



Transport technology

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Skills and services

Key services

Bus real-time passenger information
Communications system design
Concept development
Congestion analysis
Data analysis and management
Design consultancy services
Detailed design
Driver information systems
Feasibility studies
Inter-urban network management and travel information
IRSE licensed staff
Legacy systems integration
London Underground communications systems design (RIBA)
Multimodal travel information
Policy and procedures
Policy development
Project/contract management advice
Railway communications design (GRIP 1 to 5)
Return on investment
Route location studies
Scheme definition
Software solutions
Solutions development and specification
Solutions implementation
Sustainability
Systems maintenance and operation
System monitoring and evaluation
Toll systems
Traffic modelling
Training
Transport related communications
Urban/inter-urban network interface management and integrated travel information
Urban network management and travel information
Value added

Special skills

Application development
Best practice review and advice
Configuration management
Cost benefit analysis
Data collection/analysis
Database modelling design and development
Database report generation
Help desk and support
Mapping, routing, geocoding and location data management
Performance monitoring
Procurement support and management
Production of test documentation
Project/concept development, including funding submissions
Prototyping
Requirements analysis
Requirements and design modelling tools
Software engineering
Software project management

Market sectors

Airports
Integrated transportation
Maritime and ports
Road
Surface rail
Trams
Underground rail



At Mott MacDonald we believe client participation is vital to the successful outcome of a project and we endeavour to create knowledge and ownership with our clients throughout the project lifecycle.

Transport solutions

Mott MacDonald delivers real-world, multimodal transport solutions enabling clients to deliver the essential information needed by senior management, network operators and managers, engineers, stakeholders and the travelling public when and where it is needed.

We work closely with customers to deliver their policy, operational and business objectives through intelligent transport solutions. From developing the concept and ensuring it has a sound business case, through design of the solution, implementing it under your preferred funding/procurement option and providing ongoing operation and maintenance support, we deliver low risk, proven solutions to manage traffic and transport networks across all modes of transport, providing robust and reliable, integrated, multimodal travel information solutions.

Our extensive experience in transport technology places us in a key position to provide concept, design and development services in transport systems and efficient communications networks. We deliver and maintain high-quality transport technology solutions and innovative data management systems providing early benefits, measurable return on investment and investment protection for the future. We create solutions that meet the business needs of our clients and preserve their investment while also enabling them to implement more open and flexible solutions.



We have been instrumental in delivering communications infrastructure designs for major projects in both the road and rail market. Our extensive expertise enables us to deliver the best solutions required by these sectors.



Client requirements are fully identified, understood and agreed

Working in partnership with Norfolk County Council, we have helped improve the efficiency of bus service registrations through the development of an electronic bus service registration tool.



We are working with local authorities in Tyne and Wear to develop a strategic delivery plan for the implementation of UTMC in the region. The plan will offer solutions to reduce congestion and improve air quality and the availability of travel information.

Working with clients

The rapid and efficient management of network incidents, the monitoring of networks at local and regional level, interoperability between organisations and the delivery of timely and reliable information to customers are increasingly important to transport network operators. Understanding network and associated travel behaviour allows our clients to consider solutions to improve the flow of traffic across networks.

At Mott MacDonald our approach involves close assessment of our client needs to ensure that the transport systems applied are technology aligned and ultimately fulfil their obligations in securely underpinning both policy and operational objectives. Client requirements are fully identified, understood and agreed before any project commences and we help them to understand how intelligent transport system solutions work.

We are able to work from first principles with our clients to develop sound intelligent transport systems strategies and concepts. We then expand these into fully costed project proposals complete with business case analysis. We have a long and successful record of working with national government, local authorities and the private sector in developing intelligent transport systems. Our advice is based on genuine experience of delivering real-world intelligent transport system solutions – not just talking about it.

Developing concepts

We all want seamless journeys that are easy to plan, efficient, reliable, safe and stress free. Local authorities are under pressure to enhance the performance of their transport networks and the Traffic Management Act demands that traffic networks operate efficiently and with the minimum of congestion and delays.

At Mott MacDonald we go beyond the project concept phase based on our broad-ranging practical experience in a multidisciplinary environment, bringing expertise from a variety of backgrounds to cover all angles. We design solutions for both the urban and inter-urban environments to provide network managers with up-to-the-minute information on network conditions and the ability to disseminate information to key stakeholders. If a major traffic incident develops, decision support facilities are provided to help evaluate complex alternative traffic management options.

We work with clients to get beyond the discussion and study phase. We combine the experience gained through working with many clients across multiple transport disciplines with our unique blend of consultancy skills and advanced software engineering capability to move – where appropriate – to an early implementation and/or pilot project phase to prove the designs will work.



We specialise in the integration of multimodal transport systems to facilitate efficient and reliable network management and operations together with the provision of advanced information to the travelling public.



The world-first dual-purpose Stormwater Management and Road Tunnel (SMART) in Kuala Lumpur, Malaysia, contains both a stormwater channel and a motorway. Mott MacDonald designed the tunnel, hydraulics systems, tunnel ventilation, lighting and communications.

Delivering real-world solutions

Bus

Stratford High Street Eastbound (Stop N)

25 Ilford	4-8 min
108 Stratford	8-10 min
276 Newham Gen Hosp	7-11 min
425 Stratford	10-13 min
D8 Stratford	10-13 min

Stratford High Street Westbound (Stop K)

25 Oxford Circus	4-8 min
108 Lewisham	8-10 min
276 Stoke Newington	8-12 min
425 Clapton	10-13 min
D8 Crossharbour	10-13 min

Display shows approximate bus frequency (eg 4-6 min) or next scheduled departure time (eg 10:15)

Rail

Stratford Station

Time	Destination	Status	Due
14:47	Liverpool Street	On time	
14:49	Shenfield	No report	
14:52	Richmond	Starts here	
14:55	Braintree	No report	
14:57	Liverpool Street	On time	
14:59	Shenfield	No report	
15:02	Southend Vict	No report	
15:07	Liverpool Street		15:10
15:07	Richmond	Starts here	
15:09	Shenfield	No report	

DLR

Canary Wharf	13 min
Canary Wharf	23 min

DLR Status

DOCKLANDS LIGHT RAILWAY: Tuesday 26 to Friday 29 May, inclusive, suspended between Blackwall and Prince Regent and between Blackwall and London City Airport.

We can collect data from multiple sources including RSS feeds and HTML files to provide travel information to the public via public information screens and on-street kiosks.

Our Common Data Management Facility (CDMF) conforms to the Department for Transport's urban traffic management and control (UTMC) standard. CDMF collects and analyses traffic data gathered from many systems, including urban traffic control, car park monitoring equipment, CCTV, automatic vehicle location, fault management systems, road works databases, railway systems and geographical information systems. This data enables us to provide advanced network management information relating to transport conditions.

Improving the management of billions of records generated by roadside equipment and using records to provide more meaningful information is the task of Halogen, developed and delivered by Mott MacDonald. Highways Agency (HA) staff, police forces and other organisations use Halogen to disseminate information on road conditions. It is the central service for logging operational data from multiple systems, enables data to be transmitted to hand-held devices and provides network management information.

Mott MacDonald is at the forefront of UK intelligent transport systems data fusion techniques. Utilising international standards for transport information, we are leading the way in delivering benefits for the HA Information Directorate by fusing disparate information from multiple suppliers and developing a common picture of the transport network. To allow the HA to understand and benefit from the range of business operational information held by their systems, we have developed a prototype metadata repository.

On behalf of the Department for Transport, Mott MacDonald has also developed the variable demand transport modelling software, DIADEM, which allows the prediction of flow on transport networks by considering the costs of travel.

Based on our extensive experience and knowledge, Mott MacDonald is able to provide exceptional consultancy services, systems development and delivery capability, enabling us to deliver solutions on time and to budget.

As part of the UTMC route and car park guidance system for the City of Edinburgh Council, Mott MacDonald has delivered 52 VMS units to better inform travellers on traffic conditions and parking space availability.





We have been appointed lead consultant for the detailed design through to construction of the Victoria Station Upgrade. Passengers and operators will benefit enormously from this major upgrade, which will increase the size of the station by about 50% and includes new and extended ticket halls, improved information systems and step-free access from street level to underground platforms.

To facilitate the construction of Crossrail we have conducted pre-feasibility studies identifying existing railway assets affected by Crossrail to obtain cost and programme from the asset owners for their relocation, removal, replacement or protection. A verified CAD model for each site and consolidated asset, risk and assumption/exclusion registers were also created.

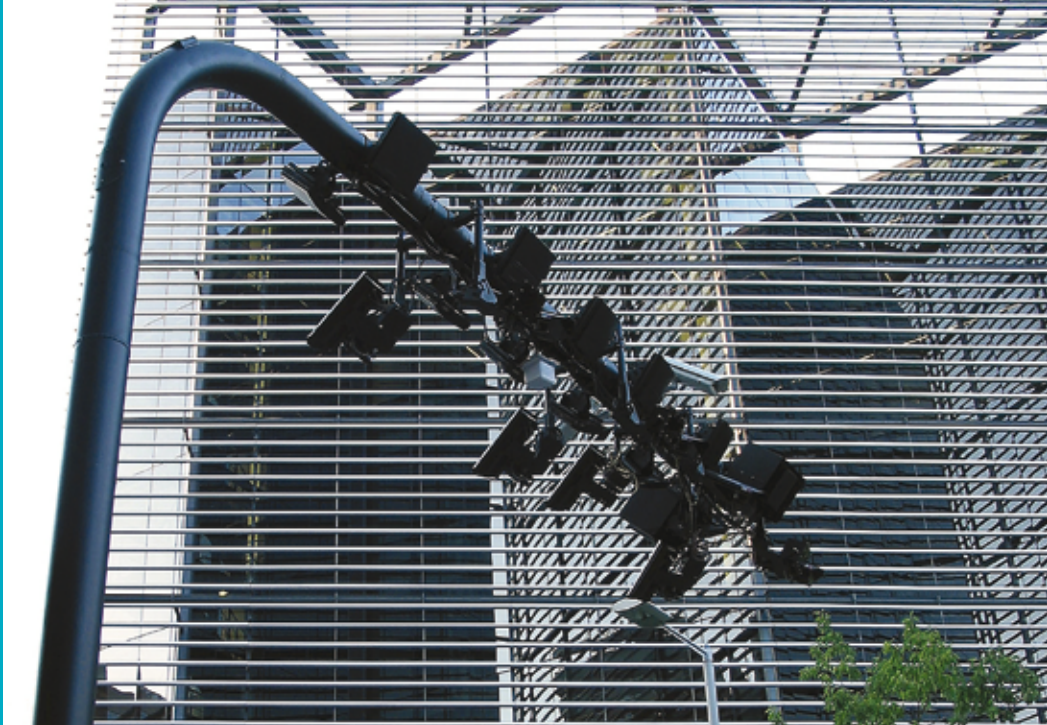


Solving communications needs

Better access to road, rail, ports and air networks is central to social, economic and financial growth. At Mott MacDonald our expertise encompasses both road and railway operational communications across multiple networks. We offer a broad range of knowledge and expertise across a range of communications fields and work with organisations in both the public and private sectors to deliver high quality communications and control systems solutions. From providing consultancy support we undertake feasibility studies, concept design and approval in principal, tender evaluation, operations and maintenance. We can provide selective advisory, planning and engineering services at any stage of a project's development.

Mott MacDonald also has broad experience of telecoms, including operational, retail, business systems and networks. This experience covers both legacy systems and a wide range of modern technologies. Our project portfolio includes all forms of rail transport providing our clients with services such as rail and light rapid transit in the UK, Europe and the US, metros in locations as diverse as Los Angeles and Beijing, and high speed trains in Taiwan and Italy. Our geographical network spans six continents, which means we can bring our skills and resources to our clients no matter where their projects are based.

Mott MacDonald has played a pivotal role in many road use charging projects, including the Dartford Crossing and the Transport for London congestion charging scheme.



We can help you appraise business performance once a new facility is operational



Advanced operational systems capable of integrating data from multiple, multimodal sources are invaluable in providing essential travel information to the public via both fixed and mobile communications methods.

Making it happen

Identifying our clients' needs and meeting their expectations are crucial to delivering high-quality technology systems. Subsequent to agreement on costs and timescales, design and development, we are committed to helping you set up new technologies. Prior to delivery of our technology systems, we offer onsite and control room training, workshops, meetings and demonstrations.

We can help you appraise business performance once a new facility is operational and, if necessary, advise on operational changes to further enhance the benefit delivered and improve the return on investment. In our drive for continuous improvement we continually monitor schemes and, when necessary, offer resilience and extra capability.

We aim to maximise benefit from individual sources of expertise by encouraging clients to join focussed user groups where cross-fertilisation of ideas and information has proven invaluable and has enabled large strides into technology development to be made.

Our expertise extends beyond implementation into the provision of professional services, including transport networks data analysis. Such analysis can identify how well a network is performing and assess whether operational criteria are delivering targeted benefits. We are also working with many local authorities to deploy advanced operational systems capable of integrating data from multiple, multi-modal sources to support network management and operations.

Mott MacDonald fully understands all aspects of transport technology and works undaunted by the complexity of multiple, interacting systems to deliver working solutions.



Mott MacDonald was appointed by BAA to provide system integration and system assurance services to provide a project wide framework that would integrate the various rail infrastructure and systems being delivered at Heathrow Terminal 5 (T5).

Safety and sustainability

Mott MacDonald works closely with clients to address the operational safety and sustainability of each project, implementing action to ensure revenue generation and stakeholder accountability. We guarantee the highest technical, professional and safety standards. To protect your investment in our technology systems, we offer advice on how best to maintain systems and when to update technology requirements. We identify risk and problems early on and offer immediate solutions, enabling your project to progress smoothly. In our design work we pay particular attention to designing for maintenance to minimise the time engineers are exposed to risks during site-based activities.

We are also very conscious of the impact of travel and transportation on the real world in terms of impact on the environment. We pride ourselves as being at the forefront of environmental sustainability issues and these are considered an essential component of any project. Our employees are highly conscious of carbon footprint issues and this is considered in the context of successful project delivery, as is the impact that any project aspect will have on the environment and the carbon footprint of the client. Our solutions are designed with the future sustainability of travel networks in mind.

Our analytical expertise has been utilised on the M42 Active Traffic Management project where we monitor and evaluate performance and provide feedback to the Highways Agency on the impact of operational regimes, for example hard shoulder running, enabling the client to demonstrate return on investment and develop plans for deployment to other parts of the network.



Our support to our clients does not end with the successful delivery of a project

Value and innovations

Our ability to add value comes from our vast experience of observing and contributing to good management practice in numerous projects and businesses, backed by our ability to transfer skills and methodologies across many sectors. We always strive to ensure best use of investment. To support customers in identifying the benefit of new approaches, systems and technology, we undertake monitoring and evaluation tasks. We assist in auditing the performance of those supplying a service to clients, providing feedback and recommendations for improved business performance.

We have a proven track record in providing expert advice on issues related to new technologies and the policy and procedures for their use. Our expertise in shaping best practice combined with our flair for innovation means we are ideally placed to help our clients increase efficiency.

Our support to our clients does not end with the successful delivery of a project. We continue to work in partnership with our clients to develop new thinking and approaches building on existing investment in technology and seeking ways to maximise the benefit and protect that investment into the future. We feed this thinking back into the development phase of projects, thereby closing the loop and supporting cost-effective and continual improvement of intelligent transport solutions.

Mott MacDonald – your real-world partner for the journey ahead.



Journeys may start in the urban environment, but many move on to other networks – motorways, rail, air or sea. We design solutions that integrate multiple, multimodal data sources and blend this data to provide the information needed by network managers, operators and the public.

Leeds
CITY COUNCIL

Leeds Travel Info

Realtime travel information for Leeds

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Currently: Intermittent cloud
13°C
RealFeel®: 13°C
Winds: NW at 11 kph

Select Area: All Timescale: Next 3 hours Default Map Position: Set Reset

Map controls: Full Extent, Map, Satellite, Traffic On, Traffic Off, Options [Mouseover]

For Leeds City Council, we have developed an innovative journey time service. Combining data from multiple sources, the system allows the travelling public to register for alerts on their routes of interest. When above normal congestion is detected, the system alerts users by email or SMS.

Mott MacDonald – multisector, multiskilled, multinational

Buildings

Communications

Construction economics

Education

Water

Environment

Health

Industry

Management consultancy

Planning

Project finance

Project management

Transport

Urban regeneration

Energy

For details see www.mottmac.com

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RV/08/09

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