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INDUSTRIAL PRACTICE



A new era for megaproject leadership

Megaproject directors are in the hot seat, serving in roles that can make — or break — capital projects costing billions of dollars. Heidrick & Struggles' research highlights the three skills that belong in any megaproject director's toolkit and suggests ways that companies can instill them.

Megaprojects are big business, as companies and governments around the world take on capital projects of ever-larger size and scope. Even accounting for slower economic growth today, the coming years will see a growing number of megaprojects¹ spanning the infrastructure, natural resources, and utilities industries — projects that will effectively reshape landscapes, skylines, and communities.

Meanwhile, the importance of the megaproject director has risen significantly over the past decade in lockstep with the complexity and challenge of the role. Many projects cross state and national boundaries, and some crews, particularly in the oil and gas and mining industries, must work in increasingly isolated, harsh environments. To be sure, megaproject directors typically have decades of expertise in the technical skills associated with managing large capital projects, but they increasingly must also master soft skills — leadership acumen, political deftness, and influencing ability — to manage the interests of multiple stakeholders in these sprawling, multiyear undertakings.

In the current low-growth business environment, the available capital for megaprojects is at risk. But the need for flawless execution and management of these projects, once sanctioned, is even more crucial. Indeed, our research finds that talent-related deficits will present the greatest challenge for companies pursuing megaprojects over the next 5 to 10 years.

To better understand how companies can attract and retain the talent they need to manage megaprojects most effectively, we conducted interviews with

70 senior executives and megaproject directors across a range of project-intensive industries (see sidebar, “About the research”). Their responses offer a glimpse into the current — and future — market for megaproject leadership, including directors’ desire for autonomy, the importance of culture, and the relative lack of effective training programs.

Our study also highlighted notable differences in perspective between company executives and megaproject directors. This lack of common understanding suggests that senior executives should reexamine their approach to the recruitment and retention of megaproject directors. By arming megaproject directors with a broader view of the business through mentorship and different types of work assignments, companies can get more from the projects they undertake, while also developing their next generation of business unit leaders.

Building the future

Current market conditions notwithstanding, the global market outlook for megaprojects is bright. McKinsey research, for example, finds that global investment in energy, infrastructure, mining, and real estate–related projects could reach \$13 trillion by 2030, up from about \$6 trillion in 2013.²

In particular, the civil engineering, infrastructure, and construction worlds are optimistic. The United Nations estimates that 1.5 million people a week are added to the global urban population, and PricewaterhouseCoopers forecasts that 60% of the world’s population will live in cities by 2030. In anticipation, organizations around the world — most notably in China and India — are ratcheting up their investments in megaprojects. Many of these projects were deliberately selected to promote growth during the economic slowdown.

¹ Projects that cost \$1 billion or more.

² See Sriram Changali, Azam Mohammad, and Mark van Nieuwland, “The construction productivity imperative,” on mckinsey.com.

Other industries face a tougher path. For example, the oil and gas sector is a victim of both its own cyclical nature and its own success: Development in North America of shale oil and gas has helped drive crude prices down more than 50% since mid-2014. In response, companies in the sector have slashed capital expenditure budgets, reduced headcount, sold noncore assets, and restructured debt.³ But the slump is not permanent; as production slows, demand will inevitably increase — particularly in the Asia-Pacific region — reigniting commodity prices. This market-driven rebalancing holds equally for the mining sector. Thus companies across both of these sectors (and others in similar situations) have incentive to focus now on the training and development of their core talent — including megaproject directors.

Differing views

In our interviews, both C-suite executives and megaproject directors placed talent-related challenges as their number one concern. However, the two groups offered differing perspectives about what really matters to the members of this critical talent pool — current and future. Companies that can bridge this divide will be better positioned to attract, retain, and develop megaproject leaders.

What do directors value most?

Notably, megaproject directors cited organizational culture as the most important factor when deciding whether to join — or remain — with a company. Although sometimes perceived as a “special breed,” megaproject directors look for the same high standard of values, ethics, and cultural fit as do other employees.⁴ Megaproject directors rate highly factors such as autonomy during project delivery.

³ See Les T. Csorba, “Crude collapse: Crisis and opportunity,” on heidrick.com.

⁴ See Karen Fifer, “What are your employees really saying about you?” on heidrick.com.

At a glance

Learn what your company’s megaproject directors really want — a supportive company culture may be as important as a rich project portfolio.

Quit investing in ineffective training programs that teach only technical skills. Instead, focus on soft skills training for high-potential employees. If budgets are tight (and even if they’re not), employ low-cost methods such as mentoring to build strategic acumen.

Look to megaproject directors as a viable pipeline of business unit leadership and a potential source of strategic insight; if nurtured and developed properly, these talented colleagues may be capable of more than you think.

They describe wanting to feel valued by other senior leaders, and they seek organizational structures and management styles that allow for open conversation with the C-suite. As one megaproject director explained, the most important part of the job is “not the title but having a chair around the table and being valued as part of the leadership team.” Another concurred, noting, “I’m attracted to the companies where the leadership and the culture not only foster the innovation process but also engage and empower the people.”

Such views may come as a surprise to the C-suite, as many of the senior executives we spoke with assumed that organizational culture is less important than the project portfolio. For their part, C-suite respondents believe that megaproject directors are most attracted by challenging assignments involving new technologies and a variety of locations. One executive went so far as to say, “Project directors chase the projects, not companies.” Another agreed, saying, “Truly great megaprojects will have a profile and excitement to attract the best people.”

Of course, the project portfolio also matters to megaproject directors: the directors we interviewed



About the research

In 2010, Heidrick and Struggles' Industrial Practice published "The new project leader." The research identified the best practices for enhancing megaproject management capabilities and helping to develop and retain the future generation of megaproject directors working in the fast-evolving natural resources sector.

To complement the original effort, our team initiated a new round of research that included natural resources but extended to other industries involved in global megaproject delivery, such as engineering, construction, and infrastructure. We conducted 70 in-depth interviews with megaproject directors and C-suite executives (including CEOs, COOs, EVPs, SVPs, and human resources directors) in these industries. For their part, the megaproject directors we interviewed have more than 650 years of collective project experience and lead projects valued at more than \$130 billion.

deemed it the second most important factor that attracts them to a company. Type, complexity, variety, scale, diversity, profile, and visibility of megaprojects were each cited as important motivators. Nonetheless, when it comes to attracting employees, the priority of these two primary factors — organizational culture and the project portfolio — is clearly flipped in the minds of C-suite leaders and megaproject directors.

The training gap

While both groups cited the inevitability and importance of learning on the job, the C-suite executives we spoke with were far more likely to highlight the importance of formal training and development courses. They also recognize that this type of learning involves mentorship from senior leaders and other executives — particularly in an environment characterized by low growth and tight

budgets, where low-cost, high-reward programs such as mentorship are often more attractive than formal (and more expensive) training initiatives.

Meanwhile, the megaproject directors we surveyed agreed that the full range of necessary skills cannot be acquired from coursework alone — yet some pointed out that the formal training they receive is inadequate in both content and approach. Others noted that their training focuses on technical elements of the role that most have mastered already. Oftentimes, the megaproject directors reported, they are left to fend for themselves to learn skills such as leadership, people management, and strategy, as well as the social and cultural nuances of working in a diverse set of international environments. One megaproject director said, "I received standard project management training, which was useful from a technical perspective. However, a large portion of my job is nontechnical in nature, covering social and political aspects. So I have acquired those skills via on-the-job experience and training." Another director observed, "It's not taught anywhere how to manage the expectations of the clients and related softer skills."

The megaproject director toolkit

The traditional perception of the megaproject director is of a professional focused on execution, managing subcontractors, and attending to the nuts and bolts of a project. Yet this narrow view of the role (and how to prepare individuals for it) is increasingly outdated. These professionals must have not only a 360-degree view of the project but also the ability to anticipate how factors seen or unseen might interact to potentially change a project's economic viability. Against this backdrop, C-suite leaders and megaproject directors agreed about the need for the latter to deepen their skills in three areas.

Economic viability assessment and innovation

Given increasing operating costs, geopolitical instability, and, in some cases, restricted access to financing, the economics of megaprojects are under increased scrutiny. The C-suite executives and megaproject directors we spoke with noted that scarce capital is making businesses picky when it comes to where — or whether — to invest in megaprojects. In addition, stakeholders (including governments) are increasingly risk averse and savvy, requiring company leaders to clearly delineate the benefits of a project instead of simply presenting its cost and schedule. Tightening regulations on health, safety, security, and environment (HSSE) add additional complications.

Generally, megaproject directors aren't tasked with deciding which projects to pursue; they are brought in to lead them. Yet many of the senior executives and megaproject directors we talked with argued that tomorrow's megaproject directors will need to approach projects more strategically, as a business unit leader would, including the capacity to assess a project's economic viability. One executive said that in his company, "We use the same filters for selecting megaproject directors and large business unit leaders." This, however, seems the exception. As discussed earlier, in most cases the current training megaproject directors receive appears insufficient to instill in them either strategic planning acumen or an overall view of the business.

Meanwhile, customers are increasingly demanding that the costs of megaprojects be pushed lower and lower. Companies providing megaproject management are challenged to find the economic returns necessary to continue the growth critical to them and their service providers. Those who find solutions will do so not by cutting corners on quality but by becoming more innovative. For example, Baker Hughes has made headlines over the past year for its technological advancements in improving

subsea recovery.⁵ Further, many oil companies have successfully cut costs by building oil production vessels on standardized, repeatable platforms instead of highly specialized production tailored to individual oil fields. This standardization allows for an efficiency, speed, and accumulation of knowledge that more than makes up for any revenue lost due to lower customization.⁶ While such progress certainly relies heavily on technological prowess, it also requires the development of a value-creation mind-set, a creative problem-solving ability, and long-term strategic skills in the megaproject director talent base. New approaches to projects will be critical to generate economic returns in a low-growth/low-commodity price environment for all companies along the value chain. In short: tough times require you to get creative — and megaproject leaders with the ability to do so will thrive.

Risk management

Risk management continues to be the heart of megaproject delivery and remains top of mind for C-suite leaders and megaproject directors alike. Accordingly, nearly four in five megaproject directors reported that they currently invest their time in the formal sign-off of project estimates, signaling that they are paying close attention to up-front planning. The notion of *portfolio project management*, which breaks megaprojects into more manageable "bites," is also growing in popularity. And several respondents from engineering, procurement, and construction (EPC) companies mentioned that their clients are adding more of their own employees to megaprojects, a time-tested form of risk sharing. However, to be successful, this method requires clearly separating risk allocation between the owners and contractors and providing sufficient

⁵ "Baker Hughes launches ultra-deepwater subsea production technology," *Oil & Gas Technology*, May 5, 2015, oilandgastechology.net.

⁶ Thomas Hundertmark, André Olinto do Valle Silva, and Jeff A. Shulman, "Managing capital projects for competitive advantage," *McKinsey Quarterly*, June 2008, available on spears.okstate.edu.

management attention to handle the additional complexity involved.

As the number of entities involved in megaprojects increases, risk management and the coordination of stakeholders will become more important still. There was a general consensus among our interviewees that the next five years will see more strategic partnerships, consolidation among service providers, consortia, and joint ventures. As megaprojects are located in increasingly remote locations, particularly in emerging markets, the delivery teams are becoming more geographically dispersed, especially in oil and gas and mining. Heightened demands from host country governments — for example, regarding local content requirements and nationalization of the workforce — will push megaproject directors and their teams to learn the soft skills necessary to understand and manage cultural differences. One executive explained, “If you think about the scope and complexity of a megaproject, you begin and end with the management of risk. This is much like running a business.”

Cutting-edge technology

In our research, both C-suite executives and megaproject directors cited technology as a crucial factor in megaproject planning and execution. However, the two groups differed drastically in their understanding of the type of technology that will most affect the industry. Megaproject directors tended to focus on operational technology and offered tactical responses grounded in their areas of expertise.

C-suite executives, meanwhile, spoke of the impact of technology on the overall business itself — for example, how the enterprise-wide integration of advanced data analytics could alter project design and planning. This wider scope of awareness underscores the broader strategic perspective necessary to run a business (and, increasingly, a megaproject). However, the current career trajectory and training of megaproject directors do not always

offer exposure to the strategic side early enough in their careers. As such, this distinction in perspective about technology is an embodiment of the fact that the C-suite often doesn't see megaproject leaders as strategic enough to run a P&L. This vicious cycle — no strategic training offered, no strategic acumen demonstrated — will continue until megaproject director development is expanded to include such skills as a baseline. Companies that successfully address this challenge will have a deeper pool of talent from which to draw.

Building your team

Companies that recognize the importance of a broader range of skills for megaproject directors will also have the edge in terms of employee development and retention, an important goal given the opportunities on the horizon. Since much of the knowledge and skills needed to manage megaprojects can't be easily developed save for firsthand experience, many companies are at risk of underinvesting in training programs — or investing in ineffective ones. By contrast, forward-looking companies will demonstrate their commitment to existing talent through a blend of mentorship, functional rotation, and formal training — approaches that will appeal to new talent as well, thus creating a virtuous cycle.

Companies should consider several approaches to bring megaproject directors up to speed on the strategic elements of both running a project and — perhaps eventually — running a business unit. One method is to keep retired leaders on retainer as coaches for the next generation of leaders. For example, one global petroleum company has brought in the former head of its chemicals business to participate in project reviews. Given their deep knowledge of the industry in general and the company specifically, such leaders can provide invaluable guidance to the next generation by

asking pointed questions. This transfer of knowledge from more senior executives to more junior ones is important in developing promising candidates for any role, but it's even more crucial for megaproject companies that may otherwise periodically face big gaps in their capabilities because of the inherently cyclical nature of their industries.

Another method is to rotate megaproject directors into other parts of the business to imbue them with a broader perspective. It is common practice across several industries (including oil and gas), particularly in Europe, to promote high-potential talent from functional disciplines or roles to be the chief of staff to a top-level company executive. Over the course of 18 to 24 months, the high-potential manager gets a firsthand, high-level view of the business; develops an advanced understanding of how decision making works at the most senior levels; and is then better equipped to take on a more strategic role. However, this practice is not yet common and is seen far less often in North America.

Both approaches offer megaproject directors valuable experience and insights, which can be augmented by the traditional project management institutes that some companies run. Indeed, some megaproject directors may be candidates for the same training modules offered to business unit leaders. As noted earlier, megaproject management is by nature cyclical. The inevitable down period between projects is the ideal time to place promising leaders into external flagship business training programs such as those offered by INSEAD, Harvard, and Stanford. Many such institutions offer programs that span just a few months — perfect for the downtime that may occur between megaprojects.



Ultimately, our findings confirm that to attract the best people — and keep the best people they already have — companies must not only do what they know well (maintain a portfolio of interesting

and challenging projects) but also recognize, when establishing executive priorities, the primacy of corporate culture, the work environment, and how valued these key contributors feel. Equally critical to the recruitment and retention of their megaproject directors, companies must emphasize meaningful professional development opportunities that build the strategic planning capabilities and soft skills needed to meet the megaproject director's unique set of challenges.

The increasing complexity of projects, the high level of customer engagement, and the international breadth and depth of partner relationships mean that the role of a megaproject director is becoming quite similar, if not directly comparable, to that of a business unit leader, divisional CEO, or chief operating officer. As our research demonstrates, the main difference between megaproject directors and business unit leaders is the latter's grasp of strategic planning and view of the overall business. To develop better megaproject leaders, companies must create environments that are attractive to top talent as well as proactively build a broader range of skills for their high-potential employees. ■

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Industrial Practice

Heidrick & Struggles' Industrial Practice helps industrial companies find innovative and effective global leaders who can thrive in today's complex environment.

Top industrial companies recognize that the quality of their leadership talent makes the real competitive difference in a world of globalization, rapidly emerging markets, offshoring, outsourcing, and far-flung supply chains. With more than 150 consultants in more than 50 locations around the world, our Industrial Practice team combines unparalleled search resources with a deeply consultative approach. We have strong expertise across all industrial sectors, including: aerospace, defense, and aviation; agribusiness; automotive; building products; capital equipment; chemicals; electrical; engineering, construction, and infrastructure; mining and metals; oil and gas; paper and packaging; and transportation and logistics.

Working closely with clients ranging from early-stage start-ups to the world's largest public companies, we develop an organization's ideal candidate profiles by getting to know its unique competitive challenges, business objectives, and leadership culture. We help our clients see beyond their candidates' functional or industry backgrounds to find those leaders most suited to meet their organization's business objectives.

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