

MAINTENANCE WITH INTELLIGENCE



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We use asset intelligence plus operations data to drive enhancements across our customers' operations, encompassing fleet performance, fleet costs and improving the passenger journey experience.
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This ground-breaking capability combines data gathered from rolling stock with Bombardier's fleet knowledge and engineering expertise to enhance the active management of vehicle maintenance, performance and operation.

This enables us to progress from a period-based maintenance regime to a condition-based approach, thus reducing unwarranted component replacement and train down-time.

The train itself can be used as a tool for monitoring operations, providing data on fuel usage, passenger demand, delay analysis or environmental conditions.

Train condition data enables us to optimise fleet maintenance by:

- Reducing material usage & maintenance cost
- Reducing corrective maintenance
- Driving improvements in availability & performance

We use train operations data to optimise fleet performance for:

- Energy management: smart stabling, metering, driver advisory systems
- Monitoring environmental impact - track condition, overhead lines, weather and temperature
- Passenger loading - congestion warnings, dwell time analysis

AIMS Overview

Bombardier's asset information and management service (AIMS) combines real time rail asset data with cross-fleet engineering knowledge to provide operational intelligence.

AIMS enables the optimisation of maintenance, reducing material usage and maintenance costs, as well as minimising corrective maintenance.

It can also provide support to operations, such as management, analysis of passenger congestion and delay attribution.

Key Features

- Fully integrated asset condition, telemetry and operations data
- Can be integrated with materials planning and work order management (SAP and MAXIMO)
- Advanced telecom systems to locate vehicles and transmit information.
- Intelligent use of historic data to identify trends and predict train behaviours
- Use of vehicle-based sensors to gather critical systems data
- Flexible choice of information delivery using GPS, web, SMS and B2B communications

Major Benefits

- Pro-active identification of problems
- Flexible maintenance planning
- Rapid response – reducing downtime
- Maximised fleet availability
- Access to specialists with vehicle expertise
- Reduced inventory
- Improved operational efficiency

Automatic Vehicle Inspection System (AVIS)

AVIS is a cost-effective train inspection system that supports assured condition-based maintenance. AVIS can be used to inspect a range of train systems and components including, brake pads, wheels, pantographs and collector shoes. The system delivers accurate information to AIMS to drive maintenance planning and deliver the following benefits:

- Improved reliability through early detection of worn down material
- Reduced damages to infrastructure (overhead lines, tracks)
- Reduction of maintenance labour and vehicle downtime
- Material savings through accurate assessment of remaining material durability

Asset intelligence – driving fleet value

