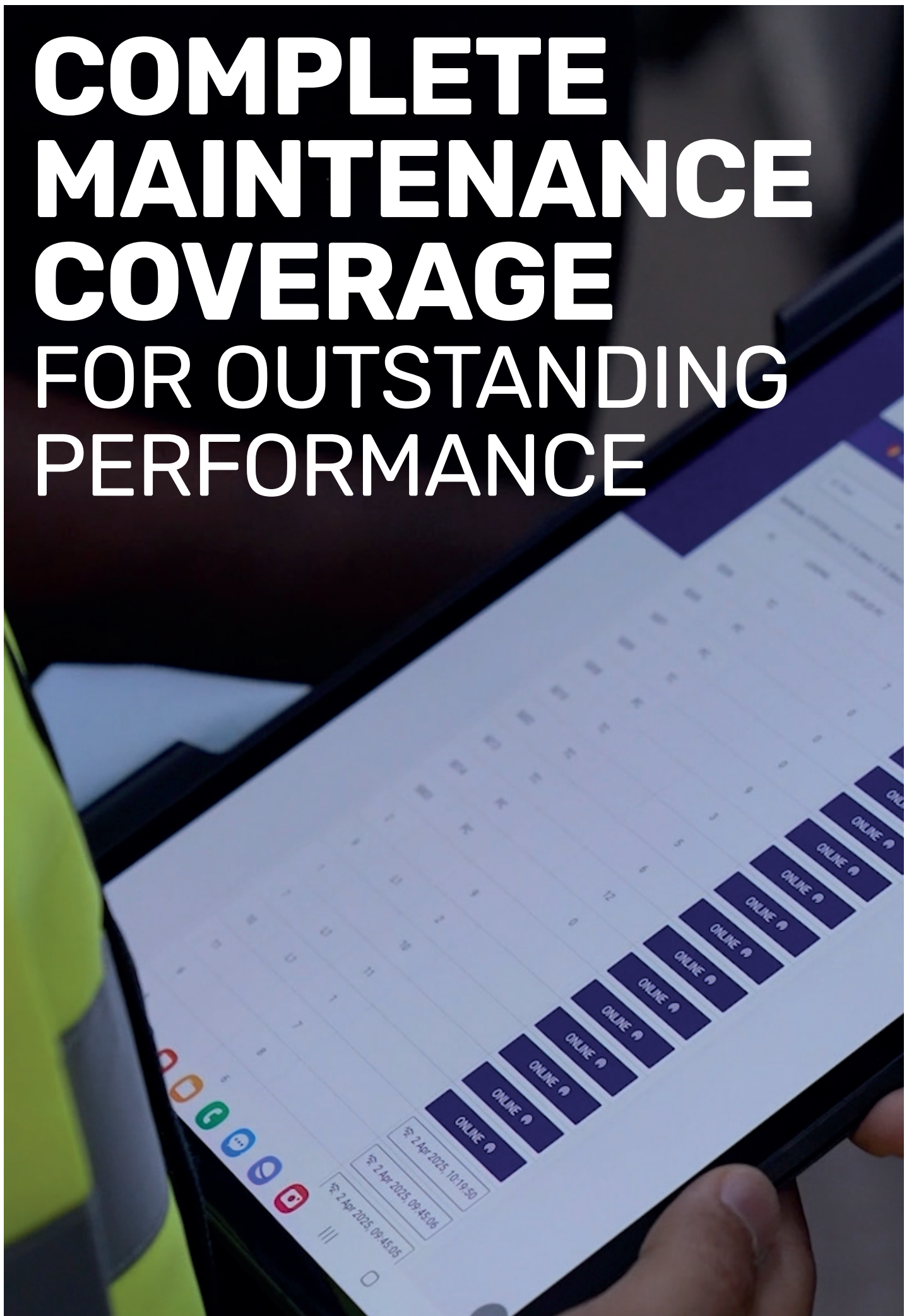




RAIL **SERVICES**

Maintenance and lifecycle support
for optimal AVAILABILITY

COMPLETE MAINTENANCE COVERAGE FOR OUTSTANDING PERFORMANCE



INTEGRATED SOLUTIONS FOR SUSTAINABLE MOBILITY

A global partner across
the full mobility lifecycle.

We are CAF, a global leader in comprehensive transport systems and a recognised benchmark in sustainable mobility. Across trains, buses, signalling, components and turnkey solutions, we help operators and authorities improve performance across the wider transport system, with safety, comfort and efficiency as shared priorities.

Our capabilities span a broad range of rolling stock, including high-speed trains, regional and commuter units, locomotives, metros and trams. This range allows us to respond to different operational contexts with solutions designed for reliability, long service life and consistent performance in operation.

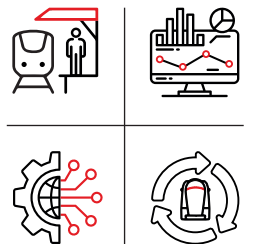


MAINTENANCE IS IN OUR DNA

We stay close to fleets in service, turning operational experience into practical maintenance actions that protect reliability and availability. By combining fleet and component maintenance with engineering support, spare parts and targeted upgrades, we help refine plans over time, reduce unplanned work and extend the useful life of the vehicles.

Digitalisation strengthens that approach. Using data, monitoring and traceability, we improve diagnosis, planning and execution in depots, reduce repetitive failures and give teams a clearer basis for action. In this way, digital services become a practical part of how availability is sustained over time, without adding unnecessary complexity.

Better insight.
Better planning.
Better uptime.



YOUR PARTNER FOR RELIABLE AND SUSTAINABLE RAIL PERFORMANCE

End-to-end services to boost
availability and extend fleet life.

Keeping fleets available takes more than maintenance alone. It requires the right mix of technical knowledge, service capability and ongoing support across the life of the vehicle.

Our services portfolio brings together the capabilities needed to support availability, reliability and durable fleet performance:

- **Fleet maintenance:** Light to heavy maintenance focused on service continuity and dependable asset care.

- **Digital mobility:** Data and intelligence for diagnosis, planning and decision-making across operation and maintenance.

- **Component maintenance:** Overhaul and refurbishment solutions that extend component life and help prevent repeated issues.

- **Spare parts:** Supply models, logistics and technical support that help keep critical materials available when they are needed.

- **Modernizations:** Targeted upgrades that improve safety, comfort and efficiency while extending the useful life of the fleet.

MORE THAN

40

COUNTRIES

MORE THAN

15,000

CARS IN SERVICE

MORE THAN

4,500

WORKFORCE

MORE THAN

150

MAINTENANCE
CENTRES



FLEET MAINTENANCE THAT FITS YOUR OPERATION

You focus on passengers.
We keep the fleet ready.

Keeping trains available means doing the right work at the right time, with clear responsibilities and a maintenance scope that fits the operation. That is how CAF protects reliability, availability and safety across the fleet, while adapting maintenance plans to operating experience.

We bring together maintenance know-how, engineering support, technical assistance and upgrade capabilities, adapting each model to the needs of the fleet, the workshop and the operator. This approach applies not only to CAF vehicles, but also to rolling stock from other manufacturers.



ONE LIFECYCLE. MULTIPLE WAYS TO PARTNER

- **Full service:** A turnkey solution in which CAF assumes full responsibility to maximise availability, reduce risk, and deliver predictable, high-performance operations.
- **TSSSA:** A collaborative model that enhances fleet performance by combining your in-house capabilities with CAF's OEM expertise and digital intelligence.
- **Spare parts supply:** Guaranteed availability of certified components to ensure maximum reliability, optimised inventory and uninterrupted fleet performance.
- **Technical support:** On-demand expertise that enables smarter decision-making, reduces technical risk and enhances performance without disrupting your operations.
- **Light maintenance:** High-efficiency routine maintenance that maximises daily availability, supports service continuity and minimises disruptions for seamless operations.
- **Heavy maintenance:** End-to-end overhaul capability that ensures long-term reliability, compliance and optimised lifecycle performance at critical milestones.
- **Mid-life upgrade:** A smart modernization solution that extends asset life, enhances performance and helps prepare your fleet investment for future requirements.
- **Upgrades & modifications:** Continuous improvement solutions that keep your fleet efficient, compliant and ready to meet evolving operational demands.

DIGITAL MAINTENANCE WITH BETTER VISIBILITY



LeadMind®
EASING YOUR WAY TO FUTURE MOBILITY

CAF's digital solution for smarter rail operations, maintenance and fleet management.

Smart capabilities that help maintainers understand fleet condition earlier, plan interventions better and keep workshop activity connected.

SMART CONTROL

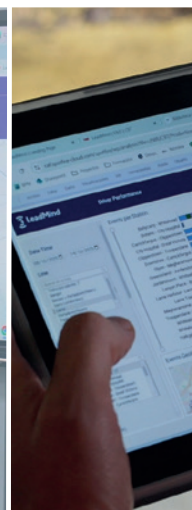
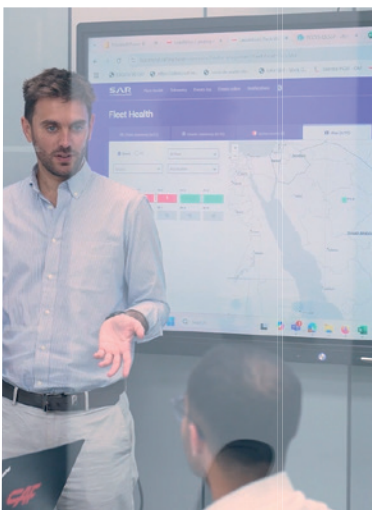
Remote actions and depot support for software status, operational states and vehicle movements in maintenance environments.

PREDICTIVE MAINTENANCE AND TRACEABILITY

Fleet status, alarms, diagnostics, condition-based maintenance and planning tools that help teams anticipate issues and keep maintenance workflows connected.

AUTOMATIC INSPECTION

LeadMind Wayside combines automatic inspection, measurement data, visual evidence and analytics to support earlier detection and better intervention planning across critical components such as wheels, brakes, pantographs and carbody areas.



CYOS
NOW MORE THAN EVER, SECURITY

Wherever digital services are used, connected railway environments rely on a strong cybersecurity layer.

CYBERSECURITY AS A COMMON LAYER ACROSS DIGITAL RAIL OPERATIONS.

CYOS helps protect assets, manage vulnerabilities and respond to incidents so digital capabilities can operate with greater resilience.



SMARTER OPERATIONS

START WITH CLEARER FLEET VISIBILITY

Operational insight, fleet visibility and digital records that support better decisions across service and maintenance.

SAFETY

- **Alive Drive:** Driving assistance that improves operational awareness and supports safer train movements.
- **Alive Protect:** Protection support for controlled environments through object detection and collision avoidance.

ENERGY EFFICIENCY

- **DAS:** Driver Advisory System that supports more efficient driving through route-based guidance.
- **DASEM:** Driver Advisory System and Energy Management that combines driving advice with onboard energy control.
- **Connected DAS:** Driving advice that adapts to changing operating conditions in real time.

PASSENGER OCCUPANCY

- **Passenger Counter:** Real-time occupancy visibility that helps operators understand, demand and reduce dwell times.

FLEET VISIBILITY AND DATA INSIGHT

A shared layer of fleet visibility and digital continuity across service operations.

FLEET MANAGEMENT

Real-time fleet visibility helps teams monitor alarms, understand vehicle condition and respond promptly when issues arise.

DIGITAL LOGBOOK

A traceable record of fleet activity that keeps information structured, consistent and aligned across teams and roles.



COMPONENT MAINTENANCE & OVERHAUL

Extend component life.
Reduce repeat issues.
Improve reliability.

Keeping a fleet reliable also means looking after the components that make performance possible every day. We provide overhaul and maintenance solutions that help extend component life, restore condition and support more stable operation across the fleet, with a strong focus on reliability and technical consistency.

LIFECYCLE MAINTENANCE

Overhaul and refurbishment of key components such as bogies, wheelsets, gearboxes, brake systems and couplings help extend useful life and ensure reliable in-service performance. These interventions restore critical functions, reduce the risk of repeated failures and help ensure that components continue to perform as expected within the maintenance cycle.

ELECTRONIC EQUIPMENT MAINTENANCE

Repair, overhaul and obsolescence management for electronic equipment help improve reliability, keep systems maintainable and support fleets as technologies evolve over time. By addressing ageing components and replacing outdated systems, we help maintain operational stability and ensure compatibility with current and future requirements.



SPARE PARTS & SUPPLY MANAGEMENT

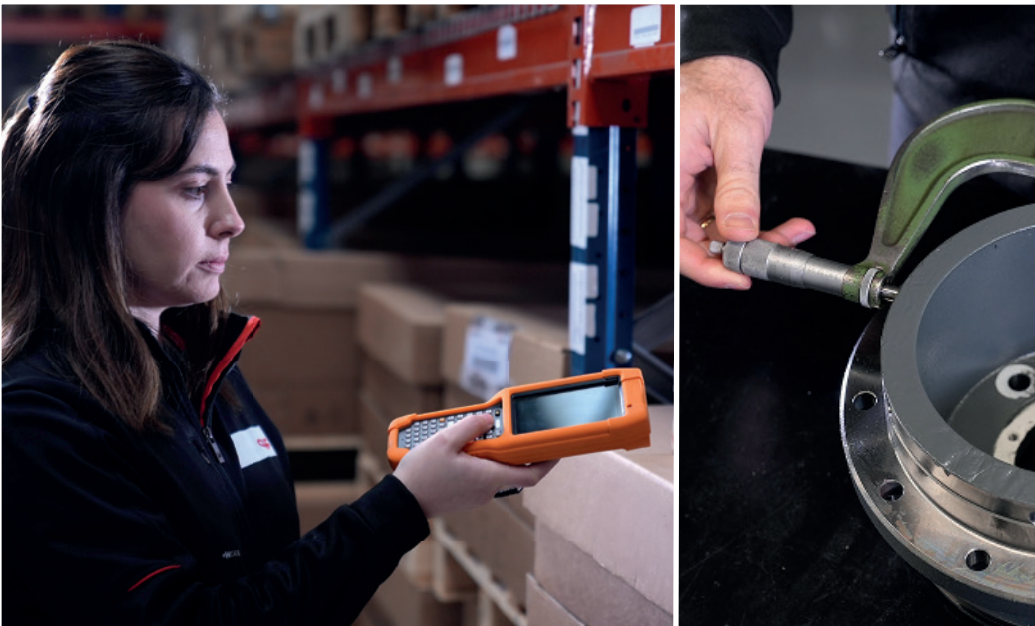
The right parts, in the right place,
exactly when you need them.

Reliable maintenance depends on access to the right materials. We bring together spare parts, supply models and technical support that help operators and maintainers keep critical components available, respond to incidents and sustain fleet performance.

Spare parts support across the maintenance cycle:

- **Preventive maintenance:** Essential parts aligned with maintenance plans to ensure reliability.
- **Corrective maintenance:** System-based spare parts support for fast breakdown response.
- **Accidents and vandalism:** Dedicated spare parts solutions for rapid fleet recovery.
- **High performance consumables:** Selected consumables that ensure dependable operation and maintenance continuity.
- **Strategic parts:** Critical items managed in advance to protect availability and continuity.

Framework contracts, tailored supply models, customised kits, repair management and warehousing solutions allow us to adapt the service to the reality of each fleet and each maintainer. This helps keep material flow connected to operational needs, with strong traceability and close customer support throughout the process.



Whether you require large, complete components like a full bogie or individual parts such as windows or braking systems, we have the right solution for your needs.

Supply of:

- **All manufacturers:** CAF products and other OEMs
- **All component categories and families.**
- **All types of spare parts:** Complete bogies, subsystems and individual spare parts.

ENGINEERED MODERNIZATIONS

Targeted upgrades that extend service life and maximise performance.

SMART LIFE EXTENSION SOLUTIONS

We work with you to extend the useful life of your fleet through upgrades that improve reliability, availability and sustainability.

Each solution is tailored to the technical, regulatory and operational context of the project, so fleets can continue performing with greater confidence in the years ahead.

- **Life extension:** We modernise fleets with technologies that improve availability and reliability while supporting smoother maintenance planning and long-term continuity in service.
- **Communications and signalling:** Our AURIGA OBS system upgrades outdated ERTMS technology, improving safety, availability and cross-border operability. Its modular design and flexible interfaces support efficient integration into existing fleets.
- **Repowering and control:** We enhance traction performance and energy efficiency through solutions such as DC to AC conversion, converter upgrades from GTO to IGBT, multi-voltage operation and catenary-free mobility with FREEDRIVE-based solutions using ultracapacitors and lithium batteries.
- **Infotainment and others:** We improve the passenger experience through advanced infotainment systems and more modern, functional interiors, because comfort, connectivity and design also shape the value of the journey.

MORE THAN

2,900

CARS MODERNIZED
WORLDWIDE



OUTSTANDING PROJECTS WORLDWIDE

AFRICA

ALGERIA - TSSSA maintenance for 26 Algiers metros for Métro El Djazaïr

EGYPT - Modernization of Line 2 units and maintenance of 23 Cairo Metro Line 1 units for the National Authority for Tunnels (NAT)

MAURITIUS - TSSSA maintenance for 18 trams for Metro Express Ltd (MEL), Government of Mauritius

AMERICA

BRAZIL - Full-service maintenance for 12 S/2070 EMUs, 9 S/9000 EMUs, 20 S/7000 EMUs, and 8 S/7500 units and full-service maintenance with LeadMind for 35 S/8500 units for Companhia Paulista de Trens Metropolitanos (CPTM) - Full-service maintenance with LeadMind for 26 São Paulo Metro Line 5 units for Motiva - Full-service maintenance for 40 Salvador de Bahia units for Companhia de Transporte do Estado da Bahia (CTB) - Full-service maintenance with LeadMind for 107 EMUs for Trivia Trens S.A.

CANADA - TSSSA maintenance with LeadMind for 28 trams for The City of Calgary

CHILE - Maintenance of Line 1 trains and LeadMind maintenance for Metro de Santiago

COLOMBIA - Modernization of 43 metros and maintenance of 38 metros for Metro de Medellín

ECUADOR - Full-service maintenance with LeadMind

MEXICO - Full-service maintenance for 20 EMUs for Ferrocarriles Suburbanos - Maintenance of 30 Mexico City Metro Line 12 units for Sistema de Transporte Colectivo (STC) - Maintenance of 20 Toluca EMUs

for Secretaría de Infraestructura, Comunicaciones y Transportes (SICT)

UNITED STATES - Maintenance of 24 Boston LRV units for Massachusetts Bay Transportation Authority (MBTA)

ASIA / PACIFIC

AUSTRALIA - LeadMind maintenance for Canberra light rail for Canberra Metro - Maintenance of Parramatta light rail units for Great River City Rail Light (GRCLR)

NEW ZEALAND - TSSSA maintenance with LeadMind Wayside for 95 EMUs for Auckland Transport

EUROPE

BELGIUM - Maintenance and modernization of 157 De Lijn trams for Vlaamse Vervoermaatschappij - LeadMind maintenance for 20 Liège trams for Société Régionale Wallonne du Transport (SRWT) - LeadMind maintenance for the Brussels metro STIB Société des Transports Intercommunaux de Bruxelles (STIB)

GERMANY - LeadMind maintenance for 10 BEMU units for Zweckverband Verkehrsverbund Rhein-Ruhr (ZV VRR) - LeadMind maintenance for 12 Schönbuchbahn EMUs for Zweckverband Schönbuchbahn (ZVS)

GREECE - Modernization of 14 Athens metro Line 1 units for STASY S.A.

HUNGARY - Maintenance of 31 Budapest trams for Budapesti Közlekedési Központ (BKK)

ITALY - LeadMind maintenance for 40 Rome trams, maintenance of 13 Rome Metro units and full-service maintenance of Rome metros for Comune di Roma - LeadMind maintenance

for Bologna trams for Comune di Bologna - Full-service maintenance for Palermo trams for Comune di Palermo - Full-service maintenance for Cagliari trams for Regione Autonoma della Sardegna - Maintenance of Trieste EMUs and Sardinia DMUs for Regione Autonoma Friuli Venezia Giulia

THE NETHERLANDS - Technical support for Amsterdam tram and metro units for GVB Activa B.V. - Technical support and LeadMind for Utrecht trams for Province of Utrecht

NORWAY - LeadMind maintenance for Sporveien Oslo AS trams and Flytoget high-speed trains

PORTUGAL - LeadMind for Companhia Carris de Ferro Lisboa trams and Wayside for Porto Trams

SPAIN - LeadMind maintenance for 6 Alcalá de Guadaira trams, full-service maintenance with LeadMind for 15 Granada trams and full-service maintenance for 7 Cádiz tram-trains for AOPJA - Full-service maintenance with LeadMind for 28 regionals and maintenance of S/446, S/463, S/464, S/465 commuter fleets, S/449, S/594, S/598 regionals, S/599 DEMU and S/120, S/120.05, S/121 high-speed for Renfe - Full-service maintenance with LeadMind for 39 S/5000 metros and refurbishment of S/2000, S/3000 and S/4000 units for Transports Metropolitanos de Barcelona (TMB) - Full-service maintenance with LeadMind for 21 Málaga trams for Metro Málaga - Maintenance of Seville Metro and Seville trams for Transportes Urbanos de Sevilla, Sociedad Anónima Municipal (Tussam) - Maintenance of Tranvía de Zaragoza fleet - LeadMind maintenance for 47 S/3000 metros for Metro Madrid - Full-service maintenance with LeadMind for EMUs S/900, S/940, S/950 and S/980 and full-service maintenance with

LeadMind for the Vitoria and Bilbao trams for Euskotren

SWEDEN - Full-service maintenance for 290 locomotives for Green Cargo - Maintenance of 25 Stockholm Subway yellow machines for SLL-Region Stockholm - Full-service maintenance for Arlanda Express units for A-Train - Full-service maintenance for AB Transitio EMUs - Maintenance for passenger car S/A7M, locomotives S/RC6 and X2000 high-speed trains for SJ AB - LeadMind maintenance for Lund trams for Skånetrafiken

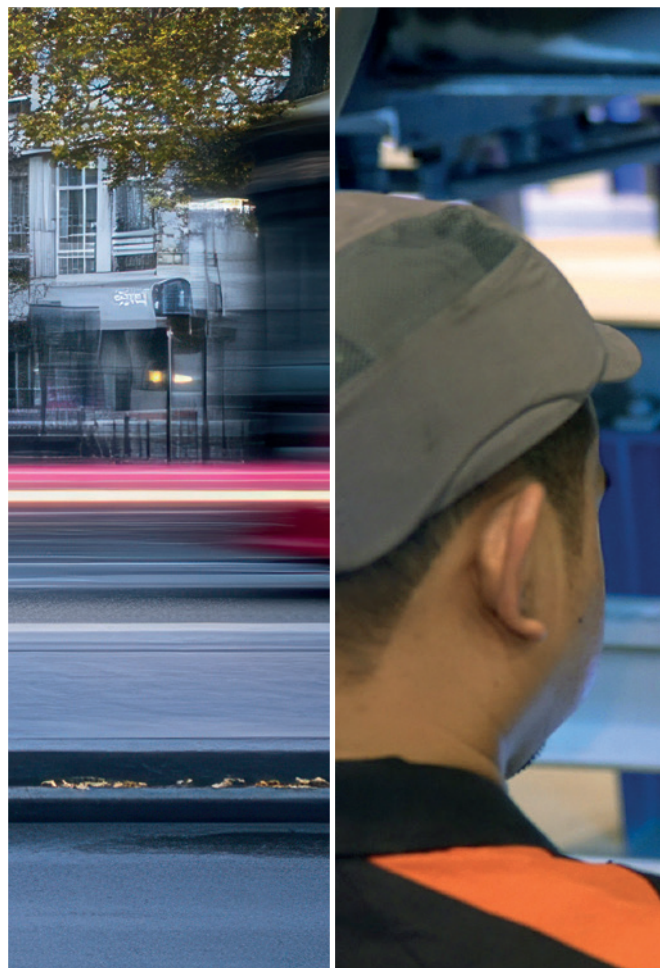
UNITED KINGDOM - Full-service maintenance with LeadMind for London North Eastern Railway (LNER) - TSSSA maintenance with LeadMind for S/397 EMUs for First TransPennine Express Limited - Full-service maintenance with LeadMind for S/195 S/195 EMUs for Northern Rail - Full-service maintenance with LeadMind for Transport for West Midlands - Maintenance of Mark 5a interim Chiltern passenger coaches for Beacon Rail - Maintenance of 27 trams for Edinburgh Trams - LeadMind maintenance for 23 3000 C3K DMUs and 4000 C4K DMUs for NIR Railways - Maintenance of S/175 Wales & Borders DMUs for Keolis - LeadMind maintenance for Caledonian Sleepers and Docklands Light Railway (DLR)

MIDDLE EAST

ISRAEL - LeadMind Wayside for Tel Aviv Urbos tramway (Purple Line) for NTA Metropolitan Mass Transit System

SAUDI ARABIA - LeadMind maintenance for Riyadh Metro - Maintenance of SAR push-pull trains

UNITED ARAB EMIRATES - Full-service maintenance with LeadMind for Etihad Rail push-pull trains



HEADQUARTERS

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SCAN TO VISIT
OUR CHANNEL



CAF