KPMG

Monitoring capital project risks effectively

October 2018

Stakeholders demand that companies undertaking capital expenditures deliver high-quality capital projects that are **on schedule** and **within budget**. These projects often cannot be administered within an organisation's normal operational limits, and are therefore typically undertaken with extensive outside support. As companies do not always consistently integrate risk management – in the form of project controls – throughout the construction life cycle, delays and cost overruns may arise when problems emerge, which can tie up valuable resources.

Facing a constantly evolving risk landscape, boards and senior management expect all oversight and assurance functions to work together to provide an integrated view of a project's risk profile. Leading companies are now taking risk management to the next level by **quantifying risks and using mathematical techniques** to understand the **dollar and time impact** of known risks on the successful delivery of their project with regard to budget and time, while **minimising disruption to existing operations**.

A structured project risk management framework:

1 Risk governance	• Set up a clear governance structure for escalation of risks from third-party consultants and contractors to the project team and steering committee • Establish a risk policy to clearly define roles and responsibilities, and outline the arrangements of key risk management activities
2 Risk identification	• Develop a comprehensive model to identify risks that may impact the operating environment of capital projects • Choose the optimal technique (e.g. workshops, subject matter experts and/or historical data) to facilitate the identification process of the risk universe
3 Quantitative analysis	• Analyse risks by determining the consequences and likelihood of occurrence • Quantify risks in time delay and cost impact terms, and map the risks and uncertainties to the project schedule • Use the Monte Carlo method to run simulations and quantify the impact of all risks
4 Evaluation and mitigation	• Perform a sensitivity analysis to determine the risks and activities that most impact cost overrun or project delay • Prioritise risk treatment plans, assign clear ownership and communicate to key stakeholder groups
5 Risk reporting	• Set up monitoring mechanisms through the use of key risk indicators (KRIs) to identify emerging trends and potential obstacles in achieving project objectives • Develop a dashboard of key risk information to the project steering committee and senior management

KPMG's proprietary tool

Risk management often turns into a box-ticking exercise and may be unable to translate results into meaningful information for management, such as early warnings of potential issues. KPMG's proprietary tool enables your organisation to quantify the impact of risks and helps you prioritise resources to manage the risks.

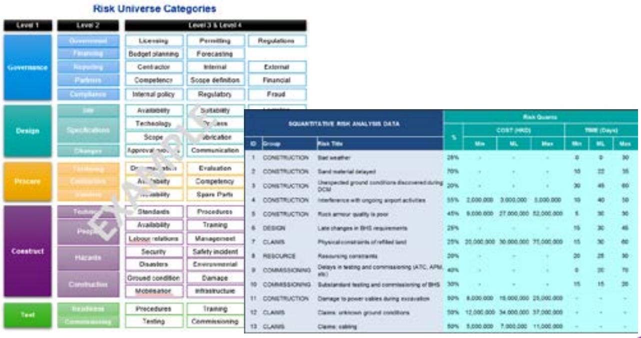
Proven methodology

A proven methodology helps identify the risk universe that may impact the achievement of project objectives, i.e. delivery on time and within budget, while minimsing disruption to operations.

The first step of quantitative risk analysis is to define the possible scenarios for each discrete risk, where the 'three point estimating approach' should be used to assess the impact of each risk event to reduce the subjectivity of the impact assessment.

Our tool maps the risks to project schedule, allowing you to assess and quantify the impact of all risk in time delay and cost impact terms. By performing sensitivity analyses to run 10,000+ simulations of the project, your resources can be prioritised and matched with the risk ranking.

The construction industry generally refers to the 80% confidence value (known as P80 values) as a benchmark. This allows the project to state they can be 80% confident of delivering a milestone by a certain date with the addition of risk. Similarly, they can be 80% confident that the cost of risk will not exceed a specific value.



PROJECT RISK MANAGEMENT

How can we help?

1. With our global network, we can benchmark your capital projects both locally and globally to build a sustainable, streamlined and scalable project risk governance and management framework that fits your operating environment.

2. Our sector and subject matter experts can conduct workshops and training to help you identify the universe of potential risks for the project as a whole, and serve as a starting point.

3. Our proprietary tool quantifies the impact of all risks, and helps determine the risk and activities that most impact cost and time overruns, enabling you to prioritise resources in management action planning.

4. We can help set up monitoring mechanisms through the use of KRIs to ensure that changes in risk profile are actively managed and escalated, which makes risks visible to senior management and allows you to identify any potential obstacles in achieving objectives.

Contact us

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