

Modelling and Simulation

Supporting the business decision making process

Modelling and Simulation techniques can help to support the business decision making process. From designing and optimising a business process, to evaluating a programme's costs and risks, technological advances have positioned Modelling and Simulation as a key business enabler.

Business Drivers

Complexity and uncertainty are common characteristics of the modern business environment. Understanding the factors that have influenced past performance, and those that determine future performance, is a management imperative.

Visibility of cost and performance drivers when developing a strategy or operation are fundamental to securing and delivering profitable business.

In the Defence sector, where the trend continues for Contracting for Availability and Through-life Capability Management, even greater emphasis is being placed on the importance of using Modelling and Simulation techniques in support of decision making.

Independent Specialists

Key ingredients to delivering effective Modelling and Simulation solutions are:

- An in-depth awareness and experience of modelling tools and techniques.
- An understanding of an organisation's business strategy and market context.
- Assumptions and arguments that are transparent and challengeable.
- Presentation of the analysis in a comprehensive, business focused way.

LSC Group's Modelling and Simulation specialists exploit business data in order to provide impartial analysis to assist the decision making process.

For over a decade, we have been developing and deploying modelling solutions to a range of industries tailoring our solutions to fit with our customers' requirements – ensuring 'best fit'.

We not only provide specialist knowledge of the Modelling and Simulation domain, but vast experience in a number of domains and the associated business drivers.

Utilising a number of modelling and simulation tools and techniques to aid this process, we are helping our clients to solve strategic and tactical problems.



If my budget is reduced, how will this impact performance?

How can we relate Through Life Cost to performance and requirement?

What is the minimum fleet size to achieve the strategic objectives?

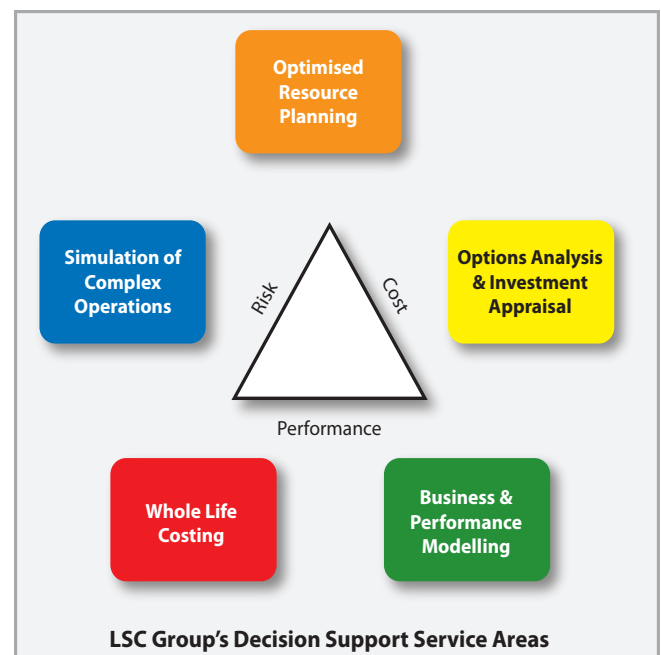
How effective is my cost reduction strategy?

What are the optimum sparing strategies that reduce cost but maintain performance?

What happens when the client asks about maintenance costs of a system that never existed on the previous platform?

Benefits of our approach

- We tailor our models to meet customer requirements - one size does not fit all
- Models are based on logical, business focused arguments which are transparent and challengeable
- Our solutions can be delivered as a bespoke one off piece of work or a comprehensive, truly embedded model and supporting consulting



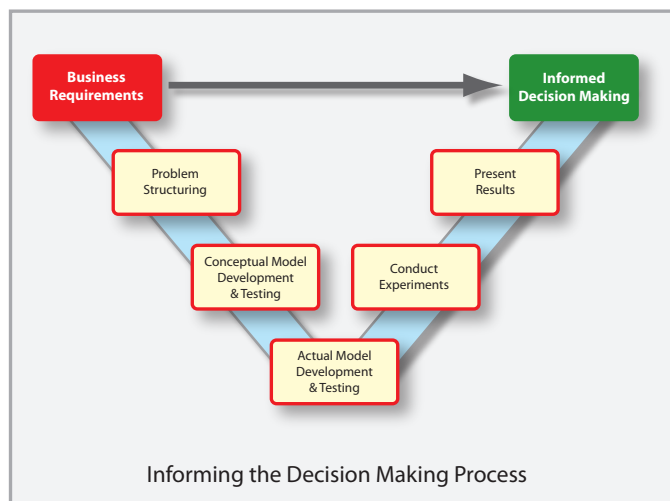
Our Approach

We use a Requirements based approach where the definition of a clear, unambiguous and agreed statement of the business requirement is critical.

We will develop a conceptual model of the role and content of the Decision Support process – once agreed the Model will be built and tested before deployment.

Experiments will be used as a means of providing scenario driven results – producing ‘what-ifs’ will help to provide greater visibility of the likely dependencies and impact on key business metrics such as time, cost and performance.

Our approach, refined over a number of years can be delivered as a comprehensive package or as a bespoke piece of one-off consulting.



Benefits

- Greater visibility of key business drivers
- Improved decision making capability
- Assist investment decisions – ensuring more informed purchasing practice
- Ability to test a strategy prior to implementation
- ‘What-if’ scenario planning help to identify likely business dependencies and impact on performance
- Opportunity to reduce costs associated with a strategy through more effective use of resource
- Ability to prepare for, and foresee, future conditions

BOWMAN

BOWMAN is the tactical and secure, voice and data communications system for UK MOD fitted to approximately 15,000 vehicles, more than 100 maritime vessels and 60 aircraft, as well as recent Urgent Operational Requirement installations. As part of the risk reduction element of the procurement process, LSC Group developed, on behalf of the MOD, a BOWMAN system support model using SPAR Technology. The model was built to investigate the sustainability of BOWMAN for the support solutions proposed by industry – helping to reduce the MOD’s exposure to risk during the programme tendering process.

The model predicted real life system performance (‘what-if’ scenario planning) against real world operational scenarios – helping to predict operational readiness and spares availability. This provided vital decision making data that informed the tender assessment process, enabling more informed decision making.

The Queen Elizabeth Class – QE Class

The Queen Elizabeth Class (QE Class) Future aircraft carriers were ordered in 2007 and will each displace approximately 65,000 tonnes and be some 280 metres long, making them the largest vessels ever operated by the Royal Navy. In the two years prior to this LSC Group, on behalf of the MOD, developed the Operational and Support Through Life Cost Model to support the eventual Main Gate Business Case.

On top of this, to contribute to a CVS (the previous platform) versus QE Class cost challenge, LSC Group developed the Cost Performance Trade Off Model. This model predicted the influence of readiness, usage and availability on the Through Life Cost of QE Class .

These two LSC Group models helped aid the decision for the QE Class project exiting Demonstration Phase and starting the Manufacturing Phase.