



# Accurate, Efficient, Intelligent

Capture, process and evaluate railway  
infrastructure data with TRAXIMIZER.

# Up-to-date infrastructure data with utmost precision

**TRAXIMIZER – the new 3D data collection system from NEXTRAIL for infrastructure data on railway tracks.**

Whether it is dynamic track acquisition, automatic generation of digital topological formats or 3D models for simulation and planning.

TRAXIMIZER allows you to accurately capture, process and evaluate all relevant railway infrastructure data. In addition, location accuracy of 10 cm is realized during normal railway operation at a speed of up to 80 km/h.

# Customised for your specific use case



**Basis for planning, engineering and operational simulation**



**Asset management and maintenance of databases**



**Testing and approval processes**



**Accurate route maps**



**3D modelling and BIM integration**



**Simulations for training purposes**

# Functionality and features

## Capturing

- 3D capturing with laser scanner and camera
- Dynamic track measurement at up to 80 km/h
- Synchronous capturing of point clouds, photos and positioning data
- Portable and applicable worldwide

## Evaluation

- Identifying all relevant objects in the track
- Capturing track geometry and topology
- Accurately measuring the distances along track axes
- Determining the absolute position of infrastructure objects

## Output

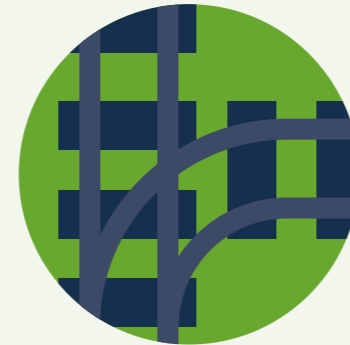
- Up-to-date photographic documentation
- Customisable XML formats or lists
- 3D models and 3D laser scatter plots
- Topological overview maps and track layouts
- Ability to integrate data into BIM processes

# Efficiency and safety through high-quality infrastructure data

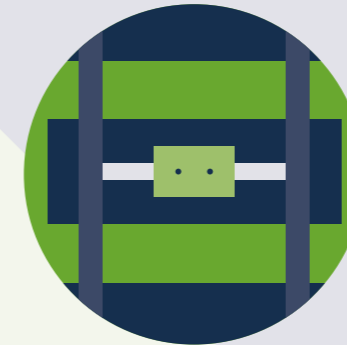
The 3D data collection system TRAXIMIZER enables optimal and safe railway operation through accurate data capturing, intelligent evaluation and customisable output of all infrastructure data in the track environment.

A specially developed 3D laser scanner for the railway environment and several high performance cameras capture synchronised point clouds, infrastructure objects and positioning data.

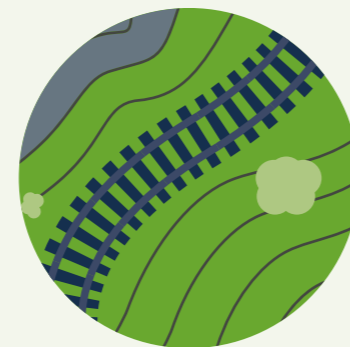
The resultant node and edge models form the basis for the evaluation and output of accurate topological and geometrical maps. The point cloud data is the base for precise measurement and complex 3D models of the track. Current interface standards and customisable output formats ensure a consequent digital process.



Topology



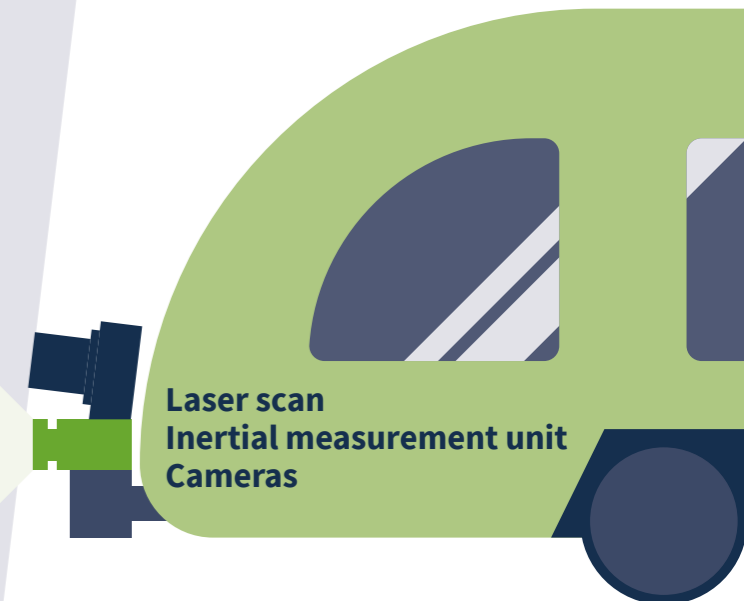
Infrastructure objects



Geometry



3D model / BIM



# The railway experts

NEXTRAIL provides railway system operators and manufacturers with comprehensive technical expertise and system know-how across various applications. Our practical and customer-oriented solutions are based on integrated, holistic consideration of the dynamics between operations, technology and organisation throughout the whole lifecycle of railway systems.



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