VITRUM LASER

3D VISUALIZATION TECHNOLOGIES

Terrestrial 3D Laser Scanning
Ground Penetrating Radar surveying
Aerial Mapping & Surveying
Advance 3D Modelling and Visualization

VITRUM LASER
3D Visualization Technologies

VITRUM LASER

3D VISUALIZATION TECHNOLOGIES

ABOUT COMPANY

Vitrum Laser inženiring d.o.o. was established in year 2004 with the aim of developing and deploying non-contact survey technologies, such as 3D laser scanning, UAV and Ground Penetrating Radar.
Company started with LiDAR technology and then specialized primarily for above and under ground measurements and become a leading company in the implementation of non-contact measuring technologies.

OUR SERVICES

Vitrum Laser is a multi disciplined company which provides land and engineering survey services throughout many sectors. With fixed price solutions provided, our clients can be satisfied that cost overruns will not occur.

3D LASER SCANNING

As Built Mapping
Clash Detections
Volume Calculations
Deformation Monitoring
3D object visualization

SUB SURFACE MAPPING

Utility Mapping
Road Layer Profiling
Void Detection
Foundation Investigation
Geological Research
Bedrock mapping
Locating Arheo Artifacts

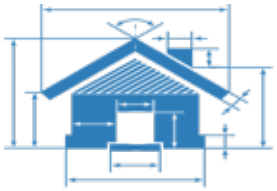
AERIAL MAPPING

GIS mapping & Surveys
Infracture Inspection
Volume Estimation
Orto Photo creation
IR Inspection

PRODUCTS | DELIVERABLES

BREAK DOWN BARRIERS TO THE DIGITAL WORLD

Operating as a multi-disciplinary consultant our Property and Infrastructure teams provide a full range of measurement services across a project lifecycle.



ASBUILT MODELLING

2D | 3D | 4D | 5D
Sections & Elevations
Site & Floor plans
Terrain Modeling
Deviation Analysis
Collision Tests

DEFORMATION MONITORING

Cutting slopes
Building deformation
Tunnel walls
Railway & Roadway
Quarry & Mine

SCAN 2 BIM

As Built 3D for BIM
Retrofit | Renovation
Parametric modelling
Intelligent 3D utilities
Computational Analysis

- 3D CAD & BIM models
- 2D CAD documentation
- Orthophoto
- Clash and Deformation reports
- Volumetrical reports
- 3D Visualizations and Simulations

SOLUTIONS
APPLICATIONS

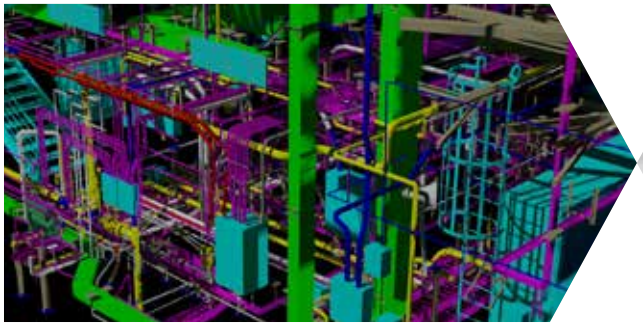
ANY SIZES
COMPLEX FORMS
INACCESSIBLE AREAS
EX ZONES...

Vitrum laser services provide our customers with flexibility and complete turnkey project execution. Our diverse international portfolio of customers and proven track record across a wide spectrum of sectors includes:

- Industry
- Architecture | Heritage
- Construction
- Mining | Geology
- Marine

SHOW CASES

Projects we carried out to demonstrate the versatility of our Services. We specialize in providing accurate 3D models to engineers, architects and facilities managers. Our services have an application suited to a diverse range of industries. Thanks to our service we can reduce project delays, design errors, and cost overruns.

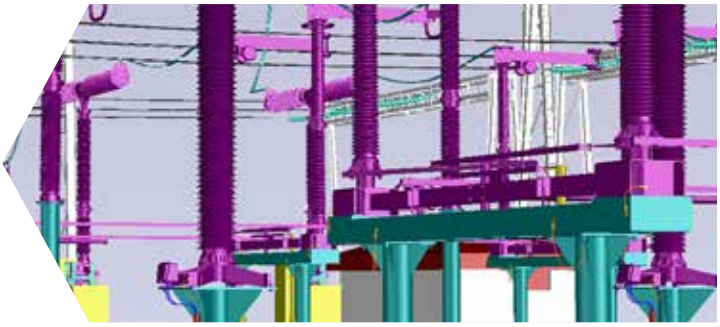


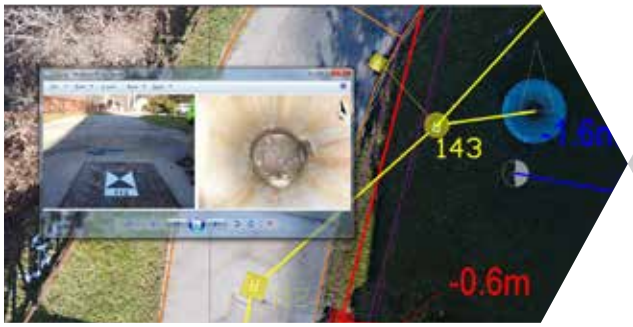
As Built Modelling
Nuclear Power Plant

Customer should use our model to coordinate the installation and relocation of MEP in support of the new system.

Scan 2 BIM
Electrical Substations

With 3D scanning we were able to create complete model for facility engineering, training, archival, and presentation purposes.



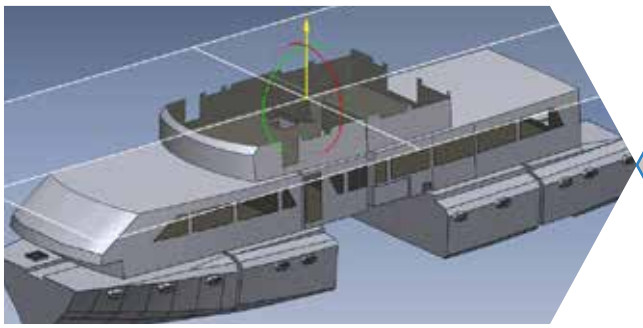


Utility Mapping
Hydro PowerPlant

Over / underground mapping survey was required to locate and map all utility infrastructure.

3D MODELS, BIM, 2D DRAWINGS, DEVIATION ANALYSIS, DEFORMATION, UTILITY MAPS

With more than 10 year's experience Vitrum Laser Inženiring is qualified to provide outstanding and well-informed solutions to the industry. Few characteristic projects are presented bellow:

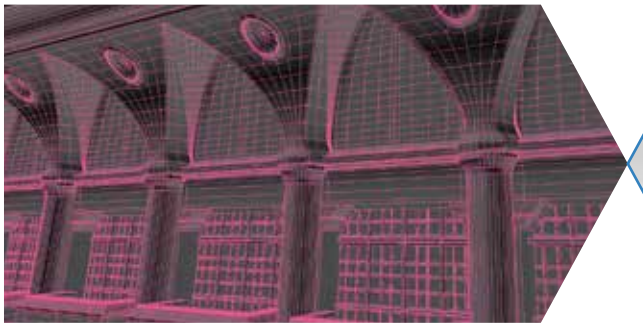


As Built Modelling
Ship Interior

We have scanned for changes to the superstructure, fitting of new equipment and verifying storage spaces prior to loading.

As Buit Modelling
Public building

Concrete part was scanned for further structural analysis purposes. CAD model was creted from pointcloud data.



As Built Modelling
Public Hall

Hall interior space was scanned and modelled for Wall Projection Mapping purposes.

ARCHITECTURE CONSTRUCTON

As Built 3D modelling

Our team was able to understand the construction firm's needs and assist them in creating the necessary deliverables to achieve their goal of verifying the structure was built as it was intended to be.

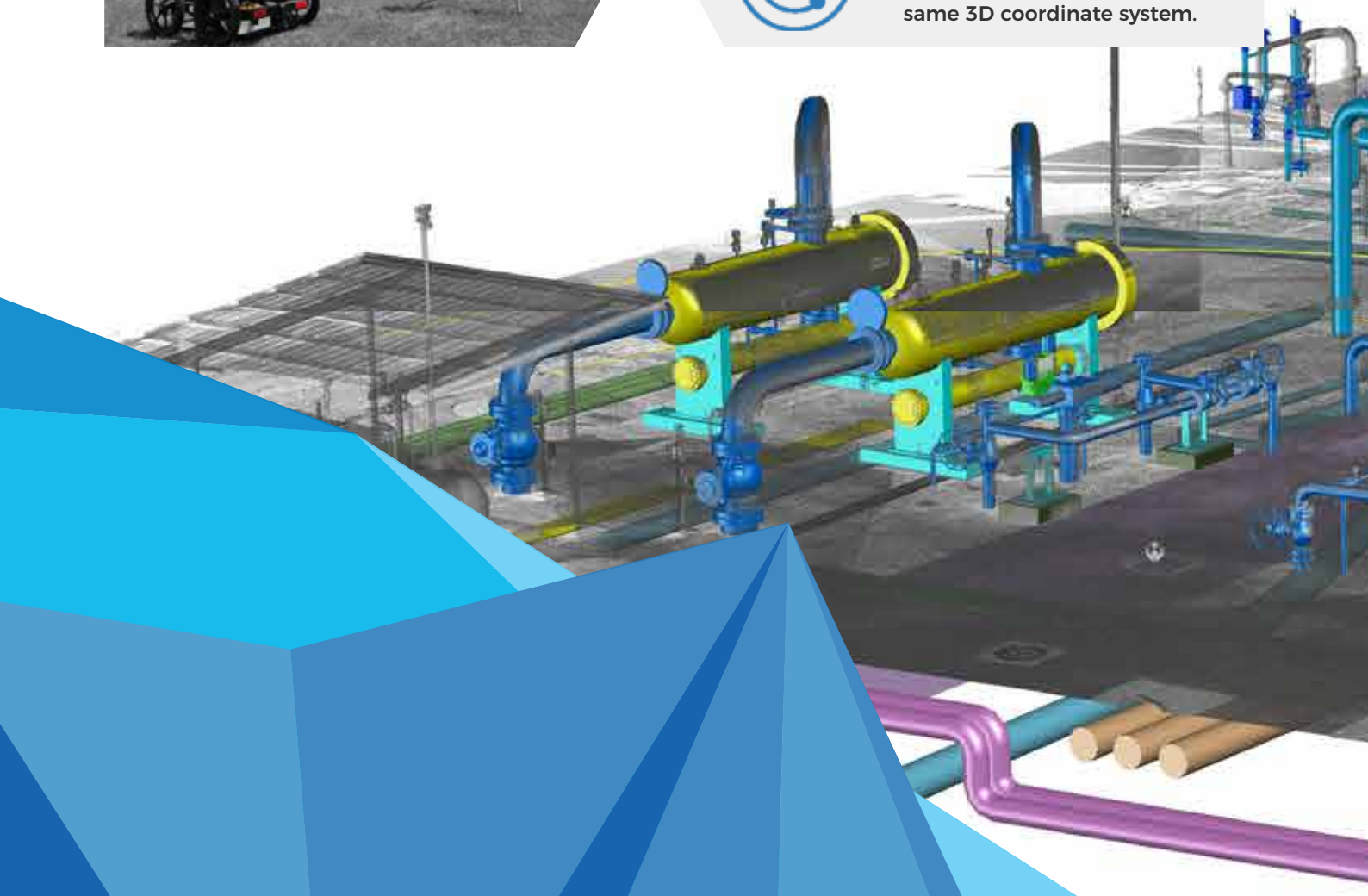
AS-BUILT MODELLING

Vitrum Laser has an efficient process to capture all changes that take place during construction. By utilizing As-Built drawings and/or sub-contractor mark-ups, Vitrum Laser incorporates the information into the BIM to generate As-Built models.

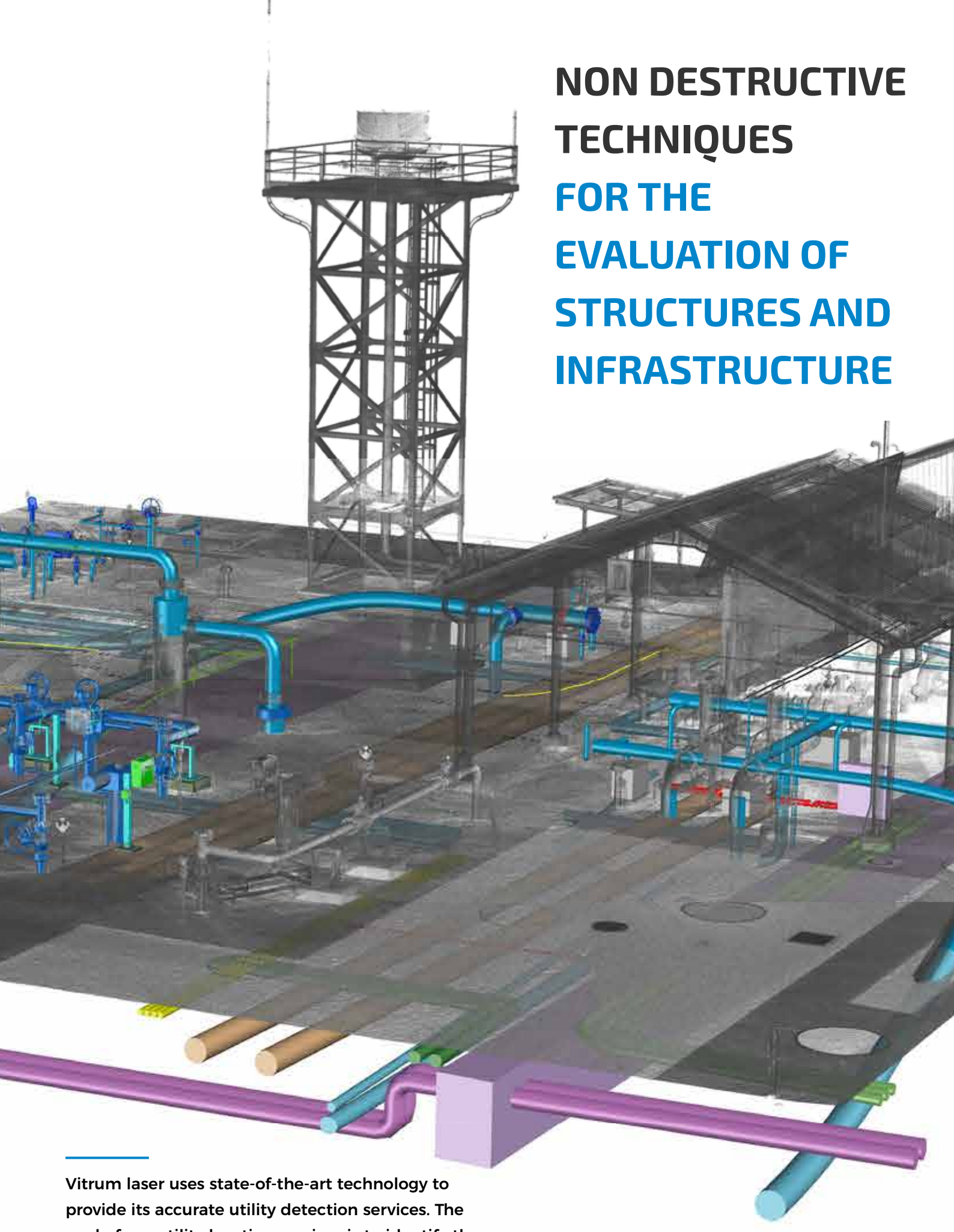
ABOVE AND BELOW

Laser scan & GPR survey

Our Special service is mapping both Surface & Subsurface utilities and present them in same 3D coordinate system.



NON DESTRUCTIVE TECHNIQUES FOR THE EVALUATION OF STRUCTURES AND INFRASTRUCTURE



Vitrum laser uses state-of-the-art technology to provide its accurate utility detection services. The goal of our utility locating services is to identify the location of the utilities in order to prevent damage to them as well as the surrounding property.

MARINE
SHIPBUILDING

Laser scanning for the Marine industry

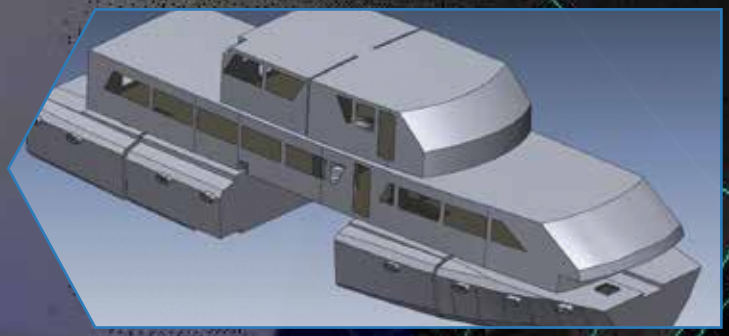
3D laser scanning, replace conventional and time-consuming methods while providing far more accurate and detailed results.

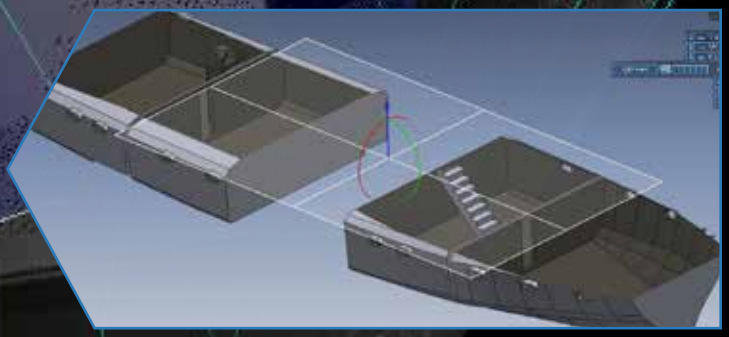
- Ship hull 3D modelling
- Engine room exact 3D dimensions
- Yachts interior 2d and 3D drawings
- Structure waterlines and sections
- Bridge 3D model creation

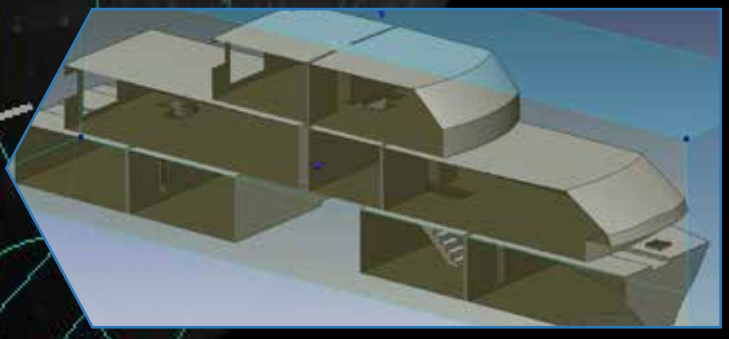
3D LASER SCANNING FOR ACQUISITION, MODERNIZATION, DAMAGE ASSESSMEN

3D Laser Scanning - AN EFFICIENT APPROACH

A better approach involves scanning ship spaces with a 3D laser scanner to create a very detailed and accurate 3D point cloud model. High speed laser scanners are quite suitable for this purpose as they can take millions of measurements in just a few minutes. Scans are taken from various positions in order to provide sufficient coverage around object. The scans are then registered together to bring them all into the same coordinate system. Laser scan data can be accurate to within 2 mm over 10 meter distances.







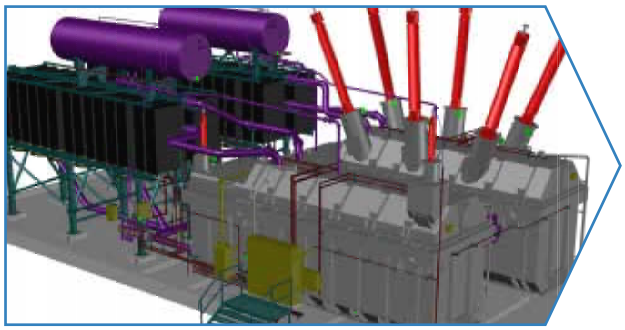
MAINTENANCE,
IT

ELECTRICAL SUBSTATION ASSET MANAGEMENT MODELS

ELECTRICAL SUBSTATION

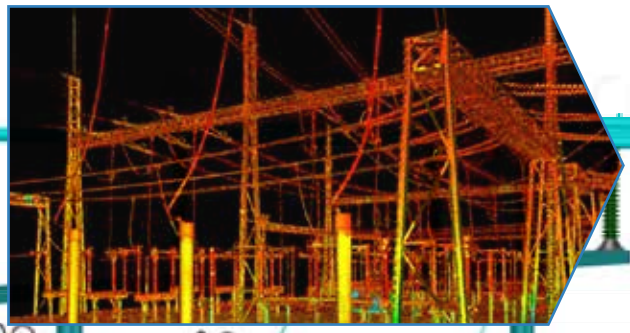
Scan 2 BIM

The resulting 3D CAD model serves as a foundation for the client's asset management of facilities on the sites. This technology enables all stakeholders to perform virtual site visits to view,



SUBSTATION 3D LASER SCANNING

Vitrum Laser measures a typical substation in less than five hours without touching anything. This avoids costly downtime and interrupted electrical service to customers. Our crew stays a safe distance from dangerous high voltage areas. We eliminate the need to revisit a site to collect more measurements. Our electrical utility clients are thrilled to receive a 3D model of the substation to incorporate into 3D substation designing software.

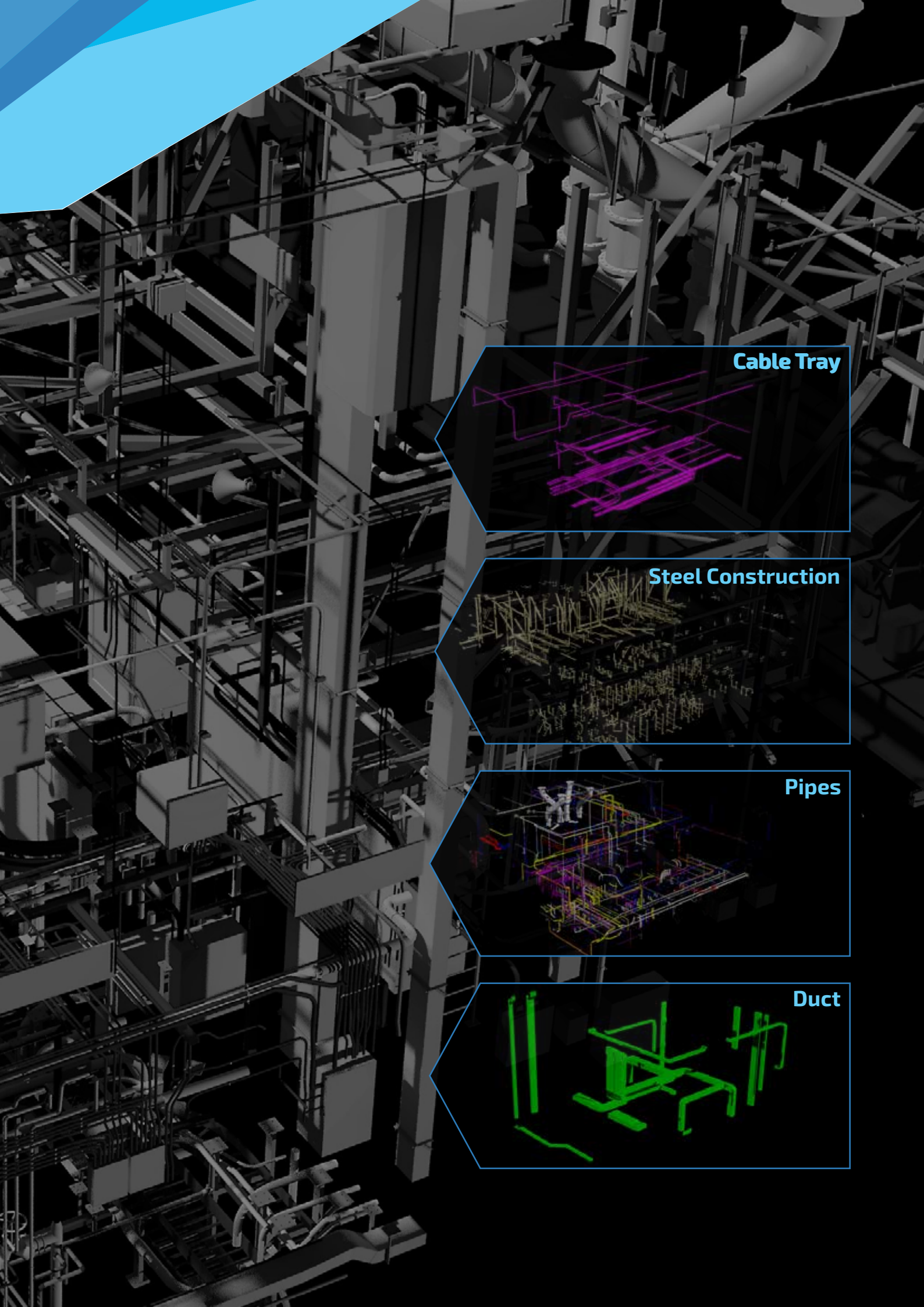


AS BUILT PLANT 3D MODELLING

Vitrum laser specialize in plant 3D modelling in MEP (Mechanical, Electrical, Plumbing) application.

Deliverables: Plant 3D, Microstation, Revit, PDMS

CREATION OF NON-INTELLIGENT (CAD) AND INTELLIGENT (DATA CENTRIC) AS-BUILT 3D MODELS BASED ON HIGH DEFINITION 3D LASER SCANNING SURVEYS


Cable Tray
Steel Construction
Pipes
Duct

OFFICE ADDRESS

Vitrum laser inženiring d.o.o.
Slovenska cesta 8A
1234 Mengeš
Slovenia

T 0038659958314
M 0038631861634

E info@vitrum-laser.si
W www.vitrum-laser.si

VITRUM LASER
3D Visualization Technologies