



ARCHNZ

USER

CONFERENCE

PROGRAMME

Friday 27 March 2026

Sudima Hotel, Auckland Airport

8.30 Registration

9.00 Welcome

"Automation, AI and Reality Capture in the AEC Industry"

Lennon Bedford - Technical Specialist

Kirsty Mackie - Reality Capture & Autonomous Specialist
Global Survey

Keynote Address

Dr. Kathryn Salm - Consultant
Urbankind

"Rolling Out Reality: Automating Construction Truth with Next-Gen Robotics"

Reality capture is moving from static, infrequent snapshots to dynamic continuous data streams. This session explores the cutting edge of ground autonomy: the new generation of agile, wheeled quadruped robots designed to navigate complex construction sites and priced for scale.

But high-frequency capture creates a data bottleneck. Andy will show how DroneDeploy is bridging the gap between massive datasets and actionable construction truth. Learn how automated ground robotics, paired with AI-driven progress tracking, can instantly give the site team as-built reality. This supports schedule control, payment accuracy, owner communication, and internal coordination with minimal extra effort from the field.

Andy Pavletich - Group Product Manager (Robotic Automation)
DroneDeploy Ground Robotics

"Using LiDAR and Bathymetric Survey Methods for improved River Representation in Hawkes Bay"

This presentation outlines the application of LiDAR and bathymetric survey methods for river surveys in the Hawkes Bay region and compares the outcomes to conventional survey approaches. Traditional methods typically rely on irregularly spaced cross sections, resulting in gaps that require interpolation and limit how well complex braided rivers are represented. By combining above water LiDAR with below water bathymetry, a near complete surface of the river system was captured, improving coverage, safety, and data reusability.

Franco Grobler - Survey Manager
Woods

10.30-11am Morning Tea

"High-Resolution 3D Mapping of Complex Sites Using UAV LiDAR and TLS"

This presentation covers high-resolution 3D mapping of complex sites, focusing on power stations. Terrestrial Laser Scanning (TLS) is used to capture detailed data from the ground, while the AA9 UAV LiDAR unit allows access to restricted or hard to reach areas. Combined, the data is precise and detailed enough to produce LOD 300 models. This talk will cover fieldwork planning, H&S considerations, data processing, and QA using Cyclone 3DR. Outcomes, limitations, and practical considerations of this integrated approach will also be discussed.

Gisela Ripoll - Geospatial Team Lead & Chief RPAS Pilot

Kurt Larsen - Geospatial Specialist & RPAS Pilot

Cheal Consultants

"Reality Capture and the Central Interceptor Project "

This talk showcases how the Ghella–Abergeldie survey team has used reality capture technologies on the Central Interceptor—one of New Zealand's largest wastewater projects. The 16.2km, 4.5m diameter tunnel runs 15–110m below ground from Grey Lynn to the Māngere Wastewater Treatment Plant, constructed using TBMs.

Reality capture has been essential for:

- Complex tie ins to live assets, using high density scanning for accurate planning and construction.
- Design of new networks and diversions, enabled by scanning old or undocumented infrastructure.
- Conformance reporting in inaccessible areas, deploying scanners into deep excavations and some of NZ's longest drilled shafts.
- Improved deliverables, including precise asbuilts, clash detection, and BIM integrated models.

The presentation highlights how scanning has evolved into a critical tool for accuracy, safety, and successful delivery on a major underground project.

Fax McKernan - Survey Manager & **Zeng Zhao** - Surveyor

Ghella

"LiDAR Netics - Automating Workflows for Airborne LiDAR Processing"

Andy will present how Woolpert is advancing production-scale airborne LiDAR workflows through the use of automation and AI. His session will explore the development and operationalisation of LiDARnetics, Woolpert's proprietary, cloud-native LiDAR production suite designed to support high-volume, high-cadence airborne LiDAR and imagery programmes. Andy will illustrate how this platform is being applied across a diverse range of sectors—from large-area mapping and environmental monitoring to infrastructure, utilities, and asset management.

Andy Burrell - Program Director
Woolpert Asia-Pacific

"LiDAR for Automating Inventory of Indigenous Forest Ecology and Carbon"

LiDAR for Indigenous Forest Ecology and Carbon, explores cutting-edge applications of drone-based LiDAR and ground-based SLAM handheld mobile scanning to capture detailed forest structure and inventory data. It highlights how these technologies are being used to improve ecological understanding and carbon assessment in indigenous forests, delivering high-resolution insights for better conservation and management outcomes.

Andrew McMillan - Remote Sensing Scientist

1-2pm Lunch

"Leveraging AI Scripting in Cyclone 3DR"

Feature extraction of road corridors can be repetitive and often has many inefficiencies – add in tight deadlines and the job becomes a perfect chance for delivery bottlenecks. Using AI and 3DR, we can create tools to suit project workflows, allowing surveyors to deliver accurate results fast

Matas Barakauskas - Senior Surveyor & LCS
Patersons

"The Digital Solar System"

The Digital Solar System explores a new way of understanding digital engineering ecosystems—using the elegance of a solar system as a metaphor for connected, dynamic, and interdependent digital workflows. In this talk, Jacques demonstrates how infrastructure projects can move beyond isolated tools and manual processes toward an orchestrated, data-centric environment.

He shares lessons from Stantec's digital transformation journey, showing how system thinking, automation, and intelligent data models can radically improve certainty, efficiency, and collaboration across the project lifecycle.

Jacques Jordaan - Senior Principal Civil Engineering Technologist and Digital Engineering Team Leader
Stantec

"How is AI Being Adopted in the AEC Industry in Aotearoa?"

PANEL DISCUSSION:

- [Dr Kathryn Salm](#) - Urbankind
- [Louisa Bloomer](#) - Stantec
- [Heath Simone](#) - Beca

MC: Bruce Robinson - Global Survey

4-5pm Afternoon Tea, Drinks & Networking

