# Dependency Modelling

## Two success stories

By Chris Baker

## Introduction

Any business, anywhere in the world, depends upon a great many resources, both external and internal in order to achieve its objectives. The difficulty is that different departments make the demands for these resources, and each is expressed the "language" of that department, with cost justifications made using their particular "currency". The accounts department might refer to "return on investment" or reduction of "shrinkage" in cash terms, to justify their case.  However the marketing department might use more emotive language such as Brand and Image, or improved "Customer Experience" to justify theirs.

Making comparisons between these demands for resources becomes almost impossible and often a high level decision is made to simply "give them 5% more than last year" or in leaner times perhaps 10% less.

In addition, these resources are never perfect, whether they be people, projects, processes, plant & equipment, the utilities or third party service providers. Recent history has shown us that the failure of any one of them can bring a company to its knees.

It is only by modelling and understanding our dependency upon these resources, using a common language and "currency", that we can create robust strategies to meet the challenges of the future.

## Case Study: Insurance Underwriter eCommerce Security

Although security had been addressed during the product development cycle, concerns had been expressed regarding certain security issues and we were asked to conduct a risk-based security review to assist in prioritising the issues.  Competing demands for resources were being expressed in different ways by different business functions.

### Client

Part of a large London Insurance Underwriting Syndicate, the client had recently launched a web-based business-to-business application that allowed brokers to write business and manage the process online.

### Problem

Although security had been addressed during the product development cycle, concerns had been expressed regarding certain security issues and we were asked to conduct a risk-based security review to assist in prioritising the issues. Competing demands for resources were being expressed in different ways by different functions.

### Solution

Using our Dependency Modelling approach, a consistent method of expressing the business requirements for the Key Performance Indicators, Availability, Confidentiality, Data Integrity and Reputation, was required. These issues were the initial focus of the workshops and these issues were weighted for probability and impact. Appropriate countermeasures and controls were considered and added to the Dependency Model.

As a result of the initial risk workshops, other Key Performance Indicators, Marketing, Product Development, Management Information, Regulatory Requirements and Roles & Responsibilities were added to the model.

### Results

Through the use of our facilitated risk workshops, a consensus view of the Key Performance Indicators (KPI's) was quickly agreed. The impacts of the various risks were assigned to each KPI and this produced a prioritised list of controls and countermeasures along with a measure of the residual risk.

In addition, the client was able to revisit and review the dependency model over time to update the probabilities and costs of security-related risks, thereby delivering a transparent risk management process that satisfied the requirements of internal and external auditors.

## Case Study: Setting Investment Priorities and meeting your KPIs

The end client is the Investment Appraisal Manager and required a risk-based process to enable the organisation to justify and prioritise their infrastructure capital investment programmes. The investment drivers were based on a thorough risk assessment and the benefits to their Key Performance Indicators.

### Client

The client, Yorkshire Electricity is now part of Northern Electric, which is the parent of the distribution companies of NEDL serving the North East of England and YEDL, serving Yorkshire and Humberside.

Their role is to ensure a reliable, consistent and safe supply of electricity to the 3.6 million customers who are directly connected to their distribution system. The area of operation covers 25,000 square kilometres, running from Berwick in the north, west to the Pennines and in the east to the estuary of the Humber.

### Business Objective

The end client is the Investment Appraisal Manager and required a risk-based process to enable the organisation to justify and prioritise their infrastructure capital investment programmes. The investment drivers were based on a thorough risk assessment and the benefits to their Key Performance Indicators.

An integrated programme of three parallel projects was designed to include:

- Consistent definitions of existing Key Performance Indicators
- Development and implementation of risk based investment appraisal
- Dependency modelling based risk analysis of capital expenditure plans

### Solution

Using our powerful dependency modelling methods, an intensive series of risk workshops were undertaken involving between three and eight of the client's senior technical & project staff.

Applying the existing Key Performance Indicators, a dependency model was built to capture the contribution of each proposed scheme to the Key Performance Indicators. The position of the client, in relation to the regulator's expectations for all Key Performance Indicators, was ranked numerically. The effectiveness of each scheme in achieving the regulator's expectations was similarly evaluated.

The entire portfolio of investment schemes were ranked in terms of their effectiveness across all the client's Key Performance Indicators and filtered by effectiveness per pound spent.

### Results

The client was able to exceed the regulator's expectations and delivered the following benefits:

- Risk based investment decisions
- Simple, repeatable, visible process for future investment decision making
- Clarity of organisational purpose across stakeholders
- Increased efficiency in decision making
- Clarity of roles and responsibilities

## Contacting the author

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