Practical Project Risk Management[1]

Identifying High-Risk Projects: A brief guide [2]

Purposes

1. Provide a simple means of differentiating between higher and lower risk projects.
2. Avoidance of applying the same management approach to both high and low risk projects.

A Simple High-level Checklist

Some projects are exposed to much higher levels of risk than others, often because risks may be difficult to identify or quantify before project approval. This six-point check list is designed to help differentiate high risk projects from others:

1. **Project size:** large teams may cause poor communication and a lack of clarity about responsibilities, information and decisions, leading to omissions, mistakes and weakened risk disclosure.
2. **Project duration:** on very long projects, there is a longer time window over which key assumptions may be undermined or during which unexpected events can occur.
3. **Novelty:** products or methods that are being used or developed for the first time either at all or by the organization involved, are a frequent cause of emergent risk.
4. **Project complexity:** the implications of interdependent project work strands or difficult combinations of requirements may be hard to understand in advance.
5. **Multiple stakeholders:** differences between stakeholders' interests can be a source of counterproductive behaviour with consequences that are difficult to forecast.
6. **Political imperative:** Government or internal organizational pressure can create a project environment that fosters estimating bias and failure to acknowledge risk.

Exceptionally problematic projects often have many and sometimes all of these characteristics. Typically, their problems are experienced as being **emergent risks and issues** identified after the main project approval decision or as being the unexpected effects of **systemic risk**.

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[1] This series of articles is by Martin Hopkinson, author of the books "*The Project Risk Maturity Model"* and *"Net Present Value and Risk Modelling for Projects"* and contributing author for Association for Project Management (APM) guides such as *Directing Change* and *Sponsoring Change.* These articles are based on a set of short risk management guides previously available on his company website, now retired. See Martin's author profile at the end of this article.

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Emergent Risks and Issues

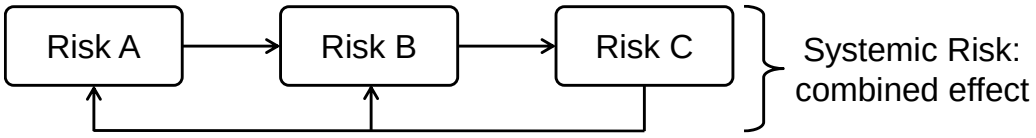
Emergent risks and issues can result from.

1. Risks that were unidentifiable or difficult to quantify e.g. because of novelty.
2. Risks that were ignored or not disclosed e.g. for commercial or management reasons.
3. Low probability risks that are often discounted e.g. Political events or company failures.
4. Optimism bias fostered by the management or political environment.
5. Mistakes and omissions caused by poor communication or inadequate data maturity.

It is illogical to assume that any risk analysis approach can forecast the effects of risks that are unidentified, poorly understood or disregarded. High risk projects thus often require relatively high provisions for cost or schedule overruns not accounted for by project risk analysis.

Systemic Risks

Systemic risks can be described as being the combined effect of multiple interdependent sources of uncertainty. The existence of positive feedback effects between risks can cause the overall level of risk to be much higher than might be calculated on a sum of the parts basis. Project complexity is an underling cause.



Examples of systemic risk include:

1. Subcontractors being able to gain mutual benefit from each other's issues.
2. Evolution of a system design as risks to elements of the design impact on each other.
3. Systems integration risk leading to the discovery of unanticipated interrelated issues.
4. The counterproductive consequences of increasing the size of a software team.

Common Faults

1. Misused rules of thumb e.g. expecting that all projects should provision 10% for cost risk.
2. The use of a project's quantitative risk analysis results to make estimates for "unknown unknowns" e.g. the provision for management contingency.
3. Using only one characteristic e.g. cost to classify projects for governance purposes.
4. Default use of a simple sum of the risks method for calculating the provision for overall risk required on a complex project.
5. Failure to recognise and account for project environment conditions that foster bias.

About the Author

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Martin Hopkinson, recently retired as the Director of Risk Management Capability Limited in the UK, and has 30 years' experience as a project manager and project risk management consultant. His experience has been gained across a wide variety of industries and engineering disciplines and includes multibillion-pound projects and programmes. He was the lead author on Tools and Techniques for the Association for Project Management's (APM) guide to risk management (*The PRAM Guide*) and led the group that produced the APM guide *Prioritising Project Risks.*

Martin's first book, *The Project Risk Maturity Model*, concerns the risk management process. His contributions to Association for Project Management (APM) guides such as *Directing Change* and *Sponsoring Change* reflect his belief in the importance of project governance and business case development.

In his second book *Net Present Value and Risk Modelling for Projects* he brought these subjects together by showing how NPV and risk modelling techniques can be used to optimise projects and support project approval decisions. (To learn more about the book, click here.)