



A Quick Guide

Discover better decision-making with Operational Research Modelling

Operational Research Modelling is a proven method of using statistical and mathematical analysis to make better decisions.

Originally developed during World War II, it was employed in a variety of industries to help the military effort. Operational Research Modelling can be applied to any number of complex problems or situations to help businesses maximise profit, performance and yield or minimise loss, risk and cost.

In an economic climate where companies can't afford to get things wrong, making the right decision is paramount to any successful business, service or operation.

The Benefits

As well making better decisions, Operational Research Modelling also:

- Allows better forecasting
- Prevents costly mistakes
- Evaluates risks, opportunities and options
- Makes predictions on what will happen

Testing & Simulation	Trying out approaches and testing ideas for improvement
Optimisation	Narrowing down choices when there are numerous feasible options and comparing them is difficult
Statistics & Probability	Measuring risk, analysing data to find valuable connections and insights, test conclusions, and make reliable forecasts

Operational Research Modelling is seen as a key management tool across many industry sectors and is used to create competitive advantage by driving efficiencies, improving services, increasing customer satisfaction and managing change more effectively.

Operational Research Modelling provides the Management Team with more complete data on which to make effective decisions, it identifies available options as well as predicting outcomes and estimating risk Key Operational Research Modelling tools include:

- Facilitates gap and sensitivity analyses
- Identifies improvement opportunities
- Optimises processes & looks at the impact of process changes in the organisation
- Identifies existing and future process bottlenecks and problem areas and offers solutions.

At Altremis Ltd we use Operational Research Modelling to support our capabilities in Lean, Six-Sigma, business continuity and quality management, it enables us to make predictions and demonstrate to clients the results of changes and improvements.

Examples of Use

Travel	Optimally pricing tickets in order to sell seats is a challenge for both Air and Rail companies. Fares are varied in order to fill seats at different prices and to minimise the number left empty. Collating sales and price data and using Operational Research Modelling techniques allows companies to make a profit.
Retail	Supermarkets use Operational Research Modelling techniques to optimise store layouts and matching customer spending behaviours. It's also used to manage the logistics of operations from suppliers to warehouse to stores.
Leisure	Operational Research Modelling can be used analyse and reduce queuing and waiting times in fair grounds and holiday resorts.
Health	Within the healthcare sector, Operational Research Modelling is extensively used to improve patient care by reducing waiting times, using operating theatres more effectively and better utilisation of resources.
Financial Services	Banks and financial institutions use Operational Research Modelling for planning and analysis of high street services to business strategy and international financing.
Government	Operational Research Modelling is used throughout Government departments - improving the effectiveness of anti-smuggling operations, managing performance related pay for teachers, evaluating the effectiveness of the Inland Revenue's call centre, predicting the size of prison populations and studying illicit internet usage.
Marketing	Used to identify customer behaviours and analyse the types of products or service they buy. Operational Research Modelling can be used to analyse vast amounts of data collected from loyalty card schemes and target customer groups with special offers.
Manufacturing	Used extensively in manufacturing to improve efficiencies, improve reliability and utilisation of resources as well as improving logistics and product planning.



Altremis Ltd is a UK-based Lean & Six Sigma Consultancy. We integrate proven business improvement techniques into our clients' organisations; helping them to grow, create value, increase customer satisfaction and drive competitive advantage.

George Forrest - Managing Director of Altremis Ltd