



Transforming Structural Inspections with AI-Powered Drone Image Viewer

Problem Statement

A global structural engineering firm struggled to scale inspections across large projects.

Client

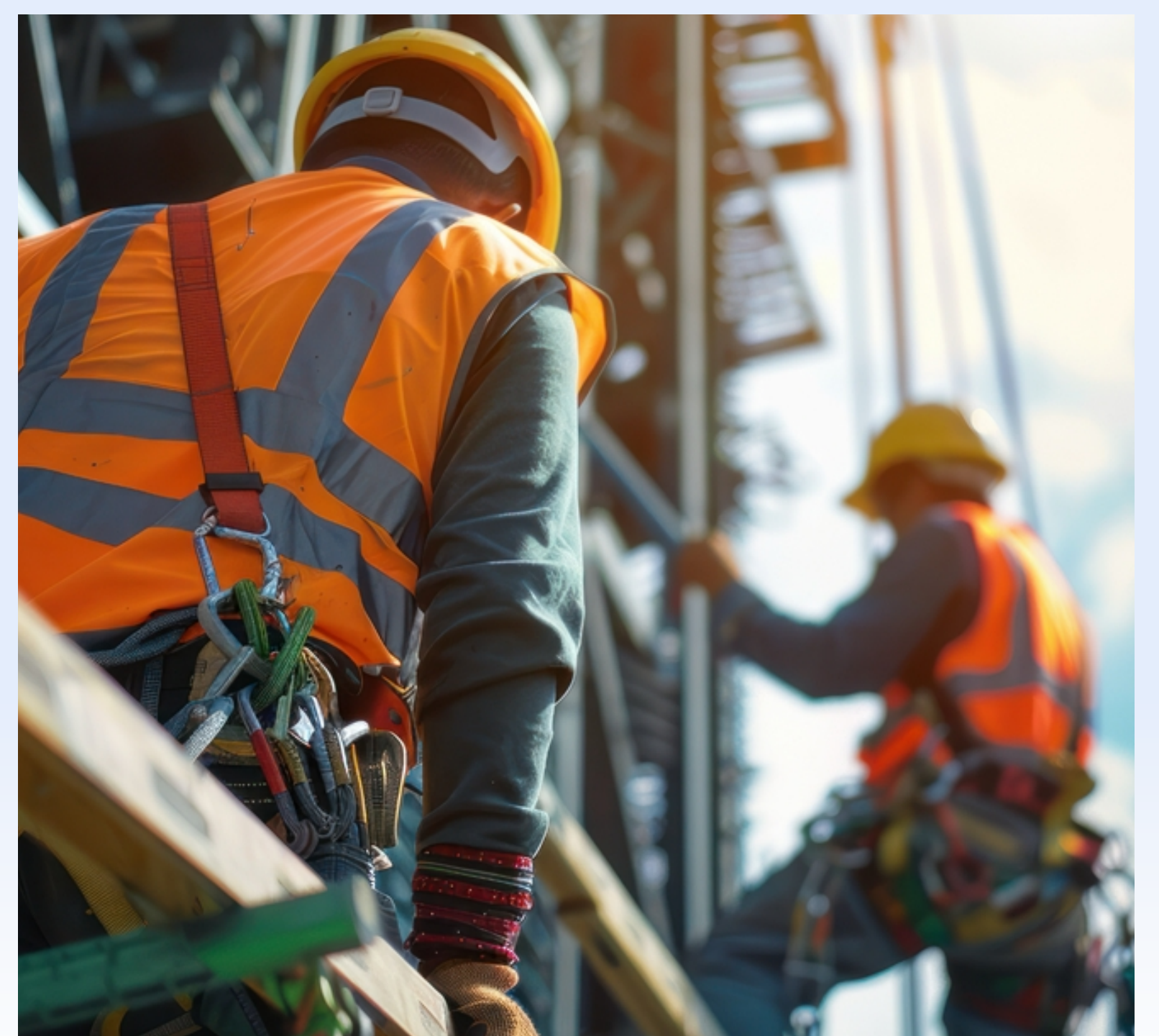
A leading \$2B structural engineering company specializing in large and complex infrastructure projects.

Business Need

Manual defect detection was slow and error-prone, while existing tools couldn't process diverse formats like orthomosaics, 2D/3D visuals, and panoramas—limiting visibility into structural health and delaying decisions.

The organization required a platform to:

- Automate defect detection and classification
- Support multiple image formats and resolutions
- Centralize inspection and defect lifecycle management
- Scale seamlessly across projects



Solution

Innominds delivered an AI-powered inspection platform built for accuracy, scalability, and usability:

- **Deep Learning Engine** – DenseNet-based model for orthomosaics, 2D/3D visuals, and panoramas
- **Interactive Dashboard** – Centralized interface for annotation, correction, and lifecycle tracking
- **Continuous Retraining** – Scalable pipeline to adapt models for new defect types
- **Multi-format Support** – Flexible processing for images and video

Strategic Impact

The AI-powered image viewer redefined large-scale inspections—delivering faster insights, smarter annotations, and centralized monitoring. The platform established a scalable, digital-first standard for infrastructure inspection.

Value Delivered

- **Unified Platform** – Centralized application for all image types
- **Higher Accuracy** – Automated detection reduced errors and time
- **Quality Control** – Built-in annotation improved reliability
- **Faster Decisions** – Dashboards enabled proactive maintenance planning

Tools & Technologies Used

- AI/ML & Cloud: Supervise.ly, Kubernetes/ KubeFlow, Azure services
- Frameworks & Development: Node.js, Angular, three.js



Transform Defect Detection with AI!

Faster Insights. Smarter Annotations. Centralized Monitoring.

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