# Accelerating the Use of Point Clouds

Point cloud data is the future of 3D capture technology, and the future is now.
InfiPoints brings you a new approach to processing, optimizing and sharing 3D Data.

All-encompassing
Point Cloud Processing Software

3D Scanner

Elysium **InfiPoints**™

| Pre-processing | Analysis | 3D Modeling | Outputs |

BIM, CAD

Video,
Viewer File,
VR
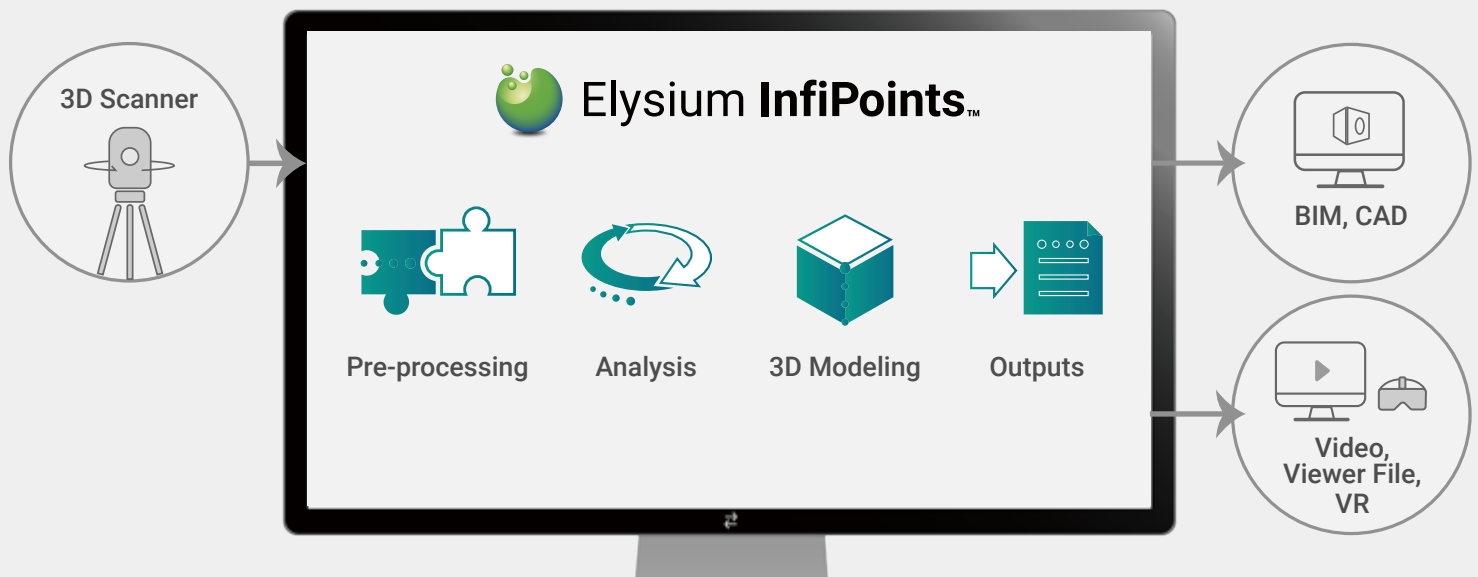
Solid Performance

Stress-free handling of billions of points of your scanned data such as that of large buildings, plants and construction sites.
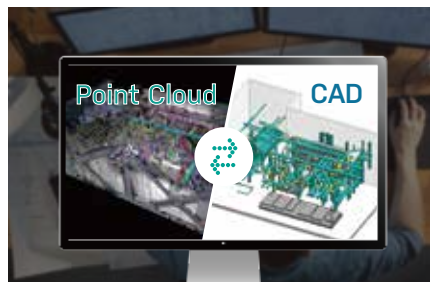
Rapid CAD Modeling

Point Cloud CAD

Trouble-free modeling of pipes and steel structure. Deliver models to Revit or other CAD software.

Shared Experience

With anyone and from anywhere. InfiPoints offers Point Cloud VR, and viewer files.

HIghlighted Feature

POINT CLOUD TO CAD

No need to model pipes, ducts, steel structures and equipment from scratch any more.InfiPoints provides state-of-the-art automatic feature extraction of planes, pipes, ducts and steel structures.

Functionality

Data Import

[Supported format]
FLS/FWS, ZFS/ZFPRJ, PTX, CL3, E57, PTS, LAS, TXT, DP, VRML, STL, OBJ, IGES, STEP, DWG, DXF, ENF, CATIA V5, CATIA V4, NX, Creo Parametric, JT, Parasolid, ACIS (SAT)

Data Pre-processing

Automatic Registration

Noise Reduction

Feature Extraction

Point Cloud Optimizing

Analysis & Simulation

Measurement

Collision Detection

Verification against CAD Model

3D Modeling

Pipe Modeling, Steel Structure Modeling, Equipment Modeling, Duct Modeling

Polygon Generation

Advanced Outputs

VR Export

CAD Export

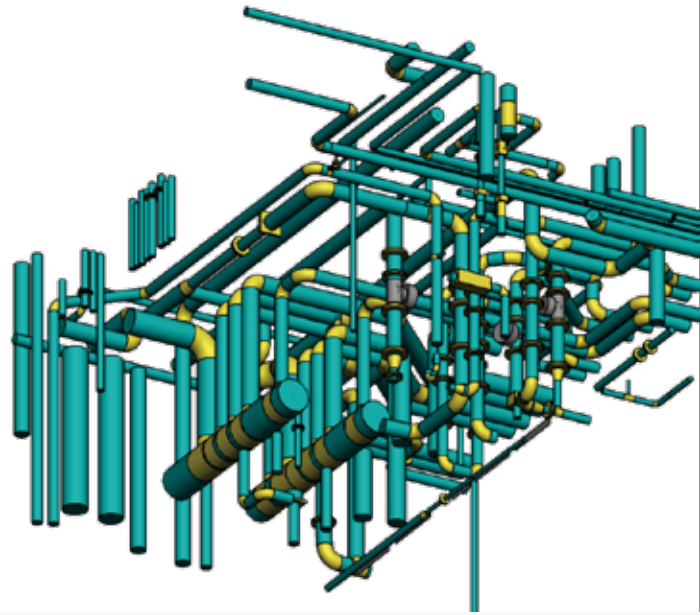Visualization File Export

Video Creation

Ortho Image Export
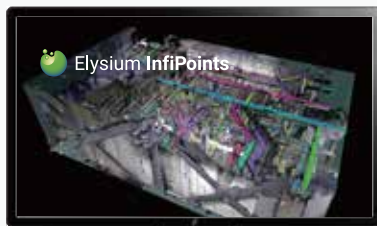
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Revit Option

Streamlining 3D Modeling for BIM

Models extracted from InfiPoints can be directly imported into Revit, Autodesk's BIM software.
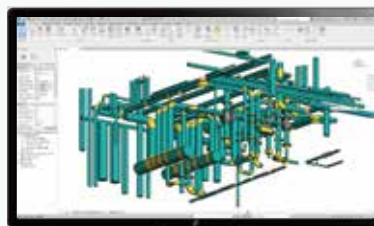This will allow you to considerably reduce the time spent on modeling.

From InfiPoints to Revit

No need to model from scratch any more

Automatic Extraction

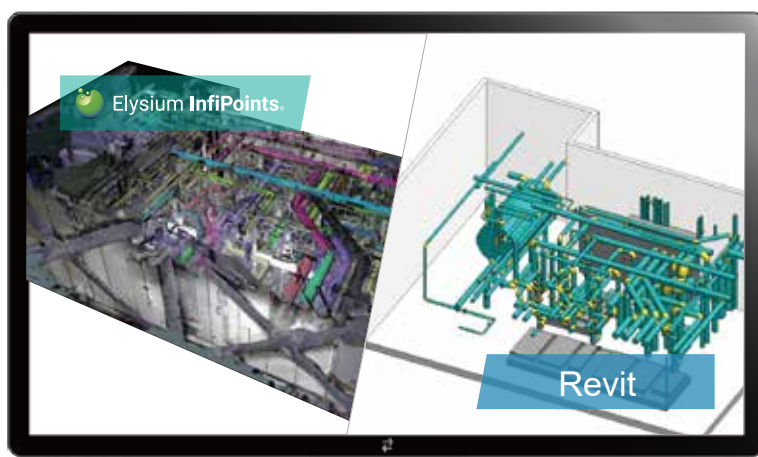Create CAD models by automatically extracting cylinders and planes from point clouds

Data Import

Drag-and-drop the file and open your extracted model in Revit. Start modeling in no time

Detailed Modeling

Detailed modeling within Revit

What you can import into Revit...

*Revit 2023-2024 are supported.

- Pipe
- Duct
- Steel Structure
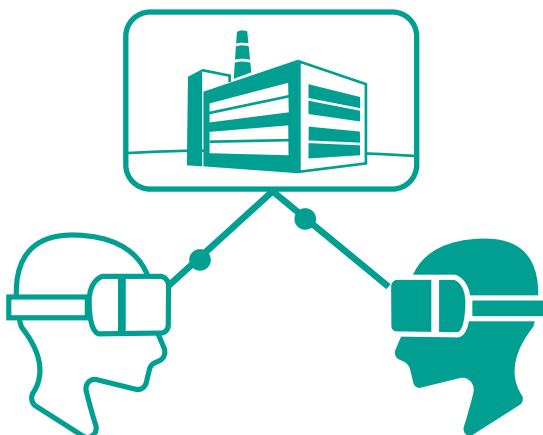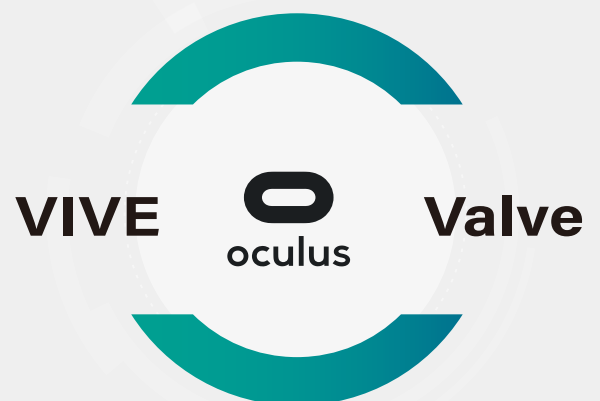- Plane

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VR Option

Experience and Share...

Point Cloud × VR

Supports Oculus, VIVE and Valve

Experience VR of your 3D laser scanned point cloud through a head-mount display.

VIVE   oculus   Valve

From Anywhere...

Share your point cloud data with others.
Enter the 3D space from anywhere and examine the data with your colleagues located remotely.
No need to gather at one place anymore.

What's More with the VR Option?

Standard VR functions are included with InfiPoints Standard, and you can experience more by purchasing the VR Option.

(*1): Requires no licensing nor installation of InfiPoints to view the exported file.
(*2): Edits will be saved in the project file and be editable in InfiPoints, too.

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Basic	
	View operation
	Distance measurement
	Laser pointer
	Jump to the specified location
	Virtual inspection
	Display 3D notes created in InfiPoints
	Display 3D CAD models

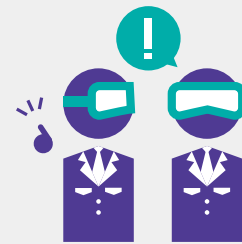| Optional	
	Viewer file export (*1)
	Multi-user virtual inspection
	Synchronize the view point between multiple clients
	Add dimensions
	Add comments and bookmarks (*2)

Utilizing Scenes

Meetings and Presentations
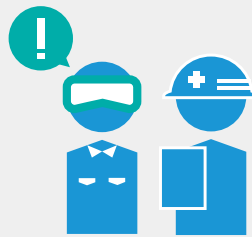
Safety Education

Business Discussion

Supported Hardware

oculus

Oculus Rift S

Oculus Quest 2

VIVE

VIVE Pro, VIVE Pro 2,

VIVE Cosmos, VIVE Cosmos Elite

Valve

Valve Index

A PC that meets both InfiPoints and VR hardware specification is required.
Refer to the Elysium and VR hardware website for more information.

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Elysium **InfiPoints**™ CUSTOMER STORY

FACILITY MAINTENANCE

Significant Labor-saving of 3D Data Creation

Mr. Shintaro Sakamoto   Mr. Eisuke Wakisaka

Shinryo Corporation

01
Point cloud data of a cooling tower for DHC system

02
CAD model generated from point cloud data

03

From measurement to CAD model creation

30% reduction

"We became interested in InfiPoints for its powerful capability to handle gigabytes of large scale facility scan data. Being a one-stop solution for our point cloud utilizing workflow, we decided on the purchase."
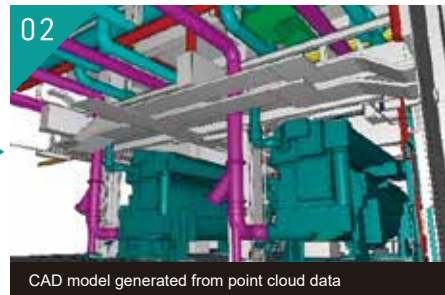
"After importing the point cloud data, we use pre-processing and modeling functions. We then import the processed model into our in-house-developed 3D CAD 'S-CAD' to create an accurate 3D model in a short period."
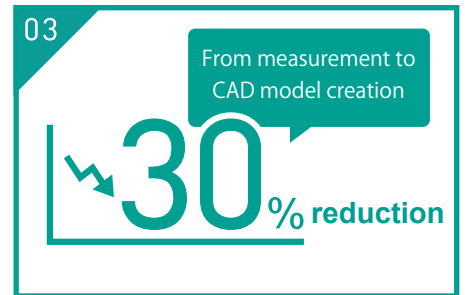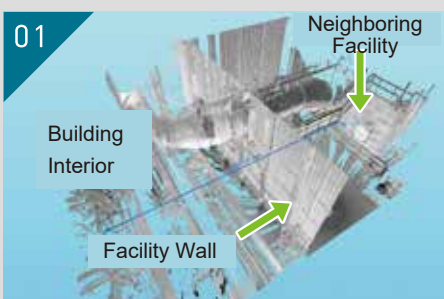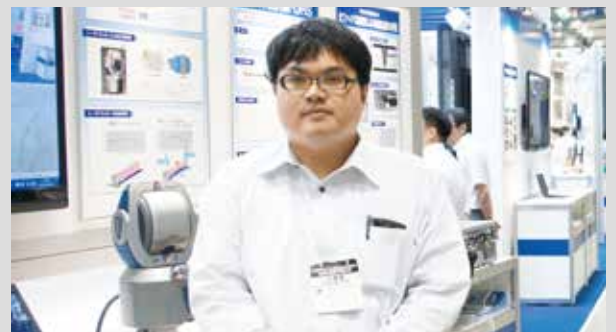
"Implementing new tools such as InfiPoints, we were able to reduce the lead time from measurement to CAD model creation by 30%."

PLANT

Utilizing Point Cloud Data for Piping Construction in Plants and Facility Inclination Inspection

Mr. Takahiko Kuroda

JFE Plant Engineering Co., Ltd.

01
Neighboring Facility
Building Interior
Facility Wall

02

03

"Taking measurements from inside the building to a neighboring building is physically difficult. Using InfiPoints' point cloud registration functionality, we can now easily measure between buildings."

"For example, measurement functions are utilized to examine inclination which have been caused from earthquakes and aging. Also, markerless registration is helpful as there is no need to place markers in dangerous areas inside the plant."
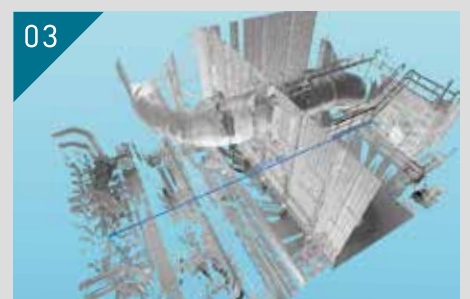
"We have received the 'TPM Excellent Product Award' presented by Japan Institute of Plant Maintenance for 'Utilizing point cloud data to develop new methods of plant maintenance saving time and costs for construction preparation' along with Elysium."
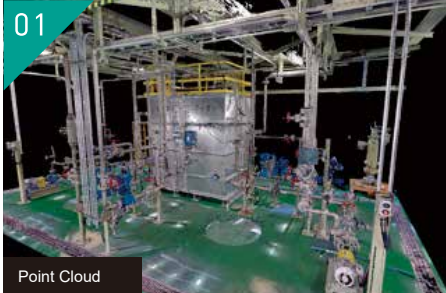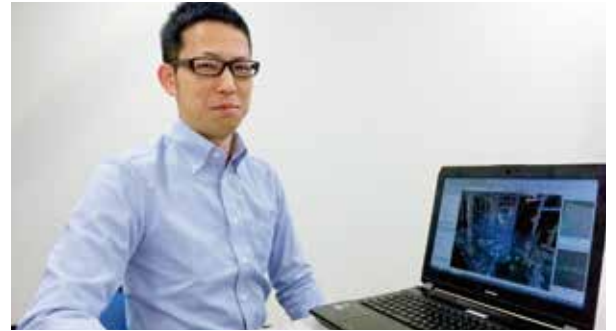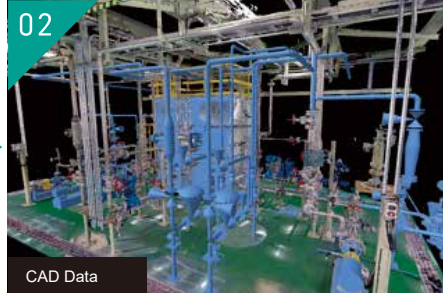
![Elysium InfiPoints™]

PLANT

Streamlining Present Condition Recognition and Rebuilding Examination in Petrochemical Plant

Mr. Takeshi Saito

Shinkoh Plantech

01 Point Cloud

02 CAD Data

03 Interference Check

"We chose InfiPoints for its capability of handling large scale scanned data smoothly and also having automatic CAD modeling functionalities."

"Anyone can check the on-site situation with ease being able to handle large scale point cloud data. Prior examination of construction is more effective such as obtaining more accurate results and shortening lead times."
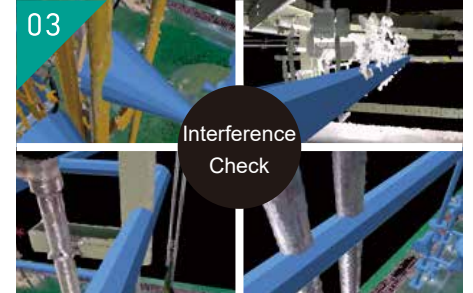
"We can now perform detailed examination with InfiPoints of interference reducing a majority of the rework originally needed. We were able to accomplish zero interference, preventing 30 areas from interference."

ACADEMIC RESEARCH

Utilizing InfiPoints for Study on World Heritage

Dr. Hideki Kuma

Matsue College

01 0.9m 0.7m 1m

02 Specialized robot / Mine tunnel data

03 Point cloud after ground extraction / Original point cloud

"We are researching mine tunnels around Japan and aiming to develop new methods of research by 3D laser-scan of dangerous narrow mining tunnels and earth surfaces clearly visualizing the form of the site."
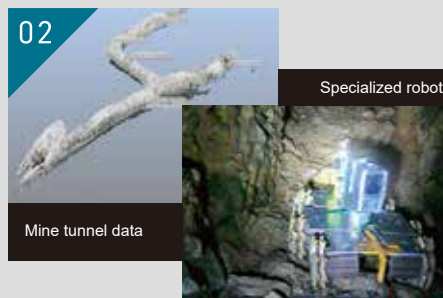
"We have developed a specialized robot 3D-scanning the mining drift. The data however contains lots of noise being a dusty environment. InfiPoints' helps solve these issues."
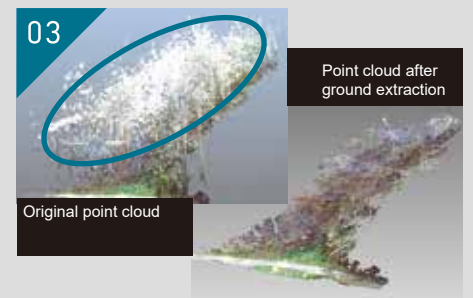
"We conventionally used sketches for research. Now, we can 3D laser-scan the site and extract the ground outline automatically in InfiPoints. This will enable a detailed investigation of the earth surface."

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