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Stimio

Enabling Predictive Maintenance and Optimised Operations Solutions for Rail
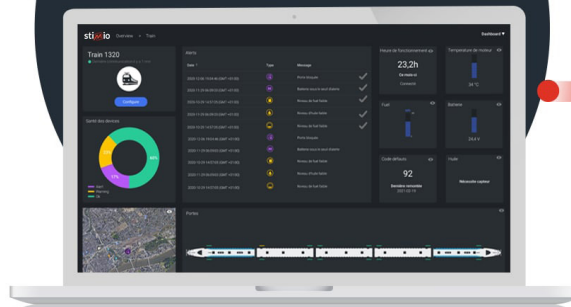

IoT devices

- Battery-Powered
- Low Power AI Algorithms
- Multi-sensors device
- Railway-Certified

Oxygen Edge

oxygen
by Stimio

Oxygen Cloud

Customers EAM & IT platforms

Complementary Data Sources

Oxygen Insights

The French-based company, designs and sells connected solutions for railway maintenance, from railway-certified IoT sensors to data analysis platforms, all based on artificial intelligence.

Predictive maintenance is the next big shift. For both railway operators and infrastructure managers, preventive or condition-based maintenance programmes will not be enough to overcome the approaching challenges facing the railway industry.

Preventing failures and defining the optimal maintenance regime for infrastructure and railway vehicles based on their life-cycle and cost will need data analytics and artificial intelligence. A higher competitiveness being the ultimate goal of the predictive maintenance, it needs to be

implemented with the help of trustworthy partners.

SNCF, TRANSDEV, RATP and CFL among many others are already relying on Stimio's IoT solutions.

The company is developing and selling its Oxygen IoT suite, which consists of Oxygen Edge for data acquisition sensors and Oxygen Cloud, its enriched data recovery platform. This comprehensive solution frees its customers from the complexities of IoT projects (networks of ultra-low consumption sensors, telecommunications, applications developments, etc.), thus letting them focus on business data with significant added value. By combining AI and machine learning technologies, the platform predicts future behaviours and failures in order to better anticipate breakdowns and enable optimal service availability. The data collected and enriched by Stimio can be easily integrated into its customers' information systems in order to be exploited. A recent webinar with IBM presents how the EAM, Maximo Health & Predict and Oxygen can co-operate to enhance maintenance operations – see the video below.

Stimio's solutions are already deployed for the following applications for passenger operators:

- Level monitoring
- Shocks and vibrations
- Temperature
- Air pressure / compressor monitoring for HVAC systems
- Door status, timing, and cycles monitoring

And for railway infrastructure:

- Counterweight and catenary tensioning
- Railtrack flooding
- Frost prediction on overhead lines

Tackling Major Railway Issues

The company has been working with railway operators and infrastructure managers from day one, giving its teams a complete understanding of their challenges. Thus, Stimio delivers with state-of-the-art, modular, customised end-to-end solutions that meet these major needs.

IoT solutions designed by Stimio help reduce maintenance costs for a smart and well-planned maintenance with real-time and condition-based information straight to customers' EAM. Operational reliability and quality of service are also enhanced based on actionable insights from wireless

railway-certified IoT devices – Railnode and Railnet.

Finally, Stimio's Oxygen IoT suite helps railway players to extend their assets' lifespan and reduce on-field inspections to achieve growing environmentally friendly goals.

Learn more: **https://stimio.fr/en**

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Key Takeaways

- A generic and modular software-driven sensor system with edge-ML capabilities to address a wide range of use cases
- Enriched data integration into your EAM/IT systems
- Embedded Oxygen SDK to develop your own application in minimum time
- A well-proven expertise with major infrastructure managers and rolling stock operators
- Oxygen Cloud combining data analytics and AI-based prediction algorithms
- A return-on-investment between 6 to 24 months

Customer Benefits

- Collect real-time data in operating conditions
- Easy implementation with wireless, autonomous, cable-free and non-intrusive IoT devices
- Increase your visibility on failures-to-come to minimise maintenance costs and improve service availability
- Extend your systems lifetime and reduce life-cycle costs
- Complement your offering to enhance value for customers

Assets more reliable · Optimised maintenance planning · Greater passenger comfort and safety

Predictive maintenance and optimised operations solutions for railway

stimio

Reduce **maintenance costs**

Reduce **field incidents**

Increase **service availability**

Control, visualize, extract, integrate, predict...

Meet Oxygen, your companion towards the digitalisation journey and predictive maintenance.

Combined with our railway-certified IoT devices and gateway, Oxygen delivers everything you need in an all-in-on SaaS Platform. From device management to visualisation and prediction, Oxygen unlocks data's potential and turn them into intelligent and actionable insights.

• Catenary frost prediction
• Counterweight height prediction
• ...

• Battery voltage monitoring
• Compressor activity monitoring
• Door activity monitoring
• PLC error code remote retrieval
• Windshield washer level
• Water tank level
• Oil level
• ...

• Rail temperature
• Signalling cables isolation faults monitoring
• Track geometry evolution monitoring
• ...

Let's talk about your challenges

https://stimio.fr/en