Building a risk management system from the ground up
A major regulated utility company embarking on a multi-billion dollar construction project created its own internal risk management system to oversee the project.

Executive Summary:

Client's challenge:
To embark upon a highly visible multi-billion dollar construction project:
  • Develop strategy to manage cost, schedule and technology risks
  • Build internal capacity to manage project

PwC's solution:
Create an industry-specific assessment team to:
  • Assess risks and develop mitigation plans for capital projects
  • Build technology solutions to address cost, schedule and risk management issues
  • Develop client capabilities to manage risks

Business impact:
  • Risk, schedule and contract management tools developed and deployed
  • Company now has enhanced skills to manage cost, schedule and other risks on capital projects

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Client’s challenge:
A major regulated utility company requested an assessment of its readiness to undertake an ambitious power plant construction project. The project was complex to execute on multiple levels, and the risks were manifold. In addition to relying on new technology, the company needed to comply with the requirements of multiple federal and state-level regulatory agencies. The multi-billion dollar budget would have a huge financial impact on both the company and its ratepayers. And perhaps most importantly, the project was highly visible both to the public and the US energy industry. Its success or failure could potentially have industry-wide ramifications.

When the assessment revealed that the client’s existing systems for governance and control, risk management, schedule management and cost management needed improvement, they realized that they had neither the staff nor the expertise to implement the recommended changes on its own. They needed more than an assessment; they needed an independent external advisor to keep the project on track while they developed their own internal risk management capabilities.

PwC’s Solution:
The utility company engaged PwC to serve in the independent advisory role and to help them develop internal capabilities to manage the risks, costs, and schedule associated with such a large-scale project. PwC assembled a team that included capital project professionals, regulatory advisors and civil and nuclear engineers to provide the ongoing advisory and management support the client required.

After observing and evaluating the client’s existing systems, PwC’s multi-functional team developed tools and frameworks to facilitate the project and remain on track. On the risk management front, team members consulted with project leads to identify risks and create mitigation plans. This information was then entered into a web-based risk management database that could analyze the data to determine the most likely cost and schedule risks and outcomes. To control costs, the team identified and promoted initiatives to track, report and forecast costs. To address potentially costly delays, PwC helped create an automated scheduling system that monitored the project’s multiple overlapping schedules and updated them monthly. A web-based contract compliance system was developed to administer contracts and manage contract changes, using email to remind individuals of their responsibilities and deadlines as contractor benchmarks were reached. Information management protocols tracked all documents and data created during the project in compliance with audit standards. PwC team members collaborated with their client counterparts to develop and enhance their schedule, cost, and risk management skills, training them on the frameworks and tools, creating transferable skills that can be applied on the client's other ongoing construction projects.

Impact on client’s business
By developing master schedules and budgets, a risk management system, and a reporting framework that promotes timely management and regulatory compliance, the company has transformed a series of governance and management problems into a systematic framework to manage complex construction projects. Web-based solutions address their contract compliance and risk management challenges, lessening the burden of managing the delays caused by changes in contractor schedules and unforeseen events. The risk management solution, developed in response to the shortcomings identified at the outset of this engagement in 2008, is still in use today.
By building their capacity to manage complex projects, the company has decreased the risk of additional delays, cost overruns, and quality problems that would have ramifications not only for themselves and their ratepayers, but also for the entire domestic energy utility industry.

The client’s employees have gained valuable skills that allow them to manage the many challenges they face on such a complex project. Engineers have developed skills in identifying and managing potential risks. Executives have gained tools that provide insight into complex schedules and contracts and that automate tasks. By building their capacity to manage complex projects, the company has decreased the risk of additional delays, cost overruns, and quality problems that would have ramifications not only for themselves and their ratepayers, but also for the entire domestic energy utility industry.

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