Laser Scan Point Cloud Data Conversion to Intelligent 3D Model – Semiconductor Plant

Key Features

Technology:

Intergraph CADWorx

FARO SCENE

AutoCAD Revit

Autodesk Navisworks

Kubit

Duration:

The project was completed in 1 month

Deliverables:

1. Conversion of Point Cloud Data from 3D Laser Scans
2. Generating intelligent 3D Model on CADWorx

The Client

A leading turnkey provider of customized services to the pharmaceutical, biotechnological, medical device, semiconductor, electronic, health and food industries. They are certified by the relevant authorities in Israel and offer specialized engineering services in Cleanroom facilities globally.

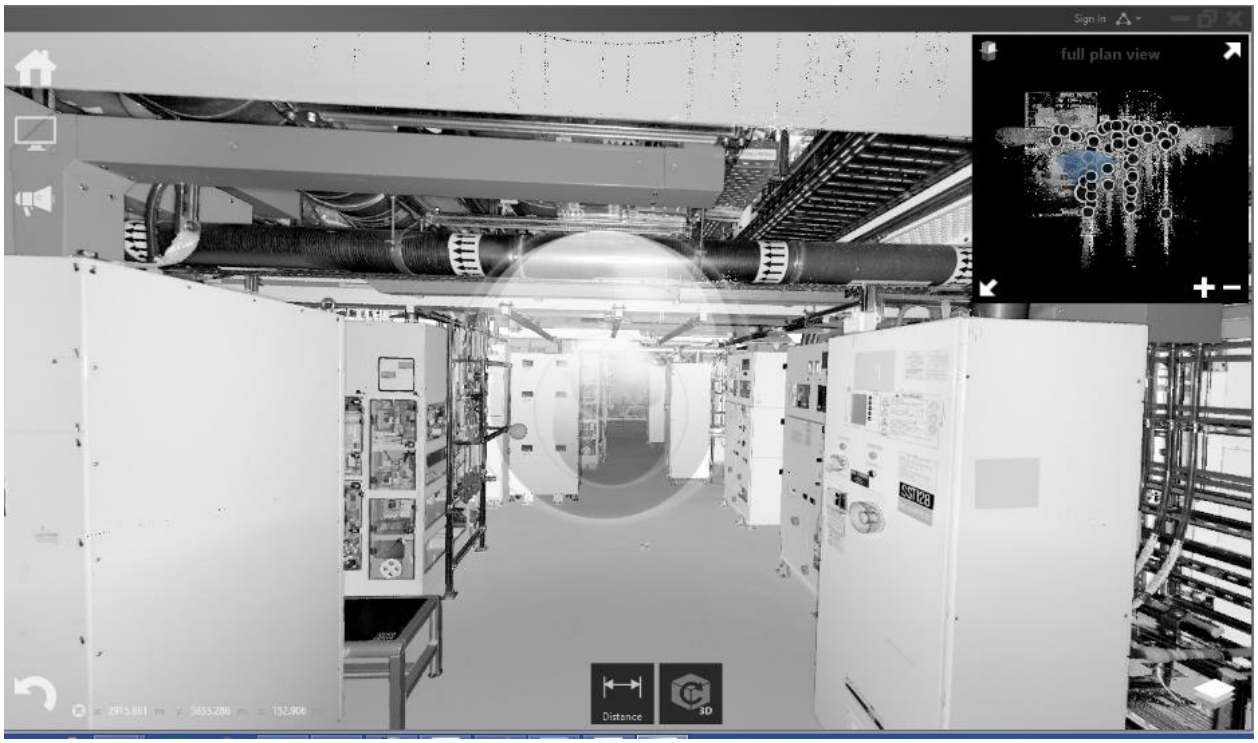
The Business Need

This project was for existing semiconductor chip manufacturing plant where the client wanted to build the same plant at another location. Reverse Engineering & Laser Scanning activities were implemented where the survey was done through FARO Laser Cameras. Point Cloud Data was extracted to generate intelligent 3D Model using Intergraph CADWorx.

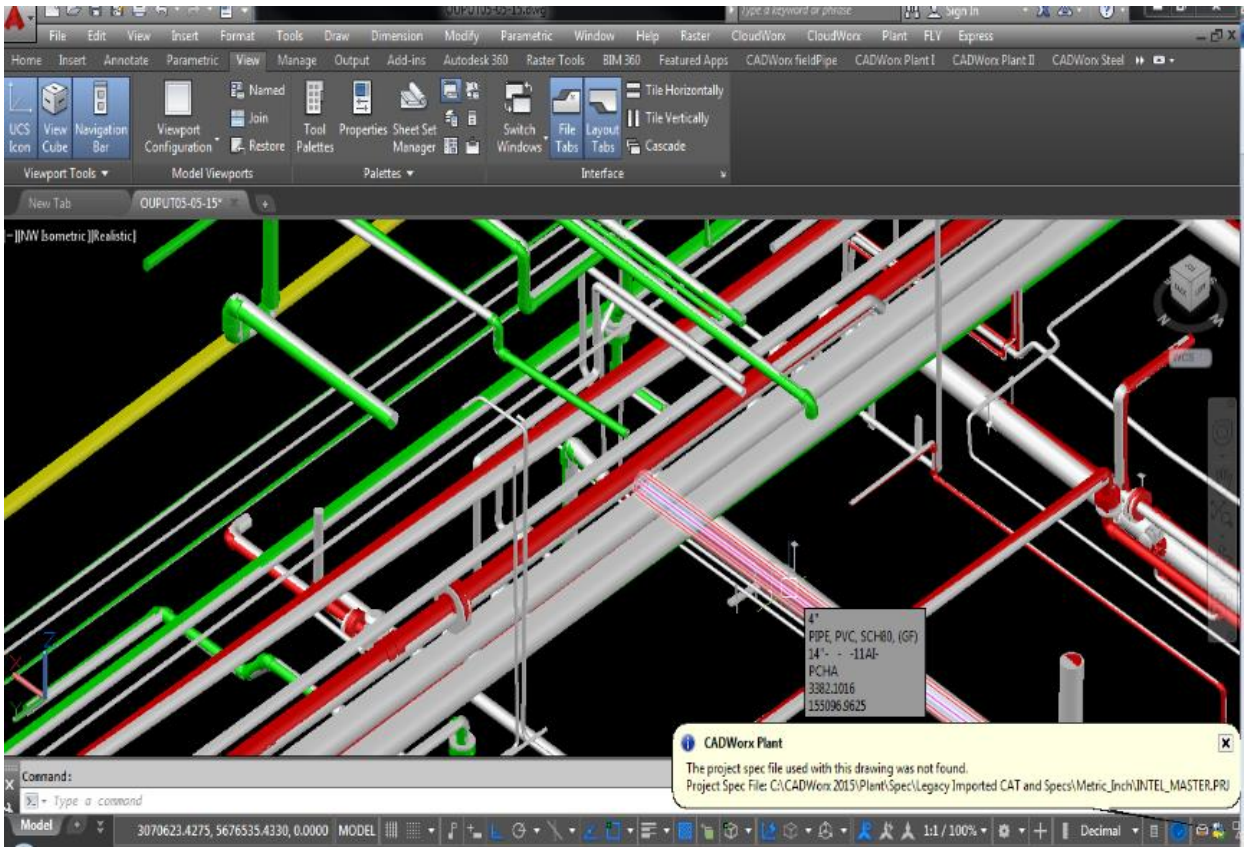
Rishabh's Solution

Rishabh's Engineering completed the Laser Scanning and conversion of point cloud data to intelligent 3D model of a semiconductor plant within 1 month with a team of 4 members.

360 Degree Plant View - FARO



360 Degree Plant View - FARO



Intelligent 3D Model on CADWorx

Input - Laser Scanning Point Cloud Data from FARO Cameras

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Step 1 - Registration & Stitching

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Step 2 - Create Dumb Model

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Step 3 - Checking Dumb model in AutoCAD Revit, ensure proper Registration & Stitching

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Step 4 - Creation of Recap project (Single file)

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Step 5 - Use of Library/Catalogue for creating Intelligent Model

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Output - Generate Intelligent 3D Model on Intergraph CADWorx

Laser Scanning to Intelligent 3D Model Conversion Process

Technology Used

- 3D Modeling – Intergraph CADWorx
- For Reviewing Laser Scans – FARO SCENE
- Review Software – AutoCAD Revit
- Model Review – Autodesk Navisworks
- Utility – Kubit

Key Deliverables

- Conversion of Point Cloud Data from 3D Laser Scans
- Generating intelligent 3D Model on CADWorx

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About Rishabh Engineering

Rishabh Engineering provides multidisciplinary engineering support services to EPC companies in industries like Oil and Gas, Petrochemical, Power and Water treatment. Our parent company, Rishabh Software is a CMMI level-3, ISO9001 and ISO27001 company that provides services in Software Development, Business Process Outsourcing (BPO) and Engineering Services Outsourcing (ESO) to clients globally. Rishabh has offices in USA, UK and India with their main delivery center in Vadodara, India.