



Learn from **150 years**
of **S&C experience**

The most critical asset of railway infrastructure

Railway networks have to cope with increasing load and aging infrastructure. As maintenance needs get more frequent, manual inspections don't suffice to detect them in advance. Switches are the most critical part of the rail infrastructure, causing approximately **20–30% of infrastructure-related delay minutes** and **costing €12bn a year** globally to maintain and replace.

The S&C Alliance: The key to S&C longevity

With over 200 years of experience in all elements of the engineering, manufacture and maintenance of switches and crossings, we are uniquely placed to offer on site advice, support, engineering and technology solutions.

Our members work together to offer best in class capabilities to safely and efficiently resolve the S&C reliability challenges faced by Infrastructure Managers Currently, the Alliance consists of 6 members and are always open to new additions.

Our strengths



Increased reliability with decreased delays



Trustworthy fastening to extend longevity



Holistic, healthy S&Cs that deliver for years+



Smooth operations with durable lubricants



Easy application of maintenance materials



Actionable insights with AI-powered data

Our Partners

DWG
INFRA

Staytite

INTERFLON

flexilube
smart lubrication

IntelRail

KONUX



Timber & concrete life extension materials for rail infrastructure

High performance polyurethane life extension products that are simple to use and offer a quick return to service. When Spikefast is used in S&C re-gauging, the process is quicker and more accurate than using wood plugs, it offers greater longevity and doesn't burn out drill bits. Postpone the need to change track components and extend the life of the asset by years.

The products

- Spikefast ET-75 and ES-50: For timber, screw holes, indentation, splits and voids (20 minute set time)
- Fastpatch LV: For concrete, crack repairs, grouting, rail shoulder repairs and bolt fixings (15 minute set time)
- CTR-100: For repairing rail seats on concrete sleepers, bearers and slab track (60 minute set time)

Proven value: Asset lifetime enhancement of 7 years



Network Rail used Spikefast to extend the life of longitudinal timbers on a bridge over the River Thames. In 2014 the timbers were due for renewal, but then removed from the plan for 2 years. A speed restriction was in place and gauge was managed with tie bars. The decision was made to fill all the screw holes and voids with Spikefast ES-50 over four weekend possessions. Upon completion of the work, tie bars were removed, and the speed restriction was lifted. The timbers were eventually renewed in December 2021 following 7 years of trouble-free service.



Fastener solutions for track, rolling stock & infrastructure

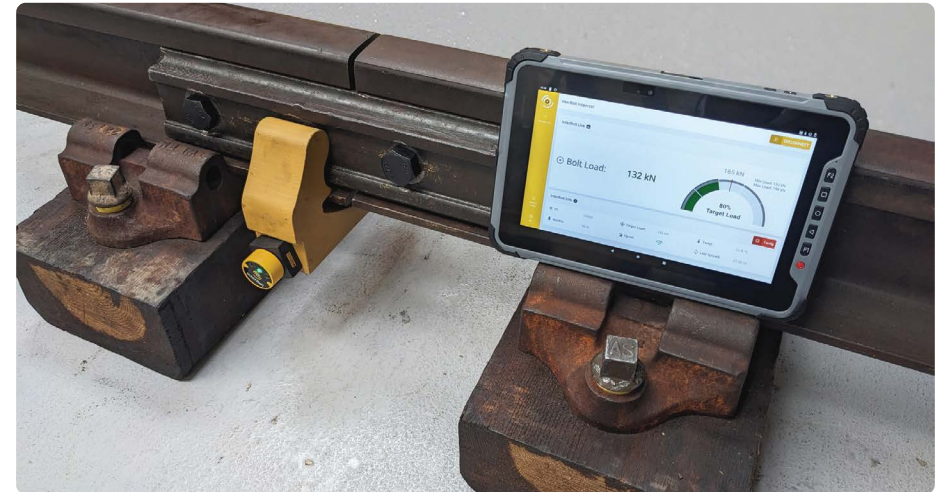
At Staytite, we're dedicated to improving railway safety and efficiency through innovative engineering and technology solutions. Our products, including the Hardlock nut and Intelligent Bolt System, reduce the need for scheduled maintenance while providing unmatched safety benefits. Trust us to provide reliable solutions and exceptional support.

What's on offer

- Expertise in reliable fastening
- Engineering solutions tailored to exact requirement
- Technologies to aid in the improvement of maintenance
- Direct line feed for rail manufacture and maintenance depots

Proven value: 100% safety record

Experience the future of bolted joint monitoring with our revolutionary Intelligent Bolt System! With real-time monitoring and transmission of clamp loads, you'll never have to worry about the safety and reliability of your track infrastructure again.



Say goodbye to the guesswork of bolted joint monitoring and hello to a smarter, more efficient solution. Trust the Intelligent Bolt System to provide the information you need to keep your track infrastructure running smoothly and safely.



The best lubricants & dry coatings for railway S&C

A “Hybrid” product with 4 functions: Creeps-penetrates, cleanses, lubricates and protects for all possible moving parts of a set of points.

www.interflon.com

What's different

- Penetrates even in the most inaccessible areas to virtually eliminate wear
- Breaks down corrosion and deposits to increase lifespan
- Forms a highly durable dry lubrication film, impervious to sunlight, rain and temperature changes
- Repels moisture, dirt, brake dust, sand and other abrasives

Proven value: Improved switch movement

Lube EP (coating) can last 4 to 8 weeks and even up to 13 weeks on slide chairs between maintenance intervals, also offers much better visual inspection due to its transparency.



The Lube EP backpack application method is quicker than the conventional brush method, safer, and more precise. It will not impact the environment due to the low application quantities, 4ml per chair and 95% biodegradable credentials.

flexilube[®]
smart lubrication

Custom fillable automatic lubrication units for railway S&C

The only refillable, recyclable and custom fillable single point automatic lubricator. Automatic lubricators for points, barrier pedestals and mechanical signals.

www.simalube.co.uk

What's on offer

- Reliable automatic lubricators for Clamplock, drive crank, barrier pedestals and mechanical signal applications.
- Units filled with proven dry film lubricants
- Refillable and recyclable
- Dispense rates up to 12 months.

Proven value: Reliable & accurate lubrication

Flexilube's automatic lubricators improve reliability on Clamplock and drive crank applications, ensuring smoother operation. This allows for more value added tasks to be carried out during routine inspection visits.



Network Rail trials proved a reduction in component failures due to reliable and accurate lubrication.



S&C reliability enhancement

IntelRail provide a comprehensive reliability inspection of all S&C system types examining the root cause of points failures to help develop and undertake corrective works. We remove the barriers between the signal and track disciplines by combining the skills to deliver a better performing asset.

What's on offer

- Total system reliability inspections of S&C focusing on detailed checks, using failure data and causal analysis.
- Undertaking condition assessment and half-life remedial works to improve reliability and asset health.
- Providing consultation and guidance on best practice S&C maintenance and enhancements for both track and signals.
- Able to deliver and install all the products offered by the S&C alliance to create a gold plated solution.
- S&C skills development program to develop staffs understanding of the different types of S&C, common failure modes, rectification and whole life cycle planning.

Proven value: S&C Reliability Improvements



In December 2022, IntelRail created a new inspection process covering all common POE and S&C configuration on Network Rail. The inspection form gathers all failure/inspection data history for track and signals. It lists system specific inspection requirements and then logs the work required to rectify whilst also ensuring the work is completed correctly and eradicates the problem.



AI-powered insights for railway maintenance & operations

As the first AI scale-up in railway, we bring next-generation predictive maintenance, network usage and traffic monitoring and planning solutions for railway infrastructure management.

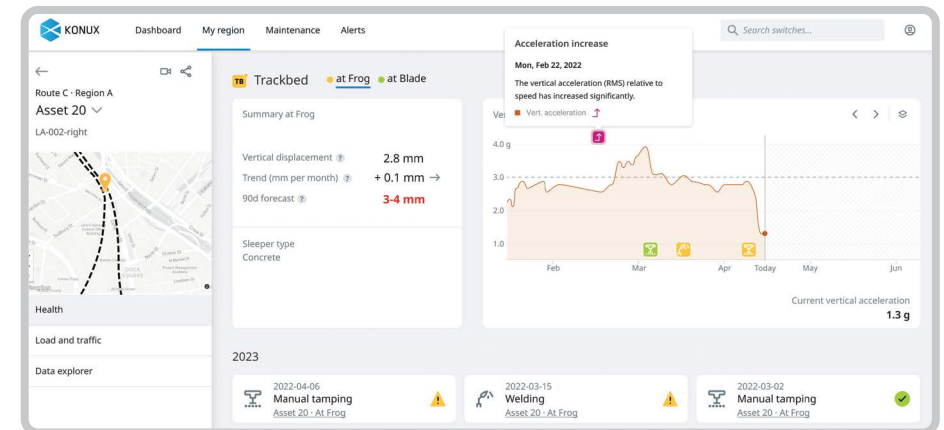
What's on offer

Our solutions bridge the information gap between infrastructure maintenance and operations to improve capacity, reliability and cost-efficiency.

- **KONUX Switch** is the holistic predictive maintenance system for S&C to improve reliability and cost efficiency
- **KONUX Network** paints a more accurate picture of network traffic and its impact across your infrastructure
- **KONUX Traffic** provides insights to build better timetables, capacity and response to delays

Proven value: Trials reveal 20% delay reduction potential

In August 2021, Network Rail granted full product acceptance to KONUX after two successful trials. **KONUX Switch** exhibited cost-saving benefits through reduced maintenance and 20% delay reduction by avoiding track closure and speed restrictions.



The trials took place on the East Midlands and East Coast routes, with KONUX IIoT devices installed on both wooden and concrete sleepers with different installation methods. The demonstrated use cases were track bed health monitoring, true load identification (usage-based inspection planning) and trackbed maintenance validation. Today the system is deployed in all regions, monitoring over 120 S&C with new features and use cases added continuously.



Formed in 2022, the S&C Alliance brings together complementary suppliers with a common goal—to help our customers optimize the performance of their Switches and Crossings. Scan the QR code to follow us on LinkedIn and learn more.