KONUX

KONUX is a leading AI scale-up transforming railway operations for a sustainable future. We combine AI and IIoT to deliver SaaS solutions that enhance capacity, reliability, and cost efficiency in rail transport. KONUX enables smarter decision-making that extends asset lifetime and improves network performance.

A new era for rail empowered by data: powered by machine learning, data insights can unlock sources of operational efficiency previously unimaginable.

From helping to minimise downtimes of critical assets to intelligent traffic management. AI changes the game.

KONUX Switch

Holistic & prescriptive, combining track & signalling insights

KONUX Switch is a predictive and prescriptive maintenance solution built for the most failure-prone and costly assets in rail infrastructure. Switches and Crossings (S&C) are responsible for 20-30% of infrastructure related delays and have a major impact on operational capacity.

Utilising IIoT and Machine Learning to improve S&C uptime, reduce track possession and unlock higher availability KONUX Switch continuously analyses the condition of your most critical components - anticipating failure, providing early alerts and actionable recommendations.

- Detect anomalies before they escalate
- Optimise inspection and maintenance schedules
- Track the effectiveness of maintenance actions
- Extend component life through smarter planning

KONUX Switch

Delay free switches at an optimal cost

Reduce disruption: Catch failures early and schedule interventions before they cause unplanned downtime or speed restrictions.

Lower cost: Target the right switch, at the right time. Extend component life and reduce unnecessary maintenance.

Increase safety: Reduce time in the field. Enable more scheduled, daytime work and fewer emergency responses.

Improve decision-making: Gain real-time visibility and AI-driven insight into switch condition, usage, and performance.

KONUX Switch leverages the power of understanding all the switch interactions and provides users with decision support insights. Additionally supporting maintenance teams by automatically identifying the effectiveness of their interventions, in turn optimising asset lifecycles.

By combining track and signalling insights, we deliver next-level operational quality in managing S&C. Our holistic approach significantly enhances the overall efficiency of switch maintenance, leading to improved reliability and safety in rail transportation.

Up to **60%** fewer delay minutes by improving reliability

Up to **45%** reduced repair downtimes

Up to **30%** lower OPEX by optimising actions

Up to **20%** longer lifetime by improving maintenance

Contact: sales@salixproducts.com.au for more information.

The future of predictive maintenance technology

KONUX Switch, introduced to the Australian market by Salix, is transforming how rail infrastructure is monitored and maintained.

KONUX Switch delivers real-time insights to a cloud-based dashboard.

Turnouts are among the most failure-prone and costly assets in any rail network. They are critical to smooth operations, yet their complexity makes them vulnerable to wear, unexpected failures, and expensive downtime.

In Australia, with a mix of busy passenger corridors and heavy haul mining routes, switch and crossing failures mean not just delays but significant economic impact.

This is where KONUX Switch steps in. With more than 5000 units in service across leading European networks such as Deutsche Bahn in Germany and Network Rail in the United Kingdom, KONUX is now being introduced to the Australian market by Salix, a specialist in innovative rail product solutions.

Salix is proud to partner with KONUX to bring this proven, Artificial Intelligence (AI)-powered predictive maintenance system to Australia, giving operators access to world-class rail technology adapted to local conditions.

HOW IT WORKS

At its core, KONUX Switch continuously analyses the health of critical turnout components – switch, crossing, point machine and trackbed – providing early warnings and actionable insights.

The self-contained unit can be installed in under 15 minutes and operates immediately, with a five-year battery life. The system delivers real-time intelligence on a cloud-based dashboard.

Operators gain visibility into asset condition at scale, enabling them to detect anomalies before they escalate, optimise inspection schedules, and plan interventions at the right time, with the right resources. The software provides you with a 90-day look ahead of any failures. While KONUX Switch predicts asset failures ahead of time, it also validates maintenance activities and their success rate.

In a trial in Infrabel (Belgium National Railways), KONUX revealed 40 per cent of tamping operations on their turnouts were unnecessary and ineffective.

"For Australia, where delays can ripple across long distances and affect both passenger confidence and freight productivity, these results represent a game-changing opportunity," said Silvana Kinninmont, Sales Manager for Salix.

FEATURES THAT MATTER

KONUX Switch brings together cutting-edge features tailored to the needs of rail operators.

Its Wheel Trajectory Reconstruction (WTR) is a world-first AI application that reconstructs the wheel path through the crossing area, detecting geometry defects at their earliest stages.

Another major benefit is smart alerts – context-aware alarms that account for weather, temperature, and train speed to cut down false positives.

Operators also have access to component reliability scoring – a unified health score across switch, crossing, point machine and trackbed, helping operators prioritise assets consistently across the network.

In addition, field teams can attach photos, videos, and inspection records directly to asset profiles, supporting collaboration and long-term knowledge building.

BENEFITS FOR AUSTRALIAN RAIL

Kinninmont said KONUX Switch is not just about technology; it's about outcomes that directly align with Australia's rail priorities.

These include reducing disruption, with early detection preventing unplanned downtime and service cancellations.

Smarter interventions reduce unnecessary maintenance and extend component life, saving operators money, while real-time visibility enables better decision-making, as operators move from reactive to proactive management.

Importantly, less time spent on emergency field work means more scheduled, daytime activities and fewer safety risks.

For Australia, which is both investing in passenger rail expansion and managing some of the world's heaviest freight corridors, predictive maintenance can significantly reduce the environmental footprint of operations while maximising capacity.

A BIGGER VISION

"KONUX isn't just delivering a product; it's creating opportunities for rail operators and their partners to work smarter together," said Kinninmont.

"Through AI-driven insights, modular IoT technology, and the secure KONUX platform, we give operators and partners the tools to solve challenges faster, improve reliability, and unlock efficiencies across the network.

"Our vision for the future of rail is simple: make it easier for customers to collaborate, adapt, and gain the insights they need to keep Australia's railways safe, resilient, and ready for what's next."

KONUX Switch is an end-to-end predictive maintenance solution for turnout management.

Images: KONUX