



Metaverse of Opportunity

Scott Crozier, Vice President, Trimble Geospatial



THEME: GEOSPATIAL CARAVAN
**EMBRACING
ONE AND ALL**

“

Geospatial technology,
now an indispensable
part of our lives, **is**
changing paradigms at
an astonishing pace.

”





Geospatial Technology started transforming the Earthmoving industry 25 years ago



Changing Paradigm



60 Million km² to be Mapped



Physical to Digital



Reduce Impact



Increase Efficiency





Artificial Intelligence



Reality Capture



Cloud Computing



Digital Twin



Connectivity / IOT

The Power to Transform



3 Innovators using the latest technology to transform the way they work.



Geo Infra
Netherlands

Design and Engineering
supporting Civil Contractors



STRABAG
Austria

One of the largest
construction companies in EU



Leigh Surveyors
Australia

Surveying services for
projects across all sectors



Continuous Innovation

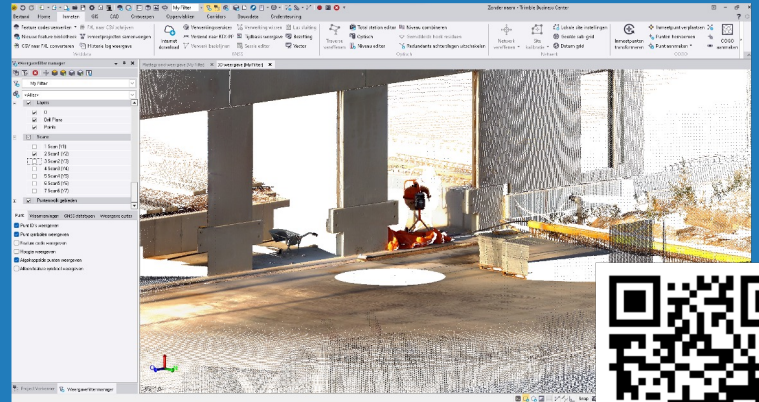
Geo Infra, Netherlands, supported by Geometius

Geo Infra were early adopters of the digital workflow and are constantly looking for new innovations to improve their business

- "Over the years we have made the successful transition from a paper-based to a full-digital workflow," Jarno de Jong

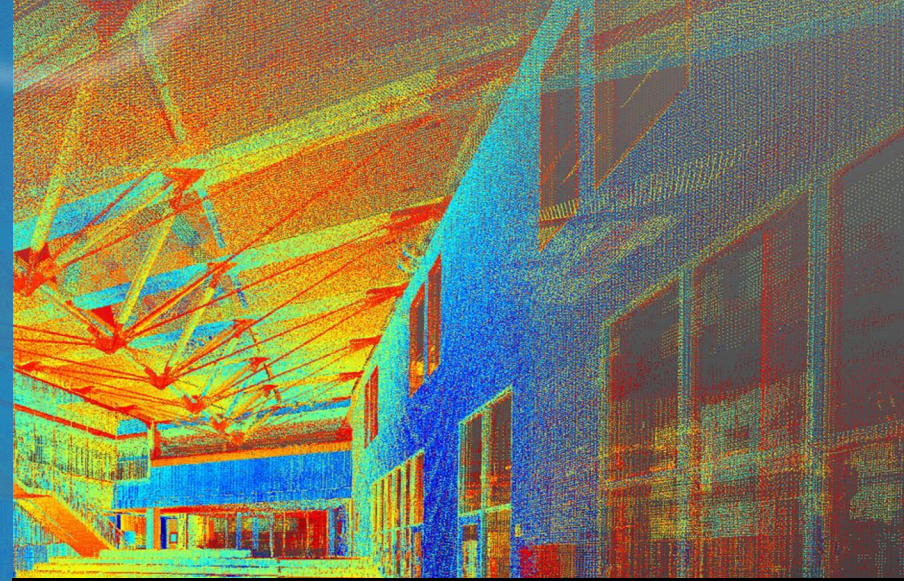
Recently added **Reality Capture** technology as part of their **continuous innovation** drive.

- A more complete image of the site, more often from pre-survey through to as-built. Improved planning and QA throughout the project.
- "Enabled us to grow our accuracy, speed of delivery and profitability." Jarno de Jong



Data Acquisition, Visualization & Insights

“The innovators in the industry are already leveraging the power of reality, capture, AI, cloud compute and digital twin technology giving glimpses of what the metaverse will enable”



“Paving the Way” with Field to BIM to Field workflows

STRABAG, Austria: All digital road reconstruction

Reality capture, digital twin and AI were key to the success of the all digital Swiss project.

- The **Client/Owner is driving industry forward** requesting the most technologically advanced solution possible including digital only delivery in a **tender where cost only accounted for 40%**.

STRABAG noted many wins from the project including:

- **Full transparency** of the project from start to finish **including for the local residents.**
- **Optimised cost of milling** operation minimising material to be cut and trucked offsite.
- **AI** used on point cloud model **reduced feature extraction time** in digital data hand over.



Embracing it all

Leigh Surveyors, Australia

Recently mapped 200km of Brisbane's motorway and complex urban environments.

- “We are **effectively demonstrating that mobile mapping** is useful for safely conducting **as-built, pre-design and maintenance surveys** to the highest standard without the need for road closures.” Chris Power



Unprecedented detail to engineering level spec (15mm)



AI tools auto detect and classify guard rails, signposts, light poles, curb, line markings etc.

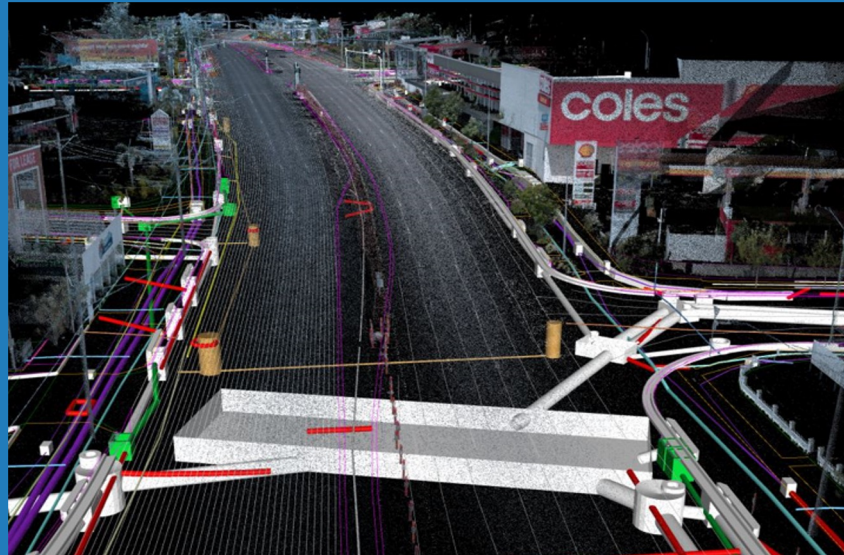


Embracing it all

Leigh Surveyors, Australia

Key insights from interview with Chris Power

- **Biggest challenge: Accuracy**, but with proper survey workflows the MX9 can now deliver engineering tolerances.
- **Near term applications:** Recent improvements in precision open up use cases from **maintenance, pre-design and as-constructed surveys**.
- **Biggest benefit:** The value is evolutionary, but today no traffic control **saves \$10,000/day**.
- The **future of BIM/Digital Twins:** After seeing our digital twin with integrated BIM objects and automated classification we are **seeing clients** like Queensland transport **update their survey standards and technical specifications**.



A Metaverse of Opportunity



We have an incredible technology stack that when fused will drive change at rates we haven't seen



The world is calling for its infrastructure to be built and operated better, faster, safer, cheaper and greener



Geospatial data & knowledge is at the heart of transformation in nearly every industry





Thank you

Scott Crozier, Vice President, Trimble Geospatial