

VINITRA

Consulting Pty. Ltd.

Engineering Survey & Maintenance Consultants

Services We Provide

Full 3D & 2D Engineering Surveys & Draughting of various structures to develop accurate As-built Plans, Models and Documentation for, but not limited to:

1. Design intentions
2. Accurate SAPOA calculated rentable surface areas
3. Asset & documentation management
4. Compliance requirements
5. Volume & area calculations
6. Verification documentation

These processes require significant accuracy to achieve regulated compliant attributes and a vast amount of time is contributed to all projects to ensure the highest possible accuracy on all our documentation.

With our background, since 2002, in Structural Engineering, Architecture, Construction Work and Surveying we produce highly accurate documentation with a strong 'no-short-cut' attitude.

We have successfully produced certified accurate as-built documentation for large scale retail and commercial properties across South Africa.

We are constantly faced with new challenges with every project and this evidently leads to improved knowledge to assist on an even higher level with every new project.

We pride ourselves in our work deliverance and wish to share our experiences and knowledge with all our clients.

What is 3D Scanning

3D scanning is the millimeter accurate dataset collection of the shape or form of static elements or objects in a 3-dimensional space or environment.

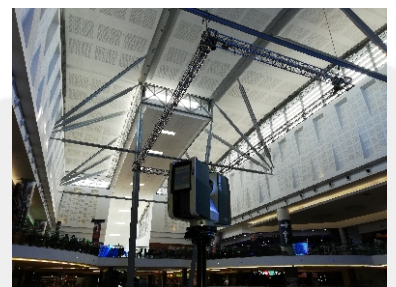
The accuracy of this data collection is processed to a range of 1-6mm and results in a consistent accurate digital environment for numerous applications in Architecture, Engineering, Construction and Manufacturing. This dataset combined with a 360° spherical photo view holds great value to not only the design specialists but also efficient data to Real Estate, Building Maintenance, Forensics and Logistics to name a few.



Plant Room Scanning



Retail Shopfront Scanning



High Level Ceiling Scanning



Parking Floor Scanning



Window Profile Scanning

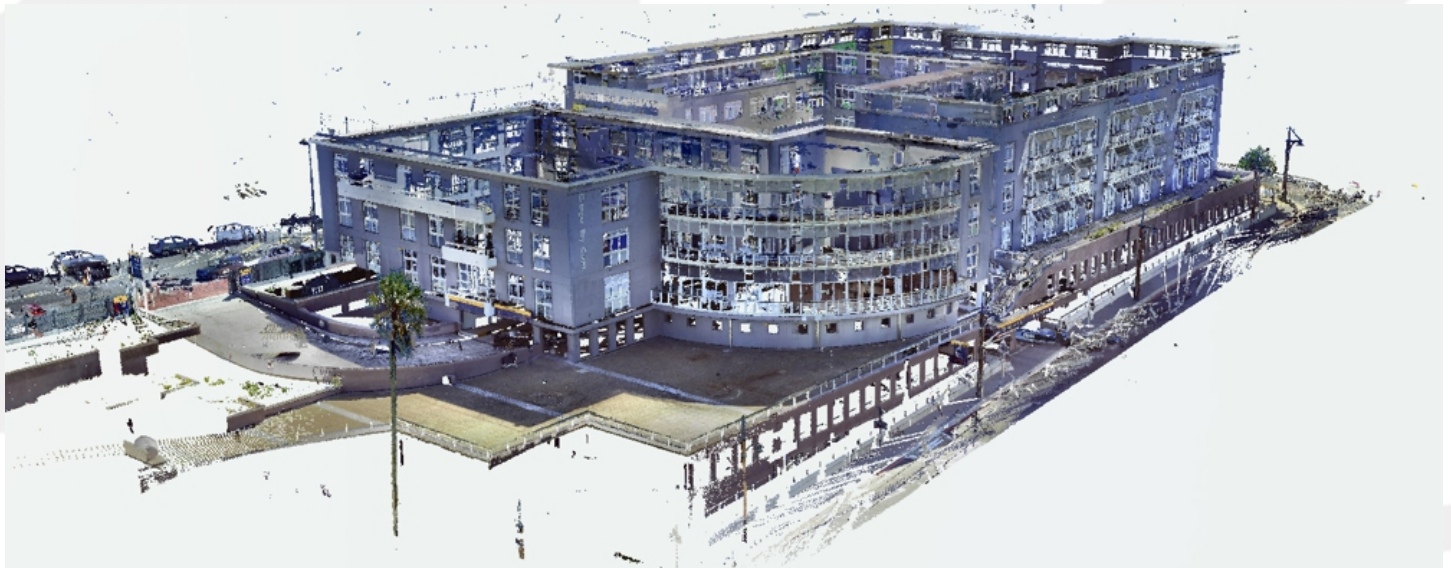


Office Space Scanning

What is a Point Cloud

It is a dense group of points in a X, Y and Z digital environment where each point is also referenced to RGB colour by combining photography and LiDAR captured surfaces.

Each point has a fixed location resulting in the accurate representation of the environment around the scan location and by registering (connecting) these various scan locations results in a computing limited digital representation. Essentially the same as you standing anywhere with elements/objects around you with a tape measure in your hand measuring anything you can touch.



What are some of the advantages and use cases of this Dataset

Detail information:

Grid based LiDAR measurements contains increased information of an element/object opposed to Surveying/Measuring by hand. Depending on the required deliverable, elements/objects can have up to 1mm apart coordinates. Typically, this degree of density can be utilized in manufacturing or reproducing a hand-made object.

Verification:

The high degree of accuracy of the registered Point Clouds can be utilized in the verification of large-scale construction against designs, reverse engineering, volume calculation and stock take. Typically, these types of datasets can be utilized for the As-Built Documentation process for further design or alterations to existing construction.

Accessibility:

Being a digital representation of an area, the data can be shared with all members of the team that is involved in the process and allows for not having to be physically present at the area for information gathering.

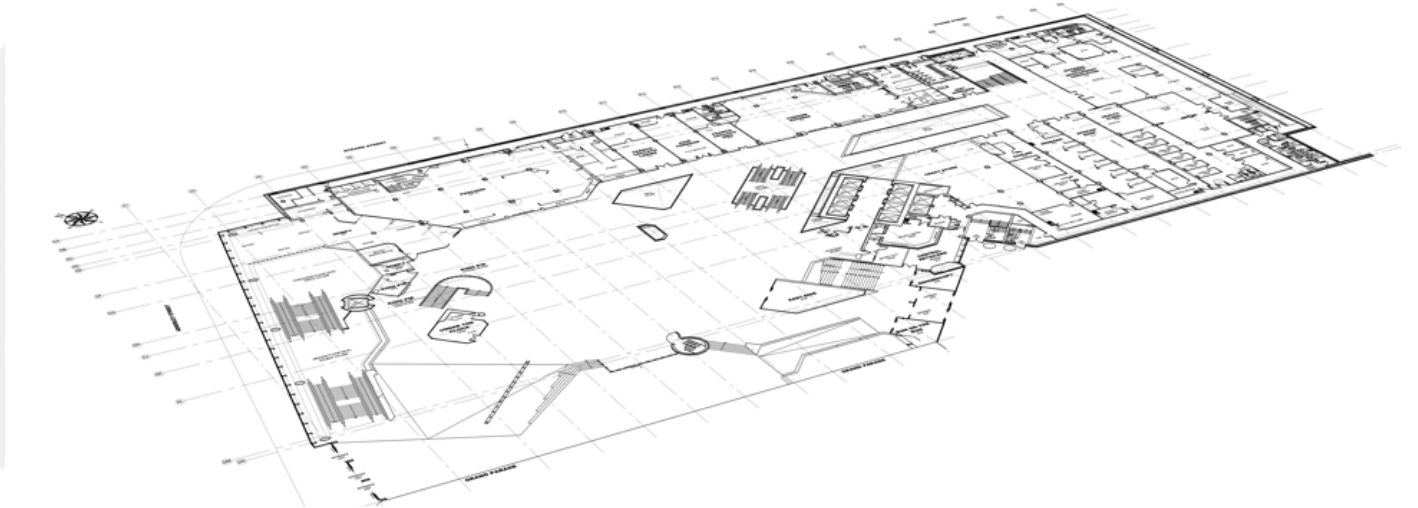
Clash Detection:

By implementing interval scanning throughout a construction or manufacturing project the 3D Designs can be analyzed against current activities on site by overlaying the Point Clouds onto the Designs. Discrepancies and site installations can be verified and can result in the early detection of possible installation problems having a direct result in cost and time savings.

What is As-built Documentation

This is the accurate to scale representation of an object, element, construction or natural formation in a drawing, model or document format.

This data is the result of prior surveying combined with the processing and draughting of the surveyed results. Raw Point Cloud Data is not utilized in a formal design or alteration processes and therefore Raw Point Cloud Data must be developed to represent the environment in either a Plan or Model format.



Some of our Larger Completed Projects



Golden Acre, Cape Town



Chatsworth Centre, Durban



Granger Bay, Cape Town



Tygerberg Park, Platteklouf

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Quality is not an act, it's a habit...