BETTER DECISIONS BEGIN WITH BETTER DATA ACQUISITION

DELIVER WORLD-CLASS ROAD INFRASTRUCTURE WITH OPENROADS™ DESIGNER
Data acquisition in civil infrastructure is not new but it has rapidly progressed from primitive methods of collecting on-field data via manual analysis and testing to capturing photos via drones and point clouds. This “reality data” is then utilized by multidiscipline teams to create accurate georeferenced 3D design models for a real-world context. Precise data acquisition in real-world context is key for the accurate and efficient project delivery of road infrastructure projects.

That’s why designers and engineers turn to OpenRoads Designer.
DO YOUR BEST **BETTER**

with OpenRoads Designer

The ability to compile useful multidiscipline data and evaluate existing conditions from varying sources is paramount for creating accurate 3D models of a road infrastructure project. The 3D reality models can be easily understood and shared in real time, accelerating the decision-making process with real-world digital context and improving team collaboration. ContextCapture, Bentley’s reality modeling software, automatically generates high-fidelity, 3D reality models from simple photographs and/or point clouds. That’s why designers and engineers turn to OpenRoads Designer.

Watch videos below to see how
OpenRoads Designer empowers road and highway engineers to make informed decisions in the early design phases to ensure efficient and on-time project delivery. It ensures better decisions and yields a better return on investment for road and highway projects.

**BUSINESS BENEFITS**

- **ACCELERATE PROJECT DELIVERY**
  Compiling and evaluating existing conditions accurately provides a real-world digital context, enabling accelerated design and construction workflows.

- **INCREASE PRODUCTIVITY**
  Minimize survey rework and design delays by acquiring broader and more detailed reality data during the onset of the project.

- **IMPROVE ACCURACY**
  Eliminate errors in the design prior to construction along with verifying operations performance against schedule.

- **REDUCE COSTS AND CHANGES**
  Minimize design changes by making better engineering decisions early in the project.

- **IMPROVE SAFETY**
  Ensure safety in the field and for the community with the ability to see how designs interact in existing conditions.
The Maharashtra government is proposing an 89.2-kilometer, super-communication expressway, connecting Mumbai to Nagpur. Primove Infrastructure Development Consultants (Primove) was retained to conduct a feasibility study and deliver a detailed project report to evaluate the technical, financial, and economic viability of the roadway infrastructure. The new highway is expected to drastically reduce travel time between the two cities to within 10 hours and promote economic development in the state, connecting at least 24 districts to the commercial capital of India.

**REAL WORLD SUCCESS**

**PRIMOVE INFRASTRUCTURE DEVELOPMENT CONSULTANTS PVT. LTD.**
Preparation of a Feasibility Study and Detailed Project Report of Access Controlled Nagpur-Mumbai Super Communication Expressway

*Nagpur, Maharashtra, India*

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**THE PROJECT TEAM:**
Using drones and ContextCapture, Primove surveyed the entire stretch of corridor and produced a 3D reality mesh from the photos of the area in just eight days, as opposed to 45 days using traditional survey methods. OpenRoads was used for detailed road design in compliance with local requirements. Bentley technology enhanced stakeholder understanding of the proposed roadway alignment through accurate visualizations and reduced project time and costs.

**PROJECT PLAYBOOK:**
ContextCapture, OpenRoads
REAL WORLD SUCCESS

FINNMAP INFRA OY
Highway 3 Arolampi Interchange
Riihimäki, Finland

The EUR 10.4 million road design project in Riihimäki, Finland will connect Highway 3 via a new teardrop interchange at Arolampi. Finnmap Infra Oy provided design and reality modeling services to ensure unhindered traffic flow during construction. The new interchange will enable zoning for new industrial and residential areas of the region and improve access to operating businesses in the area.

THE PROJECT TEAM:
The project required design and construction of ramps, junctions, and an underpass; relocation of a frontage road; removal of an old bridge; and construction of two new bridges. Finnmap used OpenRoads to create machine control models and ContextCapture to monitor construction progress through photogrammetry. The machine control models improved the execution accuracy of earth-moving works and saved 5 percent in project costs.

PROJECT PLAYBOOK:
ContextCapture, LumenRT, OpenRoads
OpenRoads Designer creates a connected and open 3D modeling environment for designers and road engineers. This enables improved collaboration and informed decision making across all phases of the road and highway projects. It ensures improved constructability, cross discipline design review, conflict resolution, and mitigation of risk before construction commences.

This innovative application supports all aspects of a detailed roads and highways design including reality modeling, geotechnical, drainage, subsurface utilities, terrain, road, roadway furniture, and more.

> SEE FOR YOURSELF THE POWER OF BETTER DATA ACQUISITION WITH OPENROADS DESIGNER

Read User Success Stories >