Brisbane Airport: embracing geospatial, digital engineering and neurodiversity

Michael Krome and Quinton Cooper (Australia)

SUMMARY

Australian Spatial Analytics (ASA) is one of Australia's largest work-integrated social enterprises. Since its inception in 2020, ASA has successfully established geospatial and digital engineering careers for over 220 young neurodivergent adults nationwide, addressing the significant challenge of this group's 34% unemployment rate. ASA's team is actively involved in various critical infrastructure projects nationwide. Recently, ASA partnered with the Brisbane Airport Corporation (BAC) to deliver professional geospatial and digital engineering services to enhance airport asset management. In the geospatial domain, ASA's data analysts are updating multiple GIS network datasets, such as drainage systems, to accurately incorporate newly generated CAD files and establish a 'single source of truth.' The analysts are integrating various network features and attributes into a single file format using ArcGIS Pro, while also digitising As-constructed and architectural drawings to produce new, user-friendly, and accessible data, with over 30,000 features created to date. With digital engineering, ASA analysts are undertaking Building Information Modelling (BIM) for the Brisbane International Terminal, which will be critical for future air traffic growth, including that for the 2032 Olympics. For this project, ASA's digital engineering team provides BIM services for BAC's Enterprise Asset Management system import and operations. The work uses a range of inputs, including point cloud scans and as-built documentation, to develop a BIM using Revit, which covers electrical, structural, fire, mechanical, and hydraulic assets. In addition to modelling, element attributes are updated by confirming that the model's metadata meets BAC's Level of Detail and Level of Information standards. This work has upskilled 12 data analysts to date. ASA also meets the requirements of the Commonwealth Security of Critical Infrastructure Act 2018 by delivering essential data work in Australia. ASA is also a member of the Trusted Information Sharing Network, which the Department of Home Affairs facilitates. In this session, you'll learn how the Brisbane Airport Corporation has embraced neurodiversity to enable effective airport asset management and create an enormous social impact for young neurodivergent adults.

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FIG Working Week 2025
Collaboration, Innovation and Resilience: Championing a Digital Generation
Brisbane, Australia, 6–10 April 2025