Excellence in Capital Projects

Leveraging the knowledge and scale of a portfolio of projects
Capital projects quite literally shape our world, with more than $10 trillion spent each year to develop the infrastructure that supports modern life—from bridges to hospitals, ports to gasfields, broadband networks to missile defense systems. Yet, not a great deal has changed over the years in how capital projects are delivered, with some practices dating back to the 1920s. With the increasing demand for capital projects around the globe, and less funding available (in the current financial climate) organizations worldwide are looking for a better way to deliver their portfolios of projects.

The vast majority of large capital projects are customized, with tailored components and individually designed contracting strategies. Because engineers like to engineer, this tailored approach is built into the DNA of many project-based organizations. Historically, such habits are only broken when there is force majeure—when a major, unavoidable event forces a change in mindset. Such an event occurred in 1940, when under extreme wartime pressure, the British ordered 60 new American cargo ships, each needing to be capable of transporting 10,000 tons of cargo. In order to build these “Liberty ships” quickly, shipbuilders were forced to simplify (and standardize) the design and manufacturing process. They succeeded: The average build time for each ship was reduced from nearly 120 days to 42 days, and within four years a network of 18 American shipyards had produced more than 2,700 Liberty ships. Not only did this new process make a significant contribution to the war effort, it also helped Europe rebuild after the war through the transatlantic transport of millions of tons of raw materials and finished goods. In short, dire necessity forced innovation (see sidebar: Lessons from the Liberty Ship on page 6).

The shipbuilders’ decision to apply an innovative, standardized approach to design and manufacturing offers valuable lessons for capital project owners. In today’s climate, it is no longer feasible to focus on single projects based on individual orders. Success depends on adapting cross-project capabilities to improve performance and reduce risk. In most cases, the simple, proven design is better—and the best organizations are those that leverage knowledge and scale across multiple projects.

The quest to develop and refine these capabilities lies at the heart of A.T. Kearney’s work.
with capital projects owners. To inform our work and learn how and why some companies excel while others lag behind, we launched the 2008 Excellence in Capital Projects survey together with more than 30 executives, many of whom are clients. The findings outlined in this paper emphasize what we think should change, across all sectors, to raise the productivity and effectiveness of global capital investment.

The Findings

Our study of capital project management techniques at companies from a range of industries in the Americas, Asia and Europe suggests that business is at a correction point in how capital projects are planned (see sidebar: About the Study on page 4). Although we have seen correction points before, they have been traditionally driven by strong external stimuli, such as war or stalwart political leadership. Today’s global correction is unique, driven by:

• Increased capital expenditures (an incremental $17 trillion is expected globally over the next five years)

• Tighter access to capital that forces more effective execution (accelerated by the uncertainty in the financial debt and equity markets)

• More capital spent as a percentage of annual revenues (for survey respondents, annual capital expenditures average 12 percent of revenue)

• Decreased availability of raw materials, con-

Characteristics of Capital Project Leaders

A set of leading companies were identified from the overall survey participants. This top quartile, which includes companies from a variety of industries, including energy, manufacturing and health products, represents the best overall performers. In general, the leaders share the following characteristics:

• Higher likelihood of bringing projects in ahead of schedule

• More frequent use of commodity hedging tools (60 percent usage level for leaders versus 20 percent for general population)

• Use of financial risk management tools, which allows leaders to eliminate some 50 to 75 percent of their risk exposure

While the study is designed to examine a range of processes and organizational functions, leaders are recognized by excellence in procurement and capabilities in developing technology. Other areas where leaders excel include:

• Risk management (both financial and overall)

• Front-end loading and stage gate reviews

• Contractor selection and management (for example, leading companies use time-and-materials contracts with ceilings while most companies are moving toward lump sum or fixed price)

• Project indicator and metric management

• Staffing, training and cross-functional assignments

• A more positive, “esprit de corps” engineering culture

• Project standardization (for example, system commonality)

• Innovation, new technology and knowledge management

• Centralized project management

In addition, we found that leaders have different challenges than followers. For example, leaders tend to be less concerned about the cost or availability of capital now and in the future, and instead are more concerned about technical complexity, the risk profile and complexity of projects, overly ambitious timelines and budgets, availability of skilled engineers within their organizations, and the rising costs of external labor and materials.
tractors, and skilled blue- and white-collar project staff
- Poor schedule performance and increasing technical complexity of projects

The study examined 11 areas of project management, shown in Figure 1, revealing many common concerns about the state of capital projects. For example, more than 90 percent of companies report a shortage of project managers and engineers; 87 percent of project owners expect contractors to increase their bargaining power over the next five years. More projects are at risk due to increasing technical complexity and rising material costs, and only about 20 percent of companies have devised a preemptive plan for reducing their exposure to volatility in the raw materials markets. In addition, we found that the use of common systems and components across projects is not widespread, and only a handful of companies execute cross-program material buys, set up long-term contractor agreements, or plan for resource continuity across projects. Finally, and importantly, most companies do not have a formal process in place for capturing and sharing lessons learned. The sidebar, Characteristics of Capital Project Leaders, highlights many of the characteristics that distinguish leaders from followers in managing capital projects.

**A Global Surge in Capital Projects**
Major construction projects are largely driven by the economic cycle—and given the economic

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**Figure 1**
Eleven areas of capital project management
slowdown, companies are likely to postpone capital spending wherever possible. However, industries that are currently growing or on the verge of growth, such as biotechnology and telecommunications, are likely to continue their recent investment sprees, although now investments will be more focused on emerging geographic regions. Similarly, utilities and energy companies, which are currently reporting record profits due to high energy prices and the surge in demand from rapidly developing countries such as China and India, are not likely to scale back their investments. The International Energy Agency estimates that companies that produce, refine and transport oil and natural gas will collectively need to invest some $26 trillion between now and 2030 to meet the sharply growing global demand for hydrocarbon-based energy.

Even against the backdrop of an economic slowdown, North America has the highest levels of capital expenditures of any country in the world. Upgrades to an aging infrastructure—roads, bridges, rail, refineries and the electric grid, among others—and investments in new projects in the energy, utility and transportation sectors represent a significant amount of this spending. And there is little sign of slowing. Overall, we project that global spending on capital projects will rise by an estimated 20 to 30 percent over the next five years as economic conditions improve.

Bigger Bets = Greater Consequences
Companies in a number of sectors—including energy, raw materials, transportation and utilities—are increasing their investments in capital projects. For example, a look at the typical corporate budget in several sectors reveals that many companies apply nearly one-third of their annual revenues to capital projects. In the energy sector, this figure exceeds 80 percent. Such large investments introduce significant risk if these projects

About the Study
A.T. Kearney’s Excellence in Capital Projects study, dubbed ExCap, examines the capital project management techniques in use at nearly 30 companies in the Americas, Asia and Europe. Study participants include executives in the manufacturing, process, oil and gas, power generation, infrastructure and contractor industries. Participants were asked to share their practices via a comprehensive online survey around 11 key areas of project management, including: capital strategy and allocation, project strategy, design and engineering, procurement, construction, installation, operations, maintenance, resource planning and human resources, capability building and technology development, and organization. Companies were scored by category and placed in quartiles, with the top quartile designated as a leader in each capability area. Participating companies were benchmarked across all survey responses and evaluated relative to A.T. Kearney’s proprietary Stages of Excellence for Capital Project Management approach, which records best practices and approaches across all dimensions of capital project management observed at client organizations around the world. Participants received customized feedback reports that scored their performance against other organizations and outlined areas where they could improve their capital project capabilities.
are not properly managed. Beyond the project-specific risks (coming in late and over budget on new plants, rigs and other assets) the financial health of the entire corporation is in jeopardy when these projects exceed their hefty budgets and fail to generate expected returns.

Strong Headwinds
In addition to the recent tightening of available capital, companies are concerned about the impact of inflation and shortages of skilled resources on their ability to deliver projects on time and on budget. As shown in Figure 2, study participants rank the cost of material and labor as their single biggest concern now and in the future, followed closely by the availability of engineers, project managers and contractors. Respondents are also pessimistic about future budget performance, with 20 percent of companies anticipating typical budget overages of 11 percent or more on capital projects over the next five years. A shortage of skilled workers is fueling the pessimism.

Inflationary forces. The rising costs of goods and services, and recent volatility, have made predicting budgets difficult. Prices for key commodities, including steel, copper and cement, have increased significantly. The situation is especially dire in the energy sector as global demand for energy soars to record levels. This is powering a substantial uptake in plant construction, prices for raw materials and equipment such as boilers, rotating gears, piping, structural steel, concrete, electrical components and wiring, which have reached record highs.

A scarcity of raw materials has necessitated some interesting practices. For example, Chinese

![Figure 2](image.png)

**Figure 2**
Material and labor costs are the biggest concerns

Source: A.T. Kearney
mining company Chinalco recently purchased Peru’s Mount Toromocho for some $3 billion in an effort to secure, at a discount price, sufficient copper to electrify all of China. This example and others signal a potential sea change in globalization, and raise questions about which countries are truly low-cost sources of supply.

**Shortage of skilled workers.** Compounding the challenges of the record high prices for construction materials and equipment is the shortage of skilled labor, ranging from project managers and engineers to craftspeople and contractors. Demographic trends indicate that this shortage will only worsen in the coming years as many workers retire and there are fewer people to replenish the talent pool. This situation will be especially prevalent in North America and Western Europe.

Study participants cite availability of engineering, project management and contractor human resources as a top concern. The utility and oil and gas industries are already feeling the pinch. The Cambridge Energy Research Associates anticipates a 15 percent shortfall in engineers and project managers worldwide for energy capital projects. Additionally, two-thirds of the members of the Society of Petroleum Engineers are at least 40 years old, and more than half of all oil field professionals will reach retirement age during the next decade. The shortage will intensify as oil companies plan to extract petroleum from hard-to-reach reserves, which will require the skills of seasoned workers with experience with complex technical projects.

Germany already faces a significant shortage of engineers, with an estimated 22,000 engineering vacancies in 2007. With no relief in sight from the university population there, businesses are partnering with elementary schools to increase

### Lessons from the Liberty Ship

The cargo ships that came to be known as Liberty ships were built in the United States during World War II to provide American goods to Great Britain. Conceived in Britain, they were adapted by the United States and redesigned to be low cost and quick to build, a symbol of American wartime industrial output. As the saying goes, necessity is the mother of invention. With a shortage of resources and experienced labor, U.S. shipbuilders developed new construction techniques that succeeded in driving down costs and cycle time and yielded a product that was more than up to the task.

More than 60 years later, the Liberty ship program offers a number of lessons for capital projects, including the need to:

- **Innovate across a program.** The Liberty design replaced most of the riveting work, which accounted for one-third of the labor costs for similar oceangoing vessels of the time, with welding, which allowed the ships to be constructed in sections.

- **Work with what you have.** After the United States entered the war, the shipbuilding yards employed women to replace the men who had joined the armed forces. This new workforce was quickly trained in welding.

- **Cut cycle time.** Initially, each Liberty ship took about 230 days to build, but the average eventually dropped to 42 days.

- **Work across the portfolio, rather than customize.** The Liberty ships were made assembly-line style from prefabricated sections. Three Liberty ships were built every day (on average).
interest in technology and science careers for students as young as kindergarten age.

Not surprisingly, more than half of our study participants expect future projects to exceed budgets, with 20 percent anticipating overruns in the double digits. Additionally, 45 percent of respondents anticipate that future projects will come in behind schedule.

Gaps, Capabilities and Leading Practices

With the dizzying pace of corporate construction, and demand for materials and workers outstripping supply, successful companies are those that develop the most efficient and repeatable approaches to capital projects—bringing projects in on time and on budget to gain the maximum amount of uptime and financial returns. Based on our findings, the following practices are essential to managing and delivering capital projects:

• Improved knowledge management that applies lessons learned in project design, contracting and execution coupled with the use of price benchmarks
• Reuse of proven designs at the subsystem and component level across multiple projects to reduce the costs of proliferation
• Coordinated supply relationships and commodity strategies that leverage volume across multiple projects
• Tailored risk management approaches that recognize and track different risk profiles across multiple projects (companies tailor design contracting approaches and incentives accordingly)
• Coordinated human resource management to plan and develop internal and external resources across the extended enterprise to ensure the right talent is deployed when and where it is needed
• Shifted organization from “vertical” to “horizontal” approach with performance management across multiple projects

Many companies are experiencing gaps in key aspects of capital project management. Performance is generally adequate in executing single projects in functional areas, such as construction, installation, operations and management, and maintenance. However, there is significant room for improvement in areas where visibility across projects is critical, including project planning, design, contracting, budgeting, and managing risks, knowledge and human resources. The following offers brief summaries of leading practices in these areas (see figure 3 on page 8).

Project planning. To screen potential projects, leading companies rely heavily on pure financial metrics, with the majority of participants reporting that it is the single-most important criterion. Strategic positioning is also a key criterion for project assessment, albeit a distant second, and committee approval is another important consideration. Less important factors include project
capability, time to payback and regulatory approval. At the capital strategy planning stage, leaders in our study employ a long-term horizon (as long as 15 years) combined with a rolling process to respond to changing market demands. They use simulation tools, including Monte Carlo algorithms, to estimate project budgets and establish contingency plans.

**Design.** Most companies in our survey allow slight variations in design and end up “reinventing the wheel,” making each facility, plant or other entity far more unique and specialized than it needs to be. In doing so, they increase costs and lengthen schedules, paying a significant premium to be “better” where “good” will suffice. The complexity introduced by custom designs also results in higher life cycle costs, as specialized approaches, supplies and resources are needed to maintain them.

The leaders in our study—those in the top quartile for a given subcategory—stress the importance of using common systems across projects. When designing a module for one project, they expand the range of performance or functionality so it meets the needs of other projects. For example, the Naval Sea Systems Command of the U.S. Navy applies equipment commonality to reduce the cost and time to design, build and maintain its 282-ship battle force. Over the past several decades the U.S. Navy allowed equipment designs to proliferate well beyond what was necessary to meet ships’ functional and performance requirements, which increased life cycle costs, as specialized approaches, supplies and resources are needed to maintain them.

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**Figure 3**
Leading practices in managing capital projects

- **Strategy** (impact on capital expenditures)
  - Develop vision that takes into account macro-level trends and future scenarios
- **Capital allocation**
  - Align capital allocation process with business strategy using financial and nonfinancial criteria
- **Project life cycle**
  - Establish cross-functional teams to improve installation, use and maintenance
  - Use a central engineering “datahouse” and project specifications database
  - Capture lessons learned in project reviews
- **Resource planning and HR**
  - Ensure that a single business unit owns the entire project
- **Technology development and capabilities**
  - Manage scarce personnel resources on long-term projects
  - Review project design for constructability
- **Design and basic engineering**
  - Employ standard or modular specifications and interoperability checks to limit scope and design changes
- **Procurement**
  - Manage scarce personnel resources on long-term projects
- **Construction**
  - Review project design for constructability
- **Installation**
  - Employ standard or modular specifications and interoperability checks to limit scope and design changes
- **Operations**
  - Manage scarce personnel resources on long-term projects
- **Maintenance**
  - Review project design for constructability
- **Organizational structure**
  - Ensure that a single business unit owns the entire project

*Source: A.T. Kearney*
costs. The Navy applied a structured methodology to reduce unnecessary design variation within select ship systems across its fleet, thus reducing variation by 11 to 30 percent and cutting projected life cycle costs by up to 40 percent.

Companies typically claim to account for life cycle costs early and extensively when incorporating design factors into projects. Study participants note that a project’s fit for purpose, constructability, operability, maintainability and adherence to regulations are all incorporated into facility design. However, few companies report an ability to leverage learnings from other projects when estimating life cycle costs, indicating that estimates are not as accurate as they could be.

As a leading practice, companies implement design-for-life cycle capability to ensure that ease of procurement, constructability and maintainability are fully appreciated when making design decisions. This requires cross-functional teams, supported by strong knowledge management and a keen understanding of the impact of project costs.

**Contracting.** Companies and contractors alike noted a shift in the balance of power toward contractors, thus emphasizing the importance of improving contracting both within and across projects. The leaders in our survey optimize project modularity and contracting approaches based on unique risk characteristics and project objectives. These characteristics include schedule criticality, availability of contractor resources and design maturity, among others. They also use a disciplined, common process across projects, creating visibility to contracting strategies and leveraging agreements wherever possible and appropriate.

We found little consistent strategic direction around incentive structures, with 40 percent of companies developing unique incentive structures for each project, and 30 percent not using incentives at all. A quarter of respondents say they jointly develop incentives with the contractors and align the incentives against the project’s specific objectives and risks, while 5 percent employ a standard incentive structure for all projects. There is little statistical proof that incentives improve cost or schedule performance, perhaps because of the unstructured, inconsistent application that is found in this survey data.

In our view, the key to contract incentives is to appreciate that different projects will inevitably have different risk profiles, resulting in different desired behaviors and incentive structures. Incentive structures should be consistently applied, but tailored to manage behaviors that contribute to the unique risks of each project. Further, large and complex projects may warrant
multiple incentive structures across subsystems to recognize the differences that may exist in design maturity and risks to schedule, costs and performance.

Overall, we project that global spending on capital projects will rise by an estimated 20 to 30 percent over the next five years as economic conditions improve.

**Executing against budgets.** Across all industries, companies factor in significant contingencies for cost overages into the capital project budgeting process. For instance, 84 percent of companies build in budget contingencies of 11 percent or more, with some going as high as 25 percent. Not surprisingly, contingency buffers of this size are an adequate safe haven, as the vast majority—95 percent—of capital projects are delivered within 10 percent of budget. Clearly, considering performance against “pure” budget (less contingency), there is room for improvement.

While budget overages are expected to occur in future projects, many of today’s projects are already showing poor performance against schedule, with nearly two out of three companies reporting that their projects tend to be behind schedule. A key finding is that leaders (companies that display top-quartile performance in all dimensions) have better budget and schedule performance and less contingency than the general study population.

**Risk management.** Most organizations recognize potential risks, but only a few have comprehensive monitoring capabilities in place. Most survey respondents say their companies identify risks and take clear actions to minimize

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**Figure 4**
Leading practices in knowledge management

Source: A.T. Kearney
the potential negative impact. A small number say their companies avoid risk wherever possible, or have limited risk visibility and take few preemptive steps to avoid it. One quarter of companies have independent teams to monitor risks and take a comprehensive approach to mitigation. About half of companies monitor risk on an ad hoc basis but employ preemptive mitigation, while the remainder typically react to risk and mitigate accordingly.

Financial instruments appear to be underused in managing price volatility around raw materials, with only 21 percent of companies using them for this purpose. While derivatives may have become somewhat discredited (and therefore harder to obtain) given speculative behavior, the original commercial logic was strong. There is a fairly even split among companies that expect the material risk to be absorbed by the supply base and those that allow the risk to be passed on to them.

The leaders use a wider range and number of tools to manage specific cost risks than the other companies. For example, 60 percent or more employ techniques such as currency futures, currency options, raw material forward buys, raw material futures, raw material options, shared-risk-reward contracts and project-specific insurance. By comparison, 40 percent of companies use only shared-risk-reward contracts.

**Knowledge management.** Best practice knowledge management is considered very difficult to attain (and a challenge that information technology cannot solve alone), due to the duration and global nature of projects, and the difficulty in transferring learnings. While followers “implicitly” share most key project information, leaders focus on knowledge management—developing systems, communities and structures that facilitate and then drive knowledge into their cultures. One leader employs a “triage” system to maximize the effectiveness of its key engineers. Moderately-skilled workers assess the work to quickly identify work that less-skilled workers or novices can perform and free up experts to handle the more challenging, complex work (see figure 4). In the non-best-practice companies, experts are solving both complex and easy problems.

**Human resources management.** Best practice human resources management involves aligning the HR strategy with the themes evolving in the project “funnel” over the long term, as shown in Figure 5. In the short term, it involves assigning the right people to the right projects, those that have the biggest impact on net present value. While most respondents have a project funnel,
or “stage gate” review process, the leaders have systematized this practice by linking HR skills systems to their project funnels. Thus, there are no “surprise” projects that cannot be staffed as the process serves as an early warning system that changes how companies recruit, train and develop employees and assign contract workers. They use continuity planning to manage scarce personnel resources on long-term projects.

Supply relationships and commodity strategies. Only half of all companies regularly leverage supplier relationships across projects. Most companies rely on spot buys of raw materials for each project, rather than take advantage of their combined scale to purchase materials in volume. Leading organizations develop resource continuity plans across projects, and manage resources collectively, rather than individually.

The Shift from Vertical to Horizontal
Faced with constraints and process gaps, the best companies will not only improve their ability to deliver large-scale capital projects but also position this ability as a source of competitive advantage.

As we noted earlier, companies are fairly competent in executing capital projects but lack the capabilities to take advantage of the knowledge and scale that a portfolio of projects can provide. In short, they employ a “vertical” focus in managing each project. For example, only 15 percent of companies have a formal system in place to capture and disseminate project information. A vertical focus in managing projects has several organizational and psychological roots. For instance, organizations tend to manage each project as its own profit-and-loss center, with little allowance to invest time or resources into knowledge capture that will benefit other projects. Organizational silos prevent communication across projects or organizations. Projects in remote locations create geographic barriers. Engineers on one project are often quick to dismiss the designs of engineers on other projects.

While followers “implicitly” share most key project information, leaders focus on knowledge management—developing systems, communities and structures that facilitate and then drive knowledge into their cultures.

A “horizontal” focus is evolving as leading companies stress the importance of cross-project capabilities. For example, one survey leader, a manufacturer of equipment for the power industry, established a central program management group to oversee functional areas across the organization—including procurement and finance—and deliver projects across business units. Projects are put through a cross-functional approval process to ensure they meet all designated criteria and
leverage existing knowledge and scale. The group also monitors risks and financial engineering in the company’s global portfolio of projects. Support functions play an important role in each project’s success. For example, resource planning and human resources helped swell the engineering ranks and deployed training where it was most needed, while knowledge management allowed for the capture and dissemination of learnings across all projects.

Figure 6 depicts the shift from a vertical to a horizontal focus—where companies move beyond executing single projects and instead take a portfolio approach.

Practices change significantly in a cross-project horizontal approach. For example, project-specific engineering resources are augmented by an enhanced “core engineering” corps and accountability is no longer handed off from one project life cycle phase to the next. Instead, cradle-to-grave accountability is the norm and employed across project strategy, design and operations. Functional silos give way to an integrated approach that pulls in the expertise of buyers, operators and maintenance crews into the concept and design phase. Project budgets and schedules are supplemented by new measures, including more effective buying, design reuse and managing risk exposure.

Profile of a Participant: Alstom

Before closing, we’d like to leave you with a brief case study of one of our participating companies. Alstom, the French transport and energy

**Figure 6**
Vertical versus horizontal focus in managing projects

<table>
<thead>
<tr>
<th>Vertical focus (manage one project at a time)</th>
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<tbody>
<tr>
<td>Project 1</td>
</tr>
<tr>
<td>Strategic, capital and risk management</td>
</tr>
<tr>
<td>Design and engineering management</td>
</tr>
<tr>
<td>• Reuse proven designs</td>
</tr>
<tr>
<td>• Use common subsystems and components</td>
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<tr>
<td>• Provide prescriptive designs to contractors</td>
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<tr>
<td>• Employ design-for-life-cycle approaches</td>
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<tr>
<td>Supply management</td>
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<tr>
<td>• Reduce exposure to commodity risks</td>
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<tr>
<td>• Cultivate longer-term contracts</td>
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<tr>
<td>• Leverage volume purchasing</td>
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<tr>
<td>• Create tailored, risk-based contract strategies</td>
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<tr>
<td>Resource management</td>
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<tr>
<td>• Employ project management tools</td>
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<tr>
<td>• Align scarce talent with required skills</td>
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<tr>
<td>• Leverage “extended enterprise” via outsourcing and offshoring</td>
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<tr>
<td>• Focus on recruiting, developing and retaining employees</td>
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<tr>
<td>Knowledge management</td>
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<tr>
<td>• Capture and share lessons learned</td>
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<tr>
<td>• Apply continual improvement techniques</td>
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<tr>
<td>• Benchmark prices for labor and materials</td>
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<tr>
<td>• Improve cost estimates</td>
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<tr>
<td>Horizontal focus: manage a portfolio of projects</td>
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</table>

*Source: A.T. Kearney*
infrastructure provider, handles approximately 80 to 100 major projects globally per year. Projects are rigorously assessed against well-defined criteria, addressing aspects that are commercial, technical, industrial, contractual and financial in nature. The review process is cross-functional and targets projects above a threshold size.

Risk management and financial engineering are handled within sectors that report up to the group level according to established criteria. The decision to pursue any given project is based on an overall assessment of the specific risks and rewards of that project. Disciplined risk management allows the company to establish the required contingency levels or alternative mitigation plans—for example, potentially including hedging and insurance—for any given project. Alstom’s performance is overall “in line” across the portfolio of projects.

**Moving Forward**

The path to change is challenging—but the rewards are achievable through an improved approach to capital project management. High-quality installations, delivered on-time and on-budget, reduce the time to payback on these capital project “big bets.” Improving contractor relationships in a period when these resources are scarce will ensure a job well done.

Getting there requires a strong voice from the top to drive the change. Cultural barriers must be removed through a robust change management process. New, cross-functional teams powered by a free flow of knowledge must be formed.

Sound daunting? Certainly not when compared to the efforts that go into any single capital project. Ramp up by leveraging the knowledge and scale that a portfolio of projects brings to bear, and even the most daunting task can be achieved.

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A.T. Kearney is a global strategic management consulting firm known for helping clients gain lasting results through a unique combination of strategic insight and collaborative working style. The firm was established in 1926 to provide management advice concerning issues on the CEO’s agenda. Today, we serve the largest global clients in all major industries. A.T. Kearney’s offices are located in major business centers in 35 countries.

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