

Voyageurs Open Access International



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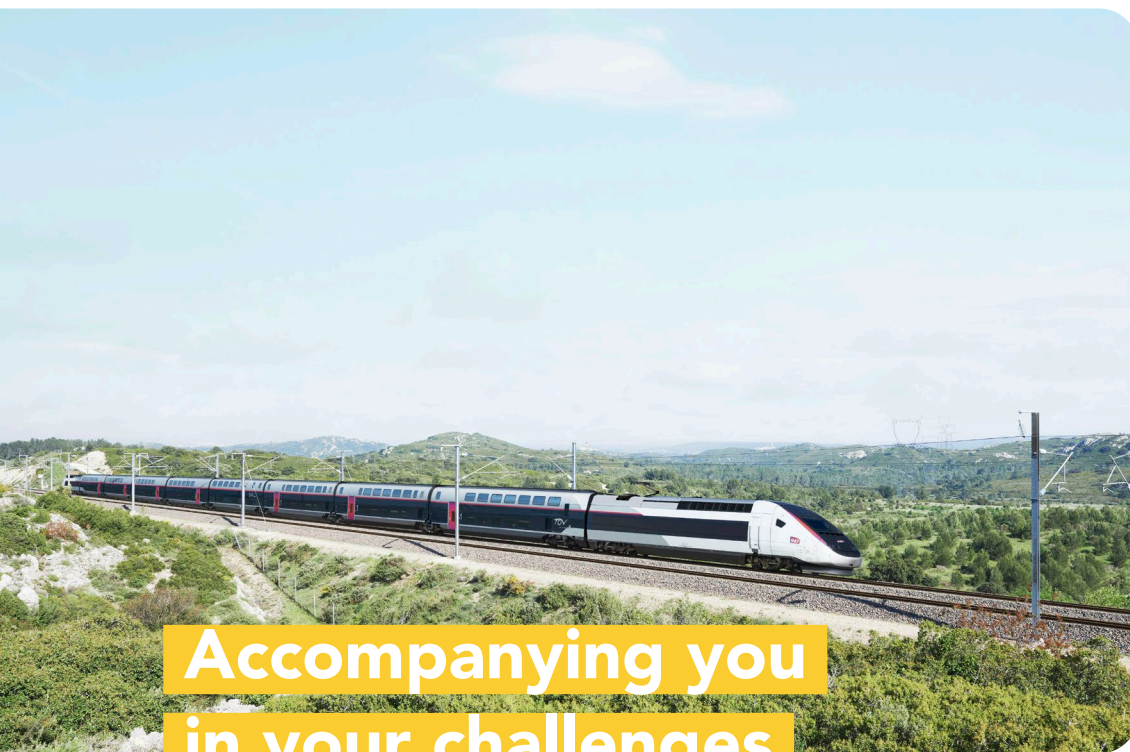


Faced with a growing population and mobility requirements, it is necessary for the passenger railway transport industry to make adaptations to what it offers, in a context of budgetary constraints and energy transition.

MASTERIS will accompany its clients with tailor-made solutions offered to all rolling stock stakeholders: Network operator, Metropolis, Organising Authority, Manufacturer and Equipment Supplier or Engineering Company. As a subsidiary of SNCF Voyageurs, and with extensive experience with all types of railway equipment (high speed trains, regional and

inter-city trains, towed cars...), MASTERIS offers a wide range of engineering and maintenance services throughout the whole life cycle of equipment: certification, approval, renovation, repairs, modernisation, end of life, etc.

Our commercial team, which has a focus on market challenges, is ready to hear what you have to say before accompanying you. Our proposition is one of value: to optimise the use and lifespan of your equipment, all while guaranteeing clients' security and comfort!



Accompanying you in your challenges

With nearly 15 years of experience, and backed by the expertise of the SNCF group, MASTERIS will let you benefit from what it offers additionally as a maintainer and operator company. Our operations may be performed on site, in one of the technological centres of SNCF or in collaboration with recognised partners in the market.

The multidisciplinary teams of MASTERIS are ready to hear what you have to say, and ready to offer a vast range of services – they are responsive in particular to 3 essential challenges.

We have a business orientation model aligned along the dynamics of existing markets with which we will serve our clients.

1

Ecological transition

Providing you with solutions by which you may reduce the energy consumption rate of your rolling stocks (e.g. air conditioning) and uphold collective transportation development policies (studies and achieving increased carrying capacity of trains).

2

Optimisation of your budgets

Offering you tailor-made solutions aimed at prolonging the lifespan of your equipment along with major set arrangements, and carrying out reliable revision operations which observe operating or investment cost limits as much as possible.

3

The availability of rolling stock materials

Minimisation of the immobilisation of your fleet by carrying out industrial operations with optimised crossing times or by upholding (in particular) the skills of your maintenance staff via adapted training programmes.

Engineering and Industrial expertise at your service

Our pool of skills – on our own premises and with the support of the SNCF group – unites technical experts from the whole railway industry.

We are capable of working on all types of rolling stock. With our experience, we can offer you solutions along every stage of the rolling stock life cycle.



YOUR KEY NEEDS

- | | |
|--|---|
| 1 ACQUIRING A NEW ROLLING STOCK | 6 HAVING AVAILABLE PARTS FOR MAINTAINING A ROLLING STOCK |
| 2 APPROVING A ROLLING STOCK ON A NETWORK OR A TRANSITION BETWEEN NETWORKS | 7 MAINTAINING/RESTORATION OF POTENTIAL AT MID-LIFE POINT |
| 3 OPERATING AND MAINTAINING YOUR FLEET IN COMPLETE SECURITY | 8 TRANSFORMATION/ MODERNISATION |
| 4 OPTIMISATION OF OPERATION AND MAINTENANCE | 9 REPAIRING |
| 5 MASTERING THE LIFESPAN OF A FLEET OF EQUIPMENT | 10 DISMANTLING |



Operational maintenance

ECM

Choosing a maintenance management system is a strategic issue for all involved in railway rolling stock maintenance.

MASTERIS has since 2019 been a certified Entity in Charge of Maintenance as per regulation 779/2019, and will accompany you, advise you and assist you in responding to your clients' needs as well as possible.

- ECM 1: maintenance supervision
- ECM 2: maintenance development
- ECM 3: maintenance management
- ECM 4: maintenance performance/execution

Our experts will accompany you in the monitoring and control of processes aimed at ensuring that the relevant regulatory requirements will be adhered to.

Our strengths

- ✚ Expertise: analysing our clients' needs to respond to their requests
- ✚ Intervention: mobilising our means and our resources such as to enable intervention as soon as possible
- ✚ Guarantees: providing a reliable, high-quality maintenance solution



Client references

ECM

MASTERIS holds a ECM1/2 qualification on behalf of VENISE SIMPLON ORIENT EXPRESS

Training programmes

SIEMENS, EUROSTAR FAMILY, DEUTSCHE BAHN, SNCB

Training

MASTERIS grants you access to a wide range of varied railway training courses that are rooted in experience gained from the SNCF group throughout its history.

Our offers are based on the fundamentals of railway maintenance; they can be tailored and applied for all your rolling stock. Our training programmes are ISO 9001 certified, our expert training providers certified in their field. Hence, a pledge of quality and a guarantee of excellence for your employees.

Top Training Programmes

- Training in **Non-Destructive Testing** : Magnetic particle testing, Penetrant testing, Ultrasound
- Training in the maintenance of **Security Equipment**: ERTMS-TVM, MAKVB, ATESS, GSMR
- Training in **Embedded Computer Systems**
- Training in the maintenance of **air reservoirs**
- Training in the implementation of **bolted assemblies**
- Training in **complex troubleshooting methods**

Our strengths

- ✚ Catalogue or tailor-made training, tailored to your needs
- ✚ Teams of experts at your services
- ✚ The savoir-faire of SNCF is renowned throughout the world



Modernisation & renovation



We offer a complete range of industrial services, from simple compliance with standards, to mid-life renovation, right up to large-scale transformation aimed at modernisation of your equipment.

We implement a cutting-edge industrial system, which includes:

- An integrated offer which fully observes your own operational constraints
- A guarantee that our commitments will be compliant with production guidelines
- "Agile" and high quality industrial and logistics organisation
- A force for technological innovation, recognised technical expertise and proven work and maintenance methods
- A network of tried and tested first class industrial partners

Our strengths

- ✚ A turnkey service offer with the provision of industrial and engineering excellence
- ✚ Capability means distributed throughout the territory to ensure addressing of your various economic and environmental issues
- ✚ A local support system for optimisation of the maintenance and the crossing time of your equipment

The benefits for your clients

- ✚ A guarantee of refurbished and modernised equipment in line with proven standards for mid-life renovations of SNCF railway equipment
- ✚ The integration of technological advances and innovative solutions for ensuring ever more security, performance and comfort
- ✚ The valuation of your heritage across the lifespan of the railway equipment



Client references

Eurostar Continental

Mid-life operations and renovation of TGV PBA and PBKA trains

Eurostar Cross Channel

Installation of the ETCS system on TMST E300 trains

Our commitments

A VISION OF YOUR PROJECT

A complete project management solution with strong contractual commitment regarding industrial quality, costs and deadlines.

We will turn up directly on clients' sites or at our industrial technical centres.

AN OPTIMISATION

A prolonged lifespan of your assets – up to 40 years.

Improvement of your equipment and components during the renovation operation.

Examples of services

- Giving new life to equipment
- In-depth revision and renovation: all parts will be disassembled, checked, renovated or changed
- Modernisation and transformation: the input of new technological, IT or design features developed by our engineering team: equipment applied in the domain of repairable parts of equipment, on-board WiFi, travellers information system, interior fittings
- Turnkey installation or upgrade of the ERTMS: integration studies, supplies, industrial work, acceptance of modified equipment, commissioning



Spare parts



PARTS REPAIRING

- With the support of a network of 10 industrial technical centres
- 450,000 PRM repaired every year
- 6,000 references created every year (the arrival of new equipment, etc.)



SUPPLY CHAIN

- With the support of the Integrated Logistics Centre (ILC)
- Shared stocks at a value of 680M€
- 1 storage platform at Moissy Cramayel



PURCHASED PARTS

- Centralised services
- 200,000 managed references, 600M€ worth of PC purchases
- A substantial contractual basis (with a 65% contractualisation rate)



ENGINEERING PARTS

- Outlining of maintenance rules (predictive)
- Potential management
- REX / Advice
- Obsolescence management



Client references

Eurostar Continental and Cross
Channel
SETER Sénégal
CFL
Transkeo
SMMRGV Maroc
ALSTOM Ateinsa
SNCB
Venise Simplon Orient Express
Accor Orient Express
SNCB

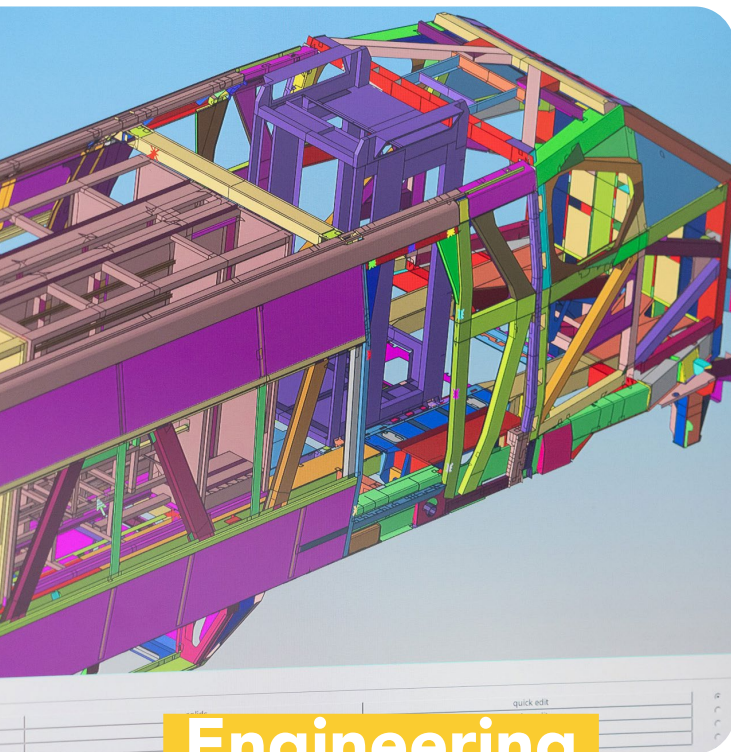
MASTERIS combines the benefits available with a service for managing the supply of parts for passenger equipment fleets, with those of agile arrangements ensured in spare parts contracts with qualified suppliers. MASTERIS is able to offer spare parts supply plans for your rolling stock both in France and internationally.

From a simple component part to kitting installation, we will work out a supply solution tailored to your needs, so as to guarantee the sustainability of your fleet.

Key figures

- | | | | |
|---|---|---|--------------------------|
| + | 3,000 orders shipped per day | + | 875 suppliers |
| + | 750 receptions per day | + | 15,000 repairable parts |
| + | 125,000 consumable components in their current life | + | 140,000 managed articles |

Our dedicated experts will accompany you throughout your project; basically being there to respond to all situations you may be confronted with in your capacity as a Railway Operative or a Maintenance Worker. Our services will be developed according to your specificities. From a simple order to a contract lasting multiple years, we will provide you with exclusive, tailor-made solutions designed to address your own needs.



Engineering



The MASTERIS engineering company, at the heart of a network which gathers together engineers and technicians in the SNCF group, is able to handle all specific technical issues recognisable with rolling stocks throughout their lifespan.

Whether it be a matter of maintenance engineering, design, expertise or trials, our teams are masters in more than 90 railway speciality domains – they benefit from a unique kind of savoir-faire in the railway sector.

The MASTERIS engineering company will accompany its clients in the preparation and implementation of their major projects:

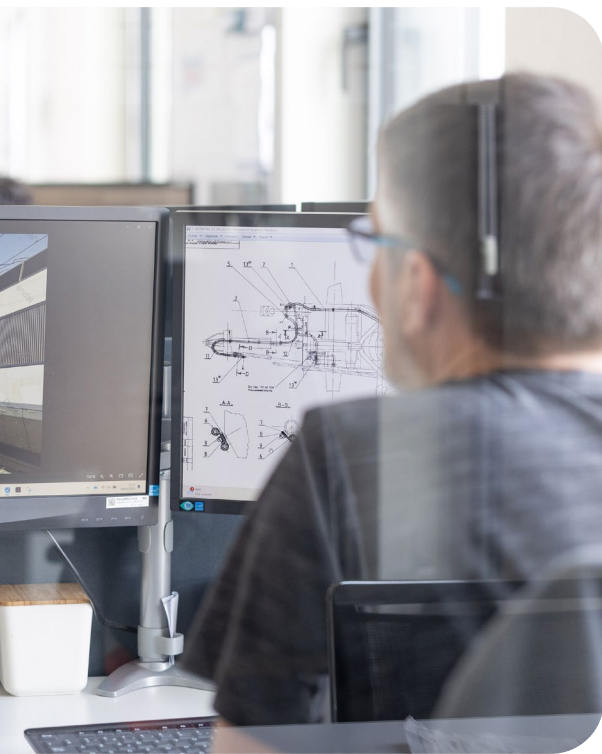
- Project Management Assistance
- Rolling Stock Reliability
- Maintenance surveys
- Renovation and modernisation studies
- Admission surveys
- Remote diagnostic and predictive maintenance solutions

Our commitments

Providing a single point of entry which allows access to all engineering savoir-faire under the stewardship of Matériel SNCF Voyageurs.

Fast responses to clients' requests, from the most simple ones to the most complex ones, as needed.

Offers of innovative services which provide value – we accompany our clients in their development.



Client references

OUIGO (Spain)
Eurostar
DB
CFL
SNCB
HITACHI
ALSTOM

Our strengths

- ✚ A robust, capable and flexible industrial tool
- ✚ Renowned engineering which has been proven internationally
- ✚ An engineering system designed to support you on major technical issues
- ✚ A customer reference on several types of products:
 - Mechanical/electrical integration studies appropriated for machine renovation or modification
 - Use of CATIA V5 and E3S software
 - Integration of complete predictive maintenance (CBM approach)
 - Turnkey EQS integration projects (installation and updating)
 - Installation and calibration of TVM loops
 - Regulatory monitoring
 - Production support and troubleshooting support intervention



OUR ADVANTAGES

A 100% subsidiary of SNCF Voyagers, MASTERIS can and will provide a solid and durable structure. With more than 160 employees, with us you will be able to benefit from multiple skills and benchmarks determined by various markets.

Our tried and tested commercial team will be specifically dedicated to your challenges. We have implemented a local management scheme for "key customer accounts", by which to share with you details of the experiences of our numerous clients with each of our services.



RAIL & LOGISTICS



VOYAGEURS
OPEN ACCESS
INTERNATIONAL



DSP REGIONAL &
URBAN MOBILITY



MODERNISATION
& UPGRADES



ENGINEERING, THE OFFER & PROJECTS

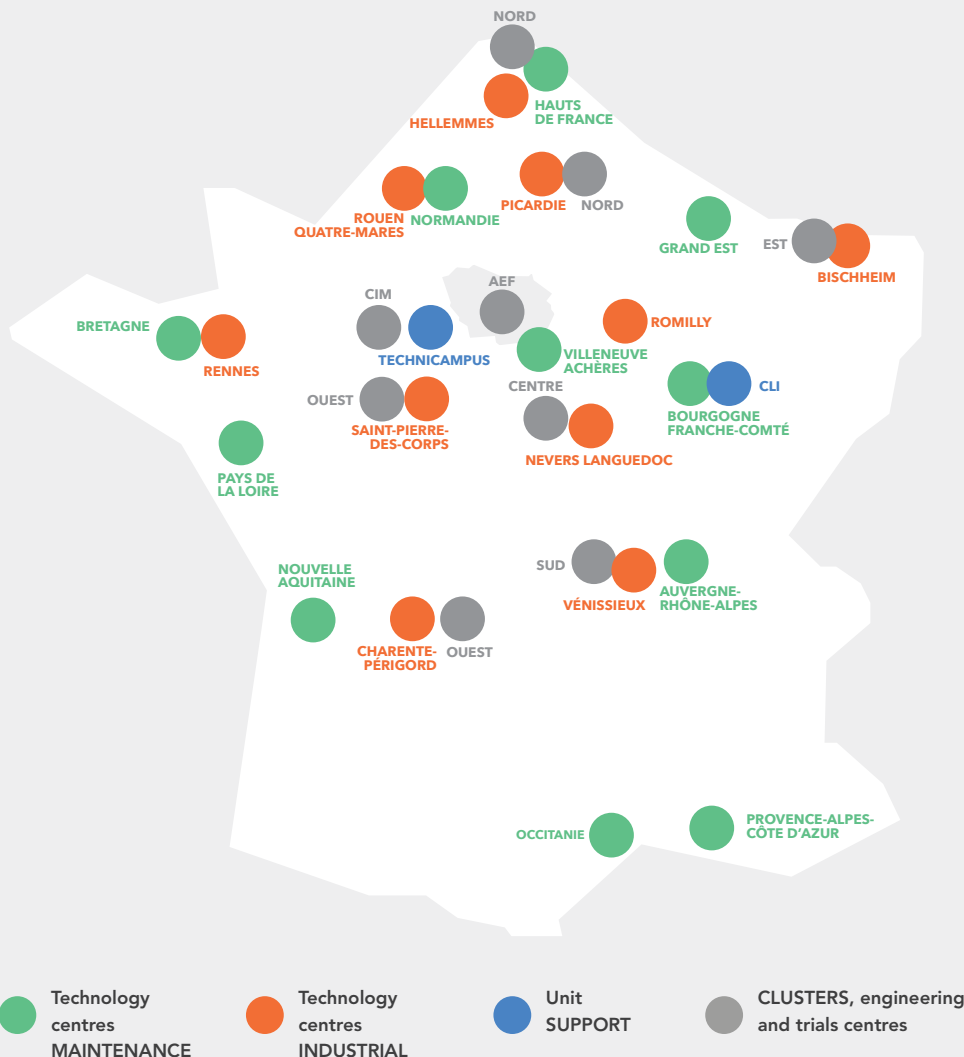
MAINTENANCE EXPERTISE ACROSS THE WHOLE TERRITORY

MASTERIS receives support from the technical and human resources of SNCF Voyageurs Matériel to position itself as a key player in the domains of maintenance and engineering – this is made possible in particular thanks to the network of maintenance and industrial technical centres throughout France.

25
Maintenance
Technical Centres

10
Industrial
Technology Centres

7
Engineering
and Trials Centres



PEOPLE TRUST US



8.5/10

**Customer
satisfaction
notice**



HITACHI

SIEMENS

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renfe



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seT'er



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