From Reality Capture to Infrastructure Intelligence

Connecting iTwin Capture, MicroStation and Bentley Infrastructure Cloud

Marta Kaczmarek, Application Engineer
June 2026

Bentley®

Bentley Systems

A global top 100 software company

BSY | **Nasdaq** Listed

PROVEN

40+
years in operation

$1.2B+
annual revenue

5,200
colleagues in 42 countries

TRUSTED

93%
of ENR Top 250 Engineering Firms

72%
of Bentley Infrastructure Top 500 Owners

41,000
accounts in 194 countries

INNOVATIVE

10M
downloads of CesiumJS

320
patents granted or pending

1,400
colleagues with doctoral and master's degrees

We completed our initial public offering on September 25, 2020. Greg Bentley rang the opening bell on March 28, 2023.

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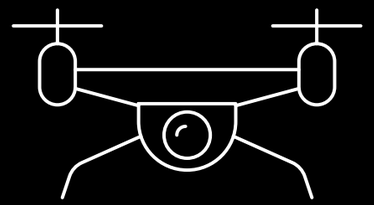
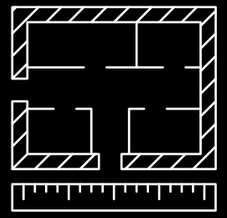
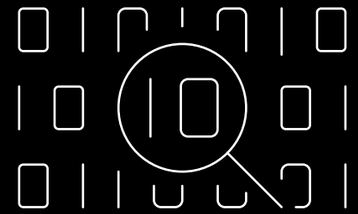
The Challenge of Disconnected Infrastructure Data



Reality Data



CAD/ BIM



Asset Information

GIS

Documents

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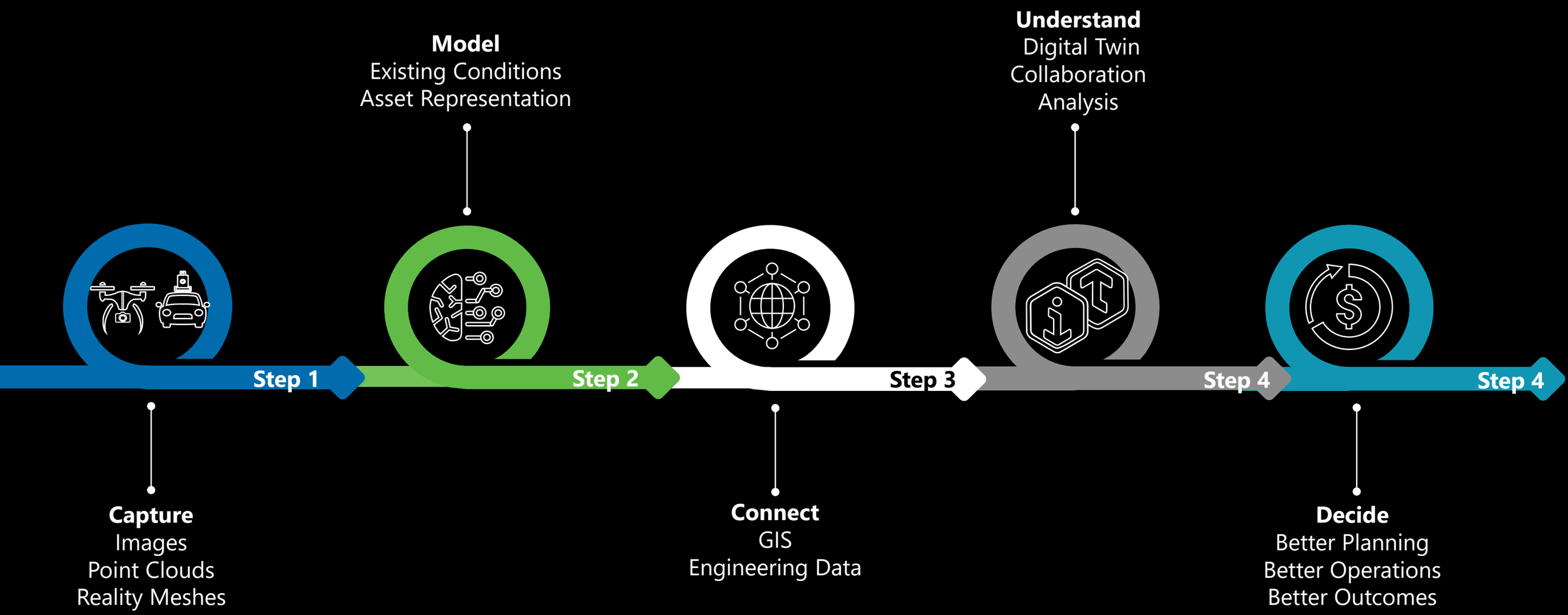
From Reality Capture to Infrastructure Intelligence



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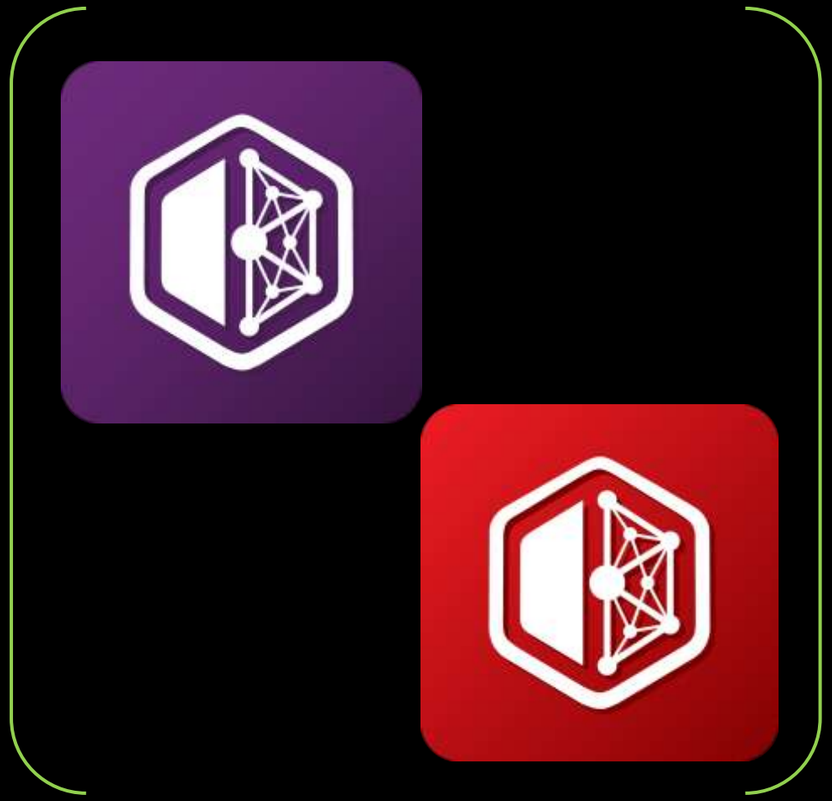

iTwin Capture Modeler
iTwin Capture Manage & Extract

Enable easy capture, management, and analysis of photogrammetric data, enhancing the accessibility and value of digital twins.

Bentley®

iTwin Capture

Accelerate the Creation of Actionable Reality Models

Create trusted, survey-grade reality models from raw survey data to accelerate project startup.

Process Projects More Efficiently

Leverage cloud computing and grid processing to rapidly handle massive volumes of data.

Unlock the Value of Your Data

Deliver high-value outcomes with a comprehensive suite of analytics tools available within Bentley's integrated environment.

Reality Modeling with iTwin Capture Modeler

High-Quality

- **Aerial Triangulation**
- **2D & 3D Reconstruction**

  Reality Mesh - Gaussian Splats - True Ortho

Accurate

- Solid Geo-registration

  GCP – RTK - GPS

Scalable

- **Small Assets to Cities**
- **Multi Engine, On-Prem & Cloud**

Create Photo Realistic Reconstructions from Photos and Point Clouds

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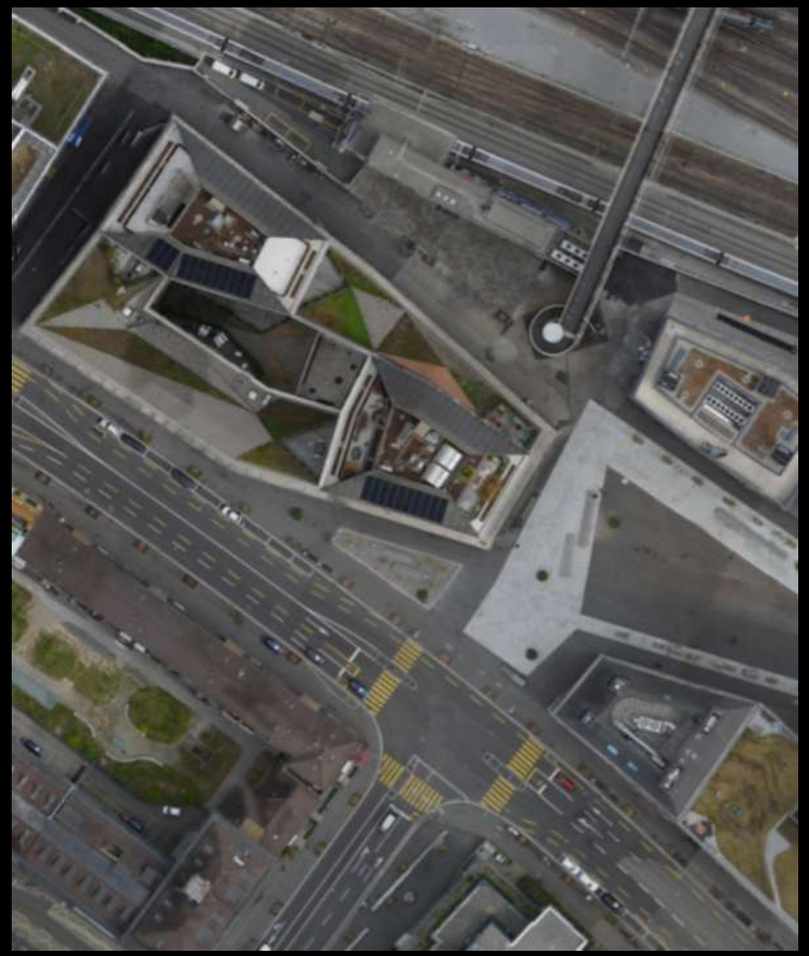
Reality Modeling with iTwin Capture Modeler

Create Photo Realistic Reconstructions from Photo and Point Cloud



Versatile

Any Imagery, Include LiDAR

Airborne – Smartphone – Mobile Mapping

Interoperable

File Export (ETL) & Streaming

Open standards

3DTiles – OBJ – LAS – LAZ - TIF

Toolbox

Measurements

Geometric retouching

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Reality Analysis with iTwin Capture Manage & Extract

Advanced Analysis

- Workflow specific tooling
- Manual & Semi automated
- Aerial, Terrestrial & Mobile Mapping

Powered by AI

- Integrate AI to Manage & Extract
- Training & Inference
  - Classification
  - Feature & Defect Detection
- Generate Objects

Enrich your Reality Data : Generate smart data & Extract Insights

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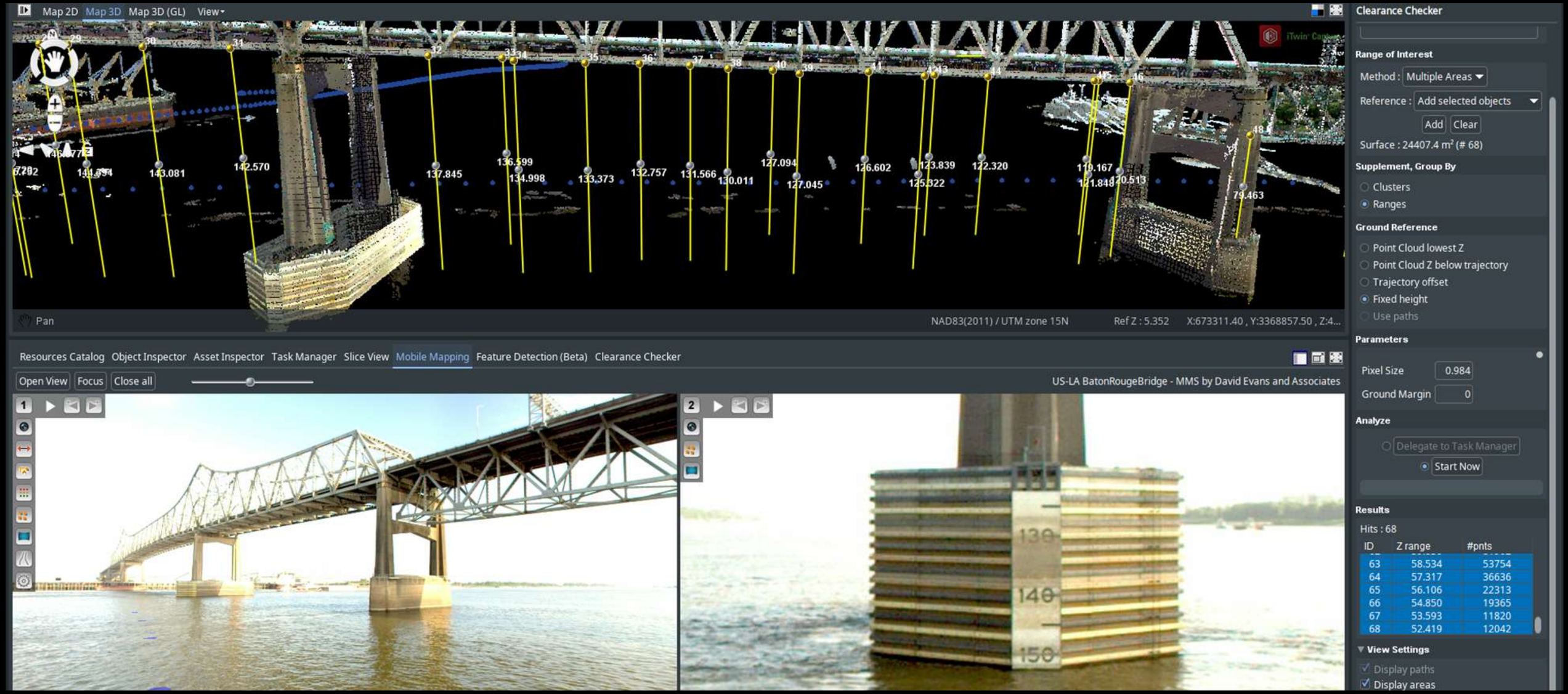
Reality Analysis

Automation on workflows for Asset Inventory, Clearance Checker



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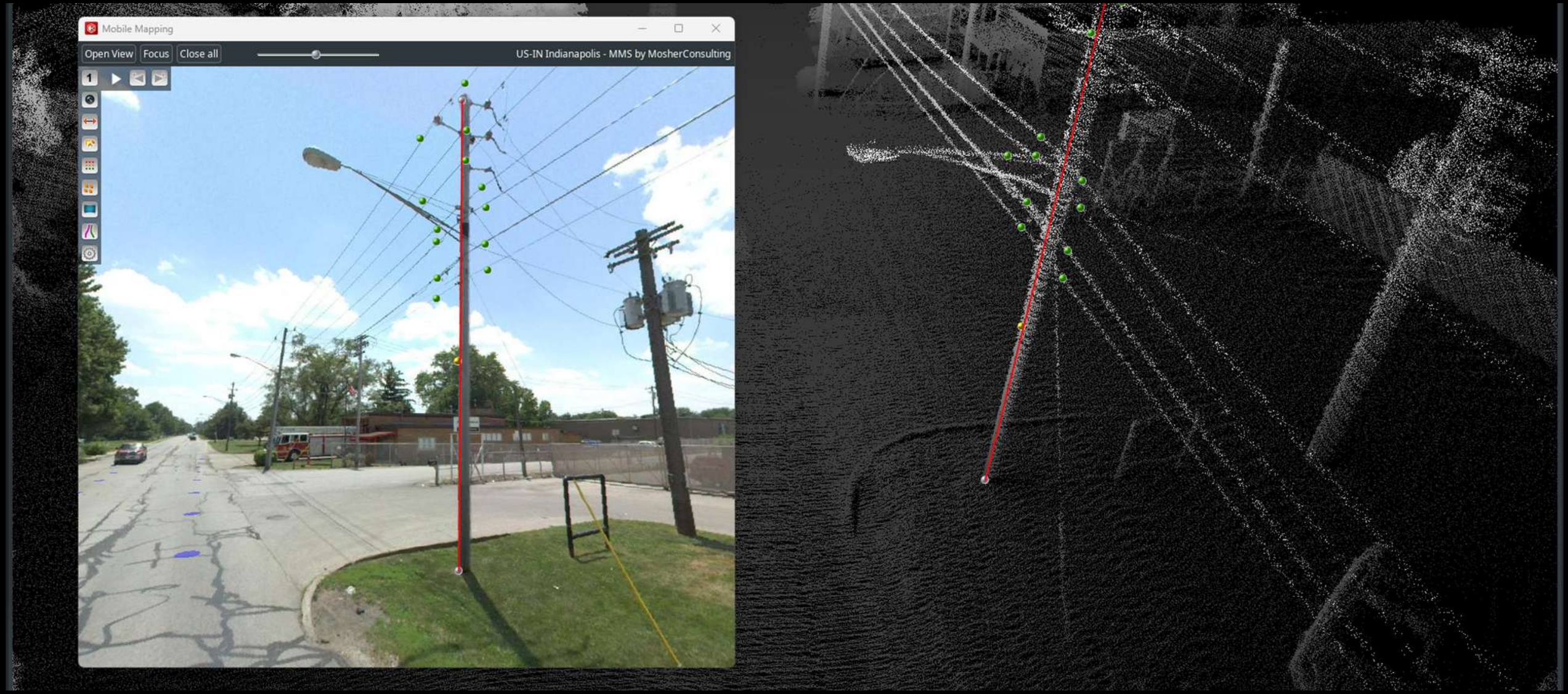
Reality Analysis

Automation on workflows for Poles analysis & Pole attachments



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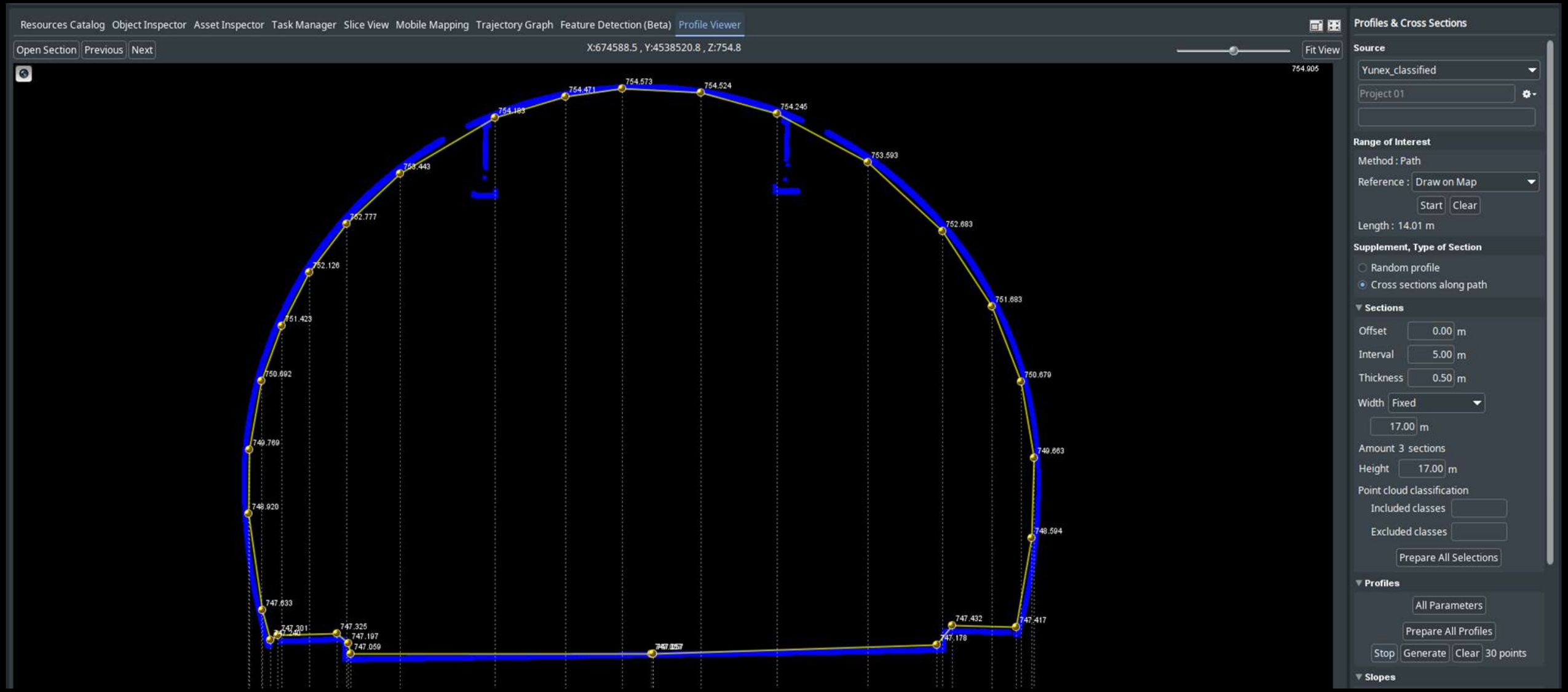
Reality Analysis

Profile & Cross Sections



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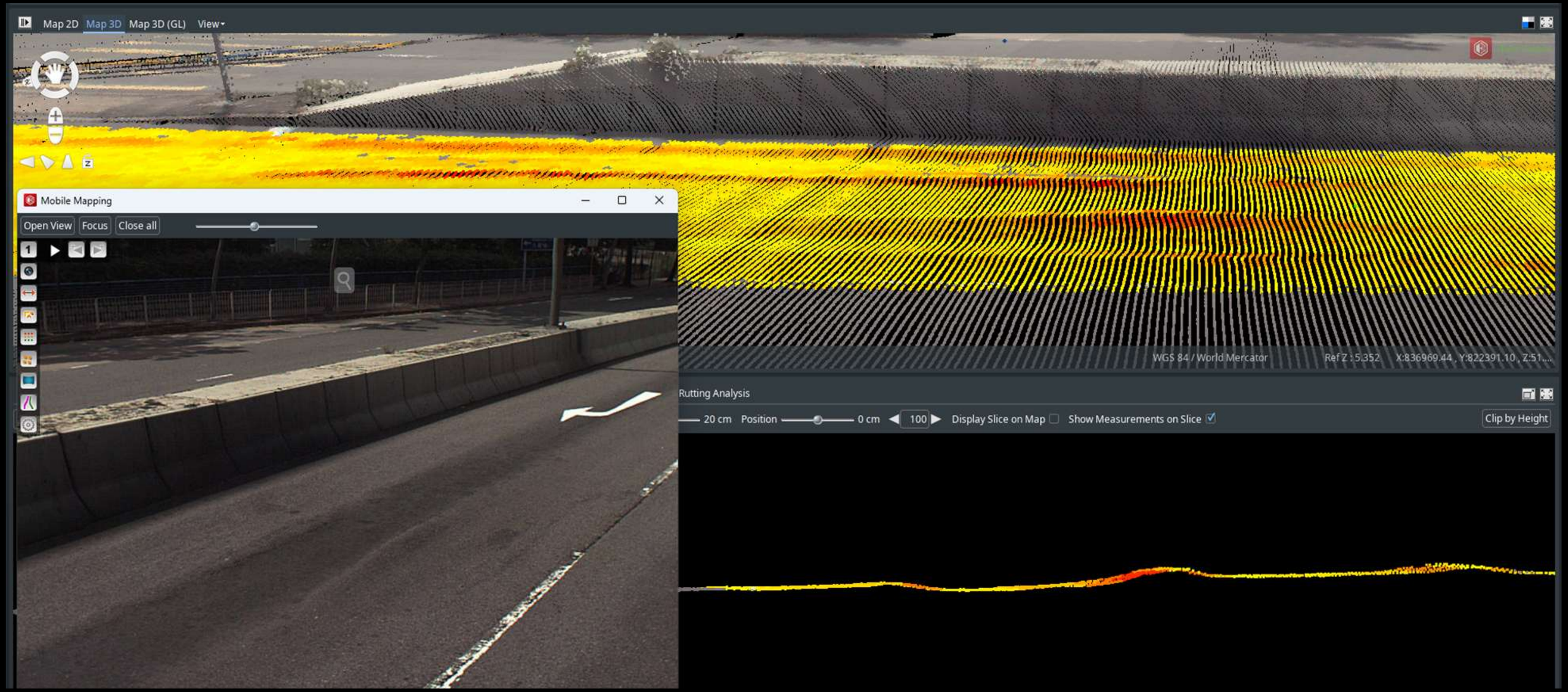
Reality Analysis

Analytics on Pavement and Road Surface



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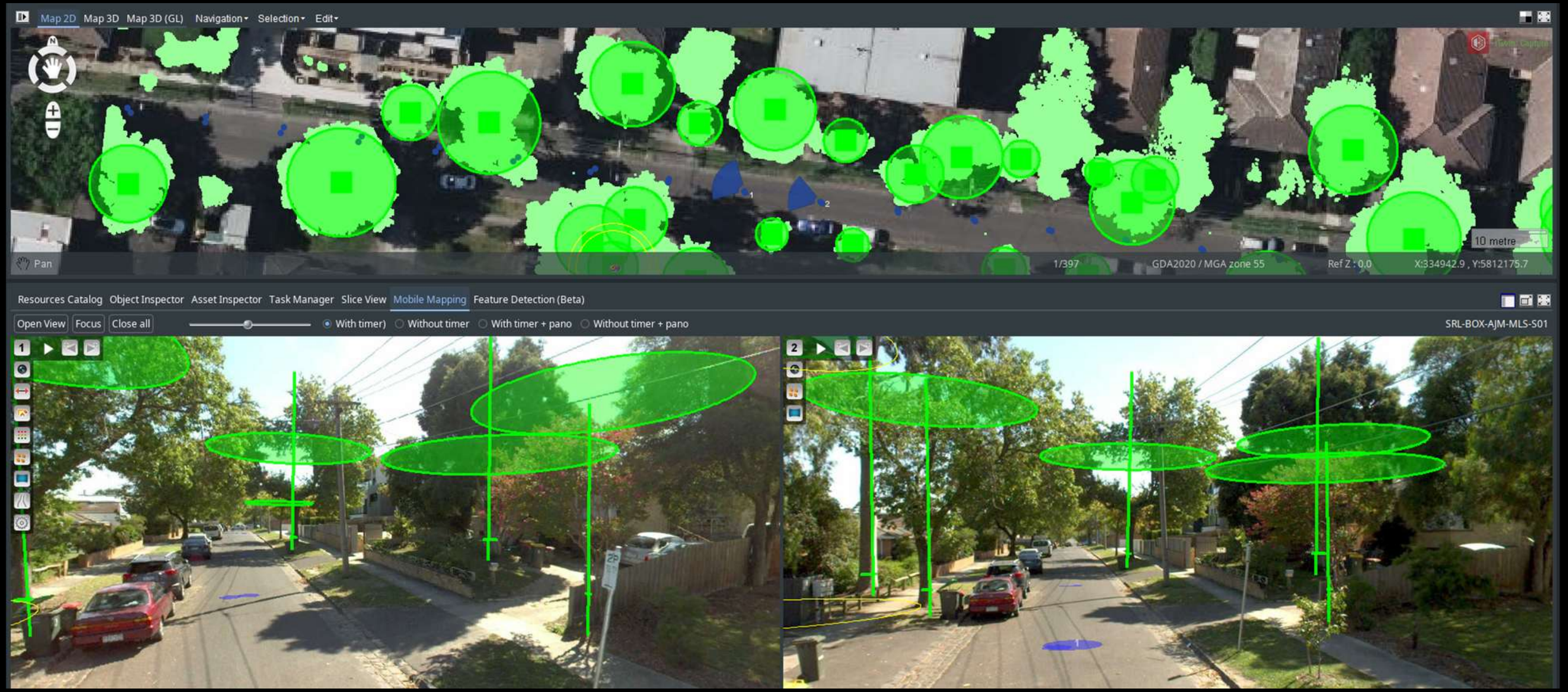
Reality Analysis

Automation on workflows for Tree detection & Tree analysis



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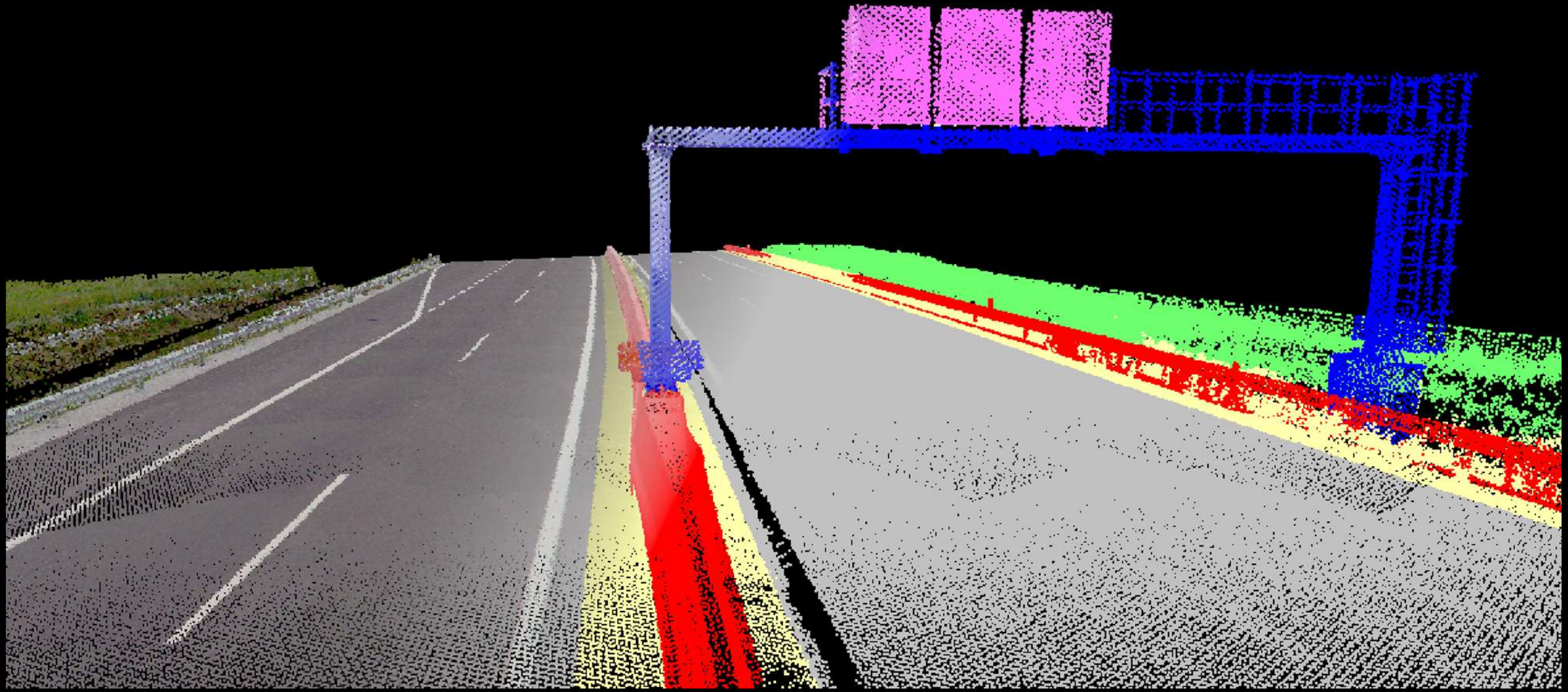
Reality Analysis Powered by AI

Analyze Point Clouds



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Reality Analysis Powered by AI

Analyze Photos and get 3D Features for Asset Inventory

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MicroStation. The only CAD software purpose-built for designing, modeling, and managing infrastructure projects.

MicroStation 2026

Read and consolidate any type of data

Open, reference, and work with data from multiple formats and sources while maintaining its original integrity.

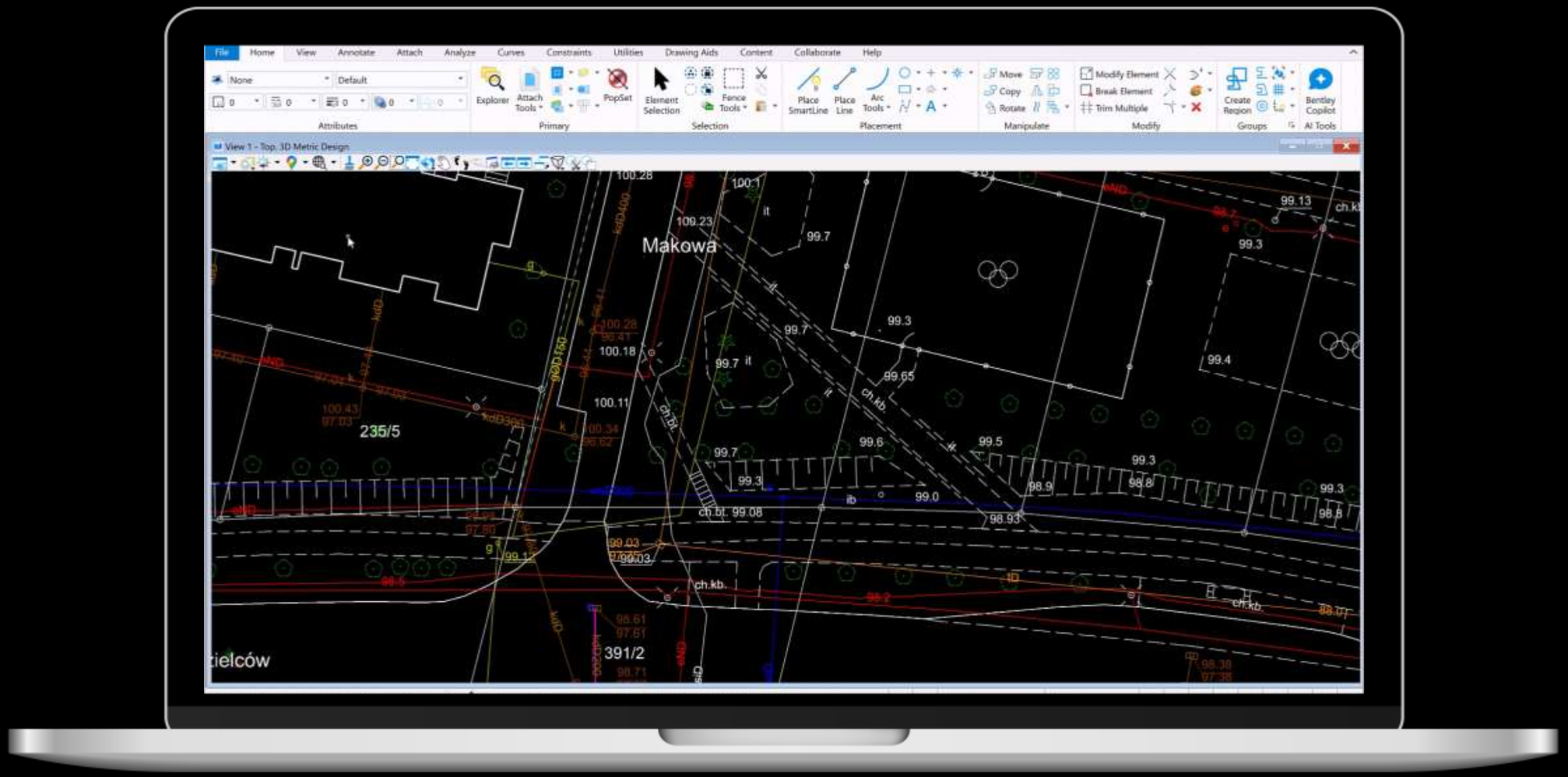
Model anything, anywhere with geospatial context

Design in real-world coordinates by combining engineering models with maps, terrain, GIS services, and reality data for complete spatial awareness.

Report everythink to infrom everyone

Improve collaboration and save time with easier exchange of data and designs.

Bentley®



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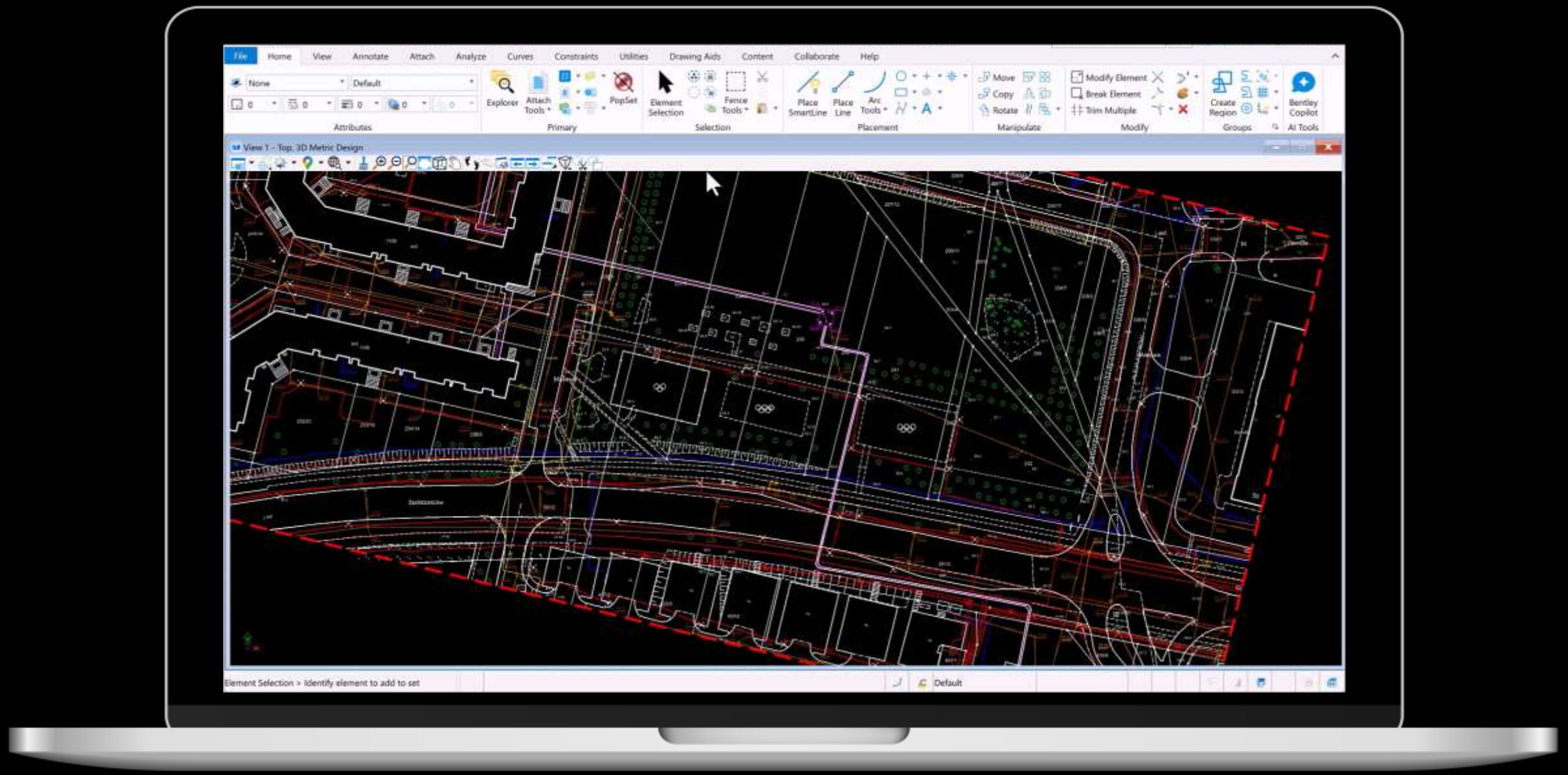

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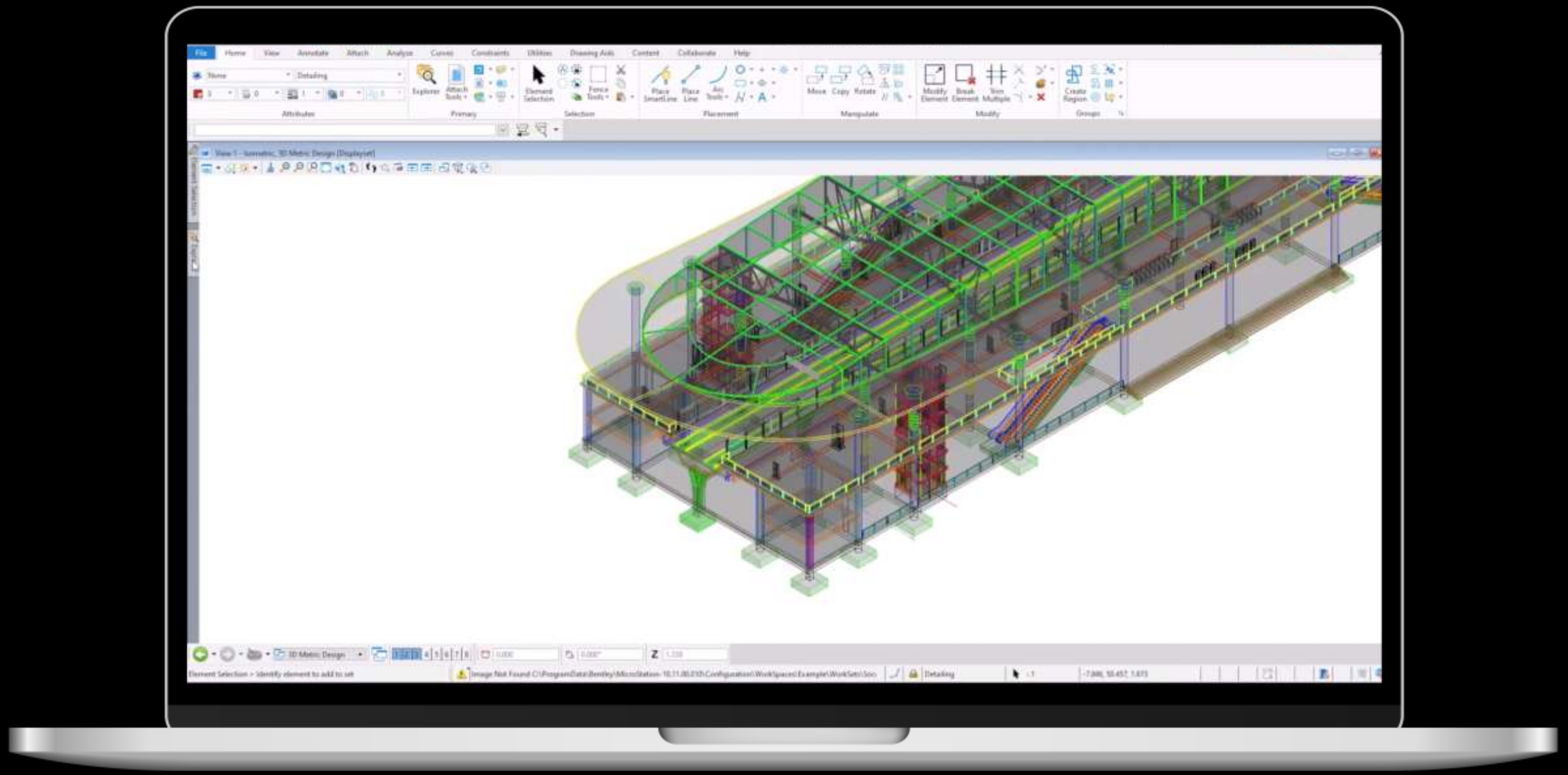

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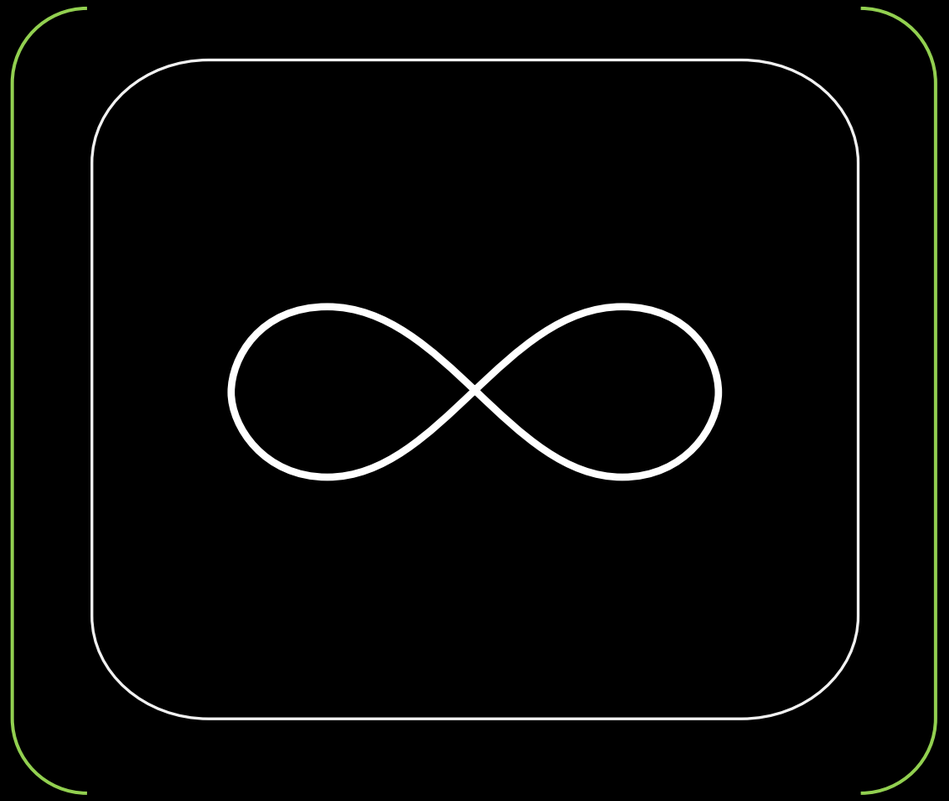
Bentley Infrastructure Cloud



A platform connecting data and people across the entire infrastructure lifecycle.

Manage your Project and Asset Portfolio in a Single Interface

Break siloes with a better connection of data through time, type, and team.

Unlock Insights with Advanced Visuals and Measurements

Streamlining design reviews with precision measurements, sectioning and analysis tools.

Empower Engineering Expertise with Data Interoperability

Create a true, single source of truth, from in-progress to final delivery.

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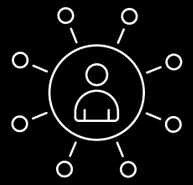
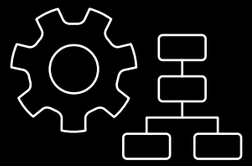
Enabling Secure and Connected Collaboration

Identity Management



Internal & External Collaboration

Flexible Licensing



Role-Based Permissions

Digital Review & Approval Workflows

Version Control & Change Tracking

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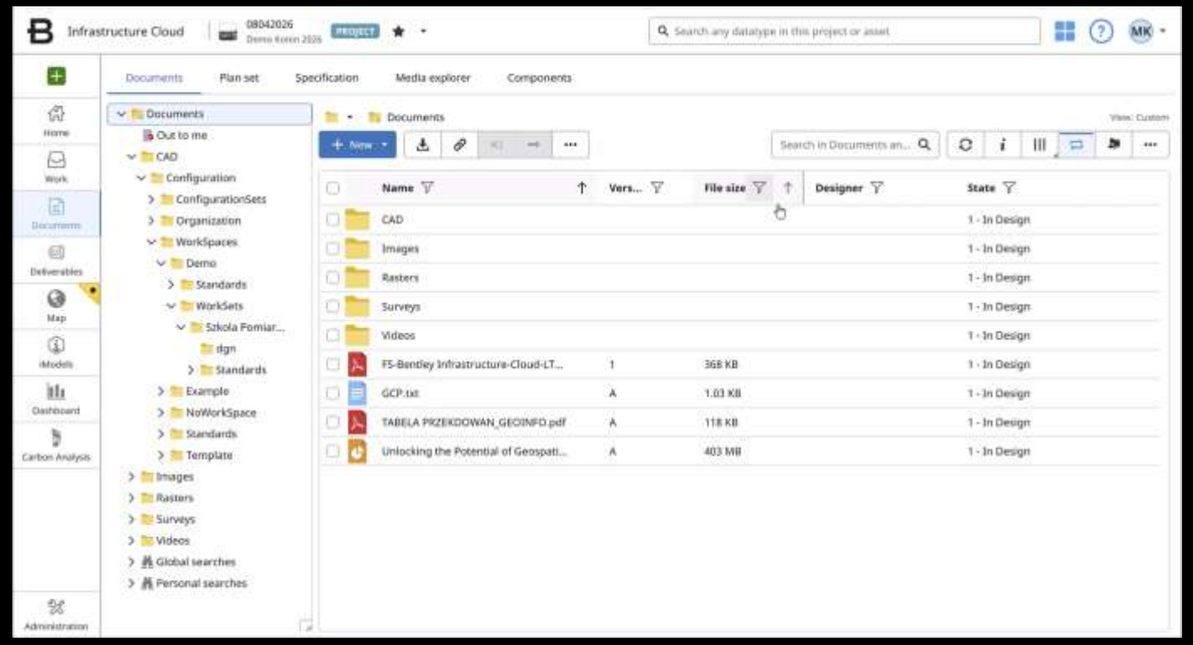
Documents Management - more than a cloud storage

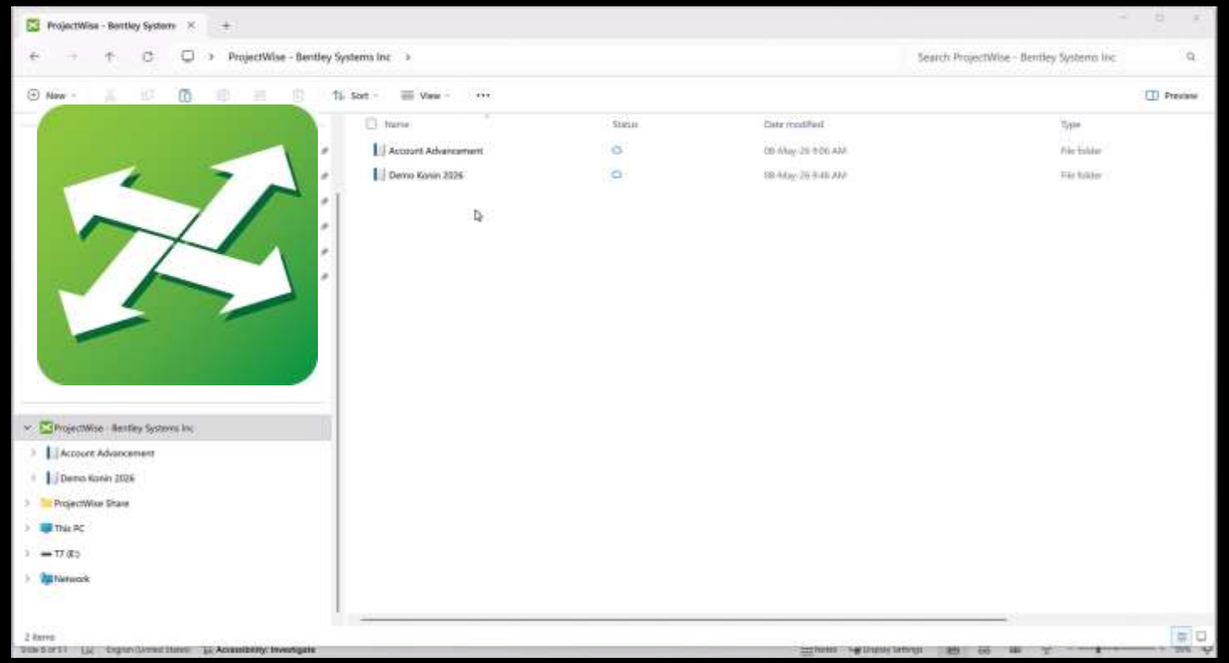
Documents (ProjectWise Cloud):

- Engineering Document Management
- File relationship management (references)
- Version control
- Controlled collaboration

ProjectWise Drive:

- Direct integration with Windows Explorer
- On-demand synchronization
- Big data handling





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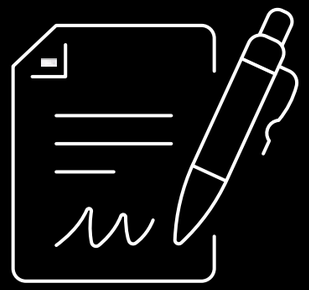
Unlock the Full Potential of Your Data

From static files to an interactive work environment

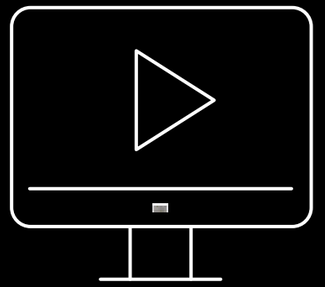
01

Markup Tool



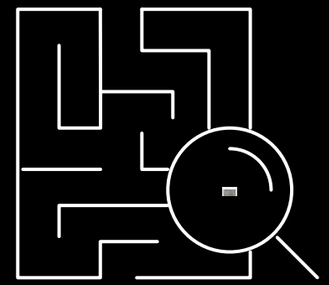
02

Media Explorer



03

Smart Search



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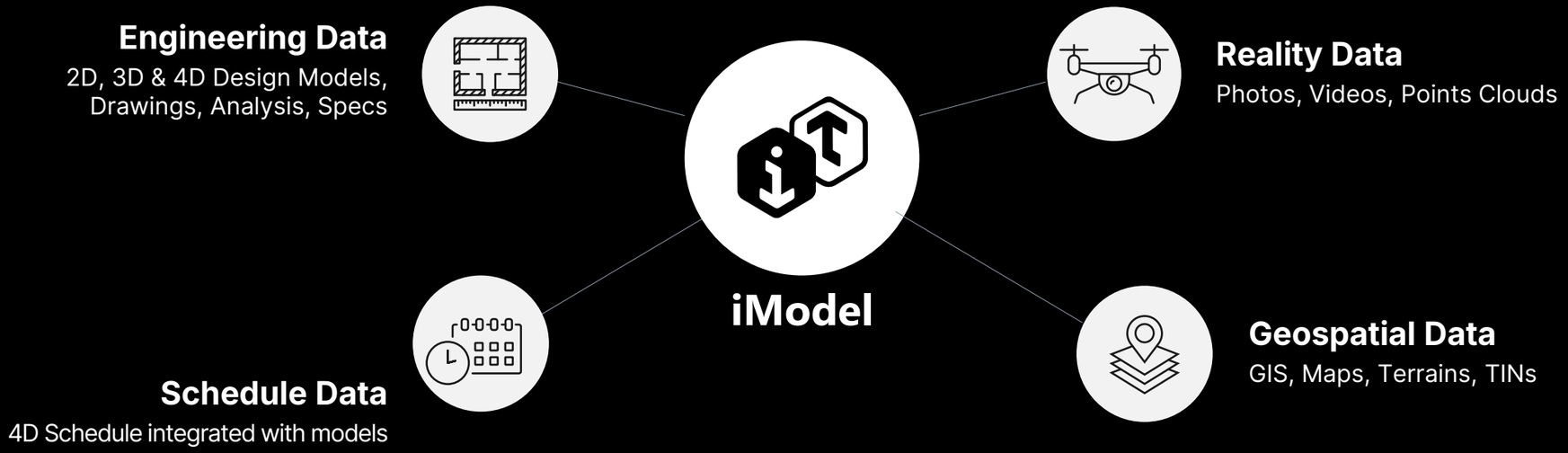
The Heart of BIC: Understanding the iModel



- Data Integration in a Federated Model
- Synchronization Across Multiple Apps and Formats
- Change Tracking and Project History
- Issue Resolution, Clash Coordination
- Data Analysis in a Digital Twin Environment
- Shared Environment for Open Application

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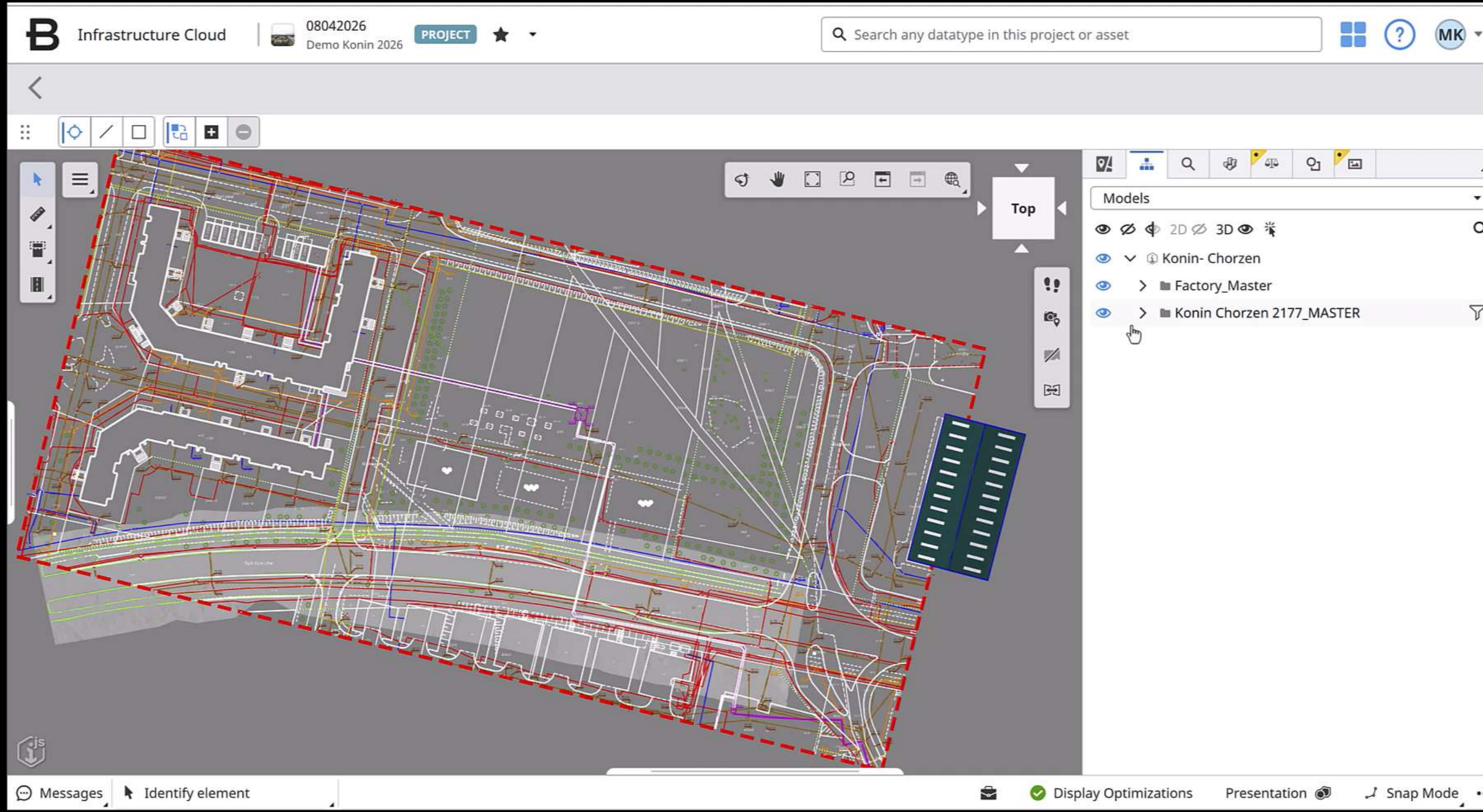
Infrastructure Cloud
08042026
Demo Konin 2026
PROJECT
Search any datatype in this project or asset
MK
Top
Models
2D
3D
Konin- Chorzen
Factory_Master
Konin Chorzen 2177_MASTER
Messages
Identify element
Display Optimizations
Presentation
Snap Mode

Infrastructure intelligence starts when reality, geospatial, and engineering data work together.

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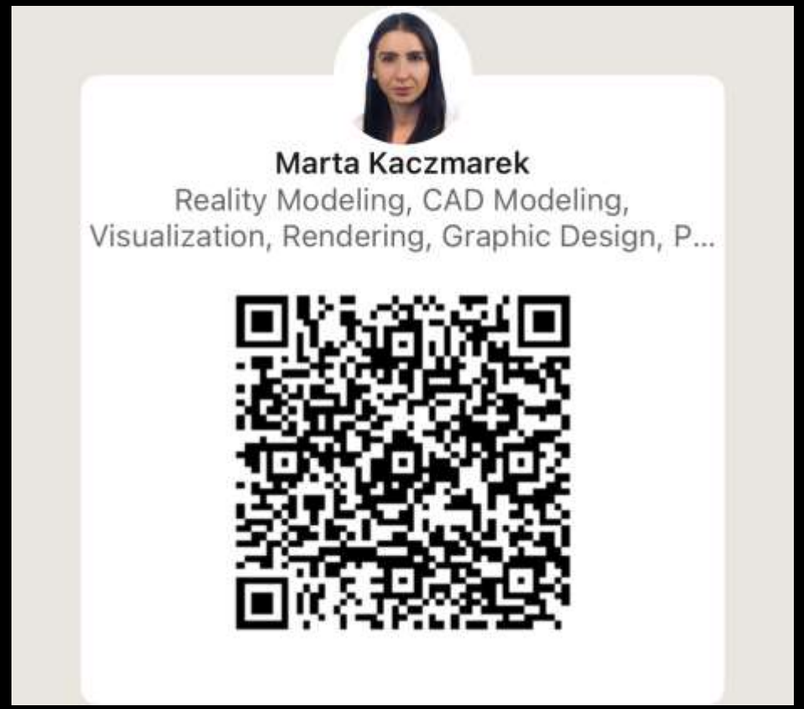
Thank you !



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