

# Risk Management in Defence Procurement

by *Chris Maughan*

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The origins of formalised project risk management within the UK Ministry of Defence (MoD) can be traced back to the mid-1980s. By this time the discipline had been well established within the oil and gas industry and was supporting companies in their efforts to exploit offshore hydrocarbon deposits in the North Sea. An individual company saw the opportunity and commercial benefits that could be realised by applying the same approach to the major equipment projects undertaken by the MoD, and introduced formalised risk management to the MoD. This was successful to the extent that the approach was championed by the then Deputy Under Secretary of State for Defence Procurement.

Since those early days, the application of risk management within the MoD, and the defence community at large, has steadily grown. In 1988, the House of Commons Defence Committee<sup>1</sup> concluded that “*the application of a more disciplined approach by MoD to risk assessment is clearly required*”, and then the Jordan Lee Cawsey Report, *Learning From Experience*,<sup>2</sup> emphasised the need for risk management within the MoD in particular, and the defence industry in general.<sup>3</sup> Furthermore, the Smart Procurement initiative, launched as part of the 1998 Strategic Defence Review,<sup>4</sup> had risk reduction and more effective risk management as one of its central pillars.

There is now a joint risk management policy between Chief of Defence Materiel (CDM) and Chief Scientific Advisor (CSA).<sup>5</sup> The policy, and approach outlined, has the aim of ensuring that managers apply explicit risk management techniques to *all aspects of all projects*, and thereby expose the risks to scrutiny during the Approvals Process and enable their management in a logical and systematic way.

By 2009, it appeared reasonable to assume that the MoD were now expert practitioners in the field of risk management and that the benefits of the approach were being experienced through the routine delivery of major capital acquisition projects on time and to budget. However,

even a cursory glance towards the latest National Audit Office (NAO) report on the performance of MoD Major Projects<sup>6</sup> indicates that this is far from the case, with many projects significantly late and over budget. It is too simplistic to say that poor application of risk management to these projects is the primary cause of such failures, but it is the contention of the author that it is a significant contributory factor.

If defence procurement risk management is not working or delivering the benefits experienced in other industries, what can or should be done to rectify the situation?

## What is Risk Management?

There are many definitions and standards for risk management, but in its simplest form it is just applied common sense! A project ‘risk’ can be described as an *uncertain event*, or set of circumstances, that should it occur will have an *effect* on the achievement of the project *objectives* (the effect can either be positive or negative); whereas a widely applied standard for risk management<sup>7</sup> reduces it even further to: *the chance of something happening that will have an impact on objectives*.

Risk management is a process that involves logical and systematic methods of identifying, analysing, mitigating, monitoring and communicating risks in a way that will allow the project to minimise the potential for losses (through delays to the programme or increases in costs) and to maximise opportunities for improving performance. Risk is inherent in everything that we do and risk management is simply helping the project team to make better decisions. Put simply, risk management is helping to run projects in the ‘real’ world. Too often project plans and budgets are formulated on the basis of an ideal situation where everything goes according to plan. This may be a result of naivety, optimism or just plain wishful thinking, without taking adequate account of the risks involved.

## MoD Guidance for Risk Management

The MoD’s Acquisition Operating Framework (AOF)<sup>8</sup> provides detailed guidance on risk management policy and its practical application. The AOF is stated as being the authoritative source of policy and good practice for all members of the MoD and their industry partners concerned with acquisition. The AOF is intended to improve consistency in the application of policy and good practice. The adoption of risk management is a mandatory process for the MoD and one that must be followed. For example, the AOF states that:

- An Integrated Project Team (IPT) leader should adopt a

formal and open Risk Management approach appropriate to the stage and nature of the project.

- Risk Management should be an integral part of the project management process and should inform project decisions and forecasts.
- Acceptable levels of risk should be agreed at all major decision points.
- Risk information, in conjunction with project data, should be used to generate the 10%, 50% and 90% confidence figures for time and cost. These are required for Project Approvals.
- IPTs and their contractors should, when appropriate, operate a common risk management process that utilises common risk information.
- Risk ownership should be assigned to the party best able to manage the risk.

MoD staff have available to them a number of proprietary software tools that support, facilitate and enhance the overall risk management process. They also have ready access to training in the principles, tools and techniques applicable to the delivery of effective project risk management.

To ensure that projects were implementing the risk management guidance in an effective manner, and that the identified risks were being managed to best effect, the MoD introduced (in the early 2000s) a risk maturity approach whereby assessments of individual projects' risk capability were conducted, using a common framework, and a benchmark set against which future capability improvements could be measured. The need for such reviews was partly driven by the realisation that many projects were being approved on which risk was subsequently proven to have been too high and that the actual implementation of risk management was inconsistent across the MoD.

However, many of the MoD's 30-odd Category A projects<sup>9</sup> are being reported by the NAO as being significantly late, over budget or not delivering the required capability (or any combination of the three), so therefore it can be concluded that MoD project risk management is still not working and that it is failing to deliver the benefits anticipated through visibly improved performance.

#### Actual Risk Management Implementation

The National Audit Office and the Office of Government Commerce compiled a list of common causes of project failure.<sup>10</sup> Included in that list is a *lack of skills and proven approach to project management and risk management*. So, if the MoD has the right process, guidance documentation and totols, why is risk management not delivering the benefits anticipated, or realising those benefits that are being experienced by other industries? The answer can only lie in its actual implementation.

At the outset, risk management was seen as a niche skill that was 'bought in' from outside experts to support individual projects. The focus was on detailed quantitative risk analysis

of project schedule and budgets to develop a greater understanding of the potential impact of risk and to assess the programme benefits that could be realised by applying alternative mitigation measures.

Such outside experts (the Risk Consultant) brought their own special risk analysis tools and project management experiences, and were accordingly relatively expensive (but not in the eyes of the oil industry where on-time delivery equals millions of dollars in revenue). The Risk Consultant sat at the right hand of the Project Manager, reported directly to him (or her) and delivered a direct and dynamic near-real-time level of support. In addition, the seniority and experience of the Risk Consultant ensured a level of credibility within the project team and the organisation's senior management. This experience also ensured they were able to critically question all project data that was being examined and used as inputs to the risk analysis, providing independent and objective assurance as to the quality of risk management information and the outputs thus produced.

The continual drive within the MoD to reduce internal costs has ensured that such an approach is no longer the norm. The first casualty was the customary use of external experts, with their replacement by in-house staff, such that there is now only a limited role for the independent Risk Consultant in supporting MoD Project Managers. The second casualty was a gradual move away from quantitative risk analysis (and its need for technical expertise and specialist analysis tools) to a focus on qualitative risk assessment, with the risks and the proposed mitigation actions recorded in risk registers and subject to periodic review. The third casualty has been the reduction in the level of credibility afforded to the risk management function within the project team, now no longer working as an advisor to the project manager but concentrating on the delivery of process rather than value-added functions. The final casualty, and probably the most significant, has been the gradual reduction in the level of seniority of staff directed to perform risk management. Risk Managers are no longer very experienced project management professionals, rather the role is seen as suitable for junior engineers or recent graduates.

The allocation of relatively junior staff to the role of Risk Manager ensures that the individual is neither experienced nor senior enough to question the validity of the information that is being provided by the project team. This leads to the Risk Manager just turning the handles on the process and the outputs being GIGO (garbage in, gospel out). Poor-quality risk management outputs reduce the credibility of the process and ensure that the output information is neither appreciated nor acted upon by the project manager.

The result of this gradual 'dumbing down' and dilution of the experience and skills applied to the delivery of project risk management within the MoD has been a move towards focusing on process rather than quality of output. A 'tick in the box' type approach is being followed, the logic of which

is that because a project has a risk management plan and a risk register then the risks are being managed. The author would contend that the opposite is, in fact, the truth and that now only 'lip service' is being paid to one of the most valuable tools in the project manager's toolbox.

**So what can be done?**

It can be seen that the MoD understanding and guidance for how project risk management should be applied is more than adequate. However, it is the actual practical implementation that is weak and ineffective.

For improvements to be experienced there needs to be a major shift, by the MoD, away from process and towards a concentration on comprehensive quantitative schedule and cost risk analysis. There needs to be an appreciation, within both MoD and the wider defence industry, of the root causes of the failure of risk management and a willingness to take the necessary actions to resolve them. Such actions need to include recognition that:

- Each major project requires a single professional project manager who has effective control of all relevant resources, including specialist technical support.<sup>11</sup>
- Risk management must be embedded in all the project activities, not seen as an adjunct or simply blind adherence to a defined process (not a tick-in-the-box!). It is an integral part of successful project management.
- Risks must be assessed and their cumulative impact on the project schedule and budget analysed using models of the total programme.
- A robust and consistent approach is required for the assessment and treatment of high-impact, low-probability risks, together with analysing their overall contribution to the establishment of schedule and budget targets.
- Risks across major programmes should be shared to ensure that common causes are identified and mitigated once, to the benefit of the many.
- The outputs of the risk analysis should be subject to regular critical review to ensure their currency.
- The application of effective risk management is a skill and there is no cheap replacement for experience, technical knowledge, or the ability to apply specialist analysis tools and to understand, interpret and present the results to the project manager.

**Conclusions**

A paper such as this is far too brief to go into the full details of exactly why risk management is failing and how the appropriate techniques should be reapplied, but it is sufficient to give the overall tenor of the current approach to risk management within the MoD. Undoubtedly there are exceptions, with individual projects applying the appropriate risk analysis and management techniques to best effect, but experience shows that this is rare.

The failings are gradually being recognised within the MoD, with senior managers now expressing concern about

the manner in which the MoD undertakes project risk management. They understand that too many programmes have failed to make use of the most appropriate schedule and cost risk analysis techniques, with the result that programmes have gone forward that are too technologically immature and with plans and budgets that fail to take account of the level of risk involved. It is also now recognised that the MoD has failed to spot where industry has understated its own risks in their eagerness to win lucrative defence contracts.

Finally, previous reviews of defence equipment procurement processes, undertaken both in the UK and overseas, have identified a failure to implement effective risk management as a key cause of project cost and schedule overruns. There is today an opportunity for the MoD to adopt best practice from across industry and build upon its existing risk management framework to deliver better project management capability across MoD. The implementation of effective and practical risk management will do much to avoid previous failures to deliver major defence programmes to their schedule and cost targets. ■

**NOTES**

- 1 Minutes of House of Commons Defence Committee, Session 1987/88
- 2 Jordan Lee Cawsey, *Learning from Experience*, Report to the Minister of State for Defence Procurement, HMSO, London, 1988
- 3 Interestingly, one of the major conclusions of the authors is that their findings only echo those of the Downey Report of 1966 and the Rayner report of 1971. All these reports identified much the same issues and reached similar conclusions. Clearly the effective implementation of review reports is not done particularly well within the MoD
- 4 [http://www.mod.uk/NR/rdonlyres/65F3D7AC-4340-4119-93A2-20825848E50E/0/sdr1998\\_complete.pdf](http://www.mod.uk/NR/rdonlyres/65F3D7AC-4340-4119-93A2-20825848E50E/0/sdr1998_complete.pdf)
- 5 <http://www.aof.mod.uk/aofcontent/tactical/risk/index.htm>
- 6 National Audit Office, *Ministry of Defence Major Projects Report 2008*, The Stationery Office, London
- 7 AS/NZS 4360:2004, Risk Management
- 8 <http://www.aof.mod.uk/index.htm>
- 9 'Category A' projects have a procurement value in excess of £400 million
- 10 Published by the OGC as CP0015/01/05, Common Causes of Project Failure, OGC Best Practice
- 11 Not a new conclusion, the same comment having been made in 1988 by Jordan Lee and Cawsey