

Effective reporting for construction projects: increasing the likelihood of project success

Thought Leadership Series 13

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About the Leadership Series

KPMG's Project Advisory Leadership Series is targeted towards owners of major capital programmes, but its content is applicable to all entities or stakeholders involved with major projects. The intent of the Project Leadership Series is to describe a framework for managing and controlling large capital projects based on the experience of our project professionals. Together with our simplified framework, we offer a sound approach to answer the questions most frequently asked by project owners.

Effective reporting for construction projects

Projects can fail for many reasons – and one contributing factor can be ineffective project reporting systems. Yet implementing an effective project reporting system is also one of the most difficult project management challenges. This is because project reporting requires coordinated information and integration from all project phases and construction activities – ranging from initiation and planning to project closeout and commissioning.

Organisations cannot afford to prepare and produce project reports in a reactive manner. Governing boards, shareholders, and regulators establish high standards for project performance in order to help ensure that projects are delivered on time, within budget, and to the expectations established by the project's stakeholders. To help accomplish these goals, projects should implement project reporting systems tailored to their own industry; while meeting the reporting needs of the project.

Unfortunately, the vast amount of data available to be reported and the complexity of software systems used for project reporting have left many project management, engineering, and construction departments with few options other than to develop ad hoc tools that require manual reconciliation and duplicate data entry. This is often referred to as "project management by spreadsheet."

In this paper, we discuss how implementation of an effective project reporting system can increase the likelihood of project success. We explore the elements of an effective project reporting system; identify how to determine the relevance and purpose of information to be reported; provide guidance on how to produce useful reports that are easy to understand; and outline example formats and guidance on timing and report distribution.

Components of a project reporting system

Major projects, with significant budgets, can require years of planning, design, and construction. Projects of this magnitude require not only a team of experienced professionals, but also a set of extensive resources, tools, and systems. Major projects have a large volume of data and complex data sources and need a project management infrastructure capable of supporting the extensive regulatory, financial, management, and other stakeholder reporting requirements.

1. Transparency and accuracy

The first component of any project reporting system is transparency and accuracy. Stakeholders demand accurate and transparent project information for making informed decisions and ensuring compliance with Regulations, Acts, and other project requirements.

There are several key elements to review when assessing or evaluating the transparency and accuracy of a project reporting system. These are:

- » **Ability to deep-dive into detail**
It is important to be able to drill down to the source data, as there are multiple opportunities for irrelevant data to creep into project status reports. For example, subcontractors and sub-consultants might generate the information and pass it along to contractors, architects and engineers, and finally to the project manager. The information may not be properly vetted before it is reported or passed along. Problems can also arise from different project account coding, issues exporting data from different

job cost reporting systems, and a misunderstanding as to what scope items are included in each cost category. Errors that are identified may take a considerable amount of time and effort to sort out.

- » **Level of redundant input**
Many project reporting systems include redundant information, or the same data reported by different sources. This often creates confusion and can lead to duplicate entries or misreporting of key data.
- » **Amount of manual adjustments**
Manual adjustments are often necessary to produce reports that accurately reflect the current project status. However, a high volume of manual adjustments required to produce accurate project reports is often a red flag. It's important to uncover the root cause or causes contributing to this.
- » **Relative size of variances**
Project reporting results will often have variances from what the contract reports and from the project owner's accounting system. Again, large variances of total project costs are often red flags indicating the project reporting system requires further evaluation and remediation.
- » **Number of discrepancies**
Most major projects produce reports that communicate different information and provide different levels of detail. However this information should not contradict itself. Discrepancies among reports are also red flags.

2. Clearly defined objectives and purpose

Another important component of an effective project reporting system is developing clearly defined objectives and purpose. With the advent of sophisticated software programs and the ability to report large volumes of data on a real-time basis, there are almost limitless project reporting capabilities at an organisation's disposal. However, this can often be overwhelming if the data is not presented in an organised and meaningful way. There are several key elements to review when assessing the objectives and purpose of a construction project reporting system. These are:

- » **Usefulness for decision-making**
Good systems facilitate decision-making because they provide management with accurate and meaningful information. If management rates the usefulness of project reports as "not effective" or "not very effective," then the project reporting system requires further evaluation.
- » **Usefulness and ease of understanding**
An effective project reporting system should be able to synthesise large volumes of data in simple and meaningful dashboards, snapshot reports, and summary reports. It should also facilitate knowledge sharing by providing information in simple, easy-to-understand formats.
- » **Ability to satisfy regulatory requirements**
The ability to provide quick and comprehensive support for regulatory proceedings is an important element of any construction project reporting system. It should be able to produce the required information in a timely and efficient manner, without the need for excessive adhoc reports or manual preparation of information.
- » **Level of security and data integrity**
Large projects often store project data in multiple formats and electronic systems, and each format has unique characteristics and levels of sensitivity and security/privacy requirements. A good system will have clearly defined data integrity and security protocols for project information.





3. Reporting layout, timing and distribution

The final component of an effective project reporting system is the layout, timing, level of detail, and distribution of project reports. There are several key elements to review:

» Types of reports and format

The report layout impacts the ability to communicate the underlying information effectively and is often as important as the information being reported. There are many specialised and required reports on major projects covering safety, environmental, schedule, and other quality and cost information. These reports are often the easiest to prepare and target specific stakeholders. Summary and status reports are much more challenging but can also prove invaluable if designed and presented in an effective manner. Below is a list of several summary and status reports that should be common to all major projects:

i) Project dashboard

A good project dashboard includes the important project metrics presented on a single page. If a project dashboard takes more than a few minutes to comprehend – or requires a lot of explanation and other supporting information – it has not served its purpose to provide quick, meaningful, and actionable information.

ii) Summary management report

Most summary management reports are prepared on a fortnightly or monthly basis; and include quick

summaries or snapshots of all major project categories such as safety, budget and cost information, work progress, schedule, risks/issues, quality, contract status, and other information deemed important by the project team.

iii) Summary cost report

Preparing summary cost reports is one of the most challenging project reporting activities for most large projects. Payment information and procurement/contract information often reside in separate systems, and budget information (if not approved at a detailed level) may require redistribution over many cost categories.

iv) Risk report

Risk reporting may take the form of a simple Risk Register updated on a routine basis; or a combination of risk dashboards, risk analysis, and meeting minutes discussing risk trends and other important risk management information.

v) Milestone schedule and three-week look-ahead

Understanding and quickly disseminating a detailed project schedule for a major project is a challenging process, as it may have thousands of activities and require hundreds of pages to print. Project management teams should identify variances to key milestones, and provide three-week look-ahead schedules at a minimum. The

milestone report should provide a quick summary of project status, and the three-week look-ahead should provide a snapshot of the upcoming project activities.

» Timing and frequency

The timing and frequency of project reports should correspond with those dates required by management and stakeholders. Usually, the project management team reports to senior management at established intervals or milestones. Producing a dashboard report and a project status report immediately before the scheduled meeting will avoid having the team prepare ad hoc reports or interim updates.

» Distribution

Determining which stakeholders need to receive which reports is often a matter of debate among project team members. Some project team members prefer information to be closely controlled and distributed on an as-needed basis only. Others prefer to distribute project reports on a much wider scale, to facilitate knowledge-sharing and collaboration and to avoid numerous information queries. In either case, all major projects should have an established communication plan that includes a distribution matrix for all project reporting documents.

Project reporting – A CASE STUDY

A power company embarked on a major project to provide access to renewable energy, a secure power supply, and lower costs for consumers. In addition to the size and scope of the project, the company identified major challenges in public perception and opposition to the project, the regulatory environment, project complexity, cost control, and on-time delivery.

To address these challenges, the project management team decided to implement two new project reporting tools. The first tool was a **Risk Management Report** aimed at improving identification, analysis, tracking, and response to project risk. The information included in this report was based on updated information from the project risk register. It was managed by a dedicated risk management team responsible for updating project risks and facilitating timely responses to risk events or risk triggers.

The risk management report helped management detect several major risks that might otherwise have gone undetected. More importantly, it helped project team members become more aware of the various risks facing the project, and identify and communicate new risks on an ongoing basis. The risk report also facilitated communication and collaboration between various project groups as they discussed the potential

impact of project risks, along with the various contingency plans and risk mitigation methods.

The second tool implemented by the project management team was a real-time, interactive, web-based **Project Status Reporting** tool. This lets individuals to access project status information on all components of the transmission project. The tool provides the user with a real-time dashboard of project status for all project work components.

The tool also has features that can access and report on other project work components, and can produce dashboard reports indicating status by phase, work package, or other criteria. A contractor in the field that encounters a site issue can relay this information to a site coordinator, who can in turn update the information in real time. Where two crews are working in the same area, this information not only saves time but also helps crews to avoid costly mistakes, injuries, or other issues that often go undetected.

The ability to access and share project data in real time has been invaluable to each and every project participant. While difficult to quantify, the added productivity, better communication, and ability of personnel to address project issues immediately as they arise has already drastically improved project performance.



CONCLUSION

Owners and developers of projects need access to accurate, real-time progress information that is presented in a concise and meaningful way. Effective project reporting helps them react to market dynamics, build relationships with external stakeholders, and make informed and efficient decisions about their projects.

By applying some of the key elements outlined in this paper, your organisation will be better prepared to deal with project issues, risks and challenges. The aim is to help you assess your project reporting systems, and address any existing deficiencies.

For more information on how effective project reporting systems can increase the likelihood of your project success, please contact **Gina Barlow** or **Harriet Dempsey**.



About KPMG Project Advisory

KPMG's Project Advisory services are objective, professional approaches to managing the many risks associated with major change: risks that involve complexity, technology, governance, selection and management of vendors and partners, implementation of solutions and acceptance of change throughout the organisation.

KPMG applies leading concepts and practices, supported by:

- › Experienced practitioners
- › Recognised best practices
- › Effective tools and templates
- › International standards
- › Built-in knowledge transfer

Project Advisory Services can assist organisations to generate significant cost savings by minimising poor selection decisions, costly overruns, misalignment with business needs, poor quality deliverables and failed projects.

Our project advisory services include

INDEPENDENT QUALITY ASSURANCE (IQA)

Is your project or programme on track?
Are the key risks and issues being effectively managed and addressed?

Independent Quality Assurance is KPMG's approach to providing objective, practical and open feedback to senior executives, independently assessing project status, risks and issues. Advice is provided by experienced staff who are not part of the delivery team.

PORTFOLIO, PROGRAMME AND PROJECT MANAGEMENT (P3M) PRACTICES

P3M provides services for the purpose of designing or evaluating portfolio, programme, or project management practices. The objective is to assist in implementing or improving P3M practices to reduce project costs, increase project success and create an organisational P3M support environment which is valued by internal and external stakeholders alike.

LARGE PROJECT AND PROGRAMME MANAGEMENT ASSISTANCE

This cornerstone service of KPMG's Advisory practice is designed to address the full lifecycle of a project or programme, providing an integrated approach to managing large initiatives – the result: significant efficiencies and enhanced outcomes. The methodology incorporates concepts from well-known risk, benefits, project and quality management disciplines to help companies achieve the results they expect during every phase of a large project or programme.

PROJECT RISK ASSESSMENT AND MONITORING

These services provide a highly focused, activity-based approach to project risk management. They provide management with an objective and independent assessment of the risks associated with a business initiative, programme or project, and evaluate the effectiveness of planned or implemented controls to mitigate the risks.

BENEFITS MANAGEMENT AND REALISATION ADVISORY

KPMG professionals help you identify the measurable business changes that you will to see at the successful completion of your project and to tie these into an effective Benefits Management and Realisation strategy which can be referenced in your Business Case. Even for projects where outcomes are "enabling" or "intangible," our Project Advisory team will be able to assist with the identification of proxy indicators and benefit relationships to support the approval of your Business Case and its successful delivery.

PORTFOLIO MANAGEMENT

Effective portfolio management helps large organisations make sound decisions by prioritising the deployment of scarce resources to change initiatives and maximising their value to help achieve the organisation's strategy. Organisations operate in increasingly dynamic environments, which often make it a struggle to satisfy fluid business requirements.

KPMG's Portfolio Management (PfM) Advisory and Assistance services help organisations to develop appropriate processes and capabilities to achieve this aim. We provide practical guidance for conducting capability development, maturity assessments and performance reviews. Our methodology provides a flexible, comprehensive approach that can help our clients achieve their goals.

PROGRAMME MANAGEMENT OFFICE ASSISTANCE

Programme Management Office Assistance is intended to help our clients develop the processes to support a Programme Management Office. We assist with the development of a client's programme office processes and facilitate communication across client leadership to help make sure that enterprise programme initiatives are aligned with the organisation's business strategies. The focus of the PMO is to increase project visibility across client leadership in order to help achieve strategic programme performance.

PROJECT ADVISORY

Our practitioners know that successful projects are the result of clear vision, careful planning, and meticulous execution.

Bottom line: Project Advisory services drive speed and effectiveness of change within your organisation by reducing costs and increasing success.

Leadership Series

Please look for important topics covered by our Project Advisory Leadership Series in the coming months:

- » Integrated project delivery
- » Building a foundation for a project health check
- » Handling labour risk in construction

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