Making project management work

Report of 24th Annual Conference held on 19th-20th September 2006
at the Latimer Conference Centre, Chesham, Buckinghamshire

Summary

Introduction

This year's Annual Conference considered how risk management is applied in practice on major projects. Presentations included the results of a survey entitled 'Project Risk Management Practice in MPA member organisations' and case studies of lessons learned in major civil engineering and information technology projects in both the public and private sectors. The presentations were followed by group discussions on ways of building risk considerations into project decision making.

The keynote speech was delivered by Dr Martin Barnes, immediate past Executive Director of MPA, who referred to some of the conclusions he had reached during his career about the value and importance of risk management as an integral part of project management.

The importance of risk management

Dr Barnes suggested that risk management is not just a part of project management, but is all of it. Risk management now spreads beyond specific project programme implementation to the operational, regulatory, financial and strategic areas of business enterprise: a 'risk universe'. It is now high on the agenda for senior management in both the public and private sectors.

In the past, risk was something that clients, as sponsors of projects, owned but traditionally tried to parcel out to other people. The impossibility of passing all the risk on to other contributors in a project and the fact that it often resulted in cost, time and quality failings led to the idea that each risk should be allocated to the party best able to assess and control it.

This approach has also led to a change in the way targets are set. In the past there were often single figure targets in terms of time and cost, and if the project fell behind, project managers were expected to make up the deficiency in the remaining project lifetime. Few managed to do this, and there has been a shift to more realistic programme control based on better recogniton and understanding of the uncertainties which might impact on the remaining work.

The principal options for effective control of risk are to:

- Reduce the probability of the adverse event happening
- Reduce the impact if it does happen
- Pay someone else to take the risk either by including it in the supplier/contractor contract or insuring against it
- Decide to live with the estimated risk.

It is good practice to prioritise project risks in a risk register, putting the most probable and those which would have the most adverse impact at the top.

The register should be constantly reviewed and sufficient resources should be allocated to dealing with possible risks. Under the latest version of the New Engineering Contract (NEC), contractors and suppliers are encouraged to collaborate with the client in identifying risks. This allows collective decisions to be made and safeguards the client's interests.

Project risk management practice in MPA: survey and results

The survey of MPA member organisations, carried out by Risk Solutions, explored:

- How risk management is applied in practice on major projects
- Whether there are ways in which project decision making can be improved by embedding risk management in the decision making processes

The questions aimed to identify the essential characteristics of the organisation, their risk management policy, how the risk management programme was implemented and what improvements people thought could be made to the system.

In brief, the findings showed that:

- Most companies surveyed had maintained a project risk management policy for more than five years
- Top drivers of these policies were: cost management, timely delivery, health and safety and quality assurance
- The majority of companies use a standard published guide to risk management and most have some sort of bespoke approach
- A corporate culture which maintains a link between senior project management and the board was seen as essential for the effective governance of risk
- Respondents considered that approaches to project risk management should be standardised and procedures aligned to business objectives
- There should be early identification of risk at the project design stage and ready access to experienced personnel as an invaluable source of 'lessons learned'
- Respondents wanted to see:
  i) the maintenance of competency amongst project managers through access to training
  ii) more use of objective project performance tools such as Earned Value Management (EVM)

Case study projects

1. A large infrastructure and change project

A South African organisation, responsible for the country's air and sea ports, was implementing an internal business change programme and an external capital investment scheme at the same time.

They were fully aware of its 'risk universe' and wanted assurance in a wide range of risk areas including investment decisions, stakeholder management, fraud and corporate responsibility. A significant communication gap was found between its senior management and those people managing the projects, and its internal auditing processes were subsequently put out to external consultants.

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In order to manage the risk inherent in both enterprises a model was produced which encompassed all project cycles within the whole 'business as usual' envelope. It meant each project, from its vision, planning and execution, together with measurement and monitoring through to acceptance, was integrated with day-to-day business.

2. Nanotechnology

The need to develop the UK's science base in nanotechnology has given rise to 100 different collaborative projects under the auspices of the Department of Trade and Industry Micro and Nano Technology portfolio (DTI MNT).These have a high risk profile both at the beginning and the end of the life cycle of the project depending on the product's acceptability within the private sector as a viable business proposition.

Assessing the key risks inherent in each project involved ongoing measurement of performance against the normal criteria of cost, time and quality, linked with measurement of the effectiveness of the risk control management via specific risk profiles. Risk management is now becoming an embedded feature in government culture.

3. Tube Lines

Tube Lines is a 30-year public private partnership (PPP) contract to provide rail for the Jubilee, Northern and Piccadilly lines in London.

Inherent risk areas in the project include:

- Satisfying London Underground's vision, English Heritage's needs on listed structures and the public as stakeholders over noise pollution in local neighbourhoods
- New communications and control systems
- Complicated logistics
- Railway tunnel work and a new signalling system
- Supply chain assurances on equipment
- Scheduling for project work on an operating rail system
- Changing the culture of the workforce
- Terrorism

There is a risk management policy which aims to:

- Not take on contracts where the risks are poorly understood
- Preserve the independence of people in the organisation who assess the risk inherent in contracts
- Ensure project managers maintain ready access to people with past relevant experience
- Rigorously monitor projects at the planning and design stage
- Constantly review the relevance of processes and procedures
- Recognise the complexity of an enterprise
- Be ready to adapt to changing circumstances
- Be able to hear the truth about a situation and act upon it without prejudice

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4. Heathrow Terminal 5

Terminal 5 (T5) is a five and a half year construction project costing £4.3 billion and creating a facility with the capacity equal to Gatwick at the western end of Heathrow between the two existing runways.

The contract strategy for procurement and delivery of the T5 programme is encompassed in the T5 Agreement, a legally binding contract existing between BAA and each of its 50 first tier suppliers engaged on the project.

In a project of this size there is a significant possibility of an event occurring which could severely affect both BAA and its suppliers. The T5 Agreement separates risk from financial consequence; all financial risk remains with BAA as the client, in an environment in which risk probabilities are actively managed.

Crucial to the effective implementation of the agreement was the creation of integrated teams, comprising people from different suppliers. Creating the right environment to support team ethos was essential, and poster campaigns were initiated which stressed the importance of the individual and the team, with successes celebrated against the standard measures of time, cost, quality and safety.

In the area of health and safety there is no acceptable level of accident and the aim was to inculcate the belief in the possibility of an accident and injury free programme and for people to recognise that they must take personal responsibility for their actions.

In making risk management work on the T5 project the root cause of certain hazards was addressed and attempts made to avoid or mitigate the circumstances.

5. Risk in IT projects

IT projects often fail because of:

- Changing conditions: assumption management is a key part of risk management. People may start a project with an excellent set of assumptions but fail to review them as the project proceeds.
- Poor scheduling: insufficient attention is paid to schedule sensitivity and critical path determination.
- Premature curtailment of IT functionality: reducing costs by cutting back on information technology requirements can seriously inhibit business development.
- High-jacking the data: IT facilities often fail to enhance the business performance because people either withhold vital information or use data out of context.
- Senior management: governance plays a large part in IT success, but also accounts for much of its failure. Often senior managers do not understand normal life cycles or strategies for reducing risk and get distracted by the demands of day-to-day business.
- Poor staff retention: companies often have a short sighted policy in the training and development of IT project managers, with the result that many fail to retain their best staff throughout the duration of a project.
- Disaster recovery: companies need to ask whether they have an efficient system of disaster recovery. Small changes in backup equipment or insufficient attention to how long mitigation procedures take can seriously impact on continuing business.
- Upgrades: risk management is often across multiple business areas. A company needs to understand what they can change and how change periods will affect other programmes.

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Case study continued

Risk management and confidence management need to be carried out together. Focusing on what has to happen or what needs to be known to increase people's confidence cultivates a more positive attitude to uncertainty and managing risk.

Conclusions from group discussions

Each group discussed a question on the theme of 'Proposals for building risk considerations into decision making', and reported key points back to the conference.

- IT projects differ from construction projects because the design is often not fixed at the start. This can give rise to very different risk profiles. It is more difficult to see how a project is progressing and failure can have catastrophic effects on the business enterprise. There may be fewer health and safety considerations in IT projects, but they probably require more stakeholder management.

- Leadership needs to give the same priority to risk management and programme management, have clear responsibility and accountability for the former and a passion to drive it down through the organisation. The risk register and risk management processes need to be transparent and their implications linked to the business enterprise. There should be clear reviews of risk management and ongoing training for project managers.

- The MPA survey indicated the need for an open exchange of views on risk perception throughout the organisation, with feedback from senior management. Contingencies held against remaining risk should be continually renewed and risk should not be hidden in cost evaluations by the project manager.

- It is not always necessary to instigate new procedures following 'lessons learned' reviews: too many processes may inhibit efficient delivery of the project. Project managers should be encouraged to become more proactive in managing risk and should have access to risk-experienced employees. The project manager should report successful risk management to the project director who can spot trends and recommend process change. 'Lessons learned' reviews should not lead to a blame culture.

- Each major project has unique characteristics in terms of its scope and complexity and different stakeholders give rise to varied external and internal risks. Key stakeholders should be appraised of risks and participate in their mitigation or acceptance, rather than being surprised by them.

- Strategic risk, which tends to be long term, should be dealt with at senior management level; project and operational risks, which affect the project objectives, should be handled by the client and contractor through the project manager.

Analysis

- Theory and practice: there is a need for a two-way learning process; thinking that can be carried over into practice, and the practice or challenges that give rise to new approaches
- Owning the project: taking responsibility for delivery is central to good project management and taking responsibility for good risk management is equally important
- The interdisciplinary approach: without a variety of skills one cannot take care of all the risks and challenges that arise
- Collaboration: the learning process is much enhanced by collaboration between different, non-competitive undertakings
- Five headlines: ‘leadership’, ‘the customer’, ‘integrated teams’, ‘quality’ and ‘people’; these are terms on which to hang an approach to effective project and risk management

Participating organisations

Advance Consultancy Ltd
Atkins plc
Association for Project Management
BAA plc
BAE SYSTEMS
BAE SYSTEMS, Air
BAE SYSTEMS, Submarines
Balfour Beatty plc
Bechtel Ltd
Bovis Lend Lease
British Energy
Costain Ltd
Department for Transport
EC Harris LLP
Electronic Data Systems Ltd
Ernst & Young LLP
Freshfields Bruckhaus Deringer
Halcrow
Henley Management College
Herbert Smith
HPR Holdings Ltd
Imperial College
Jacobs Babtie Group
John Laing Plc
KBR
KPMG LLP
Lockheed Martin
Major Projects Association
Manchester Business School
May Gurney Integrated Services
Metronet Rail
Ministry of Defence (DPA)
Mott MacDonald Group Ltd
MTR Corporation
National Air Traffic Services Ltd
National Grid plc
Network Rail Infrastructure Ltd
Nuclear Decommissioning Authority
Pell Frischmann
PricewaterhouseCoopers
Risk Solutions
Rolls-Royce plc
Scott Wilson Kirkpatrick & Co, Ltd
Siemens Business Services
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The Nichols Group
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