



Nigel Murphy

Current Position

Partner

Profession

Rail Operations and
Safety Specialist

Years of Rail Experience

33



Professional Background

Nigel Murphy is a Professional Rail Operations and Safety Manager with extensive experience gained on project work in the UK, USA, Europe and Asia-Pacific. He has undertaken many roles focussed on the operational integration of new and rail systems, pragmatically following a systems engineering approach. He is experienced in the development and implementation of Safety Management Systems, Safety Validation, application of the Common Safety Methods and undertaking Independent Assessment, Safety and Technical Audits and accident / near miss investigations.

He has extensive experience as an assessor for safety validation and ISA work, Franchise competitions, Due Diligence commissions and as a PPP Lender's Technical Advisor. He has also applied his excellent technical analysis and authorship skills to ConOps and Systems Engineering projects, market research reports, audits and feasibility studies. An accomplished bid director and manager, for multi-£M PQQs and Bids, Nigel has an exceptional ability to storyboard and portray clearly complex issues in pre-qualification and bid submissions.

His consultancy record builds on 19 years' senior operations and general management experience with British Rail, Regional Railways, Railtrack, First North Western TOC and the National ERTMS Planning team. He has a deep understanding of rail operations and safety, safety strategy, diligence, feasibility and real-time front line management of passenger and freight operations, customer service and resourcing.

Key Skills

- Analytical, intuitive and incisive approach with intense customer-focus.
- Excellent emotional intelligence and awareness of different cultural perspectives in business.
- Excellent technical authorship skills.
- Highly accomplished assessor of new trains, new systems, PPPs and franchises.
- Experienced in operational integration in new-build and upgrades to railway and metro projects.
- Trained and experienced in Expert Witness work on rail operational and system safety.
- Experienced in technical evaluation of opportunities for M&A and other transactions.
- Skilled in the application of RADAR / EFQM; and DfT evaluation methods for franchising.

Recent Projects

Network Rail: Digital Railway Directorate (2015-16)

Operations and safety work in the development of the 'Level A' Systems Architecture. Principal author of the Operational Concept for the Digital Railway in 2029. Providing expert advice on ETCS, TMS, GB rail structure.

Iarnród Éireann (Irish Rail) (2015-16)

Safety Validation for reorganization of safety management functions: technical review of deliverables.

With Atkins

Confidential: Franchise bidder (2015)

Contributed to, and undertook final peer review of the Innovation Plan for a recent TOC Franchise Bid.

Network Rail: 'Planning and Delivery of Safe Work' Independent Assessor (2014-15)

Assessment of proposed changes to trackworker protection procedures on Network Rail infrastructure. Review of safety assessment process and of compliance with Common Safety Methods. Authored assessment report.

Network Rail: Level crossing modernisation (2014)

Reviewed the safe system of work for pedestrian safety in a programme of multiple level crossings renewals and upgrades; including investigating a near miss incident to inform the revised approach.

Confidential Rail Franchising: New Entrant (2014)

Rail operations advice in support of new entrant to the UK rail franchising market; assisting client determine and develop market entry strategy and transferability of their existing experience and capabilities.

**Department for Transport / UK Treasury: Sale of Eurostar (2014)**

Safety assessment and peer review of final reports in team undertaking Vendor's Due Diligence, leading to sale of UK share of Eurostar. Peer review of final report prior to submission.

Transport Scotland: Rail Franchising Technical Advisor Team: Caledonian Sleeper and Scotrail (2013-14)

Evaluation of PQQ & Bids against EFQM / RADAR: Focus on delivery planning, transition and general operational management. Prepared Mobilisation Handbook. Diligence work on TOC mobilisation progress.

Department for Transport, Rail Franchising: Bid evaluation (2013-14)

Part of the Technical Advisor team, evaluation of bids for TSGN Franchise (largest UK rail franchise), against DfT assessment model, focus on franchise delivery planning, mobilisation, transition and general management.

New York City Transit: New York Systems Engineering and Asset Management Services (2011-13)

Managed two winning 5- year bids for consulting services; and directed first commissions.

US Federal Transit Administration: Streetcar/ LRT Project Portland, Oregon (2011)

Review of Safety Plan and Preliminary Hazard Analysis. Advice on disputed track safety issue.

Sir Roy McNulty: Rail Value for Money Study: Innovation (2010-11)

Project Direction of work reporting on the opportunities to enhance innovation in the rail industry. Recommendations, business case and outline project implementation plan.

Scotland: Confidential client: Borders Railway conceptual design and value engineering (2010-11)

Operations work in support of one of the consortia bidding during Competitive Dialogue procurement.

Department for Transport: Review of Defence Procurement and Safety - lessons for rail (2009-10)

Analysis of lessons from Gray's Report on Defence procurement and Haddon-Cave's investigation into Nimrod aircraft safety. Presentation to DfT National Networks Executive, a key input to the Rail Value for Money Study.

Portugal: Metro Do Porto: Network extensions (2010-11)

Project director of team developing the operational concept, signalling and traffic management engineering requirements for the future 3 extension phases of Metro Do Porto's LRT network in the World Heritage city.

Queensland Australia, Plenary Group, Gold Coast Rapid Transit LRT PPP- LTA team (2010)

Assessed and reported on the plans governing operations, crewing, control, station quality, security, business resilience and revenue protection as part of Lender's Technical Advisory team.

Europe Confidential Rail Systems Supplier: Market Assessment (2010)

Project Director to examine three companies' market and technical on ETCS, signalling and CBTC, to inform the client's business relationships and potential for M&A. Subsequent acquisition successfully concluded.

London Underground:, East London Railway (ELR) (2009-10)

Review of operational safety of ELR. Safety Assessment of supplementary Rules modules for GSM-R and PoSA signalling. Developed the Infrastructure Compatibility data pack for issue for non-LOROL train operators.

India: Confidential Client Market Entry Commercial and Technical Analysis (2009-2010)

Market Analysis of opportunities for rail systems and signalling export to India (market characterisation, technology review, regulatory and approvals framework). Application of ETCS technology to 'typical' layouts.

Rail Accident Investigation Branch (RAIB): Fatal Level Crossing Investigation (2009)

Reviewed the evidence of crossing performance, road and rail user sighting, and other evidence gathered as part of the human factors investigation of fatal car / train collision at Wraysholme AOCL.

RSSB: New Approach to the Rule Book (2009)

Led the project to develop the Cost Benefit Assessment (CBA) of the proposed New Approach to the Rule Book. The CBA work informed the Business Case in support of a fully revised Rule Book.

Confidential Client: Rolling Stock Procurement Thameslink and Scotrail (2008-2009)

Led a team to prepare sections of the supplier's PQQs to DfT. Prepared bid content for the PQQ submissions from diverse, often 'raw' sources, aligned to the EFQM/RADAR model. PQQs successful.

Hitachi: Javelin Class 395: System Integration Report (2008)

Developed the systems integration report for new Class 395, 140 mph Javelins for high speed services to the 2012 Olympic Park, in support of a submission for extension of testing of the first 4 units.

Hitachi: Traffic Management System (TMS) UK and Sweden (2008-2015)

Directed multi-disciplinary team researching market opportunities Hitachi TMS to GB network. Researching technical, operational and requirements to inform client's business plan. Direction of team helping client evolve and develop solutions for UK and European market; assisted on bids for TMS in UK and Sweden.

Hitachi: ETCS Market Entry to UK (2007-2011)

Directed a series of commissions for Hitachi in support of development of their ATP system into a compliant ETCS Level 2 system. Research on market, safety approvals, technical and standards.



Hitachi/Agility trains, InterCity Express Programme (IEP) PQQ and ITT (2007-2013)

Led technical sections of the PQQ for multi - £B rolling stock PFI project. Developed successful PQQ submission aligned with EFQM model. Subsequently directed a large embedded team within client's bid programme, overseeing technical delivery of train design, safety approvals, quality, and human factors integration plans. IEP contract and additional orders awarded to Agility trains.

Hong Kong Government, Review of Hong Kong Railway Inspectorate (2007)

Major review of the HKRI. Assessments, benchmarking (UK, Singapore, Australia) and stakeholder interviews at C-suite level. Recommended opportunities for change and adoption of risk-based approach.

Kennedy's (for Network Rail) Level Crossing (LX) Expert Witness (2006)

Expert Witness on a van/train collision and civil action at Wadham's North Barn LX to challenge the claimant's allegations on crossing safety. Followed by a further review of cyclist safety at Spring Bank LX (Hull).

Over 30 rail and mass transit projects for clients in UK and internationally (2002-2006)

Public transport security; valuation of US Positive Train Control; China, new metro control and management advice; Taiwan HSR- operational advisory work; Manchester South and Dorset Coast, operational safety case for new signalling technologies, audits, operational readiness; ISA on new trains; operational application of ETCS and GSM-R; operational rules for degraded mode signalling; UK ERTMS technical Secretary, ERTMS rules review and testing on AVE simulator.

Previous Positions Held

- Head of Rail Operations, Technical Director and International Director, Atkins (2002-2013)
- Operations and Human Factors Manager, National ERTMS Planning Team (2001-2002)
- Railtrack HQ, Professional Head of Operational Safety (1998-2001)
- North Western Trains, Professional Head of Operational Safety and OHS (1997-1998)
- Railtrack Midlands, Safety and Standards Manager (1993-1997)
- Regional Railways SW&W, HQ Operations Safety Manager Swindon (1992-1993)
- Regional Railways SW&W, Operations Manager South Wales (1992-1993)
- British Rail, Area Operations, Traffic and Traincrew Management and Supervision (1983-1992)
- BR General Management Training Scheme (Western Region)

Qualifications and Professional Associations

- Fellow of the Institution of Railway Operators (FIRO).
- Affiliate, IRSE (and E&PD Committee Member).
- Qualified to Professional Head level (Operations and Health & Safety).
- Lead Tutor TCMS module IRO Degree Course (Associate Lecturer with Glasgow Caledonian Univ)
- Past Co-Chair INCOSE Transportation Working Group (TWG).
- Yellow Book: Engineering Safety Management System 2 & 3.
- HSE Ops Principles Group; National Ops Safety Group, Ops Subject Committee; Coms Working Group; National SPAD Group; Signalling Principles Group; ATOC Train Operations Safety Group
- Member of British Railways Board's national Driver Restructuring Initiative Safety Team.
- N.E.B.O.S.H. Diploma (National prize winner).
- Lecturer on Operations on the Atkins / UCL MSc course in Railway Systems Engineering 2014-2015.
- Over 10 Professional Lectures / Papers for INCOSE; IRO; IRSE, INCOSE RIG and the IMechE.