

The railway industry is constantly challenged to improve performance, capacity and reliability. Mott MacDonald has a detailed understanding of rolling stock, railway operations and maintenance to support clients in delivering an optimised and robust operation. We cover the whole range of rolling stock, including all types of passenger and freight vehicles, high-speed units, metros, light rail and monorail projects. We are experts in all areas of railway infrastructure and interfaces, and in the management of vehicles and operations, providing a total railway system.



## Rolling stock, operations and maintenance



*Mott MacDonald provides a comprehensive technical and specialist rolling stock capability covering all development stages.*

### **Comprehensive capabilities**

We provide a comprehensive technical and specialist rolling stock capability, covering all stages in the development and use of rolling stock from initial specification through procurement management, design review, project management, operations, maintenance and life cycle support.

The key components of our service are:

- Operation and maintenance
- Specialist technical support
- Specification and procurement
- Support to the client in design and construction

Mott MacDonald's specialist rolling stock professionals draw upon many years of experience from manufacturing, maintenance and operating backgrounds, and provide strategic advice and engineering and operating solutions to a range of clients.

We work with our clients at the early stages of project development, when strategic business and commercial decisions are taken, in order to deliver efficient and effective solutions for the life of the scheme. Our team is experienced in undertaking key roles within a client's project team and has worked on many major rolling stock procurement projects, from the inception of procurement through to delivery of the fleet. Being heavily involved in the planning and management for the operation of both passenger and freight railway schemes, we also make effective use of our detailed knowledge of the regulatory regime and standards.

During the running of the service it is vital for clients to be confident that there is full control of the maintenance and condition of the fleet so that the quality of operation will not be compromised. We provide an independent service to clients in this area, assisting them to create a stable and manageable programme of asset renewal from the commencement of the service. Similarly, we can see that parties' legal obligations are implemented for all aspects of operations and maintenance, which gives assurance to shareholders and other stakeholders.



*We undertake a range of services for depots and maintenance workshops, including layout design.*



*We are working on a range of new rail facilities in East London, including a depot for the stabling and maintenance of a new fleet of trains.*

#### Contact us

✉ [railways@mottmac.com](mailto:railways@mottmac.com)

As a natural part of this type of work Mott MacDonald undertakes a range of services for depots and maintenance workshops including layout design, operations and movements in depots including freight handling and environmental and compliance audits.

#### Our services

Key capabilities include:

##### ▪ Rolling stock

Specification and procurement

- Business case support
- Capital management (whole-life costing)
- Engineering support
- Feasibility assessments
- Interface management, including wheel-rail interface studies
- Project programme management
- Rolling stock technical advisor
- Specification provision and technical adjudication

Design and build

- Ergonomics (in-train and control centres)
- Independent checking engineer
- Independent safety assessment
- Notified Body
- Quality and safety management
- Review of design
- Software assurance
- Surveillance
- Testing and commissioning supervision

##### ▪ Operations

- Freight logistics management
- Lifecycle reliability, availability, maintainability and safety
- Operational strategies and specifications
- Performance improvement initiatives
- Performance modelling
- Possession planning and management
- Risk assessment and safety audits
- Systems integration (safety cases)
- System operational simulations
- Terminal operations (passenger and freight)
- Track access and franchising agreement issues

##### ▪ Maintenance

- Assessment of accident damage and repair support
- Asset valuations
- Brake investigations
- Condition assessments
- Failure analysis (system and component failure)
- Maintenance facility design and operation
- Maintenance strategies and specifications
- Performance and reliability improvements
- Specialist technical support
- Welding and non-destructive testing supervision services
- Vehicle life cycle support

[www.mottmac.com](http://www.mottmac.com)

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