



**Strukton**  
Rail


# Strukton Wire Scan

The cutting-edge OCS inspection technology


Predictability. An asset worth having.




# How can operators achieve optimal performance and availability across their rail networks?



**Increased pressure on rail networks**



**Current maintenance processes are often costly and inefficient**



**Technology can improve reliability and streamline**

Rail operators today are looking for innovative approaches to optimise the maintenance and operation of their networks, as they face increasing pressure from service uptime demand and higher management standards. Technology is helping these entities improve the reliability, availability and safety of their systems. However, not all manual inspection processes are easy to replace and issues to rail infrastructure can cause hour-long delays.

One system which can cause hours long delays when issues arise is the Overhead Catenary System (OCS). Limited maintenance windows and predominantly manual processes make

it difficult for operators to efficiently and accurately inspect and measure wire positioning, thickness, and condition.

Technology can significantly improve the reliability and safety of rail systems by streaming and automating the inspection, measurement, and reporting of OCS condition.

# Technology fuelling Smart Maintenance: Introducing Strukton Wire Scan



Reduce human error through  
automated scanning



Comprehensive  
analysis



Data visualization to  
support decision-making

The Strukton Wire Scan is a ground-breaking solution for the measurement of OCS which can be deployed on any light rail and streetcar networks powered by overhead electrified wire. The solution uses advanced automatic scanning technology measure the position and condition of overhead catenary, reducing the need for manual, physical inspections. Output data includes thickness, height, stagger and dynamics. The Strukton Wire Scan can be used on all electrified rail networks (via overhead wire), such as light rail and streetcar systems.

The Strukton Wire Scan provides rail operators with the highest standard in overhead catenary measurement when paired with Strukton Rail's professional services and Smart Maintenance principles. Strukton Rail will process and analyse

output data from automated scans, including thickness, height, stagger, and dynamics, and provide detailed reports to network operators as a basis for making informed and reliable maintenance decisions.

Information captured throughout the analysis is displayed in a user-friendly GIS platform, with symbolized and labelled datasets available through a layer-based map interface.

The following diagram depicts the Strukton Wire Scan deliverables.

# Strukton Wire Scan

Simultaneous measurement  
of contact wire height and  
dynamics (contact surface,  
periphery, wire clamps etc.)



Measurement of thickness  
(thin & hot spots) and  
lateral position of all types  
of live contact wires



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Measurement of multiple  
different wires at a time  
under live conditions



4k UHD video recordings  
of the wires being scanned

**Lower  
costs  
by 42%**

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# Strukton Rail Smart Maintenance. Enable effective maintenance with one or more modules.



## Define & Select

- In house consultancy
- Complete analysis of maintenance regime



## Measure & Monitor

- Complete measurement services
- Complete monitoring system(s)
- Complete post-processing services



## Manage Data & Interface

- Asset register design, implementation and hosting services
- Data pipelines to determine position and values



## Analyse & Interpret

- Full-scope data analysis services
- Daily, Mid-term and Long term planning services
- Object failure analysis
- Maintenance engineering services



## Organise & Plan

- Maintenance execution plans
- Optimising availability plans and devices



## Maintain & Feedback

- Full-service provider
- Applied training services



## Who is Strukton Rail?

Strukton Rail provides cross-border solutions in the field of rail infrastructure, railway vehicles, mobility, information and safety systems. Throughout a century of rail construction engineering, maintenance & asset management expertise and technological development, Strukton Rail has successfully adopted, created and connected past, modern and future best practices:

- Asset management
- Maintenance delivery
- Power solutions
- Project support
- High-output equipment

Strukton Rail's expertise, coupled with their approach as a full-service provider of rail, rolling stock and electrical systems has provided customers possession of a safe and operational rail network all over Europe and beyond.

Strukton Rail uphold the highest levels of network quality, performance and availability through their practices. The tools and services of this market-leader are now available private providers to transform their rail networks. Strukton's goal is to make your rail transport a more competitive, safe and reliable option, which is sustainable and future-proof.

Strukton Wire Scan has already successfully scanned thousands of kilometres of overhead lines in Europe and is being adopted by leading operators across the globe, including ProRail (Netherlands), Utah Transit Authority (USA) and Trafikförvaltningen (Sweden).

Strukton Rail operates on an international basis and have long-term operations in Australia, North America, Sweden, Denmark, Belgium, Italy and is headquartered in Utrecht, the Netherlands. More information on Strukton Rail is available at [struktonrail.com](https://struktonrail.com)





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