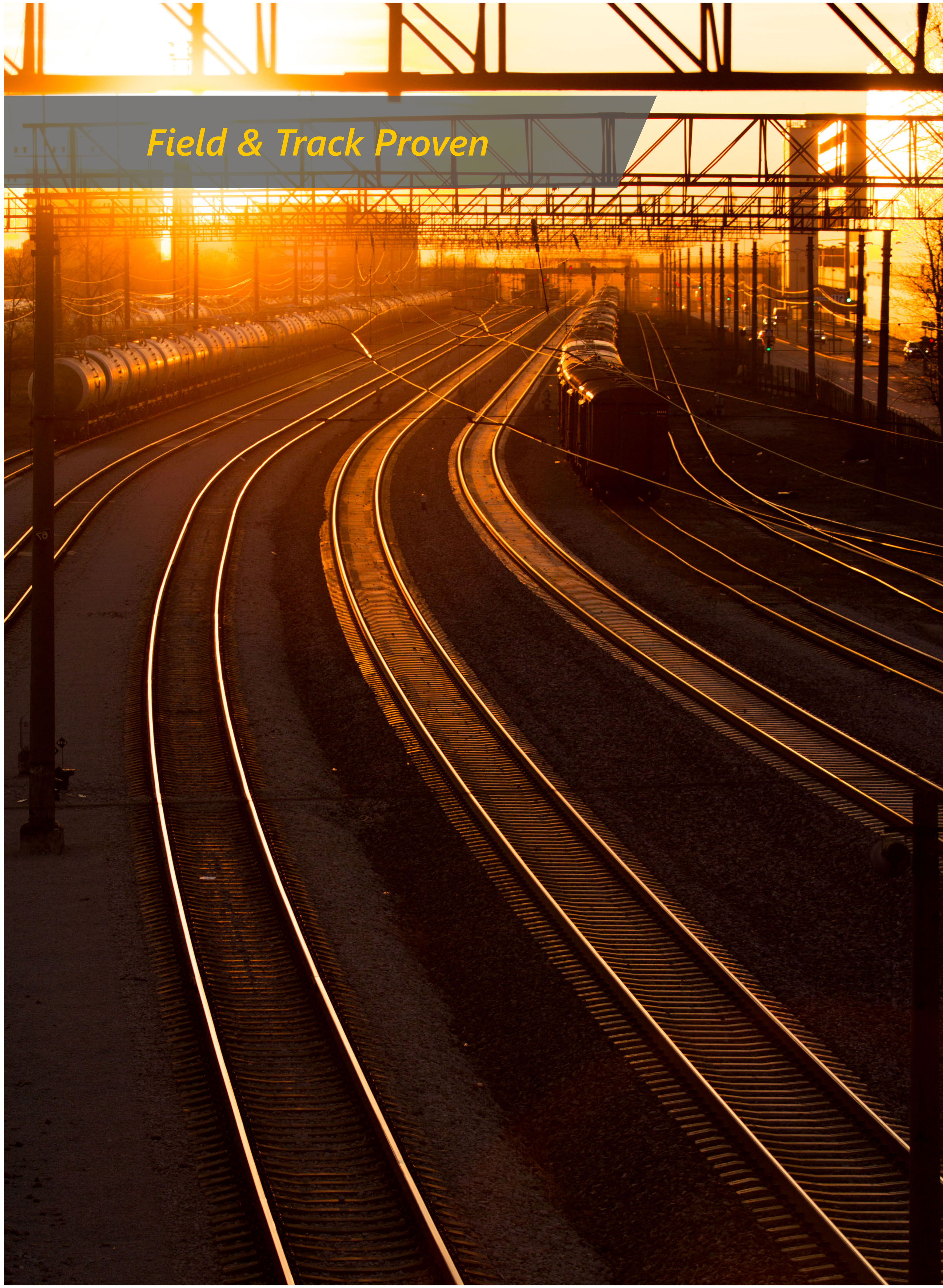


4

RAIL TRANSPORT

MEASLLEY IV
Track Geometry Measuring Trolley System

SCAN TO BROCHURE

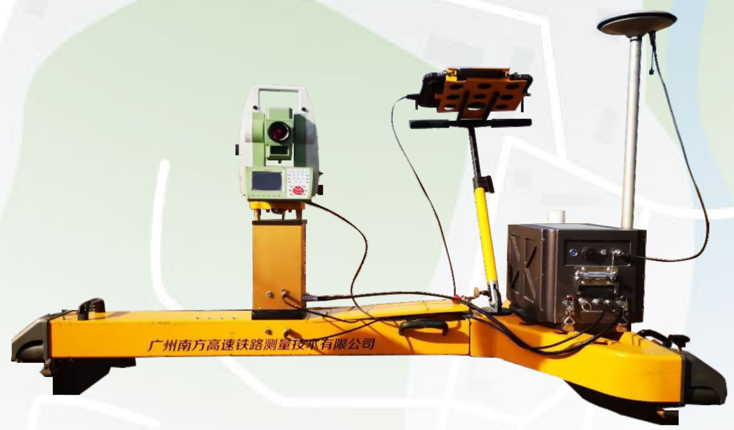
- Unique trolley structure and enhanced body materials
- Modular design, easy to assemble and maintain
- Wireless connection between trolley and data collector
- Conducts absolute measurement with robotic total station
- An economical but reliable solution for railway construction and maintenance

MEASLLEY Combo
Track Geometry Measuring Trolley System

- Integrated trolley body, assembly free
- Simplified but classic structure, easy to operate and maintain
- Separate guide pulley, able to move on trimming track and measure precisely
- Suited to absolute static measurement stop&go and relative dynamic measurement
- Used to adjust rail tracks in both construction and operational stages

i-MEASLLEY
Track Geometry Measuring Trolley System

- One platform suited to TS+IMU aided, GNSS+IMU aided or TS aided mode, switchable
- Ready to work in both open air and tunnel environments
- Continuous measurements instead of repeated station movement and levelling
- Enjoys extremely high job efficiency due to dynamic measurements
- Less affected by weather conditions, and high anti-interference capability



Comparison

Model	MEASLLEY IV	MEASLLEY Combo	i-MEASLLEY
Absolute Measurement	√	√	√
Relative Measurement	×	√	×
Robotic Total Station to Work with	Leica	Leica	Leica
IMU Module	×	×	√
Applicable for	construction & maintenance	construction & maintenance	ideal for maintenance
Work Efficiency	200-500m in 8 hours	Absolute: 200-500m in 8 hours; Relative: 800-1500m in 8 hours	3-4 km in 8 hours

Tunnel Inspection

MS100

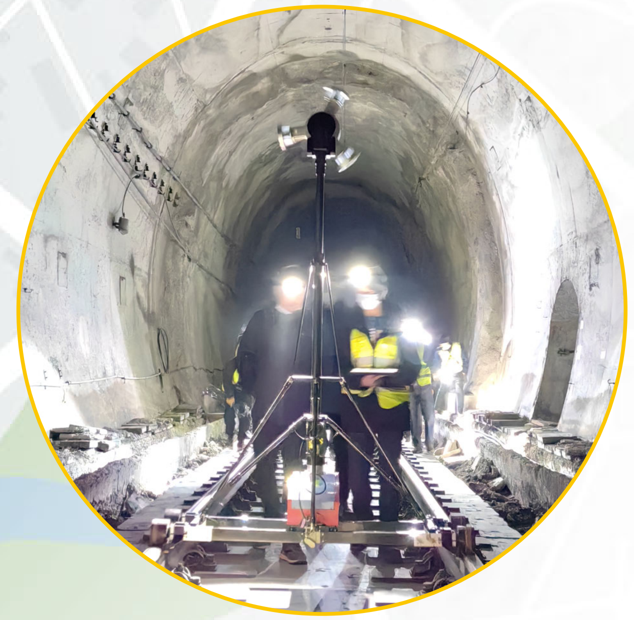
One-stop Metro Tunnel Mobile Scanning & Automated Detection System

- Motorized trolley-based laser scanning
- All-in-one software-driven setting, acquisition and analysis
- On-site realtime display geared by industrial computer built in trolley body
- Scientific and comprehensive report for structure deformation and inwall defects
- Linning cracks detected up to width 2 mm
- Computer vision enjoys much higher efficiency compared to manual inspection

MS100 Pro

One-stop Metro Tunnel Mobile Scanning & Automated Detection System

- Multi-lens camera system Clover equipped as well
- Linning cracks detected up to width 0.2 mm even



Tunnel Scan&Go

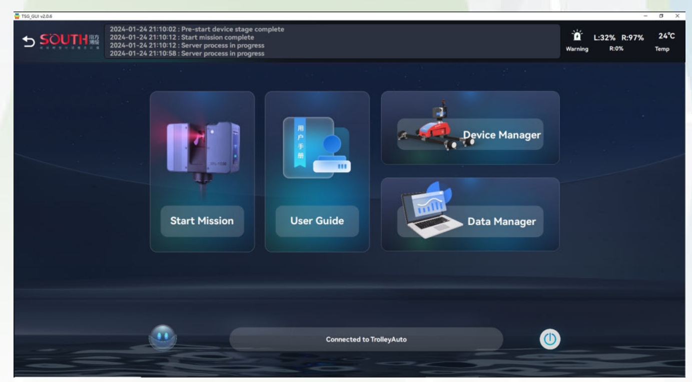
Tunnel Inspection All-in-one Software

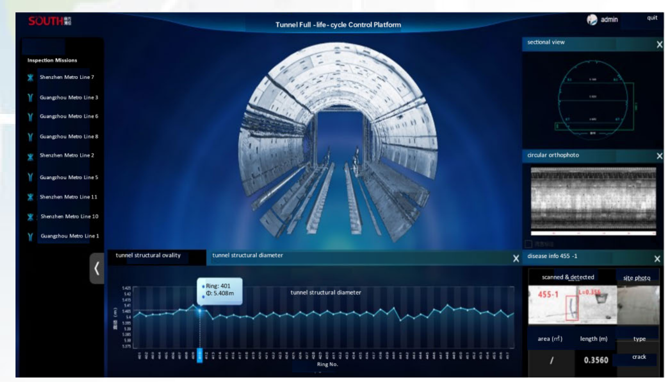
- enables the users to conduct automated scanning, data analysis, intelligent detection, report export, etc.
- deliverables include circular orthophoto, 3D point cloud, structural data analysis and detected inwall defects

Tunnel Fulicle

Tunnel Full-life-cycle Control Platform

- Scientific management of historical results
- All data traceable and analyzable
- Easy to perform tendency changes based on analysis of Before & After
- Out-of-tolerance alerts triggered ahead of emergency
- A powerful system platform ready to manage plenty of metro lines





Comparison

Model		MS100	MS100 Pro
Component	TrolleyAuto	√	√
	Laser Scanner	√	√
	Software Tunnel Scan&Go	√	√
	Clover Camera System		√
Output	Grey-scale Image (derived from point cloud)	√	√
	Ultrahigh Resolution Image		√
	Inspection Report	√	√
Tiny Crack Detected		Up to 2 mm	Up to 0.2 mm
Tunnel Structure	Ovality	√	√
	Tunnel Limit	√	√
	Tunnel Clearance	√	√
	Tunnel Convergence	√	√
	Segment Stagger	√	√
Inwall Defect	Lining Crack	√	√
	Leakage	√	√
	Moist	√	√
	Concrete Peeling-off	√	√
	Concrete Falling-block	√	√

Software	Tunnel Scan&Go	Tunnel Fulicle
type	software kit	software platform
supply	standard, must-have	optional
applicable for	contractors and rail authorities both	rail authorities mainly *
target	fieldwork, post process	big data management
	---- functions included ----	
fieldwork setting	√	x
fieldwork control	√	x
realtime display	√	x
circular orthophoto generation	√	x
AI detection	√	x
structure info computation	√	x
single-task report export	√	x
full-life cycle management	x	√
traceable data records	x	√
overall/specific statistics	x	√
big data analysis	x	√
before & after comparison	x	√
deformation monitoring	x	√
out-of-tolerance warning	x	√
general report export	x	√

Note*: the software platform Fulicle for big data management is mainly designed for rail authorities which need to make full use of the captured data and run full-life-cycle management. But, in case that big contractors receive job services for long-term cooperation (eg. 3-5 years) with the local rail authority, it's also recommended to consider this MT-GIS to keep certain database against long-term management.