

Swedish Train Operator SJ Selects Trimble Rail Systems for Remote Diagnostics, Condition Monitoring and Analytics

SUNNYVALE, Calif., Feb. 21, 2018 /PRNewswire/ -- Trimble (NASDAQ: TRMB) announced today that Swedish train operator SJ has chosen the Trimble® R2M real-time remote diagnostics system and Trimble C2M component condition monitoring system. Deploying the Trimble systems will enable SJ to improve its real-time status monitoring and analytics capability by accessing up-to-date fleet status to improve fleet availability and reliability while also reducing costs and improving safety.

Trimble R2M processes diagnostic data from rail vehicles in real time to provide a comprehensive view of overall fleet status including specific and potential vehicle faults. The R2M system analyzes and detects anomalies in on-vehicle component behavior to identify the status of component health and the possible impact this behavior may have on the vehicle as well as the overall fleet. SJ will use the system to optimize maintenance and reduce costs by performing maintenance when needed rather than after a fixed interval.

The Trimble C2M system will enable SJ to make proactive planning decisions, based on condition monitoring data. The system provides full monitoring: identifying the condition of all the key components being monitored by wayside systems and reporting on defect identification and wear detection. C2M proactively analyzes and detects anomalies with particular component behavior and uses this information to identify the impact on maintenance and service for the entire fleet. Use of the C2M system will improve SJ's ability to determine the fleet's operational status and give them the ability to make data-driven decisions about when to undertake maintenance and assist root cause analysis.

"SJ recognizes the benefits of current and updated status monitoring and analytics as a cornerstone in improving operations," said Lars Lindberg, head of Fleet Management, SJ. "SJ is a technologically advanced company that is continuously seeking innovative solutions to simplify processes and lower costs. By implementing the Trimble systems, SJ can improve its capability in remote diagnostics and analysis to identify potential fleet improvements, detect faults before breakdowns occur and increase the planning horizon of maintenance."

"Because Trimble's rail asset lifecycle management products are an interoperable solution suite, SJ has been able to implement a seamless solution that meets their needs," said Tomas Larsson, general manager of Trimble's Rail Solutions Business. "The deployment of both Trimble R2M and C2M means SJ will maximize benefits with remote diagnostics, condition monitoring and analytics delivered via one interface providing a consolidated view of on-train and wayside systems."

About SJ

As a leading train operating company, SJ offers sustainable train travel, both independently and in collaboration with other companies. SJ links Sweden together and opens up access to Scandinavia's capitals with 130,000 people choosing to travel with SJ daily on one of the 1,100 departures from 275 stations. Owned by the Swedish state, SJ is tasked with operating profitable passenger rail services. At the end of 2016 SJ had 4,500 employees and is expected to have sales of approximately SEK 7.5 billion in 2017.

For more information: <https://www.sj.se/en/about/about-sj.html>.

About Trimble's Rail Solutions

Trimble's rail solutions combine the latest in sensors and monitoring technologies with customized software and wireless communications to quickly and accurately capture the data needed to maintain and construct rail infrastructure or to manage rail transport assets. From the infrastructure planning, design, construction and maintenance phases to the operation, maintenance and repair of rail transport assets, the solutions streamline operations to keep rail projects on time and on budget.

Trimble's rail asset lifecycle management products manage the lifecycle of rail transport assets from operation through maintenance and repair. In 2014, Trimble acquired Nexala of Dublin, Ireland, providers of data aggregation and analytics tools for engineering and operations of rolling stock. In 2017, Trimble acquired Beena Vision of Atlanta, Georgia, a manufacturer of vision-based automatic wayside rail inspection systems. Using this comprehensive portfolio of on-board and wayside condition monitoring solutions, rail companies can improve operational efficiencies, manage service levels and reduce costs, while ensuring that service is maintained to the highest level. Customers using Trimble solutions include South West Trains, Eurostar, SNCF, Irish Rail, the Go-Ahead group, Siemens, Arriva, Greater Anglia, BNSF and Aurizon among others.

For more information, visit: www.trimble.com/rail, www.trimble.com/rail-assets, www.trimble.com/beenavision.

About Trimble

Trimble is transforming the way the world works by delivering products and services that connect the physical and digital worlds. Core technologies in positioning, modeling, connectivity and data analytics enable customers to improve productivity,

quality, safety and sustainability. From purpose built products to enterprise lifecycle solutions, Trimble software, hardware and services are transforming a broad range of industries such as agriculture, construction, geospatial and transportation and logistics. For more information about Trimble (NASDAQ:TRMB), visit: www.trimble.com.

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