

RISK MANAGEMENT FOR THE NEW MILLENNIUM

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Abstract

Project risk management has been recognised for some time as a formal discipline in its own right, and there is growing consensus on the elements which comprise best practice. However the project risk management field has not fully matured and there are a number of areas requiring further development. This paper presents the author's perceptions on the directions in which project risk management might develop in the short to medium term, comprising five key areas. These are : organisational bench-marking using maturity model concepts; integration of risk management with overall project management and corporate culture; increased depth of analysis and breadth of application; inclusion of behavioural aspects in the risk process; and development of a body of evidence to justify and support use of risk management.

Introduction

Risk management has developed in recent years into an accepted discipline, with its own language, techniques and tools. Many management textbooks include sections on risk management, and there is a growing library of reference texts specifically devoted to the subject in its own right. The value of a proactive formal structured approach to managing uncertainty has been widely recognised, and many organisations are seeking to introduce risk processes in order to gain the promised benefits (see Newland 1997 for a description of expected benefits).

But although it appears that risk management is a mature discipline, it is still developing, and there is some way to go before its full potential is realised. A number of initiatives

are under way to extend the boundaries of the subject, and there is a danger that risk management could dissipate and lose coherence if some sense of overall direction is not maintained. There is an accepted core understanding of risk management, but new directions are constantly being explored, as seen for example by the breadth of topics covered in the literature.

There are at least five areas where active development is needed in the short to medium term if risk management is to fulfil its promise as a management discipline for the new millennium. These include :

- organisational bench-marking using maturity model concepts
- integration of risk management with overall management and corporate culture
- increased depth of analysis and breadth of application
- inclusion of behavioural aspects in the risk process
- development of a body of evidence to justify and support use of risk management

These areas have been addressed in more detail elsewhere (Hillson 1998), and are considered in turn below.

Organisational Benchmarking

A number of current initiatives are investigating the development and application of maturity model concepts to the field of risk management (see for example Hillson 1997, PMI 1998). Organisations wishing to reap the benefits of proactive management of uncertainty need to be able to determine whether their risk processes are adequate, using agreed measures to compare with best practice or against competitors, and the maturity model approach offers a structured route to developing excellence in risk management.

The use of maturity models provides an accepted framework defining increasing levels of capability in managing risk, allowing an organisation to assess itself against the chosen model. Once the current level is known, improvement targets can be set, with a structured action plan aimed at the next maturity level. The model can then allow progress to be monitored, providing assurance that the required increases in risk capability are being achieved.

Integration of Risk Management

Risk management is often perceived as a specialist activity undertaken by experts using dedicated tools and techniques. In order to the overall organisation to gain the full benefits from implementing the risk process, it is important that risk management should become fully integrated at both operational and strategic levels. Without such integration, there is a danger that the results of risk management may not be used appropriately (or at all), and that project and business strategy may not take proper account of any risk assessment.

True integration requires a number of changes, including recognition of the existence of uncertainty as an inherent part of being in business, together with proper interfaces to business processes and tools. In addition, there is a need to develop strategic risk-based thinking within organisational culture. The denial of risk is common at senior management levels, and much of the value of implementing risk management can be diluted or lost if decision-makers do not properly take account of risk. Risk management must be seen as an integral part of doing business, and must become “built-in not bolt-on”, a natural feature of all project and business processes, rather than being conducted as an optional additional activity.

Increased Depth And Breadth

There is general consensus about the current risk management process. Further development is however required to improve its effectiveness, both in functionality and scope. These two dimensions of

improvement are termed depth of analysis and breadth of application.

The current level of risk analysis is often driven by the capabilities of the available tools and techniques. The depth of analysis could be improved by :

- Development of better tools and techniques, with improved functionality, better attention to the user interface, and improved integration with other parts of the toolset.
- Use of advanced information technology capabilities to enable effective knowledge management and learning from experience, for example using artificial intelligence, expert systems or knowledge-based systems to permit new types of analysis (see for example Stader 1997, Brander & Dawe 1997).
- Development of existing techniques from other disciplines for application within the risk arena, for example from system dynamics, safety and hazard analysis, integrated logistic support (ILS), financial trading etc.

The current scope of risk management is fairly limited, tending to concentrate on timescales and cost targets. While these are undeniably important, there are a number of other areas which should be covered by the risk process. The breadth of application could be enhanced by :

- Measurement of impact against all types of objectives, including performance, quality, compliance, environmental or regulatory, “soft” objectives such as human factors issues, and the business benefits.
- Expansion of the scope of risk processes to include programme risk management (addressing threats to portfolios of projects, considering inter-project issues) and business risk assessment (taking account of business drivers). This is already being addressed by some (CCTA 1995, ICAEW 1998).

Behavioural Aspects

There is general agreement on the importance of human behaviour in determining performance (Oldfield & Ocock 1997). Future developments in risk management must take more account of these issues, both in generating input data for

the risk process, and in interpreting outputs. This should include the area of heuristics, to identify the unconscious rules used when making judgements under conditions of uncertainty. It should also consider risk attitudes and their effect on the validity of the risk process. A reliable means of measuring risk attitudes needs to be developed, to identify and counter potential bias among participants (for example Greenwood 1997). The impact of risk attitude on perception of uncertainty should be explored to allow the effects to be eliminated.

This would also permit building of risk-balanced teams, including people who are comfortable with taking risks, balanced by others who are more conservative and safety-conscious, in order to ensure that risks are only taken where appropriate.

Supporting Evidence

A number of studies have been undertaken to identify the benefits that can be expected by those implementing a structured approach to risk management (Newland 1997). These include both “hard” measurable benefits to the bottom line as well as “soft” intangible benefits.

The widespread use of risk management suggests that people are implicitly convinced that it must deliver benefits. It is however difficult to prove unambiguously that benefits are being achieved. There is therefore a genuine need for a body of evidence to demonstrate the expected benefits of the risk process. Problems currently arise from the fact that existing evidence is *anecdotal* (instead of providing hard measurable data) and *confidential* (accessible data is required, including both good news and bad). In the absence of a coherent body of irrefutable evidence, the undoubted benefits that can accrue from effective management of risk must currently be taken on trust. Overcoming this will require generation of a body of evidence to support the use of formal risk management, providing evidence that benefits can be expected and achieved, and convincing the sceptical or inexperienced that they should use risk management.

Conclusion

The short history of risk management has been a success story to date, with widespread application across many industries, and development of a core best practice with a strong supporting infrastructure. Although risk management has matured into a recognised discipline, it has not yet reached its peak and could still develop further.

There are several areas where progress is required. Development in these areas would have a significant effect on risk management, by producing :

- An accepted framework within which each organisation understands its current risk management capability and which defines a structured path for progression towards enhanced maturity of risk processes (via organisational benchmarking).
- A set of risk management tools and techniques which are fully integrated with project and business processes, with the existence of uncertainty being recognised and accepted at all levels (via integration of risk management).
- Improved analysis of the effects of risk on project and business performance, addressing its impact on issues wider than time and cost (via increased depth of analysis and breadth of application).
- Proper account being taken of human factors in the risk process, using assessment of risk attitudes to counter systematic bias and build risk-balanced teams (via behavioural aspects).
- Agreement on the benefits that can be expected from implementation of a formal approach to risk management, based on an objective and accessible body of evidence which justifies those benefits (via supporting evidence).

It is argued that attention to these areas will ensure that risk management continues to develop. Risk management must not remain static if it is to fulfil its potential as a significant contributor to project and business success, and if it is to take its place as an indispensable and effective management tool for the new millennium.

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A more detailed version of this paper has been published previously (Hillson 1998), and permission to use extracts has been granted by the publisher.

Author Biography

Dr David Hillson is Manager of Consultancy with PMP, with responsibility for all aspects of consultancy work. He has a particular interest in risk management consultancy and training. David is also Consulting Editor of the *International Journal of Project & Business Risk Management*. His speciality is risk technology transfer, assisting organisations to develop in-house risk processes, and he is a regular conference speaker on risk.

David is a Fellow of the UK Association for Project Management (APM), and is co-editor of the recently-published "*Project Risk Analysis & Management (PRAM) Guide*". He is current Chairman of the APM Risk Management SIG. He is also an active member of the Institute of Risk Management (IRM) and the Project Management Institute (PMI).

Before developing an interest in risk, David was a project manager in a major UK engineering company, responsible for the successful delivery of a number of large real-time software-intensive projects.

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