

Operational Analysis



BAE SYSTEMS

We are Techmodal

A collaborative data consultancy, bringing the capability and creativity you need to unlock the strategic potential in your data.

As Defence and Government experts, we understand the unique complexity of your constraints. Adaptive, imaginative and iterative, we meet you where you are – and start with what you have.

We focus on making more of your existing tools and technology. Applying smart thinking and continuous improvement to uncover the insight in your data – and help you move past your stickiest problems. Optimising your investments, operations and outcomes. Maximising the impact of your resources towards a better future.

Our clients operate in high-stakes, highly technical and highly secure environments. The pace is fast; the demands are complex and the cost of getting decisions wrong is high. They need partners who bring clarity, precision and practical expertise – not complexity for its own sake.

Our value comes from combining deep analytical strength, applied technology expertise and hands-on consulting experience. We turn ambiguity into clarity and insight into action.

What we offer

We operate at the cutting edge of digital innovation and at the heart of organisations that keep vital infrastructure running, national security protected, and armed forces prepared. Our teams provide:

Decision advantage

We give organisations the insight to act with clarity and pace, ensuring choices made today hold up under tomorrow's pressure.

Our strength comes from being data-led, operationally aware and grounded in real-world context. We explore options, test scenarios and highlight trade-offs before action is taken, building confidence in complex and high-consequence environments.

Technology that works

We help organisations unlock the full value of their technology and existing investments. Our solutions are shaped to our clients' environments – secure, scalable and designed for reuse – delivering faster outcomes and greater value for money.

We stay user-driven, not technology-driven, ensuring what we build is usable, dependable and impactful.

Delivery impact

We work shoulder-to-shoulder with clients to turn ambition into results. Our approach is collaborative, adaptive and focused on rapid progress.

We build momentum early, provide clear answers before the conversation moves on and ensure delivery stays aligned to purpose. Whether defining strategy or supporting implementation, we bring clarity, structure and practical leadership.

Strength in secure and complex environments

All our work is delivered by security-cleared teams who understand the realities of Defence, national security and critical infrastructure.

We design and assure solutions that are resilient, secure and governed — engineered to work in environments where constraints are real and reliability matters.

Powered by BAE Systems Digital Intelligence

We combine the pace, creativity and agility of a specialist consultancy with the depth, reach and security of BAE Systems.

Clients benefit from a unique blend of niche expertise and enterprise-scale capability, with seamless access to Digital Intelligence, engineering, cyber and equipment programmes when required.

Service Overview

Our Operational Analysis (OA) service has been developed to provide evidence-based decision support at the most senior levels of organisations. Our multidisciplinary approach utilises consultancy skills to unpack the question and help organisations act as an intelligent customer, through simulation modelling, wargaming, software development and business intelligence techniques. Our approach has evolved along with customer requirements, via embedded staff within a large public sector organisation, with a proven track record of delivery against a range of business challenges from operational-level support to Strategic level policy and balance of investment activity. Our reputation for quality, timely and relevant delivery has seen significant growth in our customer base, with significant SC and DV cleared expertise in Defence Logistics within strategic headquarters and across front line commands.

We provide a **data driven wargaming solution** to support senior level decision making, including;

- Designing wargame approach including identifying and pre-briefing key stakeholders on roles and desired outcomes.
- Developing supporting tools and datasets to enable live modelling, facilitating wargames including home team and red team activity.

- Delivering flash reports and issuing final reports with recommendations for process improvement.

The approach has been successfully delivered to senior stakeholders in Defence, and for education and training purposes with university and professional academy student cohorts.

Our OA service is used to support **strategic level policy and strategy formulation**, providing policy makers with a rapid view of the implications of policy and financial decisions on operational outputs. This is underpinned by end-to-end logistics and support simulation modelling and business intelligence tools, developed in-house using MS Excel, Visual Basic for Applications (VBA), Microsoft PowerBI and Simul8, and deployed onto Authority systems. Examples of these tools include:

Tactical Simulation Planning Tool (TSPT): A logistics movement simulation model used to calculate force deployment timelines, storage and distribution requirements and contracting costs throughout an end-to-end logistics network and enable what-if analysis for transport and nodal capacities.

Joint Sustainability Assurance Model (JSAM): An inventory optimisation tool, designed to rapidly enumerate the cost and risk of sustainment and operational stocks for a range of operational scenarios, including stockpile shortfalls. Used also to identify the impact of changes to policy and contracting processes, such as lead times, warning times, and identifying data quality improvements.

Strategic Base Assurance Model (SBAM): A complex tactical-level system of systems process map of the operational outload process. Including identifying areas of interdependence and incoherence between organisations, single point of failure and pinch points, information system demands and requirements for contractor input.

Further examples of our operational analysis capabilities include:

Requirements analysis. Requirements capture, delivering organisational level Requirement Investigations (RIs), using data analysis, forecasting and scenario modelling to deliver policy compliant and data-driven sets of detailed requirements against which future capability can be assessed and funded.

Support to ongoing military Operations and Exercises, including in Iraq and Afghanistan, and for contemporary operations in Eastern Europe. This involves providing over the shoulder modelling support, rapid data analysis and providing logistics subject matter expertise at speed of relevance to inform senior commander decision making and optimise logistic effect.

Force development and dataset management: Developing and maintaining master force structure data and assumptions to provide volumetric understanding of the scale and

complexity of operational scenarios. Including data quality management and access control.

Performance Management: Developing KPIs, data capture and reporting regimes to support performance management programmes within senior decision-making boards.

Sales and Operational Planning (S&OP): Developing and deploying data-driven S&OP forecasting toolsets to improve forecast accuracy for a multi-billion-pound pan-Defence inventory programme, reducing overstocking and improving availability of the right commodities at the right time.

Carbon Foot printing and sustainability analysis: Developing a methodology and dashboard to record Scope 1 & 2 carbon emissions of MOD's support organisation, articulating the highest emitting platforms and demonstrating candidate options for emission reduction, including platform replacements, alternative routing options and contracted solutions.

Technology and conceptual force development: Undertaking technology horizon scanning and analysis of future technologies to deliver improvements in operational performance. Including liaising with industry partners, academia and research institutions to articulate the financial and operational benefits, risks and challenges of introducing future technology.

Business outsourcing support: OA to support the MOD in outsourcing major logistics and support activity, including sea mounting and logistics commodity and services. Providing unambiguous commercially compliant volumetric requirements to support outsourcing feasibility studies and subsequent contracting mechanisms. Assessing value for money through development of independent cost models, soft market testing of alternative suppliers, and assessment of the ability and cost to the client to deliver services in-house.

End-to-end logistics subject matter expertise: Detailed understanding of the logistics, supply chain and movement processes. For all classes of supply including Food, Fuel, Engineering materiel, ammunition and raw materials and consumables. For all ranges of movement type, including road, rail, airlift, sealift, helicopter and commercial movements.

Service Features

- Strategic level decision support including wargaming
- Logistics analysis
- Simulation modelling & Business Intelligence
- Force development
- Requirements capture and capability analysis
- Process mapping
- Inventory management
- Performance management
- Conceptual force development
- Logistics and support subject matter expertise
- Supply chain requirements and outsourcing support
- Carbon foot printing and sustainability analysis

Service Benefits

- Data-driven and evidence-based decision making
- Cost-benefit analysis to support balance of investment activity
- Optimised logistics and movement flow, including routing and use of resources
- Optimised inventory spend and stockpiling strategy
- Rapid scenario assessment

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