

When to Quantify

Thursday 5 July 2007, Mechanics Institute, Manchester.

This meeting was held by the North West group of the IRM, Networking North West, in association with the APM Specific Interest Group on Risk Management at the historic Mechanics Institute in Manchester. Around 60 people came to network and learn from the experience reflected in the presentations.

The overall objective of the meeting was to understand the circumstances in which characterising risk quantitatively has benefits, and, in contrast, when it is more trouble than it is worth. The talks were given by practitioners dealing with different aspects of this question.

First off, Peter Campbell of HVR Consulting discussed the role of quantification within an overall risk management system and noted some shortcomings of a purely qualitative approach. He argued that these could be addressed with more quantification. He described a £200m project where proper analysis showed there was actually £180m risk exposure. The first of two further case studies related to an understated risk which might have been more effectively flagged up under a quantified system. The other showed how quantitative analysis was able to demonstrate that a project was doomed to failure without substantial restructuring.

Next Robin Phillips of Sellafield Ltd described how the company faces a broad spectrum of risks in their business of managing a nuclear waste disposal liability of £40bn with a £1.1bn annual budget. These risks relate to strategy, financial, commercial, safety and environmental, operations, technical, asset management, reputational and programme/project issues. Robin described the approach used in each case, sometimes quantitative and sometimes not, and why it is appropriate. He then showed how they are all brought together in the business risk database.

After tea, Helen Wilkinson describe the work of Risk Solutions for DEFRA, helping to support risk based policy making following the foot and mouth disease outbreak in 2002. The issue was the duration of the permitted minimum interval between animal movements on and off farms. This is known as the standstill period. After very careful modelling and analysis Risk Solutions were able to show that a 6 day standstill provided valuable 'insurance' in terms of cost-effectively limiting the spread of the virus, but that the previously recommended 22 day period provided a relatively small additional benefit. Helen emphasised that the way the analysis is explained and used with stakeholder groups is key to using it to contribute to policy decisions.

Finally Martyn Cubitt of CORDA talked about the risk of choosing the wrong strategy. This usually dominates the risks of successfully implementing the chosen strategy, but it is more difficult to grasp during the early development stages of a project. He provided several illustrations of this drawn from large-scale procurement exercises. For example an initially chosen 'build quick / early revenue' strategy for providing army barracks was shown to be

perhaps £100m more expensive than a more considered approach. Martyn then went on to talk about integrating a top down strategic approach with a bottom up, tactical, one. His example here showed the importance of very specific and detailed human factors risks in maintaining fighter aircraft availability.

A short panel discussion underlined some of the main lessons learnt during the afternoon which, in my opinion were:

- There are substantial pitfalls in simplistic approaches, often semi-qualitative, often unthinkingly mandated by management, often incorporating illogical features. This conclusion is not of itself a reason to look at more quantitative approaches, but it does mean there is a need to review common practices and see if they can be improved, not least so as to gain buy in from managers who seem increasingly sceptical of risk management. One suggestion is that a new language is needed. This could perhaps form the topic of a future meeting.
- Secondly, quantitative analysis covers a broad spectrum of techniques, ranging from three point estimates on a risk register to the sophisticated analyses described by Helen and Martyn. The 'business case' for quantitative depends on the decision to be taken and what is at stake. This underlines the importance of problem framing, identification of critical issues and working with stakeholders, rather than tool selection and standard approaches.

In summary, think about issues, don't just follow procedures!

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