



Midlands Highway Alliance Plus

Digital Working Group Meeting, 19th March 2026



Speaker



Alessandro Poss

Sr. Customer Success Manager

DroneDeploy

alessandro.poss@dronedeploy.com

Agenda:

1. **The Now:**
The UK Drone Landscape in 2026
2. **The How:**
Leveraging Reality Capture for
Complex Projects
3. **The Future:**
Automation, Data, and AI



The Now: Current Legislation & Regulatory Shifts in the UK



RIS3 Shift



Digital Roads



Safety & Carbon

The Now: UK Drones Landscape in 2026

How the 2026 rules specifically benefit civil engineering and highway maintenance.

1. Reduced Disruption

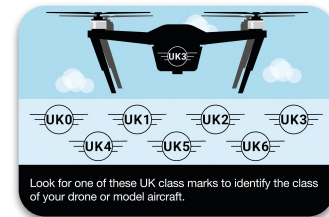
- *Rule:* UK2 Class + 5m proximity limit.
- **Benefit:** Perform bridge and gantry inspections over live traffic. No more costly lane closures or traffic management setups.

2. Expanded Range & Time

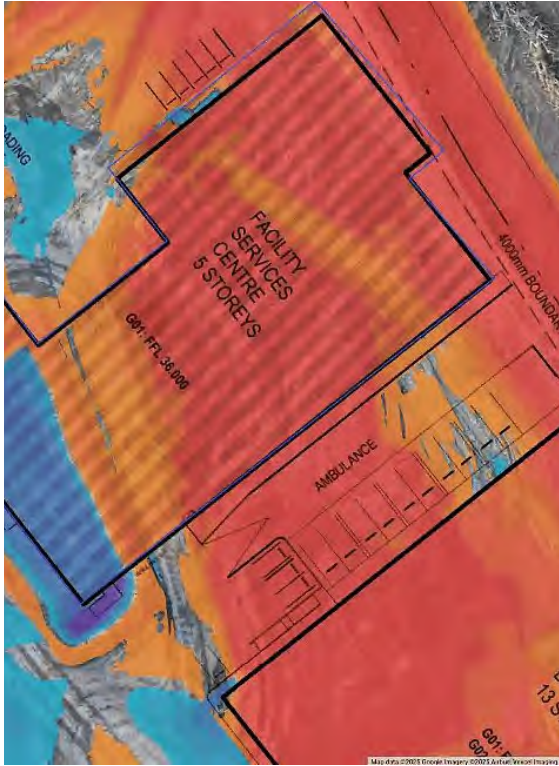
- *Rule:* Streamlined BVLOS (Beyond Visual Line of Sight) and mandatory night lighting.
- **Benefit:** Survey miles of track/road in one flight and perform thermal concrete-curing checks 24/7.

3. Rapid Deployment

- *Rule:* 100g "Micro-drone" registration.
- **Benefit:** Integrate ultra-light drones into daily Safety Management Systems (SMS) for instant, ad-hoc site inspections.



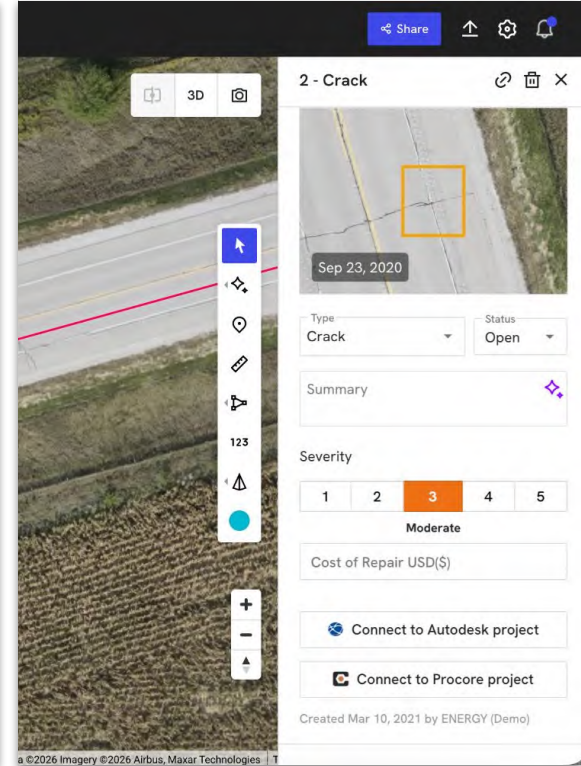
The How: Leveraging Reality Capture for Complex Projects



Earthworks

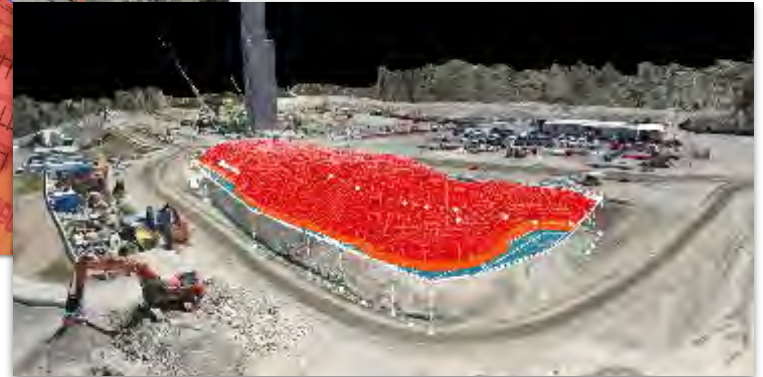


Design Planning

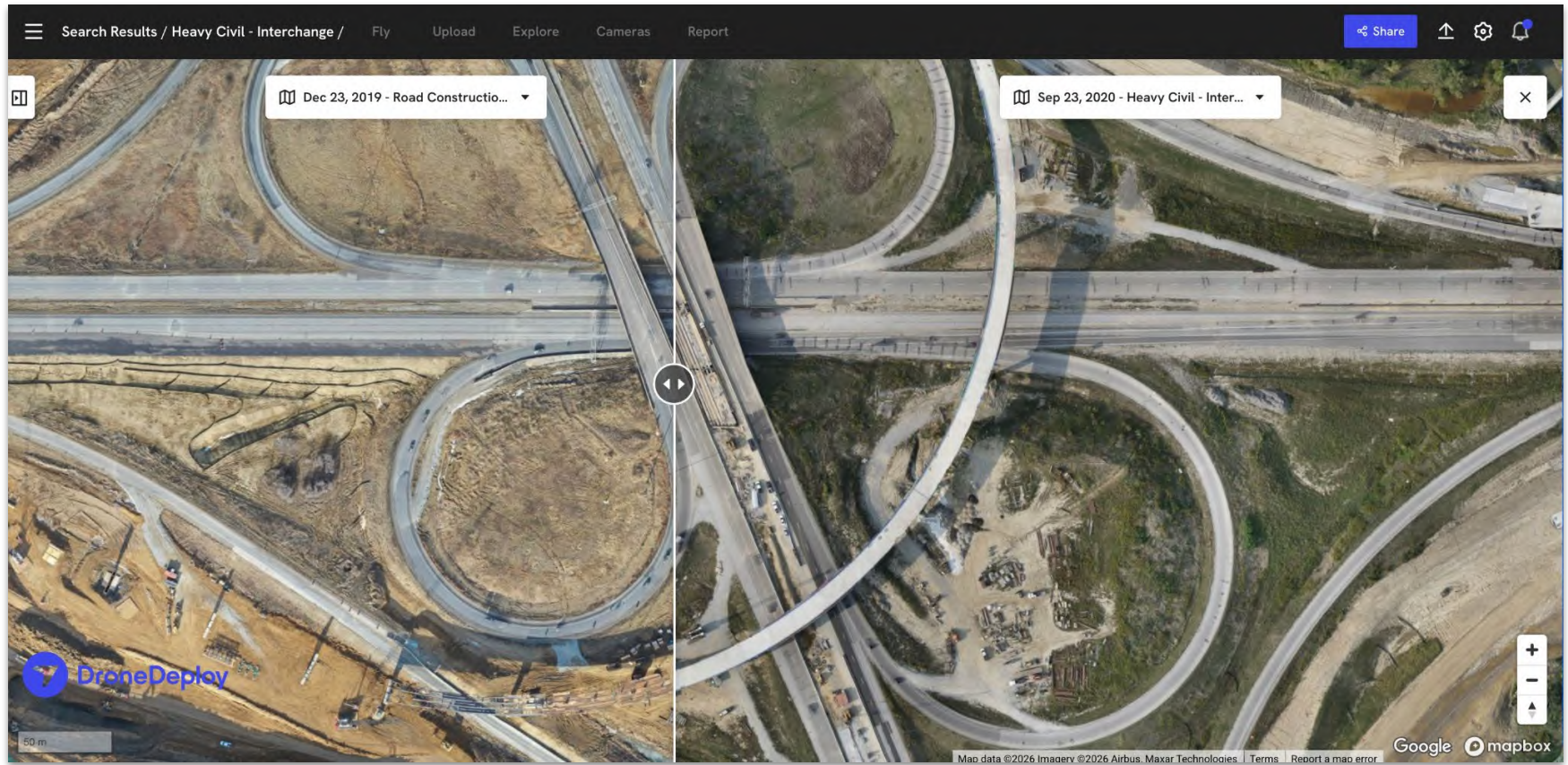


Remote Inspections

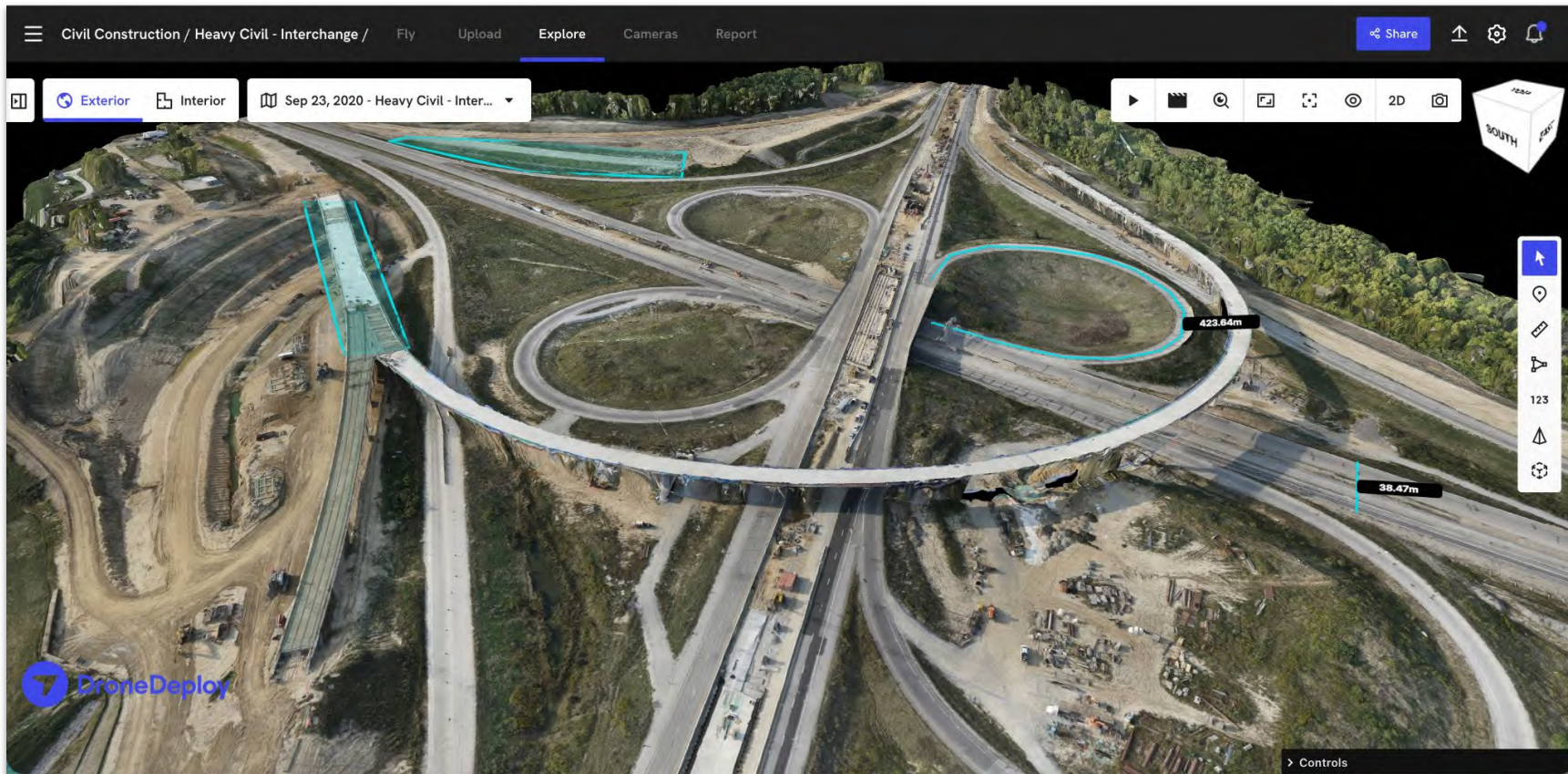
Use Case: Earthworks, Cut Fill Analysis



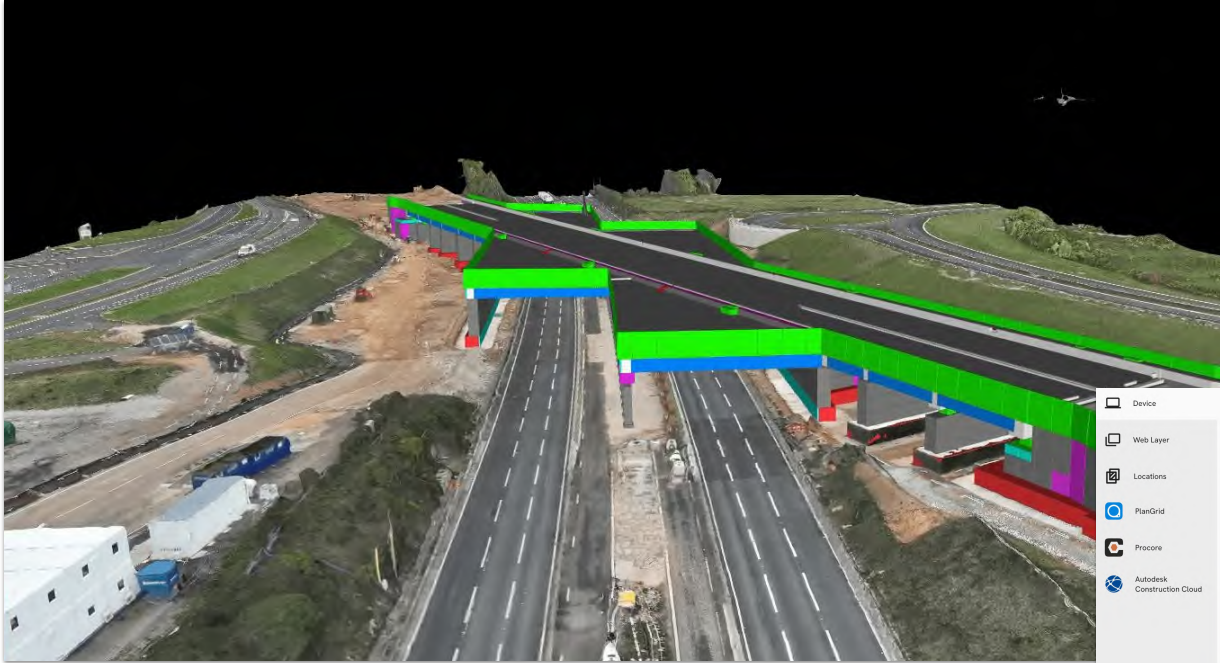
Use Case: Compare 2D Maps over Time



Use Case: Measurements and Annotations with 3D Mesh Models



Use Case: Design Planning + Verification



Device

Web Layer

Locations

PlanGrid

Procore

Autodesk Construction Cloud

Add file from device

Begin by selecting the type of file you want to upload, then drop or select your file to begin the upload. [Learn more about file types.](#)

1. Select file type

 Drawing PNG, PDF Manually align a drawing to the project map.	 Geo-Referenced Drawings Shapefile Automatically align a drawing to the project map.	 Point Measurements CSV Add specific measurement data.
 3D Visualization DWG, IFC Upload a 3D model to visualize elements in the 3D project view.	 Design Surface GeoTIFF, DDF, XML Upload a 3D surface to perform out/roll analysis against map data.	 Building Information Modeling NWD, NWC, NWF View walkthrough photos compared to a BIM model.

2. Select file

Drop or select a CAD file to upload

Supported Formats: .dxf, .ifc

Select File

Use Case: Long Linear 3D Models and Elevation Profiles

The screenshot displays a software interface for managing 3D models and elevation profiles. The main view shows a 3D model of a road corridor with a red dashed line indicating the path. The interface includes a top navigation bar with options like Search Results, Upload, Explore, Cameras, and Report. A left sidebar lists annotations, with 'Total Length' selected. The right sidebar shows the details for the selected annotation, including its title, date, and various length and elevation metrics.

Annotations List:

- Total Length (Jan 6, 2021) - Distance
- Untitled (Jan 27, 2026) - Distance
- Intersection of Kanas Ave. & ... (Jan 6, 2021) - Area
- Earthwork Area A (Jan 6, 2021) - Area
- Earthwork Area B (Jan 6, 2021) - Volume
- Bridge 27A (Under Constructi... (Jan 6, 2021) - Point
- Intersection of Hazelwood Ave. (Jan 6, 2021) - Area

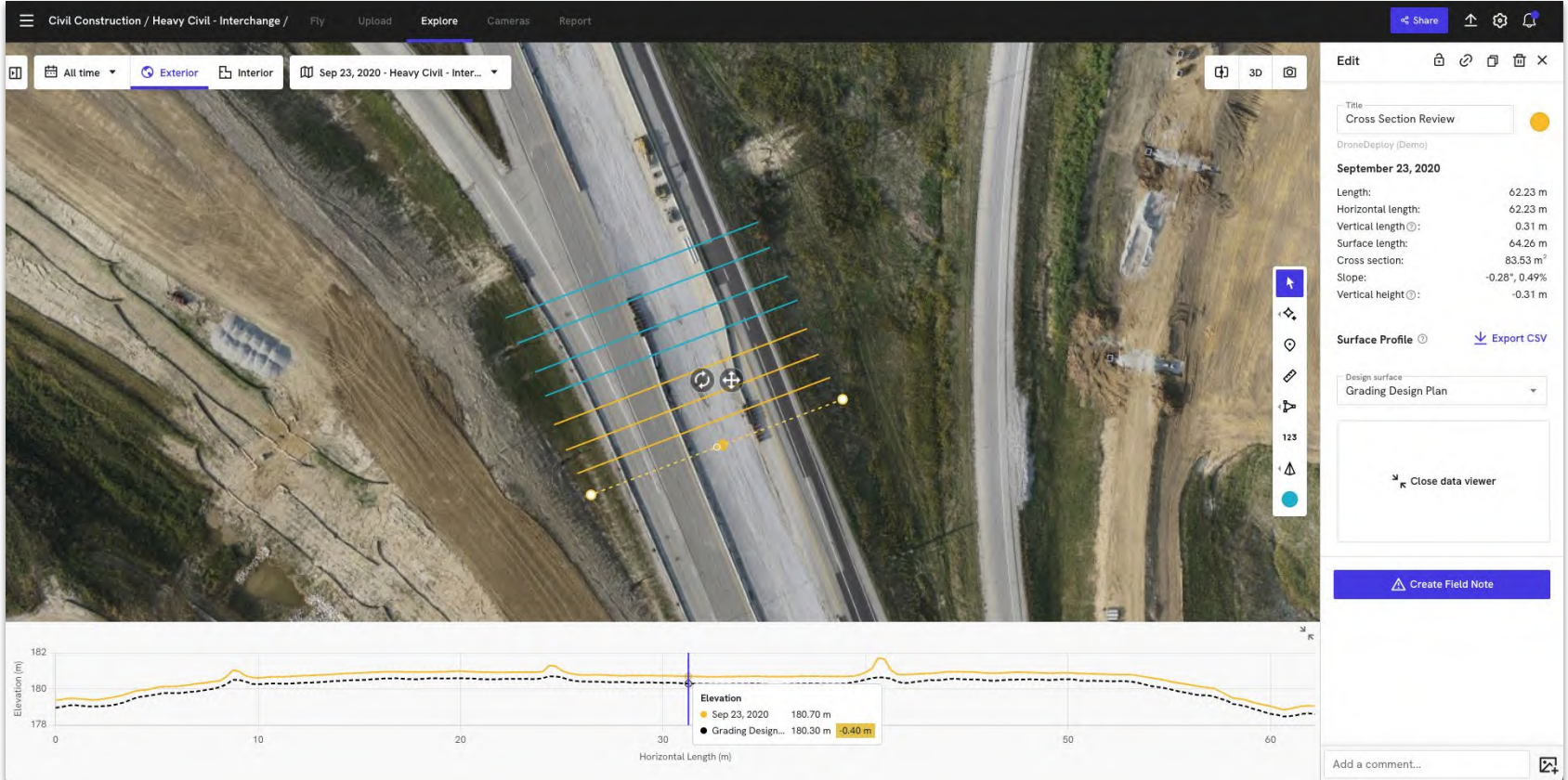
Annotation Details (Total Length):

- Title: Total Length
- Date: September 23, 2020
- Length: 8.28 km
- Horizontal length: 8.28 km
- Vertical length: 93.77 m
- Surface length: 8.28 km
- Cross section: -8.46 ha
- Slope: -0.21°, 0.36%
- Vertical height: -29.94 m

Elevation Profile:

The elevation profile graph shows Elevation (m) on the y-axis (ranging from 150 to 250) and Horizontal Length (m) on the x-axis (ranging from 0 to 8000). The profile line is red and shows a slight downward trend from approximately 240m at 0m horizontal length to about 200m at 8000m horizontal length.

Use Case: Cross Section Review



Use Case: Long Linear 3D Models and Elevation Profiles

The screenshot displays a 3D mapping application interface. The main view shows a 3D model of a road corridor, highlighted in pink, with an elevation profile overlaid. The profile shows a peak of 250.27m. The interface includes a top navigation bar with options like Search Results, Fly, Upload, Explore, Cameras, and Report. A left sidebar contains a search bar, layer controls, and a 3D Map panel with tabs for Mesh, Points, and Splat. The 3D Map panel has checkboxes for 3D Map, Elevation, and Contours. A right sidebar contains navigation and tool icons. The bottom right corner has a Controls button.

Search Results / Heavy Civil - Road Corridor & Rail / Fly Upload Explore Cameras Report

Share

Sep 23, 2020 - Heavy Civil - Roa... Exterior Interior

Layers +

Overlays 0 >

3D Map

Mesh Points Splat **New!**

3D Map >

Elevation >

Contours >

Media +

Map Photos 0/1198 >

Markup

Annotations 8 >

Field Notes 6 >

Apps + Integrations

Export ? Help

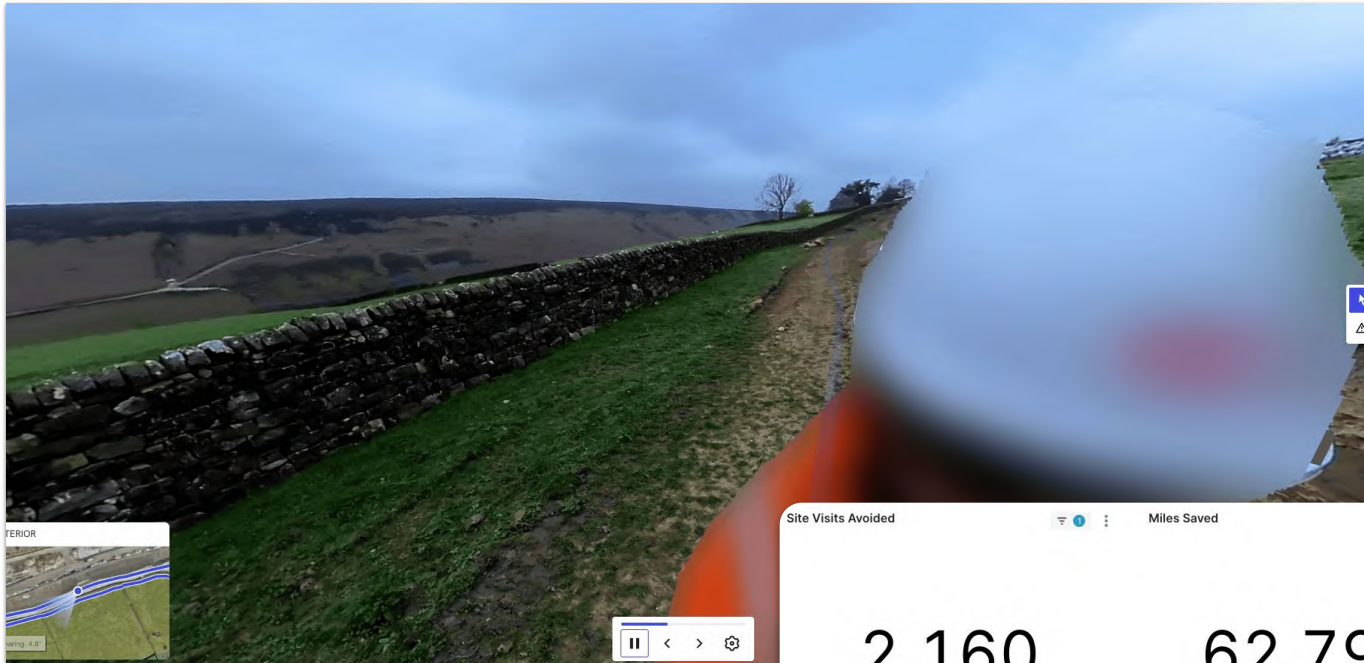
2D

EAST

123

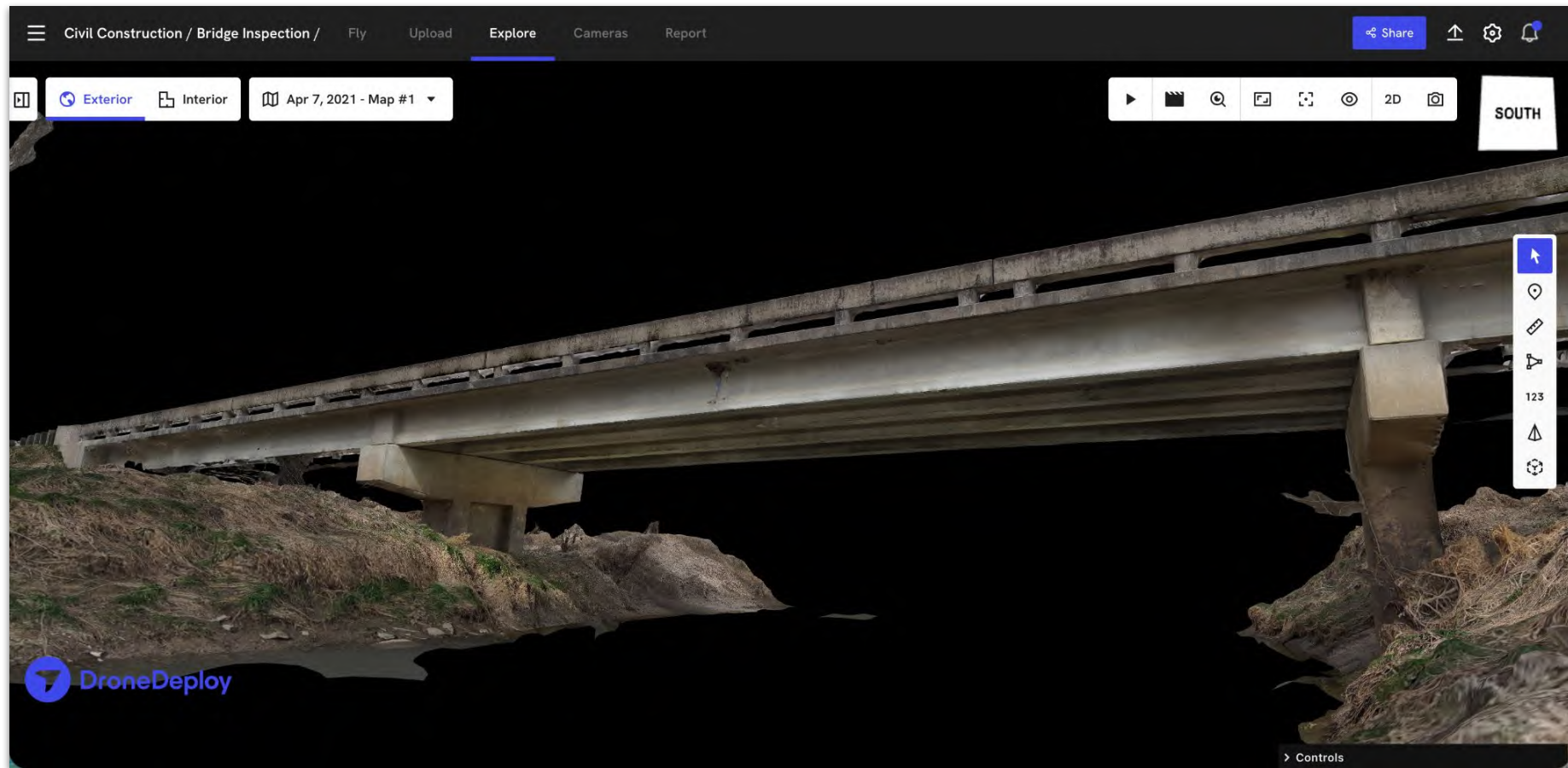
Controls

Use Case: Remote Visits and Site Conditions

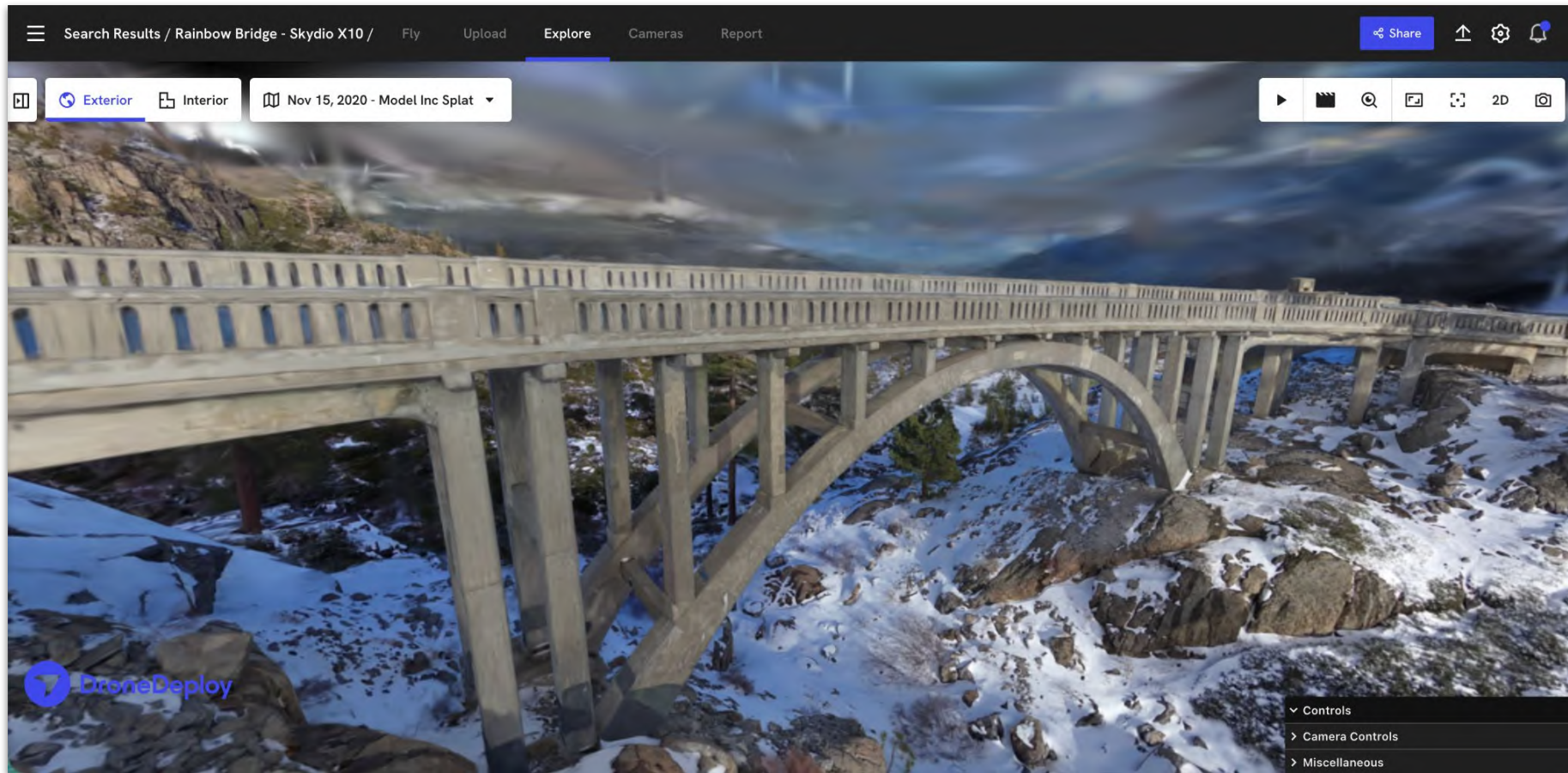


Site Visits Avoided	Miles Saved	Tons of CO2 Saved
2,160	62,791	25

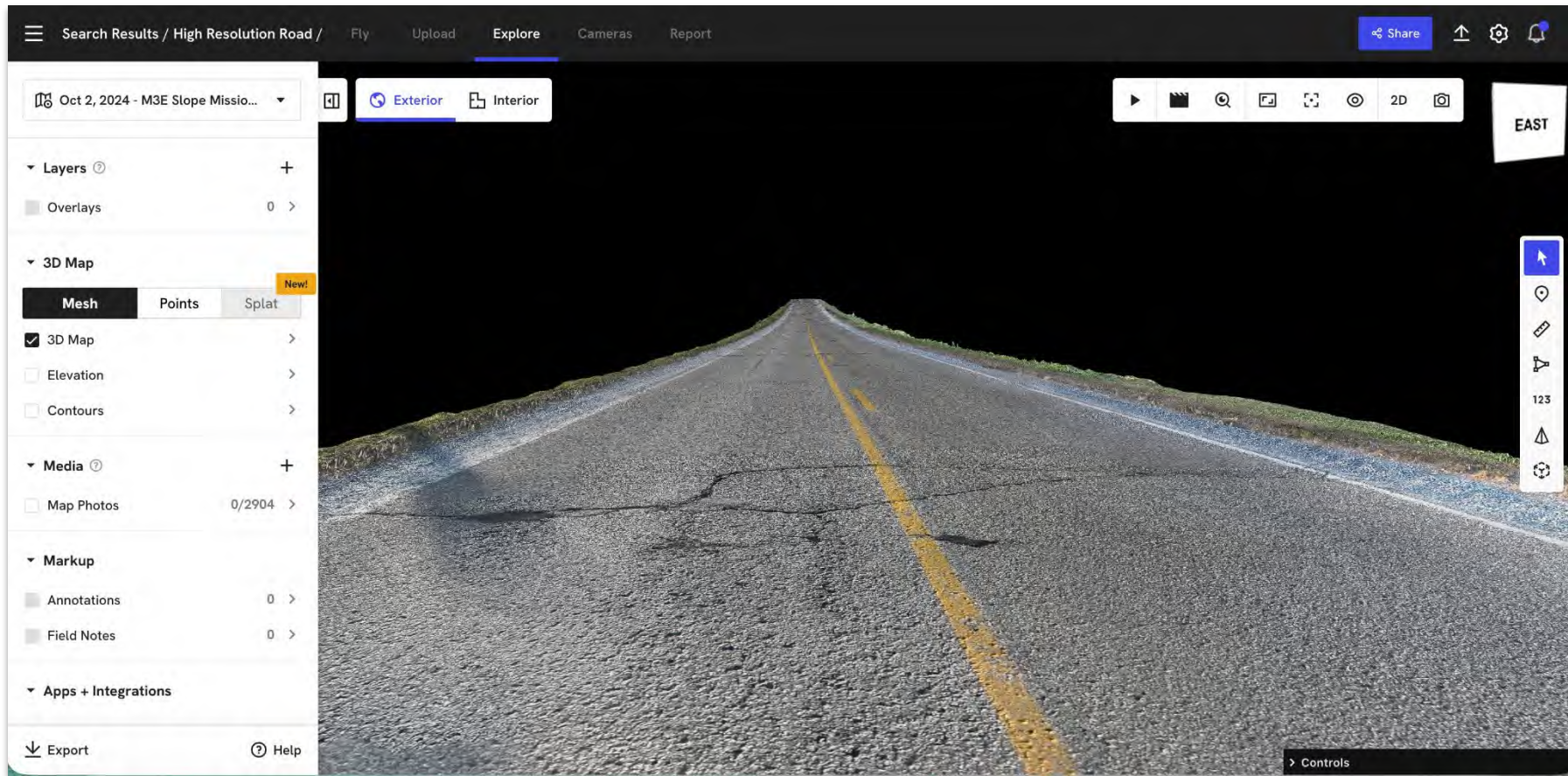
Use Case: Bridge Inspections with 3D Mesh Models



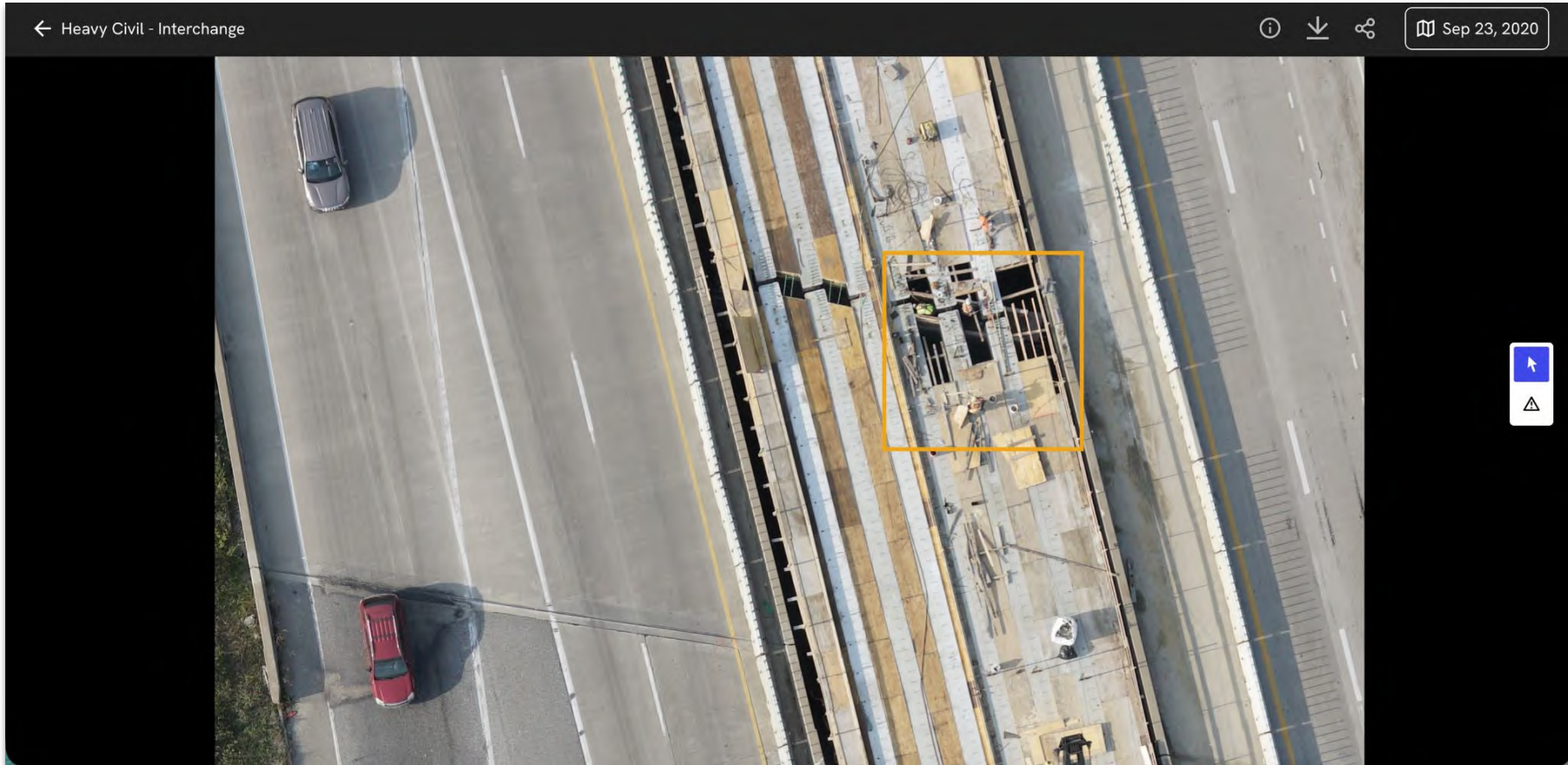
Use Case: Bridge Inspections with 3D Gaussian Splats



Use Case: High Resolution 3D Models and Maps of Road Surfaces



Use Case: Safety Issue Tracking with Field Notes on Drone Photos



Use Case: Quality Issue Tracking with Field Notes on 3D Mesh Models

The screenshot displays the DroneDeploy web interface for a project titled "Civil Construction / Proposed Hillside Solar Farm". The main view is a 3D mesh model of a construction site, showing a winding road and a bridge structure. The interface includes a top navigation bar with options like "Fly", "Upload", "Explore", "Cameras", and "Report". A secondary bar shows "Exterior" and "Interior" views, and a date filter for "Sep 4, 2017 - Road Inspection". A right-hand sidebar contains a vertical toolbar with icons for navigation and editing. On the right side, a detailed panel for a specific issue is visible, titled "9 - Crack". This panel includes a thumbnail image of the crack, a date of "Sep 4, 2017", a "Type" dropdown set to "Crack", and a "Status" dropdown set to "Open". Below this, there is a text field with the note "Please check this next time in the field" and a "Severity" section with a scale from 1 to 5. The scale is currently set to 3, which is labeled "Moderate". A "Cost of Repair USD(\$)" field is also present. At the bottom of the panel, there are buttons to "Connect to Autodesk project" and "Connect to Procore project". The DroneDeploy logo is visible in the bottom left corner of the interface.

9 - Crack

Sep 4, 2017

Type
Crack

Status
Open

Please check this next time in the field

Severity

1	2	3	4	5
Minimal	Moderate			Critical

Cost of Repair USD(\$)

Connect to Autodesk project

Connect to Procore project

Created Jul 28, 2021 by DroneDeploy (Demo)

> Controls

Use Case: Quality Issue Tracking with Field Notes on 3D Mesh Models

The screenshot displays a software interface for quality issue tracking on 3D mesh models. The main view shows an aerial 3D model of a road corridor with a red line and a yellow marker. The interface includes a top navigation bar with options like 'Search Results', 'Heavy Civil - Road Corridor & Rail', 'Fly', 'Upload', 'Explore', 'Cameras', and 'Report'. A 'Field Notes' sidebar on the left lists three items: '2 - Crack', '4 - Debris', and '18 - Observation'. The right sidebar provides details for the selected '2 - Crack' issue, including a thumbnail, date (Sep 23, 2020), type (Crack), status (Open), severity (3 - Moderate), and options to connect to Autodesk or Procore projects.

© DroneDeploy

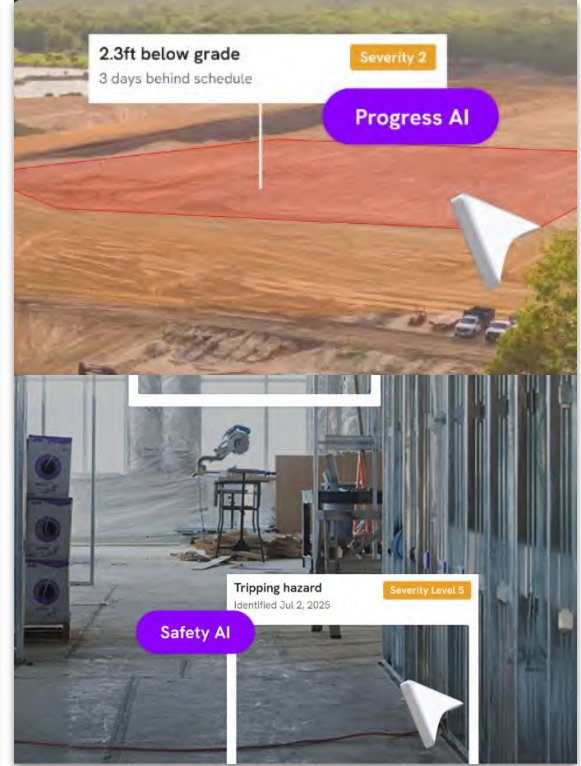
The Future: Automation, Data and AI



Dock Drones



Robotics



AI Insights

The Future: Automation, Data and AI



By 2030, **50%+** of data collected will be collected **by autonomous robot**

Dock Drones

Robotics

AI Insights

Conclusions & Q&A



Thank you!

Connect with me:



Alessandro Poss

Sr. Customer Success Manager

DroneDeploy

alessandro.poss@dronedeploy.com