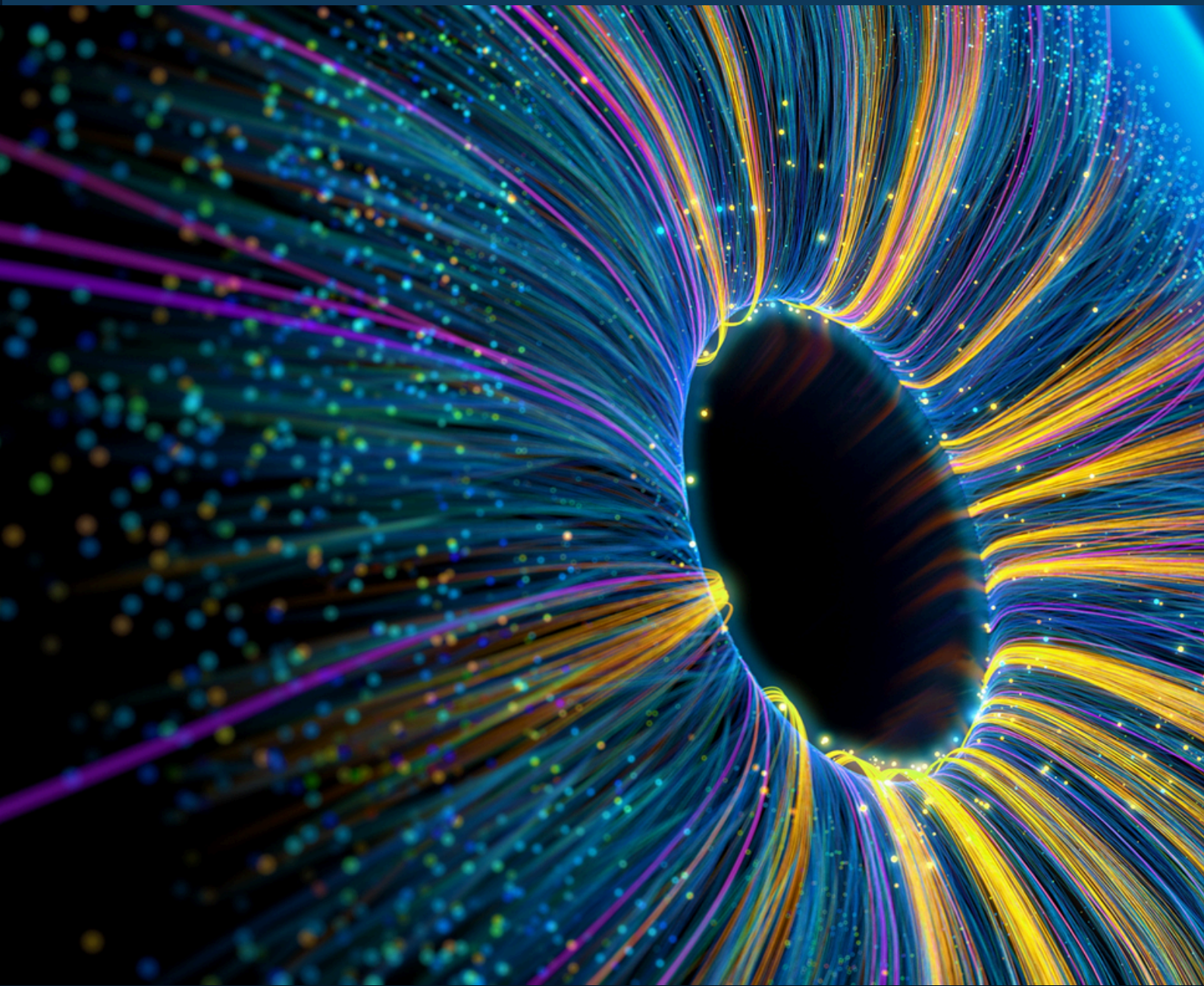


# TECHMODAL

## G-CLOUD SERVICE DEFINITION

**Operational Insights**  
Operational Analysis



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## 01 - ABOUT US

### Who we are

We are Techmodal, a Bristol-based data science and analytics consultancy with 200 data and technology professionals. For the past 20 years, Techmodal has excelled in delivering rapid-impact, innovative solutions to solve some of the most difficult data problems in UK Defence and Public Sector.

We deploy teams to deliver fast, actionable insight from complex, siloed and sensitive data. We are user-focused and technology agnostic, meaning we deliver solutions together with users to specific needs, aligning to customers' technology investments and strategies.

### Benefits of working with us

- Deep understanding of data and its context to extract maximum insight
- Exploitation and application of disruptive technologies and approaches
- Partnership approach providing collaboration, knowledge transfer and upskilling
- Repeatable solutions that provide significant Return on Investment (ROI)
- High quality, rapid impact, agile delivery

### Our offerings

#### Data Analytics Consultancy

##### Applied Data Science

Applying data science tools and techniques to real-life operational challenges

##### Modelling & Simulation

Utilising domain knowledge and modelling expertise to enable customers to make better decisions

##### Operational Insights

Data-led insights into operational challenges with embedded domain experts

#### Software Development

Development of scalable, robust and secure applications, enabling customers enduring access to their data and insights

## Our customers

We've built a reputation for getting things done and doing them well. This is why we are a trusted partner across UK Public Sector.



Ministry  
of Defence



Home Office



Department  
for Transport



Cabinet Office



## Our values

Our people are the lifeblood of the business. We're proud of the variety of backgrounds and experiences our people bring to the business as we believe this empowers different perspectives that drive our innovation.

But no matter how different our background, our shared passion for using data to solve complex problems keeps us all connected. Our culture is built on four core values:

**Get it done, do it well** We find practical solutions to difficult problems and do not get lost in process and theory. We are agile, flexible, and tenacious with a commitment to promoting quality and sustainability.

**Communicate boldly** We believe that being honest and straightforward is key to building trust. This entails being brave enough to tell customers and colleagues what they need to know rather than what they want to hear.

**Grow with integrity** We are an ambitious company run by a team whose aim it is to make people proud. This is achieved by valuing our culture and embracing the diverse perspectives of our people.

**Reward people with opportunities** Our success depends on our people. We give individuals the freedom to experiment and develop, so they remain challenged and engaged.



## 02 - 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.

## 03 - 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

## 04 - 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

**End of document**

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Visit our website  
[www.techmodal.com/overview](http://www.techmodal.com/overview)



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