

Purpose:

Fast, high-resolution capture of the near-track environment for clearance checks and accurate as-built documentation Trimble GEDO Scan systems

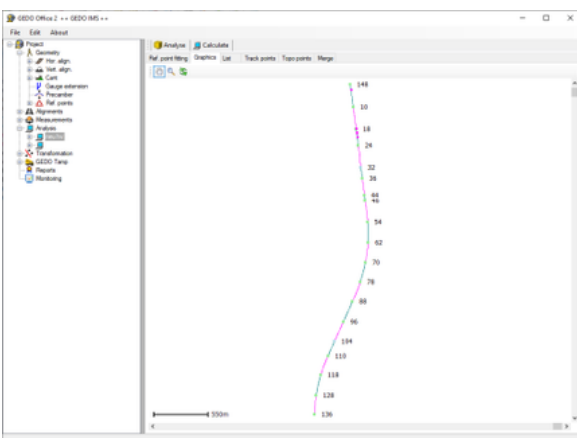
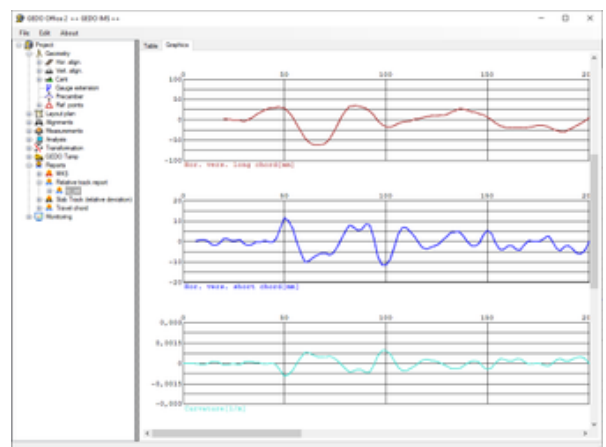
Trimble GEDO Scan systems replace lengthy, personnel-intensive tape and profile methods with automated laser scanning and precise positioning. The resulting 3D point clouds support BIM workflows, planning and construction management.

Workflow:

- 1) Choose system based on scope - GEDO Scan, Rec-Scan or IMS-Scan
- 2) Capture corridor and structures
- 3) Process in GEDO Scan Office - envelopes, cross-sections, encroachment detection
- 4) Export reports and CAD/BIM deliverables

Deliverables:

- Clearance envelopes and encroachment flags
- Cross-section drawings
- Absolute distances to platforms and structures - 3D point cloud and models
- As-built reports



Configuration: Trimble GEDO CE 2.0
trolley + GX50

Method:

Scan the near-track environment and rails; register and geodetically reference for absolute as-built models and clearance results.

When to use:

Short sections and local clearance checks (platforms, tunnels, bridges/OLE) where quick walk-and-scan is needed and absolute track position isn't required.

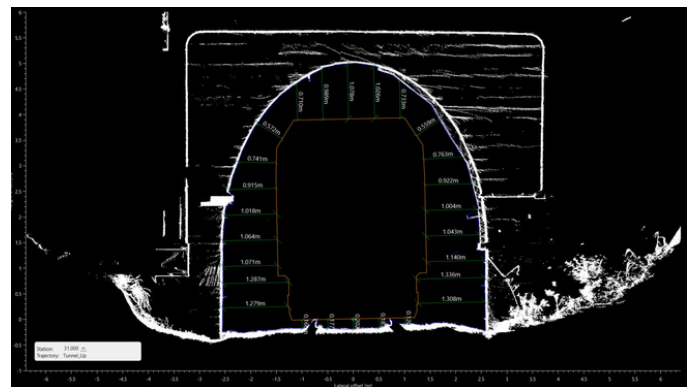
Deliverables:

- Cross-sections
- Clearances
- Point clouds and CAD/BIM packages for as-built documentation.



GX50 Dual Scan
Head

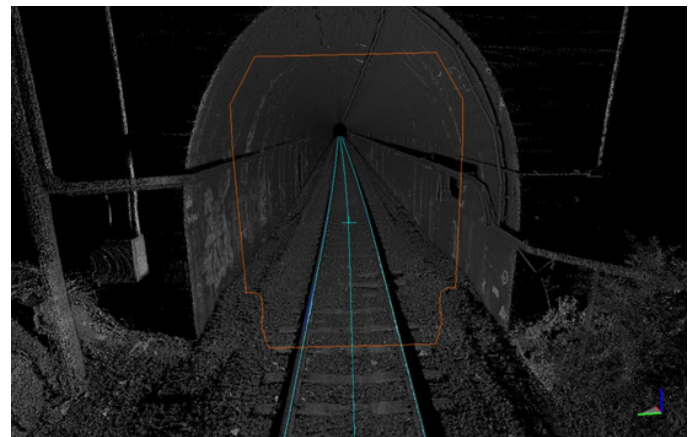




Configuration: GEDO trolley + GX50 + total station (geodetic referencing).

Method:

High-resolution scanning with geodetic ties to deliver absolute as-built models, cross-sections and clearances.



Field Advantages:

Live deviations to nominal alignment
Main point detection and marking
High productivity for tamping prep

Deliverables:

- Cross-sections
- Clearance checks
- As-built point clouds
- CAD/BIM packages.

Configuration:

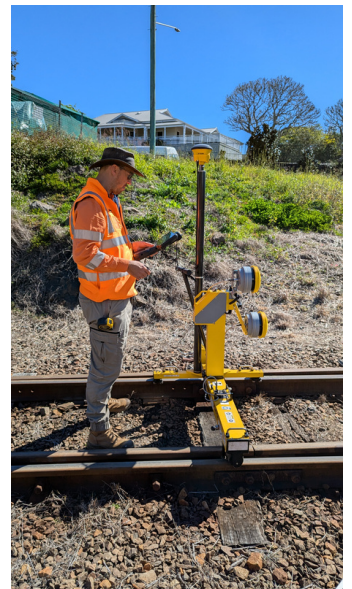
GEDO CE 2.0 trolley + GEDO IMU + GX50 + control unit; optional GNSS or black and white targets.

Method:

Inertial measurement with integrated laser scanning for long corridors and tunnels; periodic ties to control provide absolute position with full geometry.

Why Choose IMS-GX50:

- Highest productivity over long distances
- Robust in tunnels and challenging environments
- Complete clearance analysis with geometry incl. gauge, cant and twist





Configuration:

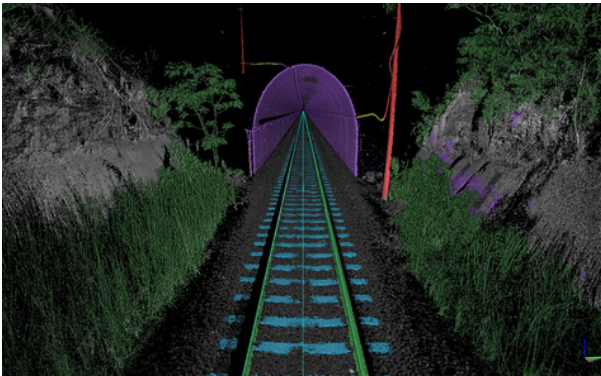
Vehicle-mounted mobile mapping system (Trimble MX series)

Method:

High-speed corridor capture from the roadway. Absolute positioning from tightly integrated GNSS/IMU and control points. Data processed for clearance envelopes, structure offsets and asset inventory.

Where it fits:

- Large network coverage
- Bridges, tunnels and platform approaches
- Rapid as-built and change detection across long distances



Deliverables:

- Lift & line correction tables (per chainage)
- 3D point clouds and imagery
- Clearance checks
- Cross-sections
- Feature extraction and asset layers
- CAD/BIM deliverables

