



## Better Decisions with Better Information

Geospatial data is crucial to keeping transportation corridors open and operating smoothly. Transportation departments need up-to-date, highly accurate spatial information about their network to plan construction, manage signage, monitor damage, check bridge clearances, or otherwise drive better decision making. Better information leads to better decisions. Better decisions improve safety and service while reducing cost.

The Optech Lynx mobile survey system is the key to producing the type of spatial information that drives better decisions. Equipped with highly accurate high-speed lidar sensors and integrated 360° cameras, operators can collect detailed geospatial and geometric information from hundreds of kilometers of roadway/railway in a single day without closing them to normal traffic. From bridge clearance to surface slope and condition — the Lynx provides engineers and planners with the clearest possible view of their transportation networks, enabling a wide variety of improvement and monitoring applications.



### Planning and Design

- Topographic Maps/DTMs
- CAD Models/  
Baseline Data
- Virtual 3D Design



### Maintenance

- Vegetation Management
- Powerline Clearances
- Pavement Condition



### Construction

- Quality Control
- As-Built
- Construction Automation/  
Machine Control



### Asset Management

- Inventory Mapping and GIS
- Traffic Signs
- Billboards



### Operations

- Bridge Clearances
- Emergency Response

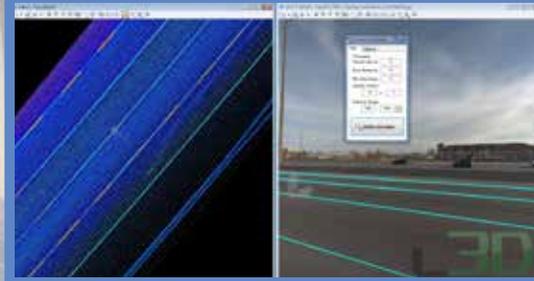


### Safety

- Road Safety Analysis
- Accident Investigation
- Landslide Assessment



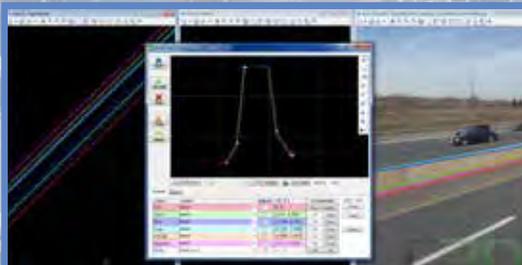
Reliably extract signs, billboards and other roadside assets using semi-automated tools. Easily associate attribute information to each extracted feature and import them directly into your GIS database.



Automatically extract pavement markings and lines using the lidar point cloud's intensity data to obtain detailed lane information for the generation of 3D road maps.

**SIGNS AND ROADSIDE ASSETS**

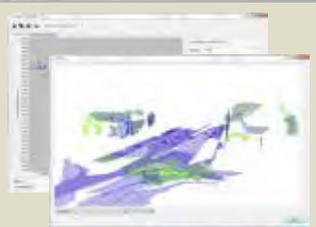
**ROAD MARKINGS & LINES**



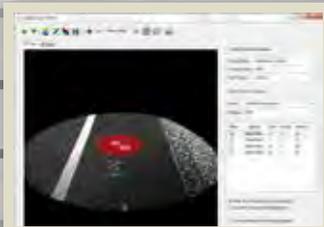
Quickly and precisely capture the dimensions of guard rails and barriers, then analyze deformation using automated and semi-automated algorithms, and port the information directly to GIS and CAD platforms for use by engineers and designers.

**BARRIERS AND GUARD RAILS**

The Lynx delivers the highest accuracy in the mobile survey market in (relative and absolute) accuracy, which is crucial for automating



Qualitative and quantitative analysis tools for project validation



Easy incorporation of control points for trajectory optimization and project validation

Automated lidar self-calibration engine for boresight/trajectory corrections together with practical quality control tools

Real-time lidar data and image visualization, plus GNSS/INS data quality monitoring, for immediate QA/QC

**PRODUCTION**  
Valuable Information  
for Transportation  
Infrastructure

**PROCESS, OPTIMIZE**  
VALIDATION  
Data Accuracy  
Effectively

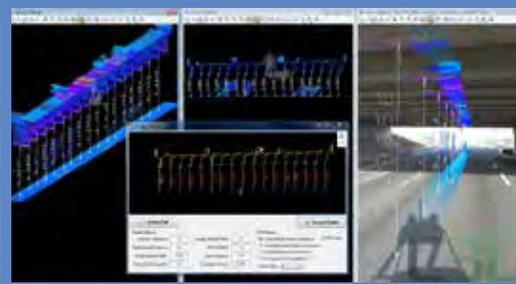
**COLLECT**  
Data Fast  
the First



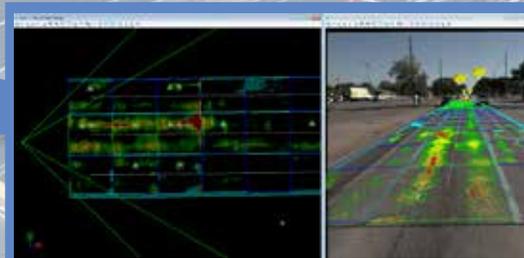
# Optech Lynx: Mobile Surveying for Transportation Infrastructure



Efficiently capture road surface geometry using automated tools, and generate cross-sections along the roadway to support the needs of many engineering/design projects.



Reliably and automatically measure clearances along the entire transportation corridor using the Lynx's high relative accuracy. Also, reliably and quickly perform clash detection analysis.



Detect ruts, pot holes, cracks and other road-surface damage in the Lynx's dense and highly precise point clouds, and automatically extract pavement condition with corresponding ASTM 6433 standard reports.

Highest-quality data in the terms of both accuracy and resolution, which is key for feature extraction.

PRODUCE  
Information  
Transportation  
Infrastructure

OPTIMIZE and  
DATE  
Accuracy Cost-  
(QA/QC)

SELECT  
and Right  
at Time



ROAD GEOMETRY

BRIDGE CLEARANCES AND ANALYSIS

PAVEMENT CONDITION

Automated camera self-calibration engine for efficient camera boresight together with practical quality control tools



Automated measurement of tie points for camera boresight calibration



Visual inspection tools for lidar/imagery alignment and QC

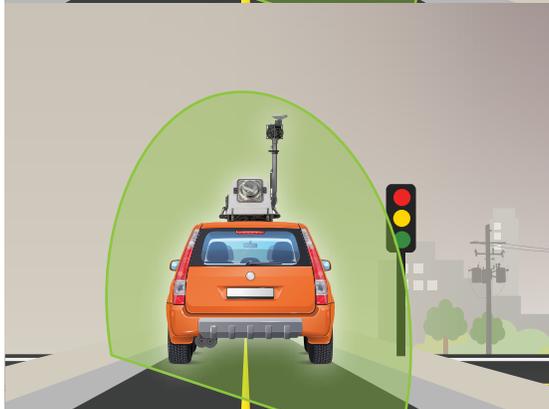
## Choose the Right Model for Your Application

With three customizable models to choose from, you can select the right Lynx solution for any application from asset mapping to design survey projects. All models deliver world-class lidar performance, including the highest precision in the mobile mapping segment and the best point distribution at highway speeds. The models also share a complete software solution with best-in-class survey planning, execution, and post-processing for both cameras and lidar.



### Lynx MG

- Ideal for asset management and city modeling
- High-precision and high-density lidar
- Integrated 360° camera
- Maximum portability
- Upgradeable to SG-S or SG



### Lynx SG-S

- Maximum versatility—portable and accurate
- Excellent price vs performance
- Highest-quality lidar and integrated camera
- Compatible with Optech LMS Pro software for maximizing accuracy
- Upgradeable to SG



### Lynx SG

- Dual lidar sensors for multiple-perspective lidar coverage
- Up to 10 cameras integrated and supported
- Built for maximizing accuracy and efficiency on design survey projects
- This is the choice when accuracy is of paramount importance—make no sacrifices!

