

ITS

## **Beyond limits**

GMV is a global leader in the design and implementation of Intelligent Transportation Systems, with thousands of clients across five continents.

GMV offers integrated, operational turnkey solutions, fully involved in project execution, including proprietary hardware and software development, manufacturing, and third-party system integration.

Our clients vouch for GMV as a global trailblazer in ITS design and implementation for public bus transportation, public rail transportation, and fleets.

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## Public bus transportation

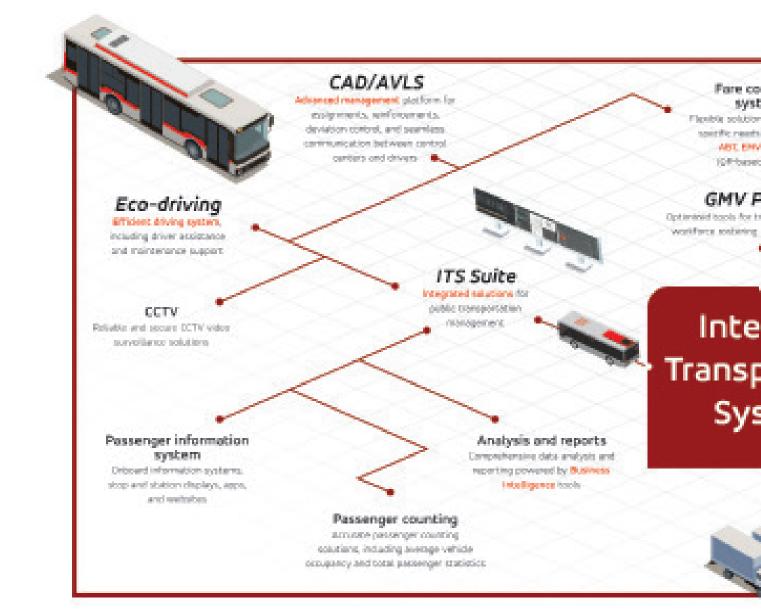
Among the ITS solutions offered by GMV, the *ITS Suite* stands out as a comprehensive set of applications, including **Automatic Vehicle Location (CAD/AVL)**, ticketing systems (AFCS), **CCTV**, and the Passenger Information System (PIS). This suite enables operators to control, monitor, collect data, analyze it, and generate reports on the delivery of transportation services. Its features range from real-time service compliance monitoring to data exploitation through Business Intelligence (BI) tools, as well as dispatch tools, alarm management, and regulation tools.

Designed to adapt to both proprietary and third-party applications, the *ITS Suite* integrates seamlessly with other systems, such as passenger counting and *Eco-driving* (efficient driving). The suite is further enhanced by the *GMV Planner*, which supports service planning and resource optimization to ensure fast, efficient, and cost-effective transportation. With its interoperable and scalable design, the *ITS Suite* facilitates data exchange and supports intermodal, multi-fleet, and multi-operator implementations. GMV is embracing the latest trends in public transportation **ticketing systems** with its innovative solutions, which include proprietary onboard elements for validation and sales. These solutions support account-based ticketing (**ABT**), **EMV** or NFC payments by credit card, back-office tools for fare configuration and data analysis, as well as various systems for stations and clearing houses.

## Public rail transportation

Rail transport is characterized by its emphasis on safety, punctuality, and comfort. GMV's Intelligent Transportation Systems contribute to improving passenger service, enhancing safety, and optimizing management for transport authorities and operators.

GMV is a highly relevant provider in the ITS sector, offering proprietary systems with significant global clients, including transportation operators such as RENFE, ONCF (Morocco's national railway), Metro de Barcelona, and Metro de Santiago de Chile, as well as



rolling stock manufacturers such as ALSTOM, CAF, Pesa, and Talgo. GMV has proven to be a reliable technological partner, demonstrating a high level of commitment to large-scale railway projects and strictly adhering to the rigorous standards of the sector.

GMV's solutions include the **SAE-R**<sup>®</sup>, Automatic Vehicle Location System (CAD/AVL), designed specifically for rail environments. This system enables operators to comprehensively manage transportation services in both real-time and offline modes. In real-time, **SAE-R**<sup>®</sup> facilitates control, monitoring, resource allocation, and alarm management. In offline mode, the system allows for data analysis and service performance reporting using Business Intelligence (BI) tools. **SAE-R**<sup>®</sup> is further enhanced by onboard systems for rail, including **Info-Pass** for onboard passenger information, **DV-REC** for digital distributed video surveillance, and **PA-Intercomm** for public address and audio communication.

GMV also offers cutting-edge solutions in access and ticketing systems for public rail transportation,

incorporating onboard validation and sales elements of its own design. These solutions support account-based ticketing (ABT), EMV payments via credit cards or NFC, and include back-office tools for fare configuration and data analysis.

## Fleets

GMV is a leader in GNSS fleet management, offering a cutting-edge tracking and management service that allows for real-time monitoring of all fleet activity, including locations, stops, speeds, fuel consumption, alerts... This solution provides a wide range of features, enabling fleet managers to fully monitor each vehicle, and is a flexible service that can be easily integrated with other business applications. GMV's fleet management optimizes all resources, improving the profitability and safety of all processes and providing a significant competitive edge within the sector.

