



**We maintain
Your excellence**

maSTERIS 
VOYAGEURS

*Optimisons votre excellence

Overview

MARKETS



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& Rail Works



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& International



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& railway engineering

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Engineering

Remi Peltier**Managing Director**

For more than 10 years, MASTERIS, subsidiary and Entity in Charge of Maintenance within SNCF Voyageurs, has established itself as a key player in the market for maintenance of railway and urban rolling stock. Today, we provide solutions that meet the needs of more than 150 clients in France and in other countries, on all types of rolling stock. The decade ahead promises to be full of challenges, particularly given the advent of competition. However, we are well prepared to face these challenges. We build on a commercial

organisation aligned to our markets, our client culture and our expertise as an Entity in Charge of Maintenance. Our capacity to adapt is the hallmark of all our projects, which are carried out by experts in a spirit of mastery and innovation. Whether maintenance or engineering, rolling stock or tramways, we can provide bespoke solutions. Well aware of the implications of mobility, we are working on tomorrow's solutions to better meet our clients' expectations in a demanding and volatile environment.

A handwritten signature in black ink that reads "Remi Peltier". The signature is written in a cursive, flowing style with a long horizontal stroke underneath.

Specialist in maintenance and railway engineering

Our mission

Since 2009, MASTERIS, certified Entity in Charge of Maintenance and SNCF Voyageurs subsidiary, has been providing solutions that meet the needs of more than 150 clients, in France and internationally, on all types of heavy rail and light rail rolling stock. With unique know-how, mastery of almost 90 areas of railway specialisation, whether the projects involve

renovation, repair or modernisation? MASTERIS offers bespoke services to all of its clients.

No matter what the need, MASTERIS is committed to providing maintenance and engineering solutions that are adapted to your rolling stock, and participating in improving your railway equipment supported by the expertise of SNCF Matériel.

A market-oriented commercial organisation

The MASTERIS commercial organisation focuses on its markets and is completely oriented to its clients: Rail Logistics & Rail Works, Passenger Rolling Stock, Urban Transport - France & International and OPTER (renovation of AGC and TER2NNG trains).

Our clients benefit from a unique entry point within MASTERIS, depending on the nature of their activities. A dedicated contact person ensures monitoring of the implementation of their projects, accompanied by a high level of support and management of the commercial relationship.



6
Subsidiaries

+150
employees

150
Clients
worldwide

€120M
Turnover
2021



**Subsidiary
of SNCF Voyageurs
which reports to the
Rolling Stock Division**



**ROLLING
STOCK
DIVISION**

MASTERIS 

OUR MARKETS



OUR ACTIVITIES



**OPERATIONAL
MAINTENANCE**



ENGINEERING



**MODERNISATION
& RENOVATION**



SPARE PARTS



OUR EXPERTISE

Specification

Concept
Manufacturing

Certification



Signalling
Reliability

Maintenance

Renovation
modernisation

MASTERIS, partner for your activity



François de Labbey
Director of Rail Logistics
& Rail Works

Our raison d'être is to enable you, a railway undertaking, to ensure that your mission to transport is achieved, you a civil engineering company, to succeed in your construction works, you a ROSCO to upgrade your assets. When you choose MASTERIS, you are choosing an integrated framework for mastery of the entire maintenance chain to safeguard the development of your activity. When you choose MASTERIS you are choosing the effective entry point to the power of the SNCF Group.



+1000

On-site deployments
in Europe

+50%

Success rate /
hotline call

+20

Certified partner
workshops in Europe

Integrated

Supervision, engineering, planning and implementation: These four main competencies of the Entity in Charge of Maintenance (ECM) come together in MASTERIS and SNCF Matériel to guarantee seamless maintenance.

Flexibility

For a preventive or corrective maintenance operation, a one-off or recurring need, for an engineering task, for intervention on diesel or electric units, mechanical devices or safety equipment, MASTERIS provides customised offering adapted to your operating conditions and the size of your fleet. This offering relies on our own network of workshops and qualified partners in Europe, with the support of mobile teams that intervene on request.

Responsiveness

Our Fleet Technical Supervision organisation, which schedules your maintenance operations, is available on-call 24/7, 365 days a year. Thus, we are at your side, working out together with you the solution that offers the most security. And to guarantee your commitments, our hotlines support your drivers, should they encounter technical difficulties.

MASTERIS's sales team listens to its clients' specific requirements and works to find solutions that meet these requirements. The main axle centres offer great rapport and efficiency (Nevers and Terginier)...



Pierre Benevent
Materials Director - ETF

Pierre Benevent
Materials Director - ETF

Client References

Akiem

Full Service
Maintenance for
a fleet of more than
150 traction units

ETF

Full Service
Maintenance for
a fleet of 6 BB60000
(diesel)



PASSENGER ROLLING STOCK

**Experience
that makes the difference**



Guillaume Dufosse
Director of the Passenger
Rolling Stock Department

The MASTERIS Passenger Rolling Stock Department offers all of its clients, railway undertakings or maintenance organisations, a broad range of services and performances developed by SNCF Matériel and MASTERIS. Listening to the client, bespoke solutions and a service spirit are the values we strive to develop in our teams.



+35

More than 20 partner
SNCF Maintenance
Technicentres

70

Maintenance
sites

24/7

Maintenance
24/7,
365 days a year

Imperative

You must minimise downtime of your rolling stock and ensure that passengers experience optimal performance of trains and train equipment. Thanks to our maintenance experience acquired on numerous machines, in addition to our mastery of the different ECM functions and a perfect understanding of operator constraints, we can guarantee our clients the best possible conditions for their fleet in terms of comfort, reliability and safety.

Service à la carte

Given your specific operating constraints, we intervene to meet both one-off requirements and recurring needs, for preventative or corrective maintenance operations. Thus, you benefit from tailored solutions adapted to your requirements and your budget.

Continuous improvement

In addition to our experience, ranging from commuter and regional trains to high-speed rail, we are supported by our engineering teams and the latest technological innovations in order to improve the safety, reliability and availability of your rolling stock.

“ We purchase the majority of our consumables and our services for overhaul of parts from MASTERIS. With effective listening skills and efficiency, this global partner offers us access to a broad portfolio of products and services. ”



Luciano Fernandes Borges
Managing Director SMMRGV

Client References

CDG Express

Maintenance
contract for
Regiolis railcars

Ter Dakar

Operational
maintenance
support



Our solutions for optimising operation of your urban rolling stock



Arnaud Vaquié
Director of Urban Transport
France & International

MASTERIS sets a new milestone in implementing a commercial organisation dedicated to the urban transport market in France and internationally. With extensive experience gained over more than 10 years on all types of urban rolling stock - tramway and metro, MASTERIS is at your side with bespoke solutions. Our value proposition: Optimise utilisation and service life of your rolling stock, while guaranteeing the safety of your operation!



8,5/10

Average urban
client satisfaction
rating

750

Bogies overhauled
on the Citadis
and TFS tramways

6 000

Callipers and 2500
brake renovated on
the Citadis tramway and
VAL underground trains

" The MASTERIS scope of services is extensive to respond to our different needs. At start-up of the industrial or engineering services, we have quality support that is appropriate for our requirements. If there are hazards, the MASTERIS team provides transparency in the exchanges that enables us to easily re-orient all the priorities of our production plan. "



Martial Treand
Industrial Methods
Manager at Keolis Orléans

Tailored offering

To respond to your budgetary control issues, operating constraints or environmental footprint, we are at your side to jointly define a tailored support model. Multi-disciplinary teams are at your service for intervention at each life-cycle of your rolling stock: Certification, training of your personnel for implementation of major maintenance and renovation operations, or for targeted engineering studies.

Expertise at the service of urban rail

Our in-house pool of skills brings together technical experts from the railway industry. We are capable of intervening on any type of guided urban transport rolling stock: tramway, metro, VAL, funicular. Backed by the expertise of the SNCF Group and the multi-disciplinary MASTERIS teams, our synergy as maintainer and developer is a key advantage for providing proven or innovative solutions.

Optimisation of your equipment

Our industrial maintenance operations can be implemented on site, in one of the SNCF Technicentres or in collaboration with a partner, in order to optimally reduce the downtime of your rolling stock. Complementing the major operations of mid-life renovation and maintenance, we have high-performance industrial tools for overhaul of all major components of your rolling stock (particularly the bogies, doors, brakes, HVAC systems and body structures). Likewise, we have the capacity to provide state-of-the-art solutions in the areas of remote diagnostics and predictive maintenance.

Client References

Networks Keolis & Transdev Dublin

Industrial renovation engineering study for improving the reliability of the power units and callipers of the brakes on the Citadis tramway railcars and on the VAL 208 metro trains.

Métropole de Rouen Normandie

General overhaul at 600,000 km for the bogies of 27 railcars of the CITADIS 402 tramway with integration of a new system for lubricating the wheel flange.

MASTERIS at the forefront of the renovation project for Trains Express Régionaux (TER)



Louis Roma
Director OPTER
Renovation AGC & TER2NNG trains

This major overhaul will provide another potential 20 years of service life to the AGC and TER2NNG trains, which constitute 40% of the TER fleet. On this occasion, new interior and exterior livery chosen by our clients modernises the rolling stock. From the technical perspective and given this unusual volume, thanks to the know-how of SNCF Voyageurs and MASTERIS, this work could be implemented in quality and without surprises.



40%

The TER fleet
renovated in mid-life

6

Technicentres
Rolling stock

10-year

Program

“ Considering its scale and duration, the renovation program for the AGC and the TER2NNG trains is fundamental for TER. By contracting with MASTERIS, we assure implementation of the program within the specified time frame and we guarantee availability of the fleet for the second half of its service life. Thus, this program becomes the showcase of MASTERIS for the regions that progressively recover the property value of the railcars. ”



Gérard Pitault
Director - TER flagship
project and modernisation

An unprecedented industrial operation

- more than 900 railcars
- a 10-year industrial program
- as many as 55 cars processed simultaneously

Confirmed know-how

This complex operation requires a many competencies: Engineering, methodology, supply chain, purchasing, quality, production. In order to restore the appearance of a new train, we are implementing a body operation. It includes treating the corrosion, refurbishing the interior fixtures and fittings and seats with a design selected with each of the clients but also the refurbishment of the exterior and interior livery. A specific number of components can be repaired or replaced to restore a potential homogeneity to the locomotive (HVAC groups, brake panels, pantographs, bogey frames, motor support element, etc.). Finally, a complete passenger information and communication offering (WiFi, screens, video protection, passenger counting, remote diagnostics) can be provided, as well as greening activities to limit the carbon footprint of our rolling stock!

Client References

**Société nationale
des chemins de fer
luxembourgeois**

Renovation of TER2NNG trains

**Les Régions
de France**

Renovation of TER2NNG
and AGC trains



Solutions for your issues

A global service offering built around the 4 activities...



...to respond to 10 client needs all identified along the rolling stock life-cycle.

10
NEEDS

- | | |
|--|--|
| 1 ACQUIRE NEW ROLLING STOCK | 6 PROVISION OF PARTS TO MAINTAIN THE ROLLING STOCK |
| 2 CERTIFY ROLLING STOCK ON A NETWORK OR THE TRANSITION BETWEEN NETWORKS | 7 MAINTAIN / RESTORE THE POTENTIAL AT MID-LIFE OF ROLLING STOCK |
| 3 OPERATE AND MAINTAIN ITS FLEET OF ROLLING STOCK IN COMPLETE SAFETY | 8 TRANSFORM / MODERNISE ROLLING STOCK |
| 4 OPTIMISE OPERATION AND MAINTENANCE OF ITS ROLLING STOCK | 9 REPAIR ROLLING STOCK (RA) |
| 5 CONTROL THE SERVICE LIFE OF AN EQUIPMENT FLEET | 10 DISMANTLE ROLLING STOCK |



Antoine Mouchart
Director of Engineering Tenders
& Projects

// From simple provision of parts, to a complete renovation program for rolling stock, and on through study or expertise of a train subsystem. The service offering provided by MASTERIS is one of the most complete on the market and it is supported by all the expertise of SNCF Matériel. Essentially it is reflected in one of your 10 primary needs!s!



+200

different
types of
service

90

railway
specialities

+150

clients rely
on us

The totality of the service offering provided by MASTERIS is built around the 10 primary needs of our clients. For each of these needs, a complete service offering is available now.

Our offering is based on the vast experience of SNCF Matériel in the maintenance area, acquired over several decades. It is likewise supported by a network of specialised industrial workshops, and the competence of one of the most important European consulting firms specialising in railway rolling stock, capable of handling all expert projects, development projects, or even modernisation and maintenance studies.

It is not possible to list all the services in this brochure; however the pages below provide an overview.

The MASTERIS sales team is available to assist you and present the service offering that best meets your needs!



SPARE PARTS

A network of partners at your service

Maintenance of braking systems or on-board signalling systems, axles, etc. MASTERIS offers access to more than 3000 suppliers and provides an effective supply chain service that reduces downtime of your rolling stock.

+3 000

Suppliers

Client References

Thalys

Provision of
spare parts



RENOVATION & MODERNISATION

**Give your equipment
a second life**

Expertise

From simple repairs to overhauls, MASTERIS takes care of all types of rolling stock: locomotive, TGV, tramway, underground, self-propelled and more. MASTERIS provides a turnkey offering, a contractual obligation maintain costs and deadlines with no surprises, thanks to our industrialisation studies. We put all our effort into finding solutions that are compatible with your operating constraints.

Optimisation

We prolong the service life of your assets so that you maintain or develop your operating performance without having to invest in new rolling stock. At MASTERIS, when we integrate state-of-the-art technologies or new functionalities, we also warrant that only parts that need replacing will be replaced, without compromising your performance, safety or reliability objectives.

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Modernised
automatic
underground railcars

Client References

Keolis *Nancy*
Semitan
Opter CFL
*Renovation of the
TER2NNG trains*

Eurostar
*Installation
of the TBL1+
system on E300
high-speed railcars*



OPERATIONAL MAINTENANCE

**Ensures equipment
performance**

Rigour and expertise

MASTERIS provides a full-service offering, a reliable, flexible turnkey solution accompanied by a controlled budget and defined for the long-term that covers a wide array of services. Likewise, we provide one-off services for specific points such as safety tests, diagnostics or troubleshooting deployment.

86%

Rolling
stock availability
rate

+20

Maintenance
Technicentres
integrated

Optimal maintenance

We have maintenance experience acquired on many different equipment items, through our mastery of the various ECM functions. For our client, we guarantee the best conditions for their fleet in terms of comfort, reliability and safety.

Tailored solutions

Your operating constraints are specific. We provide intervention for both one-off and recurring needs as well as preventive and corrective maintenance operations. Thus, you benefit from tailored solutions adapted to your requirements and your budget.

Client References

VSOE

*(Venice Simplon
Orient Express)*

Captrain Mesea

Transdev

Rouen

Keolis

Bordeaux



ENGINEERING

An extensive range of expertise

There are many engineering competencies relating to SNCF rolling stock throughout the MASTERIS organisation:

- Specific expertise in all types of railway components and subsystems; bogies, brakes, safety equipment, body structures, interior fixtures and fittings, on-board electronics, HVAC, etc.
- Specific expertise on the train level: control command, aerodynamics, fire/smoke, balance of mass, energy economy, braking distance calculations, various numeric simulations, etc.
- Maintenance implementation support: ECM services A and B, fleet availability optimisation, rolling stock availability optimisation, maintenance cost optimisation, implementation of predictive maintenance, etc.
- Studies and management of mechanical, electrical or software modifications associated with transformation projects, greening projects or projects involving integration of new equipment, such as the ERTMS.
- Implementation of test programs as well as static and dynamic validation on the test bench and/or on the train.
- Taking care of admission as part of a project involving acquisition or modification of rolling stock.

+1 800

engineers
and technicians

Client References

Akiem

ROSCO

Mesea, CFL, Eurostar, Thalys, Ouigo Espagne, Keolis, Transdev

Railway undertakings

Siemens, Alstom, HitachiRail

Manufacturers

MAINTENANCE EXPERTISE THROUGHOUT THE ENTIRE REGION

MASTERIS leverages the technical resources and human resources of SNCF Matériel to position itself as a key player in the areas of maintenance and engineering, notably thanks to the close-meshed network of Maintenance and Industrial Technicentres across France.

25

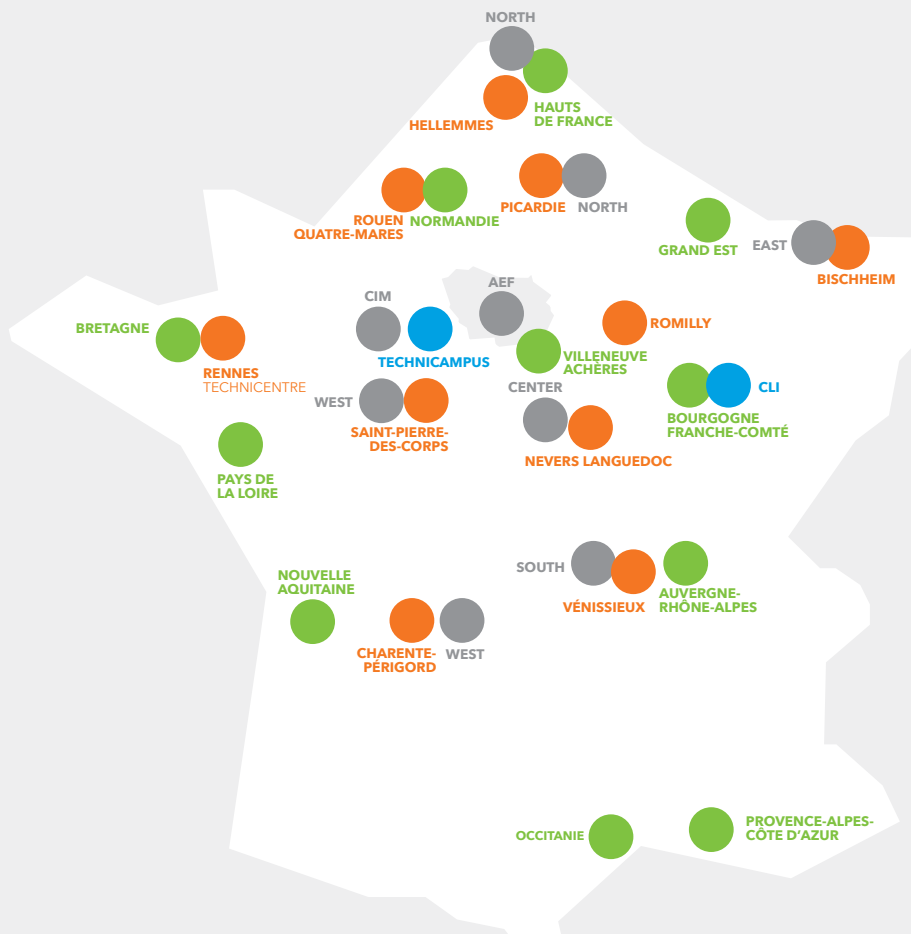
Maintenance
Technicentres

10

Industrial
Technicentres

7

Centres of engineering
and testing



MAINTENANCE
Technicentres



INDUSTRIAL
Technicentres



SUPPORT
Entities



CLUSTERS, centres of
engineering and testing

A RECOMMENDED EXPERIENCE THAT IS AT THE SERVICE OF OUR CLIENTS IN FRANCE AND INTERNATIONALLY

High speed

Trenitalia Italy
Renfe Spain
ONCF Morocco
Ouigo Spain

Regional

CFL Luxembourg
TER Dakar
Regions of France :
OPTER project

Rail Logistics & Rail Works

Akiem
ETF France
Captrain France
Ecorail Transport

Urban

Keolis Bordeaux, Lyon, Rennes,
Lille, Nancy, Tours, Orléans
RATP Paris
RATP Dev Brest
CTS Strasbourg
Setram Le Mans
T2C Clermont
Métropole Rouen Normandie
Transdev Dublin
M'Tag Grenoble
TAM Montpellier
Hello Paris
(Keolis-RATP Dev)
Keolis Dubaï
Transdev Rouen
Tisseo Toulouse
Métropole Européenne
de Lille





contact@masteris.com
masteris.com