types of spatial information (particularly earth observation and positioning data) for a wide range of downstream applications.
- **Collaboration and engagement**
  - Increasing collaboration and engagement across a broader range of government, industry and research stakeholders to promote value, and data integration.
- **Public data landscape**
  - Responding to a changing public data landscape in regards to data sharing, privacy and security, and demand for government to access and use data more to improve policy and services.
ANZLIC – Strategic Plan 2020-2024 Update

• Priority Initiatives
  • Modernising the Foundation Spatial Data Framework (FSDF)
  • Metadata & Tools
  • Digital Twins
  • Space and Spatial

• Priority Enablers
  • Skills and Capabilities for the future
  • Effective Collaboration and Engagement
  • Support Improved Diversity & Inclusion

• https://www.anzlic.gov.au/
Digital Twin Whitepaper

• Standards Australia released its Digital Twin Whitepaper – March 2023
• Key Drivers
  • Grow our Digital Economy & Industry
  • Industry transformation and Innovation
  • Improve wellbeing for our community
  • Support Australia’s climate commitment
• Key Challenges
  • Need for Greater National Leadership and Coordination
  • Need to Drive Better Decisions Facilitated by Better Information Sharing
  • Need for Guidance on Best Practice and to Support Future Capability
• Recommendations
  • Leadership and Governance
  • Standards, Capability and Technology
  • National DTw Pilot Program
Some key opportunities and examples of how DTw use cases can provide value and benefit to Australia.
Some of the key benefits of investing in DTw capability in Australia
The table below provides a qualitative snapshot of Australia’s current state and application of digital built environment initiatives by government entities.

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**Legend:**
- **GREEN** - Strategy and framework in place
- **ORANGE** - Partial capability - early strategy
- **RED** - Nil or very limited capability - strategy yet to be defined
Spatial Digital Twin Programs - States

New South Wales

NSW Spatial Digital Twin

Fishermans Bend Digital Twin

Queensland

Queensland Globe

Brisbane – Cross Rail

Bathurst Spatial Digital Twin

Victoria

Victoria Digital Twin


https://qldglobe.information.qld.gov.au
Resilient, Intelligent Infrastructure Systems (RIIS) in Urban Resources and Energy Sectors

- Industry and Australian Research Council funded Research & Innovation Hub
- Deliver Transformation Technologies to address Australia’s Critical Infrastructure needs

- Themes:
  - https://riis.org.au

ISO/TC 211 56TH PLENARY MEETING
Resilient, Intelligent Infrastructure Systems (RIIS) in Urban Resources and Energy Sectors

- Theme 5 – Spatial Data Infrastructures, Digital Twin and Decision Support
  - Digital Twins for Asset Management, Simulation and Prognosis, Construction and Design
  - Visualisation, Virtual and Augmented Reality and Interactive Guidance Systems
  - Managing Digital Twins and Establishing Digital Threads
Question to the Seminar

Smart Cities – Digital Twins – IoT – AI – Metaverse
Acknowledgement

- Marie Truelove – Head of Product Management, CSIRO’s Data61
- Brian Nicholls – Managing Director AAM – Woolpert Company
- Adam Beck – Head of Digital Urbanism
- Gavin Cotterill – Founder & Managing Director GC3 Digital
- ANZLIC
- Resilient, Intelligent Infrastructure Systems in Urban Resources and Energy Systems
THANK YOU

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