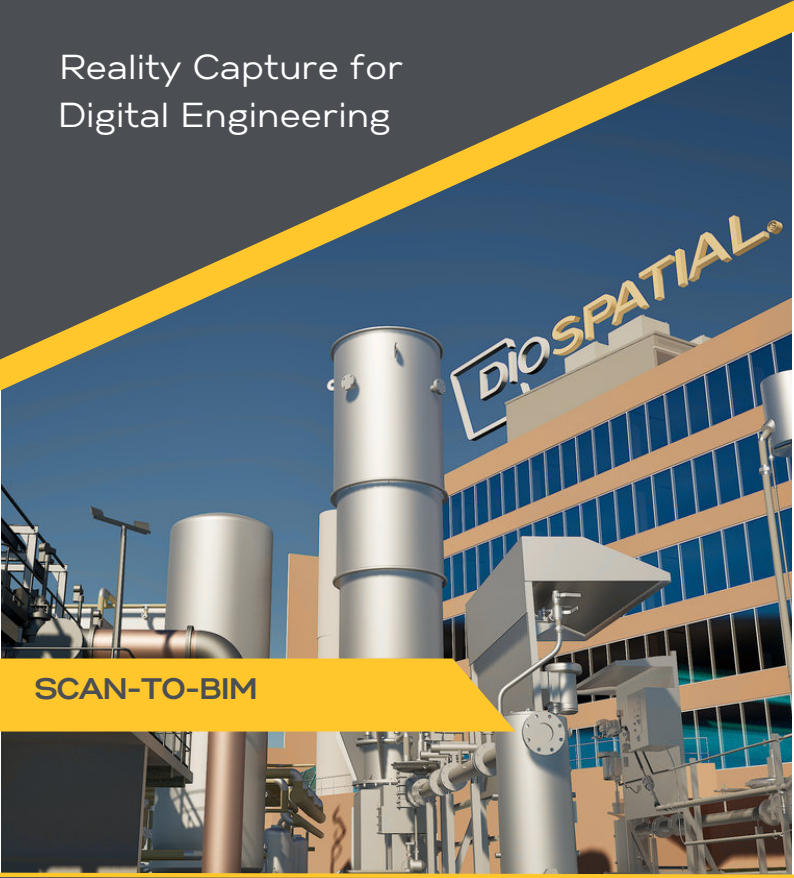
DIOSPATIAL®

Reality Capture for
Digital Engineering



SCAN-TO-BIM

1300 156 969 diospatial.com info@diospatial.com

About Us

We are a team of engineers and surveyors working to provide the most effective survey, geospatial, and digital engineering solutions to the AEC sector. Our team has extensive experience supporting surveyors, engineers and project managers, in the planning, design, set out and construction, of large scale infrastructure.

We utilise drones, LiDAR, sonar, laser scanning and cutting edge technologies to deliver the most effective and compelling spatial solutions for the built and natural environments.

DIO SPATIAL DIFFERENCE

- 100% Client Satisfaction
- Outcome-Driven Solutions
- Quality Assured
- Ongoing Customer Support

Drone Survey & Inspection
Precision aerial and surface sensing technology for accurate topographic survey of large areas.

Photogrammetry Modelling
Providing rich visualisation for inspection and survey purposes.

Laser Scanning & Survey
The most precise and detailed capture of complex structures.

Bathymetry Survey
Surface mapping of the terrain beneath the water for accurate bathymetric survey.

Instrumentation & Monitoring
High precision sensing technologies for reliable, remote and real-time monitoring.

Scan to BIM & Digital Engineering
An extension of our reality capture services to support a digital engineering workflow.

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Scan-to-BIM

TRANSFORMING ASSETS INTO INTELLIGENT 3D MODELS

As industries shift towards digital engineering, accurate 3D representations of physical assets are essential. Our Scan-to-BIM service provides a high-precision, reality-captured model that enables efficient facility upgrades, minimizes risk, and supports informed decision-making.

Our team of expert engineers and surveyors go beyond traditional scanning and modelling – we provide an integrated approach that ensures:

- Accurate and detailed data capture from the outset.
- BIM models optimised for digital engineering, not just static 3D representations.
- Overcome complex construction challenges by combining high precision models with simulation of engineering designs.
- Multi-stakeholder collaboration for faster decision making.

Leveraging our engineering and surveying expertise, to deliver a precise and integrated scan-to-BIM solution

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Digital Engineering

BEYOND SCAN-TO-BIM: INTEGRATED DIGITAL ENGINEERING
We don't just deliver models – we provide actionable insights that enhance project efficiency, safety, and cost-effectiveness.

Our Digital Engineering approach combines scan data with engineering intelligence to optimize planning and execution.

- Minimize costly errors by simulating real-world conditions before construction begins.
- Streamline decision-making with accurate, real-time data for facility and asset management.
- Improve collaboration across disciplines by aligning all stakeholders with a unified model.
- Ensure compliance and reliability with high-detail, scalable solutions tailored to your needs.

We provide more than just a 3D model. We deliver a data-driven solution to successful project execution.

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Previous Projects

BIM Modelling Pumping Station

Diospatial delivered a high-precision scan-to-BIM solution for a dam pumping station upgrade. Using drone photogrammetry and terrestrial laser scanning, a geo-referenced 3D digital twin and point cloud were created.

A detailed BIM model was developed to support design feasibility and mechanical upgrades.

Hosted online for stakeholder access, the model enabled accurate planning, measurement, and simulation, helping avoid costly design or installation errors through precise visualisation and real-world validation.

Survey and Modelling Refrigeration System

Diospatial delivered a high-accuracy terrestrial laser scanning and scan-to-Revit solution for ammonia piping upgrades. A robust survey control network enabled 5mm RMSE accuracy.

Detailed scanning captured the entire plant and complex piping network, with expert modelling producing a precise Revit model.

Hosted on Pointerra, the point cloud and model provided stakeholders easy access to visualise, interrogate, and download data without specialised software or hardware requirements, supporting accurate and efficient upgrade planning.

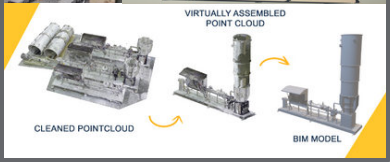
Previous Projects

BIM Modelling Flare Skids

Diospatial delivered a high-accuracy laser scanning and BIM solution to support upgrades and maintenance of wastewater treatment infrastructure. Using high-density scanning, we achieved complete coverage and 3mm accuracy across the mechanical components.

The point cloud was cleaned with individual parts separated and virtually reassembled for precise As-Built modelling. Rigorous quality control ensured full alignment between the model and the captured site conditions.

The result: accurate, accessible data that empowers faster planning, reduces project risk, and streamlines upgrade workflows.

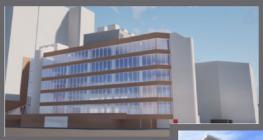


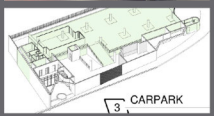
Survey and BIM Building Re-design & upgrade

Diospatial delivered a full laser scanning, surveying, and BIM modelling solution for a multi-storey commercial building.

The scope included internal and external building capture, detailed mapping of the surrounding streetscape, and a boundary survey conducted by Diospatial's Registered Surveyor. We delivered gross building areas and produced detailed floor plans, elevations, and sections to support design, documentation, and project coordination.

A BIM model, compatible with industry-standard design and engineering platforms, was delivered to ensure seamless integration with the client's workflows, supporting collaboration, decision-making, and project execution.





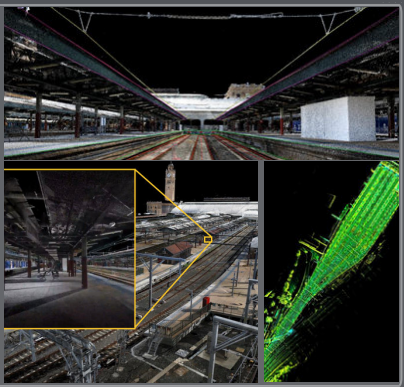
Previous Projects

Sydney Central Yard Laser Scanning

Diospatial delivered a high-accuracy laser scanning solution at Sydney Central Yard to support OHL tension analysis and detailed design.

Using a VZ-400i scanner, a geo-referenced, colourised point cloud was produced at multiple resolutions. Feature and measurement extraction, including height and stagger data, was completed in GIS software.

All work was conducted outside the danger zone with no disruption to rail operations, ensuring safe, efficient data capture and stakeholder collaboration via a 3D web portal.



Train Station As-Built Laser Scanning

Diospatial conducted a high-accuracy terrestrial laser scanning survey of a train station and surrounding streets to support engineering design and construction planning.

A colourised point cloud and interactive panorama viewer enabled virtual site walkthroughs, measurements, and annotations. Manual data cleaning ensured precision, and deliverables exceeded accuracy requirements at ±5mm.

All work was completed over two days without road or rail closures, demonstrating Diospatial's ability to deliver safely in complex urban environments.

Our Clients

We have worked with a wide range of clients across various sectors delivering tailored survey and spatial solutions to meet diverse project needs.

DIOSPATIAL®

Contact Us

Zack Wasson
Managing Director
+61 419 175 949
zack@diospatial.com

Brendon Hol
Operations Manager
+61 449 254 848
brendon@diospatial.com

Robinson Duenas
DE & BIM Lead
+61 481 843 818
rob@diospatial.com