Practical Project Risk Management[1]

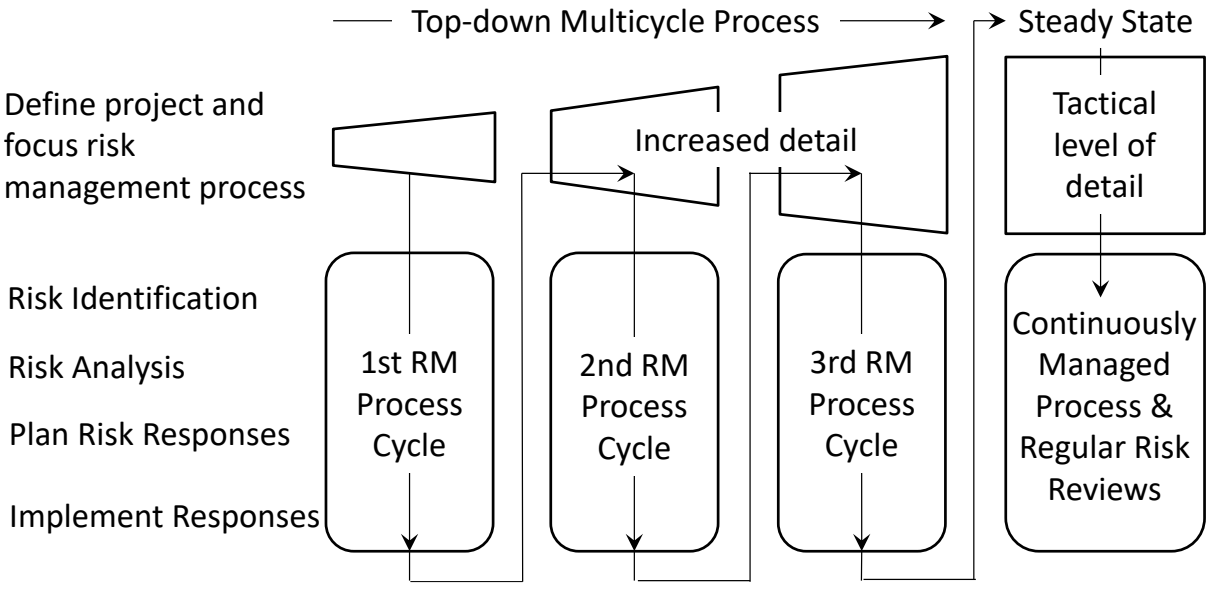
Top-down Multicycle Risk Management Process: A brief guide [2]

Purposes

1. Tailor and evolve the risk management process during the earliest phases of a project.
2. Attend to and manage the most fundamentally important sources of risk first.
3. Make rapid early progress by gaining key insights from simple high-level risk analysis.
4. Make risk-robust and risk-efficient choices when developing project plans.
5. Underpin the development of coherent and rational tactical-level risk models and registers.

The Underlying Principle

The risk management process is initiated using simple models with a focus on the most significant sources of risk. Insights from each cycle are used to influence the focus of subsequent cycles as detail is increased. The number of cycles may vary. By way of example, the figure below illustrates three cycles of the process prior to reaching a steady state:



[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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Historical Note

The principle of using a top-down multicycle approach when initiating a project risk management process has been recommended since the 1990s by the APM PRAM Guide and by some leading authors e.g. Chapman and Ward. However, it is still not widely understood, arguably because organisations have favoured the use of tactical-level techniques that are easier to roll-out and that are supported by commercialized project tools.

Points to Note

1. A project might use a tactical risk management process to manage the delivery of an early phase e.g. its Concept phase whilst using a top-down multicycle approach to initiate the risk management process for later phases e.g. Project Delivery and Benefits Realisation.
2. When improving a project with inadequate risk management capability, it can be useful to review its plans and process in the context of a refreshed top-down multicycle approach.

Characteristic Tools and Techniques

Risk Managers should be familiar with a wide range of tools and techniques. The table below shows how some may be more typically used in certain cycles of the process than others.

Early Cycles	Later and Final Cycles	Tactical Implementation
Strategic Risks Identification	Range of Risk ID techniques	Detailed Risk Register
Simple High-level Risk Models	NPV Risk Modelling	Probability-Impact Matrix
Stakeholder Analysis	Cost Risk Modelling	Risk Mitigation Plans
Parametric Cost Modelling	Schedule Risk Modelling	Ongoing risk identification
High-level NPV Risk Modelling	Future phases Risk Registers	Updated Monte Carlo models
Influence Diagrams	Risk-based planning decisions	Routine Risk Reports
Risk-based strategy decisions	Project Sanction Risk Report	Routine Risk Reviews

Common Faults

1. Failure to manage risk until a project's plan is defined to a level of detail that makes using the Probability-Impact Matrix risk analysis technique practical.
2. Failure to make risk-efficient choices when making project strategy decisions.
3. Failure to identify and manage the effects of overarching sources of risk.
4. Bottom-up development of detailed risk models that causes modelling faults such as duplication, incoherence or omission of the effects of overarching or strategic risks.

About the Author

Martin Hopkinson

United Kingdom

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.)