

# Analysis & Modelling Service

Prediction with Confidence



**Understand and assess the future outcome of current plans in order to optimise operations, manage risk and make informed business decisions.**

## Requirement

There are increasing commercial and technical requirements for both customer and industry organisations to accurately scope and predict future situations and likely outcomes. Budget cuts, increased competition, innovative business ideas and risk associated with long-term performance based contracting are just a few examples.

Organisations must therefore clearly understand complex impending operations, maintenance, logistic support and training situations. This includes a need to examine and compare different options, the cause and effect of change within these options and the associated costs. Possessing this ability underpins business optimisation, management of risk and structured decision making.

## Analysis & Modelling Service

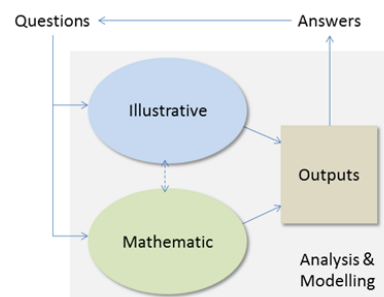
Persides has an extensive analysis and modelling capability which includes both illustrative (qualitative) and mathematical (quantitative) techniques.

Illustrative modelling is used to visualise current and future situations in order to understand scope, responsibilities and interactions. Techniques used by Persides include enterprise, functional and business process modelling.

Mathematical modelling is used to compare options, investigate cause and effect, aid trade-off and input data sensitivity analysis. Mathematical modelling is good for understanding throughput over time and answering questions such as; how many, how often and how much? Techniques include deterministic and stochastic (simulation) mathematics embedded in models developed within MS Excel

and simulation software tools. The simulation software used is recognised as a 'best practice' tool for stochastic analysis and modelling. It offers a virtual and dynamic environment which provides visual understanding of options and potential situations.

The Persides approach to analysis and modelling begins with identification of the key questions or issues an organisation or project has. Once this is determined, Persides select and tailor the range of modelling techniques that best suit the situation and requirement. This might be a single technique and model, or a combination of illustrative and mathematical techniques supported by a range of modelling software tools.



Our approach to mathematical modelling can include a combination of methods embedded within a joint MS Excel / simulation model. This approach provides the flexibility to use different methods to address different modelling aspects such as availability, utilisation and cost. Our approach generates graphical outputs which aid understanding and decision making.



**The use of modelling will help an organisation better understand where it is now and determine where it wants to be in the future.**

A key part of effective modelling is the identification, capture, qualification, cleansing, updating and managing of input and output data. Persides applies a structured configuration control process to data management.

There is a wide variety of topics our modelling can address. Examples include;

- Project scope and definition
- Availability versus lifecycle cost
- Fleet operations and optimisation of asset use
- Deployment planning
- Cost modelling (estimating, Whole Life Cost (WLC), Life Cycle Cost (LCC), Through-Life Cost)
- Resource use and utilisation i.e. personnel, facilities, test equipment, utilities, spare parts
- Supply Chain design and operation including spares throughput
- Maintenance and modification programmes
- Training design and throughput
- Engineering help desk & query service

### Our Experience

Persides has performed complex analysis and modelling for a range of different requirements. Examples include:

#### • Capability Life Extension

Developed and used a simulation model to examine the impact of extending the life of a fleet of complex equipment. The analysis addressed issues such as; obsolescence, supply chain throughput and cost.

The outcome enables our client to better understand options and select the optimum approach.



#### • Equipment Availability

Developed and used a simulation model to assess performance criteria within a cost envelope for a fleet of vehicles. The project required an understanding of confidence levels to achieve a variety of delivery performance requirements and associated costs. The model was used to analyse spares recommendations and demand satisfaction requirements.

#### • Leasing Analysis

Developed and delivered a leasing model to aid a market research study into potential opportunities within the Military, Blue Light and Commercial areas. The model provided a graphical illustration of the cumulative running costs, Net Present Value, financial status, monthly lease takings, and the return on sales over time.



### How Our Expertise Can Help You

If you have commercial and/or technical requirements to accurately scope and predict long term likely situations and outcomes we can help. We can advise on what modelling techniques are best suited to your specific situation. We can subsequently establish a model and perform the analysis on your behalf or we can develop a model for you to use to aid your own analysis and decision making. In the latter approach, we can provide model training and user documentation.

### Client Benefits

Persides has extensive experience in the performance of analysis and modelling. Previous clients have gained situation visibility and understanding as a result of our analysis and modelling work. Our effective and accurate modelling has significantly increased confidence and reduced their risk underpinning structured decision making.

### Why Persides?

Persides is an established force in the Defence, Security and Energy markets offering proven support solution design services. Persides is an independent and proactive company that is committed to understanding our customer needs and delivering customer satisfaction.

#### Persides

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