

# **Dr Rupert Booth**

Senior Adviser

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Languages: English



## **Expertise**

- Antitrust
- Finance and Valuation
- Mergers
- · Performance, Productivity and Efficiency

#### **Profile**

Rupert is a pragmatic and widely qualified economist and chartered engineer, with global experience of economic analysis and financial appraisal. He has worked for many of the world's leading consulting and engineering firms, in the UK and overseas. He is a Chartered Financial Analyst and has Masters' degrees in competition economics (MA) and law (LLM).

He is also a qualified Better Business Case Practitioner and is a Certified Public—Private Partnerships Professional. His PhD from Warwick Business School focused on the correlation of mergers and acquisitions in the pharmaceutical sector with firms' comparative efficiency, as measured by Data Envelopment Analysis.

## Selected professional experience

- Affinity Water. Advice on possible challenges to the enhancement cases within the PR24 business plan (2024)
- Scottish Southern Electricity. Advice on treatments of ongoing efficiency during RIIO-T3 and possible alternative treatments based upon learning curves (2024)
- National Highways. Assisting the Lower Thames Crossing (LTC) directorate in undertaking analysis to
  test the risks that would emerge in relation to the Dartford Crossings, if the LTC were delayed. These
  risks include non-availability of one or more of the existing Crossings, with consequences for road users
  and the wider economy (2023)



- South West Water. Ongoing advice during the PR24 price review, with emphasis on the preparation of Cost Adjustment Claims, Ongoing Efficiency and Real Price Effects (2023)
- Mastercard. Advice on cost allocation principles for the calculation of the segment profitability of payment systems (2023)
- Transbank. Audit of a cost allocation model for a payment system to confirm its adherence to the principles of cost reflexivity and competition regulations (2023)
- Confidential commercial dispute. Benchmarking pharmaceutical royalties to identify an appropriate quantum of damages (2023)
- Italo Treno. Advice on the appropriate level of rail fares for High Speed Rail services in Italy that would be consistent with EU directives (2023)
- Fluvius. Benchmarking of the IT function of the Belgian grid operator, against the regulator's performance expectations (2023)
- Rotala. Expert review of the Transport for West Midlands West Midlands Fares Freeze Model, to consider the appropriateness and sensitivity of its input assumptions (2023)
- Confidential Law firm. Critique of a draft Regulatory Impact Assessment for the introduction of a Code of Practice for private parking (2023)
- Anglian Water Services. Critique of Ofwat's proposals for funding of Bioresources, as part of the PR24 price review (2022)
- Scottish and Southern Electricity Networks. Advice during the RIIO-ED2 price control, focusing on Ongoing Efficiency and Real Price Effects (2022)
- Investment management company. Advice on quantification of damages in an aircraft leasing dispute (2022)
- Department for Transport. Drafting of an Outline Business Case and a Strategic Outline Business Case
  for the Waterloo & City and Piccadilly tube lines for Driverless Trains. Subsequent design of a Analytical
  Hierarchy Process model to support multi-criteria analysis of five tube lines (Victoria, Central, Piccadilly,
  Bakerloo and Waterloo & City) and the subsequent analysis of scenarios (2022)
- Water Distributor. Direct Procurement for Customer (DPC) lead adviser for a water resilience
  programme, coordinating technical, financial, economic, regulatory and procurement workstreams, to
  enable the DPC project to pass through the Ofwat Control Points (2022)
- Transport Infrastructure Ireland. Drafted a position paper for an original methodology for calculating the Public Sector Benchmark (PSB) range for the MetroLink Public Private Partnership (PPP) project (MetroLink PPP), including the processes for updating the PSB, a timeline for its use, and a maturity assessment of the input data (2022)
- Network Rail. For the Transpennine Route Upgrade, review of the Outline Business Case and the design
  of a consistent Value Framework to support 'Project 13' contracting approaches. For the Midland
  Mainline 3 project, development of a Strategic Brief, to be used as a basis for the Target Operating
  Model (2022)
- Lower Thames Crossing. Drafting of specifications for user requirements, technical functional and user interface, for a funding model for the Lower Thames Crossing, to examine sensitivities to inflation rates and programme delays. Management of the subsequent model build (2022)
- UK electricity network. Specification of a Multi-Criteria Decision Analysis (MCDA) framework for appraising Alternative Delivery Models. This was followed by the building and testing of a spreadsheet, to implement (2022)
- Foreign Commonwealth & Development Office. Design of training material for the international version of the Five Case Model, to be delivered in South-East Asia (2022)
- Advice to a global pharmaceutical company on improving the efficiency of product development (2011)
- Cambridgeshire Autonomous Metro. Led the Finance & Funding strategy for the metro (2021)



- Economic modelling of government interventions to stimulate the UK space launch sector (2021)
- Business case for a Women in Tech internal inclusion initiative (2021)
- Advised a water company on dialogue with Ofwat on Asset-health and Resilience, with the potential for benefits from the adoption of Digital Twins (2021)
- Advised a bus company on benchmarks of bidding costs as part of a judicial review (2021)
- Advised a roads delivery organisation on the potential for benchmarking in regulatory discussions (2021)
- Delivered training on Natural Capital Accounting and Multi-Criteria Analysis to an economics consultancy (2021)
- Advised on a reasonable profit margin for a gas turbine power plant in the Middle East, as part of a construction claim (2021)
- Provided a critique of an expert report submitted to the UK Competition and Markets Authority, as part of an appeal against the Ofgem Final Determination in the GD2 price review (2021)
- Overhauled the proposed Five-Year Project Portfolio Plans for the Saudi infrastructure sector, to prepare for the annual budget submission of a 10% reduction on the \$10bn programme (2017–22)
- Steered the creation of a National Integrated Infrastructure Strategic Plan for over \$100bn of public investment (2017–22)
- Developed business cases to justify investment in Project Management Offices of over 100 staff within public entities (2017–22)
- Assisted the UK's Infrastructure Project Authority on the development of an international version of the Five Case Model, the UK Treasury standard investment appraisal method, and supported the United Nations Development Program on Municipal Finance (2017–22)
- Authored the first infrastructure appraisal procedures to be published by the Saudi government, covering
  risk assessment, strategic fit and value-for-money and project prioritisation procedures. Subsequent
  application of the procedures and design of training courses for Saudi nationals (2017–22)
- Presented findings to senior government ministers, e.g. in Finance, Economics and Transport, on the reduction of cost and schedule overrun of projects from 35% to less than 10% (2017–22)
- Built capability of Saudi nationals in Public Investment Management and Project Portfolio Management by training over 50 staff (2017–22)
- Developed options for public investments, e.g. in ports, roads and hospitals, to reduce costs by 20% (2017–22)
- Calculated an appropriate discount rate to use in economic appraisals in Saudi Arabia (2017–22)
- Provided a global consulting firm with macroeconomic modelling to create a report to government on the nation's real estate market and implications for the banking sector (2011–16)
- Designed a contingency allocation system for re-assigning project variances between stakeholders, based on contractual obligations, to reduce the cost of the state of cost overruns (averaging 50%) (2011–16)
- Benchmarked alternative organisational approaches to Public Investment Management (PIM); a target reduction of 20% of capital expenditure was achieved (2011–16)
- Wrote detailed procedures for portfolio management, undertaking appraisal of individual projects and benchmarking to assist the appraisal (e.g. facility design, R&D productivity, asset management).
   Eliminating 'gold-plating' led to savings of at least 20% (2011–16)
- Guided the implementation of a monthly monitoring system for Qatar's major projects for the Major Projects Committee (reporting to the Prime Minister), which included a SQL/Qlik interactive dashboard, covering a pipeline of over \$100bn (2011–16)
- Defined IT strategy for the Central Planning Office and acted as IT manager, serving over 150 users (2011–16)



- Upgraded the procurement strategy, processes and procedures of the Western Region Development Council in Abu Dhabi, in line with international best practice (2011–16)
- Assisted the Go Ahead group in the preparation of an Accreditation Questionnaire for a rail franchise bid, in the form required by the Department for Transport, i.e. the Business Excellence Model (2010)
- Appraised the feasibility of an industrial park with alternative financing options, for PDVSA in Venezuela (2010)
- Piloted a project for the Carbon Trust, to embed carbon savings practices in aggregate companies, by using facilitators across the nation to encourage adoption and measure results (2010)
- Review of a financial model for two gas distributors of their programme of replacement of corroding pipes (the 30/30 programme) (2010)
- Advice to a Baltic water and sewerage company on the role of process benchmarking in establishing the
  efficient level of costs, and the integration of the process model with econometric modelling (2010)
- Review for several bus operators of the model used by the Department for Transport to estimate the costs of the concessionary fares scheme (2010)
- Analysis of the value and returns on intellectual property rights for a leading mobile phone manufacturer (2010)
- Development for the Office of the PPP Arbiter of the approach for the assessment of the efficiency of the support costs of the London Underground (Infracos) (2010)

### **Selected publications**

- Booth, R.J. (2023), 'Contemporary infrastructure business cases: assessing impact in the round', Agenda, May
- Booth, R.J. (2023), 'Undertaking capital projects: linking risk and return', Agenda, February
- Booth, R.J (2023), 'Nature: the root of all capital?', Agenda, January
- Booth, R.J. (2022), 'Adaptive planning for pathways through uncertainty: from theory to practice', Agenda, November
- Booth, R.J. (2021), 'Investment appraisal in the round: why MCA?', Agenda, February.
- Booth, R.J. (2021), 'Setting Fair, Reasonable & Non-Discriminatory Royalty Rates in the Biopharmaceutical Sector', Advantox.
- Booth, R.J. (2020), 'Preparing for resilience: analysing and treating risk', Agenda, December.
- Booth, R.J. (2014), 'Economic analysis and survey of water infrastructure in emerging economies', Proceedings of the ICE Municipal Engineer, 167:3, 1 September, pp. 125–136.
- Booth R.J. (2012), 'Risk planning for interdependencies: from theory to practice', Proceedings of the ICE
   Municipal Engineer, 165:2, 1 June, pp. 85–92.
- Booth, R.J. (2011), 'Patent pools in pharmaceuticals: a drop in the ocean?', Agenda, February.
- Booth, R.J. (1997), Practical Cost Management: Techniques to Improve Decision-Making, CIMA Publishing.
- Booth, R.J. (1994), Conquer the Cost Service Compromise: A Five-Step Program to Improve Performance and Reduce Costs, Irwin (US), Financial Times (UK).

## **Qualifications**



- · PhD, Warwick Business School, UK
- MA Economics, Kings College London, UK
- Master of Laws (Commercial and corporate law), University of London, UK
- · Certified Public Private Partnership Professional, APMG
- Envision Sustainability Professional, via the Institute for Sustainable Infrastructure
- Lean Six Sigma Black Belt, Acuity Institute
- Axelos Practitioner Status: Better Business Cases; Portfolio, Programme & Project Management
  Offices; Management of Value; Management of Portfolios, Management of Risk, CHAMPS2, Change
  Manager, AGILE, Benefits Management
- Rupert Booth is a CFA® charterholder