

# 3D LASER SCANNING

*Confidence In Every Decision.*



# TABLE OF CONTENTS

Why Do You Need 3D Scanning?	02
What We Offer	03
Scanning Workflows	04
Industries We Serve	05
Featured Projects	06
Company Portfolio	07



# WHY DO YOU NEED 3D SCANNING?

Ryobi-G offers precision 3D scanning solutions, using state-of-the-art equipment, technology and processes to produce 3D scans of the highest quality needed to empower our clients with reliable data they can use with confidence.

## SAFE

Our ability to scan from a safe distance enables us to collect data on any job site deemed unsafe to access.

## FAST

Being able to capture thousands of data points in seconds, our team is able to survey a larger area in a short amount of time, limiting the man-hours spent in potentially dangerous areas.

## ACCURATE

The skill of our team paired with our high-end scanners guarantees results with an accuracy up to  $\pm 2\text{mm}^*$ .

*\*subject to conditions*

## COST-EFFECTIVE

Our value stands out above all others when speed, accuracy, and consistency is needed, particularly for large volumes of data.

## CLASH DETECTION

A popular, cost-saving use of (our) scan data to intercept design clashes caused by deformation over-time and/or changes during construction / installation.

## EFFICIENCY

The efficiency in our process enables us to deploy our scanners and start collecting data with minimal downtime, which translates into faster delivery times for our clients.



*Experts from all over the world have frequently reported that 3D laser scanning can reduce total project costs by 5-7 percent and project schedule by 10-12 percent on industrial projects.*

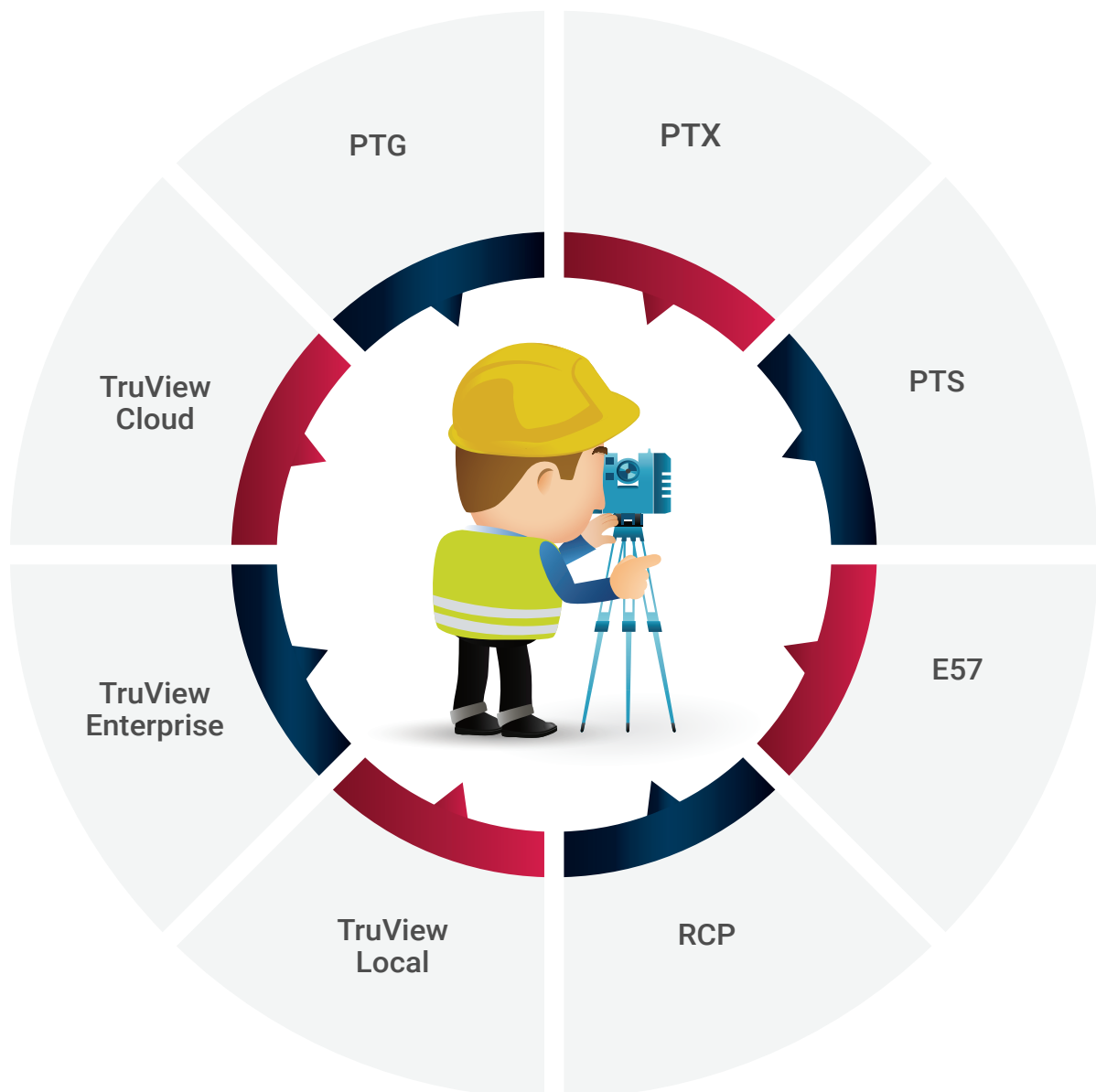
*Deecan Sanyo Chillachi A.*

*(Research Analyst, Engineering and Construction)*



# WHAT WE OFFER

Our 3D laser scanning (3DLS) capabilities extend to more than just data collection. We have the flexibility of formatting the data to meet the needs of the client. For instance, we are able to prepare the data sets in specific formats to help integrate it into their workflows - see below.



# SCANNING WORKFLOWS

Ryobi-G practices industry standards using top of the line scanners to capture every detail as accurately as possible in order to provide our clients the best quality data. This can be broken down into 5 essential steps - see below.

START

## STEP 01

**PLAN**- We start by working closely with each and every client in order to understand their project needs in order to provide the best possible solution.

## STEP 02

**SCAN**- Our talented engineers will then mobilise, deploying scanners on-site and begin capturing (raw) point cloud data.



## STEP 04

**PROCESS**- Once the engineer has collected all the necessary point cloud data, it is then exported onto a computer for processing.

## STEP 03

**REVIEW**- Whilst scanning, our engineers will be constantly reviewing the data collected, checking for errors, making sure we collect only what is essential for the project.



FINISH

## STEP 05

**DELIVER**- Once the data processing is complete, a final round of checks is done with the client before we compile the final deliverables and hand it over to the client.





# INDUSTRIES WE SERVE

3D laser scanning is used in diverse fields ranging from construction and infrastructure to the entertainment industry. The most common industries that benefit from laser scanning are listed below:



## CONSTRUCTION

3D laser scanning is a common tool that can be used in all phases of a construction project, particularly large and/or complex projects - where time (spent collecting data), consistency, and accuracy of data play a significant role in a project's timeline.



## INDUSTRIAL, PROCESS & PLANT

3DLS data is ideal for design, construction, operations, retrofits, and renovations in complex structures such as refineries, processing plants, and production facilities.



## ARCHITECTURE & DESIGN

Having 3D as-built models help designers and engineers to visualise and modify a design / space with accuracy - common practice found in many modern-day project workflows.



**CAN'T FIND YOUR INDUSTRY?  
TALK TO US!**



# FEATURED PROJECTS

Ryobi-G has taken on a wide variety of 3D laser scanning projects across various industry. Whether they are big or small, simple or complex, we strive to offer the best possible solution(s) for any given task. Below are 6 unique projects that we have taken on, from scanning heritage buildings and laboratories, to mapping construction sites, processing plants etc.

Drop us a message if you want to find out more!

## W'RAY CONSTRUCTION

3D laser scanning of interior features of heritage building for restoration work at Orchard Road.

## PUB CATCHMENT & WATERWAYS

Supply and delivery of ortho-mosaic mapping of a construction site for building contractors' use at Clementi HDB site at West Coast Link.

## BASF CHEMICAL PLANT

3D Laser scanning using TLS and drone imaging of entire chemical plant got as built and A&A design works at Jurong Island.

3D static laser scanning services for Changi Water Reclamation Plant (CWRP), Chestnut Avenue WaterWorks (CAWW) and Jalan Eunos Services Reservoir (JESR).

3D laser scanning for Jewel Basement 1 (Pre & Post Scanning).

The provision of registered surveyor services to carry out 3D laser scanning & BIM Modelling for the existing CTRN facility at 11 Stockport Road, DSO Marina Hill premises.

## WILLOWGLEN

## SHIMIZU

## DSO NATIONAL LABORATORIES



# COMPANY PORTFOLIO

For over 20 years, Ryobi-G has been working with an wide range of clients from private companies to local (government) authorities. We have an extensive track record of delivering satisfaction to our clients. Here are some of the projects we've worked on over the years:

NO.	CLIENT	PROJECT DESCRIPTION
1.	Mott MacDonald	3D laser scanning and hi res imaging work for Tunnel Structures and Trackwork System.
2.	ShenZhen Metro	3D laser scanning and hi res imaging for assesement of tunnel profiles, railhead profiles and wall structures
3.	W'Ray Construction	3D laser scanning of interior features of heritage building for restoration work at Orchard Road.
4.	Sembcorp Architect & Engineering	Drone imaging for topographical information and visual inspections at Mandai West Camp.
5.	PUB WSN	3D laser scanning, drone imaging and 3D modelling of Mount Faber II Service Reservoir and Fort Canning Service Reservoir.
6.	PUB Catchment & Waterways	Supply and delivery of orthomosaic mapping of a construction site for building contractors' use at Clementi HDB site.
7.	BASF Chemical Plant	3D laser scanning using TLS and drone imaging of entire chemical plant got as built and A&A design works.
8.	Mott MacDonald	3D laser scanning of C8379 bore tunnel for assessment of tunnel cross section profiles at Beach Road.
9.	Meinhardt Facade Technology	3D modelling and 2D orthomosaic (drone) of Alexandra Techno Park Tower A & B for facade inspection.
10.	Land Transport Authority	3D modelling of Recreational Facility for Western Singapore.
11.	NParks	Provision of ground based LiDAR services for the National Parks Board for a period of one year at Botanic Gardens.





# COMPANY PORTFOLIO (CONT.)

NO.	CLIENT	PROJECT DESCRIPTION
12.	AEG	3D laser scan of 20ft container for NTU EMERL.
13	iPORT	3D laser scan of the office building for interior design and renovation work (3D laser scanning and virtual view).
14.	iPORT	3D laser scan of the apartment building for interior design and renovation work at West Coast Apartment.
15.	CAD Drafting Singapore	3D statics laser scanning at Givaudan Singapore Level 4.
16.	Willowglen	3D static laser scanning services for Water Reclamation Plant and Services Reservoir.
17.	iPORT	FARO laser scanner and Trimble Realworks USB dongle rental (1year).
18.	Shimizu	3D laser scanning for Jewel Basement 1 (Pre & Post Scanning).
19.	PEC	3D laser scanning for existing facility to fit new indoor plant for GSK project at Pioneer Sector 3.
20.	DSO National Laboratories	3D laser building survey and BIM modeling for existing CTRN facility at 11 Stockport Road, DSO Marina Hill premises.
21.	NHB	Using 3D reality capture technology to document heritage buildings for Sun Yat Sen Memorial Hall.



# REQUEST FOR FREE DEMO FROM US

You don't have to take our word for it, decide for yourself whether 3d laser scanning the best solution for you. Reach out and call us to get some first hand experience with a free in-person demo session!

## GET IN TOUCH



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