



SERCEL

A Viridien Business

S-scan

RAILWAY MONITORING SOLUTION



S-scan

Near-surface imaging and monitoring solution to prevent deformation and collapse.

FEATURES & BENEFITS



Sinkhole under railway tracks

Uses train's energy and surface waves it generates to measure Rayleigh wave velocities

- Continuous source free of excitation. Noise elimination by larger and high quantity waves.

Versatility

- Can be used with any sensor type.

Predictive maintenance

- Optimized operational costs.

Cloud computing and reporting, with fast 4D results available via online web viewer

- Easily accessible by cloud Secure Data Storage.



Ease of installation

- Scan or long-term monitoring with quick installation.

Instability anticipation

- Provide safety for of rail passengers and freight.

Higher resolution than conventional methods

- Reduction of remedial maintenance costs by precise positioning of geotechnical borings.

HOW DOES IT WORK?

→ EQUIPMENT

- Highly sensitive accelerometers with accuracy up to 30 meters/98'5" foot depth.

→ ACQUISITION & REMOTE CONTROL

- Monitoring on InSite equipment: train detection, sensor status system alerts.

→ DATA PROCESSING

- On-board automatic passive seismic, and guided interferometry processings (daily results).

→ INTERPRETATION & REPORTING

- Daily reporting on a dedicated 4D web viewer. Feeding experts geophysicists with interpretation ready data.

THE SENSOR SOLUTION



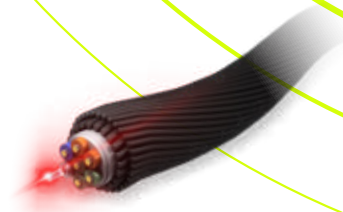
WiNG^{NT} Node

- For proof of concept or snapshot imaging.
- Post processed results within a few days.
- Accuracy of 30 cm/12 inch and up to 10 m/32 feet covered area.



Wired accelerometer

- High-precision monitoring.
- Real-time monitoring & processing over several weeks or months.
- Accuracy of 1 m/3,3 feet and up to 100 m/328 feet covered area.



DAS fiber cable

- Long-term and long-range monitoring.
- Real-time monitoring & processing over several months or years.
- Accuracy of 5 m/16 feet and up to 80 km/50 miles covered area.

SOFTWARE SOLUTION

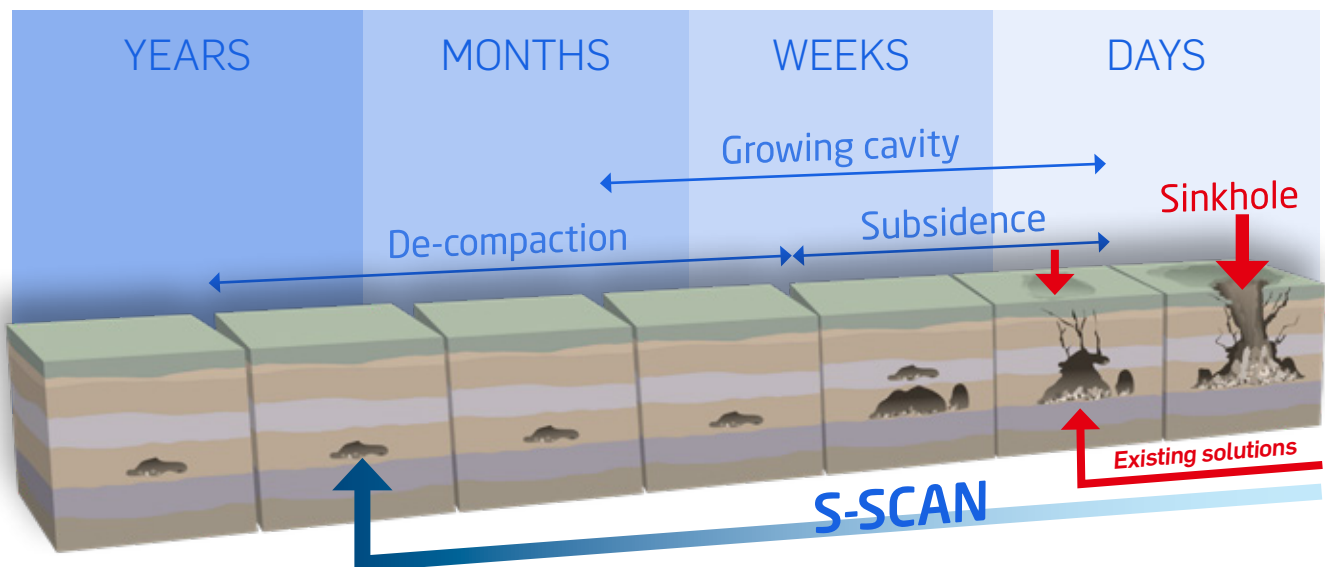
S-scan software

- Continuous data harvesting.
- High-data capacity.
- High-resolution visualization and analysis of near-surface imaging.



EARLY INSTABILITY ANTICIPATION

Growing cavities & sinkholes



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