

# Enterprise modelling

## Making better business decisions faster



### Managing business systems is difficult...

Organisations are complex. The multi-layered interactions of people, systems and processes in every enterprise mean that when a problem arises, or a new activity is planned, identifying the dynamic factors that can influence the outcome is difficult.

### Dealing with complexity and stakeholders

Businesses, markets, and indeed economies are far more complex than they were twenty, ten or even five years ago with far more dynamic interdependencies. Decision makers can no longer rely on intuition because critical connections will be missed. Knock-on effects often cause unexpected outcomes. Smart companies still exploit their internal intelligence and experience but also make effective use of data, modelling and analytics to gain insight and solve their business problems.

Coupled with this increased complexity, everyone involved in decision-making will have their own mental model of how the business operates, which action to take, and what the result may be – and each person's model will be different to their colleagues' – making it hard to form a strategy or get agreement on issues. What is needed is a means of aligning these mental models.

This is where enterprise modelling can help.

### Enterprise modelling helps you to craft successful strategies, through making better business decisions faster.

Enterprise modelling gives you:

- a better understanding of your organisation's complex business systems
- an enduring tool to help you develop a strategy that is robust to unanticipated outcomes
- A process that brings all stakeholders with you, ensuring you have buy-in for your chosen strategy and can successfully implement it.

### Our projects

#### Mergers and acquisitions

We showed that the merger between two biotechnology companies could work, through modelling the processes of their new multi-product, single site facility. *(Top left)*

#### Aerospace

Our models enabled a commercial airline to gain strategic advantage, achieving industry cost leadership through optimising the purchase of jet fuel for its aircraft. *(Middle)*

#### Oil and gas

We helped a major upstream oil and gas firm to model the optimal sequence for its well-drilling, and enabled re-generation of this sequence as field conditions changed. *(Top right)*

## What is enterprise modelling?

Enterprise modelling is a process that delivers a 'picture' of the issue – literally. It provides you with a graphical representation that draws together a robust, shared understanding of the business system. We then apply proven mathematical modelling techniques to assess the many 'what-ifs' and their future impact on your business. The graphical representation and modelling are combined, to dynamically show the outcomes that would result from each alternative strategy that you apply, in a way that ensures that all stakeholders share the same vision of how the system operates and the impacts of alternative strategies on it.

These graphics are your tools: they help you reach a shared agreement on your optimum strategy, founded upon the knowledge within your organisation.

“ Because enterprise models are based on your hypothesis, your key values and your data, the robust, real-world options they provide enable you to select a method, system, or course of action that best fits your business needs. ”

## What do enterprise models look like?

### The problem:

A pharmaceutical company was considering a merger with another firm. This is a very expensive process with a large number of factors that can influence the decision.

### The process:

Analysis of the merger indicated that the linchpin was the consolidation of two production lines within one manufacturing site. The key question was: could the lines operate together in a way that would yield greater benefit to the new business?

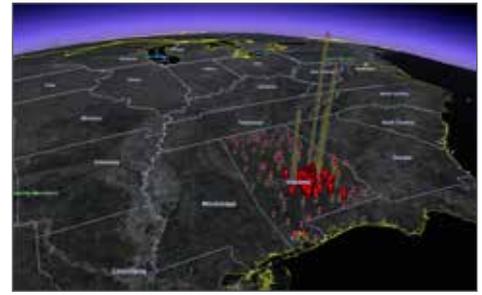
The stakeholders were interviewed to understand manufacturing layout constraints, staffing and scheduling. A simulation was created, as a shared collaboration between the two organisations and the shareholders, which showed a range of layout, staffing and scheduling options.

From this model, alternative scenarios were generated to identify a set of successful configurations; these were animated so all stakeholders could see the new operation, provide comment and ultimately gain confidence in the recommendation.

### The solution:

The enterprise modelling approach identified the most critical component of the merger and used a scientific approach to support the high-level decision taken. Modelling delivered a number of viable potential configurations for the merged business, providing confidence to the organisation and its shareholders that a robust and resilient solution could be achieved. The shared ownership of the model between both organisations meant that the resulting merger was more likely to succeed.

## Our projects



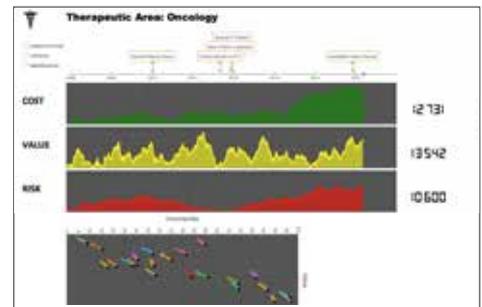
### Health

We worked with state public health officials to assess the impact of both man-made and naturally occurring pandemics on local health facilities.



### Training

By creating a training simulator built by experienced engineers, we shortened training time for a company's new engineers – from up to five years, to around six months.



### Research and development

Our models provided a visualisation of the cost, value, and risk dimensions of clinical trials, enabling robust decisions to be taken on which trials should be progressed.

To discuss enterprise modelling with us or to arrange a meeting please contact:

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