

Independent Project Analysis, Inc. is the preeminent organization for quantitative analysis of capital project effectiveness worldwide. At IPA, we identify Best Practices to drive successful project outcomes.

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No Measure, No Change: Capital Project System Change Management Observations From the Field

By Paul Barshop, Director,
IPA Capital Solutions

Sometimes I feel like a war correspondent embedded in the front lines of a major infantry charge. One military unit is trying to advance against another. Except, in my case, I am a front-line observer of owner companies, not military units, attempting to implement change efforts to improve capital project performance. The deeply entrenched enemy companies are struggling to defeat is the status quo. From my position along the battlefield, the carnage of failed campaigns for improving capital project outcomes is strewn everywhere.



The “change efforts” I speak of entail initiatives to improve project performance. For instance, let’s say a company wants to improve the cost and schedule predictability of its capital projects. The board of directors is tired of cost and schedule overruns and has told senior management to fix the problem. The change effort represents the collective actions taken to bring about improvement, including modifications to business processes, organizations, and project functions.

I have witnessed change efforts cut down in a hail of resistance (to change) as soon as they are ordered to begin. Others, in essence, veer off the battlefield because of weak leadership. Still, other change leaders are able to advance well toward enemy lines, but fail to breach the enemy’s defenses when resources and reinforcements are drained.

Change efforts can be derailed for any number of reasons. I believe the most common root cause is the failure of change effort leaders to determine how they are going to measure success. For example, if the change

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Chinese Government Policy Pushes Chemicals Plant Relocation Activity

Back in September 2017, the State Council of the People’s Republic of China issued guidance on the relocation and transformation of industrial sites that manufacture or handle hazardous chemicals near densely populated areas. The central government guidance, which represents a more hardline push to relocate hazardous chemical sites near residential areas, stipulates that medium- to small-sized facilities, or those of significantly high risk, have to start relocation or modifications by late 2018 and complete the move by 2020. Large and mega-sized facilities have to start relocation or modifications by late 2020 and complete the move (or work) by 2025.

The Chinese government is moving “to overhaul the enterprises that fail to meet standards in safety and minimum distance to residential areas, reduce dangerous chemical incidents, protect people’s lives, and promote upgrading the petrochemical industry,” according to a release on the relocations project guidance posted on The State Council’s website. “By 2025, any unqualified enterprises will be revamped to meet standards, move into standardized

industrial parks, or be shut down.”

A report by IPA Project Analyst Pei Hsing Seow, IPA Senior Project Analyst Christina Yip, and IPA Chemicals, Life Sciences & Nutrition Manager Natalia Zwart takes a closer look at how chemicals companies can effectively manage execution risks for relocation projects in China without eroding project value. (“Relocation Projects Are Likely to Continue to Grow in China in the Near Future,” *IPA Newsletter*, September 2017). IPA maintains research into relocation projects in China and Best Practices for chemicals industry owner companies to follow as they are planning or in the early phase of developing a site relocation project.

IPA has been conducting studies into the capital project market in China since 1996. Several evaluation products for capital projects in the country are offered. For more information about IPA's evaluations of capital projects in China or its latest China capital project industry research, please contact IPA Chemicals, Life Sciences & Nutrition Manager Natalia Zwart at nzwart@ipaglobal.com.

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IPA improves the competitiveness of our customers through enabling more effective use of capital in their businesses. It is our mission and unique competence to conduct research into the functioning of capital projects and project systems and to apply the results of that research to help our customers create and use capital assets more efficiently.

Offshore Leadership Forum: Costs Lowered in the Short-Term, but Fundamental Changes Still Needed to Achieve Lasting Success



Nearly 100 oil and gas industry executives from owner companies, contractors, and service providers gathered in Houston, Texas, on Tuesday, December 5, 2017, for the second annual Offshore Leadership Forum. Organized by Independent Project Analysis (IPA) and *Offshore* magazine, the forum provides an intimate setting for industry leaders to share ideas and develop actions to improve the long-term efficiency of major oil and gas developments.

IPA research has long pointed to the standardization of asset designs and supply chains as a pathway to achieving a low cost structure for oil and gas projects over the long term. Very few owner firms have yet to fully embrace this approach, but its prominence in discussions at the inaugural Offshore Leadership Forum in 2016 signaled that industry executives are now more open to exploring how standardization might take shape in their organizations. Building on that dialogue, the 2017 forum featured an early morning standardization-focused workshop held exclusively for owner firm executives. The closed-door roundtable session featured insights from leaders who have successfully implemented standardization programs, enabled detailed discussions on navigating the associated challenges, and provided a foundation for participants to take back to their companies.

Investment Decision Making Must Evolve

Following the workshop, Neeraj Nandurdikar, IPA Oil and Gas Business Director, delivered opening remarks at the 2017 Offshore Leadership Forum general session. The industry's approach to making asset investment decisions and delivering projects must evolve in the lower for longer oil price environment, Nandurdikar said. In response to the new landscape, oil and gas organizations have focused on optimization efforts to lower costs. However, such efforts will likely only yield short-term benefits, and fundamental changes are needed to achieve long-term improvement.

IPA Founder and President Edward Merrow next offered his perspectives on some of the changes executives should now focus on. In addition to standardization and minimizing customization of designs, Merrow cited weaknesses in the supply chain and key owner competency deficiencies as standing in the way of creating low cost projects going forward. He also addressed weak production attainment

as the industry's dark secret. Although it is known that the average field only produces 70 percent of its planned plateau, what is shocking is that the results are no better 8 to 10 years after startup. Merrow pointed out that to improve in this area, owner companies must remove optimism bias from decision making. Merrow left the audience with several key questions to serve as a starting point for where executives should turn their focus:

- **Why have standardization and minimum customization eluded the industry for so long?**
- **Why does the industry systematically exaggerate the producibility of reservoirs?**
- **Why does the industry build twice the amount of capacity needed?**
- **What behavior changes are needed to do projects for less for longer?**

Additional plenary sessions were led by Stephen Heitzman of Talos Energy, Rick Fowler of LLOG Exploration, Eric Sirgo of Chevron, and Fausto Álvarez Hernández of the National Hydrocarbons Commission of Mexico. All speakers participated in an afternoon panel session, fielding questions from the audience. The forum was run under the Chatham House Rule to allow for truly candid discussions. As such, full details of these sessions cannot be provided. However, *Offshore* published an event recap in its February 2018 issue and, in the coming months, IPA will publish a series of articles expanding on key oil and gas industry themes that emerged from the forum. The planned article topics include, but are not limited to:

- **Weak long-term production attainment**
- **Focusing transformation efforts where the money is (the state of E&P competencies)**

For more information about the Offshore Leadership Forum, contact Neeraj Nandurdikar, Director, IPA Oil and Gas Business, at nnandurdikar@ipaglobal.com.

By Tony Nicholson

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effort goal is to improve cost predictability, the measure of success would be determining whether cost predictability actually improved after the changes were implemented. It is difficult to understand why anyone leading a change effort would fail to measure success. We know intuitively that measurement is essential to drive change. Try losing weight without setting a target or measuring progress. Yet, somehow we routinely fail to make this connection to the change efforts undertaken to improve project performance.

In my experience, measurement's role in change management is critically undervalued. Change efforts often start off strong; many of the participants are motivated because they think they will finally be able to make some improvements. At first, there is a lot of excitement and discussion. The change team may even use many of the typical change management practices such as stakeholder analysis and communication planning, but without a plan for measuring change, any forward momentum gained cannot be sustained over the long term.

Having a measure of success is essential. It tells us what a comprehensive solution design looks like. This, in turn, forces us to define a detailed solution and develop a thorough roll-out plan. Critically, by establishing a measurement plan, change leaders can get feedback on whether the solution and implementation are working. Such efforts are challenging, especially because of long project cycle times and the uncertainty of project estimates. For example, consider the average \$5 million industrial sector project that takes 14 months from authorization to startup. Without a means of measuring progress, we would not know if the work to improve predictability on that project was successful for more than a year! Even then, because of estimate uncertainty, it might take several more years to develop a big enough sample to really know if our changes were successful.

Contrast this with improving a manufacturing process in which the effect of changes might be observed in a matter of minutes, hours, or maybe days. The feedback loop is much shorter.



Feedback Is Needed Earlier and Faster

Project system change efforts require some type of leading indicator or project driver as the measure of success. Some examples include the level of project definition, team integration, or use of other practices. Project outcomes still have to be measured and evaluated, but measuring project drivers shortens the time between cause and effect into something that can be used to sustain a change effort.

One of the best examples I have that demonstrates the importance of measurement using project drivers is a study that IPA completed on change efforts to improve capital project performance.¹ IPA performed at least two site benchmarkings of the 92 different chemical plants and petroleum refineries included in the change management study. The initial benchmarking established the site's performance baseline. The second benchmarking, conducted 18 months to 3 years later, measured whether there was any improvement in construction safety, cost, schedule, and asset quality. Twenty-seven sites significantly improved their project outcomes. The other 65 failed to gain any ground.

All of the successful sites had one thing in common: They set a target for the completeness of project definition at authorization for every project and they measured whether the target was achieved. This was the single element that led to significant improvement in project results in just 2 to 3 years, while the other sites stagnated. Target setting for project definition completeness is vital because measuring the leading indicator of success at authorization reduces the time to get feedback on the progress of improvement efforts.

Measurement Forces the Development of a Plan

Consider how project definition target setting changes the project team's behaviors. The change team had to identify all activities necessary to achieve the target. It had to get

¹ Alex Ogilvie and Kate Rohrbaugh, "Site Improvement: Identifying the Pathway to Success," IBC 2015, IPA, March 2015.



enough people and a big enough budget to do the work. It had to update its work process, develop instructions, and create tools. It had to engage stakeholders and users to figure out how to overcome resistance. It had to train people and support project teams as they learned what to do. It had to design and install the measurement system.

Of course, not all 27 sites developed a robust battle plan the first time around. There were undoubtedly varying levels of completeness. But, as General and later U.S. President Dwight D. Eisenhower is quoted as saying, “In preparing for battle I have always found that plans are useless, but planning is indispensable.” The enemy (the status quo) will discover weaknesses in most plans. By measuring a leading indicator of better project performance, the change team established a fast feedback loop to know whether it was successful or not. Any problems it found could be identified and fixed quickly.

The problem gets more complicated the further the change is removed from the actual project outcomes. Let’s say a company creates a project management office (PMO) to deliver projects more effectively. A leading indicator of improved project performance might be lower owner costs or shorter project definition cycles, but how are these measured improvements attributable to the creation of the PMO? Are other internal or external influences driving performance changes?

Beware of Performance Measurement Pitfalls

Many change teams are tempted to choose compliance as the measure of success. It is easy to measure whether someone completes a form or checklist. Compliance has a role in measuring adoption of the change, but measuring compliance only eventually leads to tick the box behavior through which work ends up being done in form, rather than substance. If the work is important enough, the change team should set up a measurement system to critically evaluate the work.

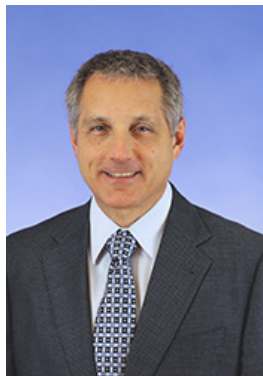
Another hazard is that performance measures can go too

far. IPA has several examples of change efforts that created so many performance targets and so much bureaucracy around measurement that the projects were uncompetitive despite implementing some Best Practices.

Measurement Is Essential

Clearly there is no magic formula for determining the best means of measuring change, but the change team cannot give up until a reasonable solution is identified. Then there should be some testing to see if it will work.

Any change effort without a quantified measure of success and mechanism for measuring should be stopped before moving out of the initial development stage. The chances of winning the battle, so that a company executes its capital projects more effectively than it did before, is very low without measuring success. Without a measurement of success, the payoff from all of the money and time spent developing solutions and rolling out changes will be less than expected, if not wasted.



Paul Barshop is the author of, *Capital Projects: What Every Executive Needs to Know to Avoid Costly Mistakes and Make Major Investments Pay Off* (Wiley, 2016). Barshop serves as Director of IPA Capital Solutions, IPA’s business initiative to provide hands-on support to clients implementing changes to their capital project development and delivery systems to improve performance.

Barshop served as IPA’s Chief Operating Officer from 2004 to 2015. He previously served as Director of IPA’s Netherlands Office from 2000 to 2004, serving European and Middle Eastern clients. Paul joined IPA in 1994. In his early years at IPA, he served as Quality Manager and Project Analyst. He can be reached at pbarshop@ipaglobal.com.

Industrial Capital Project Leaders Convene for IBC 2018

Capital projects research on the topics of owner procurement, engineering lead competency, and the perils of pursuing schedule-driven projects were among the new research presentations delivered at the 2018 meeting of the Industry Benchmarking Consortium (IBC), March 19-22, in Northern Virginia. In addition, quantitative research underpinning the key themes in IPA's latest book, *Leading Complex Projects*, by Edward Merrow and Neeraj Nandurdikar, was discussed at the annual IBC gathering.

The IBC, a premiere group of the world's leading industrial companies in the processing, refining, and mining and minerals sectors, meets annually to explore practices for individual companies to improve the competitiveness of their capital projects outcomes. Through benchmarkings of large and site-based systems conducted by IPA during the previous year, IBC member companies are given exclusive insights into how their capital project systems and outcomes stack up against their industry peers with respect to safety, cost, schedule, and operational performance. The 4-day event provides participants insights into the latest capital projects industry trends and performance hurdles. The research relies heavily on project data derived from recent project evaluations, combined with IPA's entire downstream database, containing detailed project data from more than 18,000 capital projects.

The entire IBC conference is designed as a working meeting for delegates representing companies' business and capital project functions. Several client and industry-tailored breakout sessions take place during the meeting. Networking opportunities are hosted as well. "IBC attendees not only assess the strengths and weaknesses of the capital project systems they support, they also are expected to map out a plan for improvement," said IBC Director Andrew Griffith. Griffith noted that this year's IBC continues to emphasize business decisions that drive better or worse



project performance, owner core competencies, and the burgeoning need companies face in strengthening their site-based systems.

Of key interest to those attending IBC 2018 was new research on the role of the owner procurement function. For their study, IPA Project Research Division Director Michael McFadden and IPA Research Team Leader Swati Bhat examined the disconnect in KPIs between procurement and projects personnel and how the role of the procurement function should be integrated into projects. The procurement function's ability to add or erode project value is significant, an abstract of the research study states. But "the procurement role on capital projects and how this function is staffed and defining its roles and responsibilities remains an issue."

Other research studies presented at IBC 2018 included an examination of what makes a good Constructability Review and the recent performance and pitfalls owners have experienced in delivering capital projects in India.

The IBC conference is the largest annual event hosted by IPA. A separate conference dedicated to increasing the capital effectiveness of projects in the exploration and production (E&P) industry, the Upstream IBC (UIBC), is held every fall. The IBC and UIBC each have a cost engineering subcommittee that also convenes annually to review updated cost and schedule data and new research to help project organization cost groups prepare more reliable project estimates.



Research and Presentation Summaries

Abstracts for the research studies and presentations mentioned follow.

Competency Series: The Engineering Leader

Over the last 2 years, IPA has revealed how an individual’s specific attributes can facilitate success in various roles on a project team. IPA has shown, quantitatively, how these attributes can be linked to success. The first competency study completed in 2016 focused on the project manager. In 2017, construction manager competency was examined. The next function in the project team competency study series is the engineering lead. Although past research set the framework for this study, the attributes and measures of success for engineering leads are bound to be unique to this critical team function.

Understanding the Owner’s Role in Procurement

The procurement function, in one way or another, influences the spending of nearly every dollar of a project whether it is the engineering, procurement, and construction (EPC) services or all materials associated with the project. This study looks into the opportunity to align key performance indicators for the procurement function and those of the project team as they relate to the purchase of services and materials. The study establishes the platform for an ongoing Procurement sub-committee of the IBC.

Why Do We Drive Schedules?

As a projects community, IBC members drive schedule as the most important priority for major projects over one-third of the time. We know from observation, common sense, and systematic study that schedule-driven projects are much harder to deliver successfully than their cost-driven counterparts. This study dissects schedule-driven projects to understand exactly why schedule was deemed most important and by whom.

What Makes a Good Constructability Review?

IPA data show that about 60 percent of large capital projects conduct Constructability Reviews during Front-End Loading (FEL) and that the practice is correlated with better project performance. But IPA also sees a wide variation in how this practice is actually implemented. This study addresses what the objectives of a Constructability Review are as well as industry Best Practices for conducting effective Constructability Reviews.

The Role of the Project Management Office in Site Projects

IPA has long recognized different ways sites use central resources and different ways central project groups engage with sites. This study defines degrees of centralization and the trade-offs inherent in the different approaches. We will investigate where central and site organizations should come together to optimize resources—in terms of personnel and tools/processes—to deliver more successful projects across the project organization.

Executing Projects in India: Pitfalls and Challenges Ahead

Project dynamics in India are changing. The Indian economy is expected to grow more than 7 percent in 2018, despite recent hurdles such as the demonetization of higher value currency notes and the introduction of the country-wide Goods and Services Tax. In the near term, international companies are planning a number of capital projects in India. In this presentation, IPA reviews the recent performance of Indian projects, compare that performance to global projects, and highlight challenges for the current round of projects in India.

Leading Complex Projects

In groundbreaking research that studied hundreds of project leaders, IPA Founder and President Ed Merrow and IPA Oil and Gas Business Director Neeraj Nandurdikar reveal the personalities, habits, behaviors, and common tasks of the most effective and successful project leaders, as defined by the track record of their projects. The research statistically links these habits, personalities, and tasks to various project outcomes and recommends an approach to selecting leaders with specific characteristics to increase the chances of a successful project delivery. The research is the basis of IPA’s latest book, *Leading Complex Projects* (Wiley, 2018), due out in May, on what it takes to deliver promised value in capital projects.

For more information about the IBC, please contact IBC Director Andrew Griffith at agriffith@ipaglobal.com.



IBC EMEA 2018 takes place April 24-25, 2018, in The Hague, Netherlands. This event is open only to IBC member companies executing capital projects in Europe, the Middle East, Africa, and Russia.

Many of the same new capital project research presentations delivered at IBC 2018 in Northern Virginia will be featured at the EMEA event. The agenda also includes time for networking and discussions with IPA regarding the performance of IBC member companies. For more information about IBC EMEA, please contact Nathalie van der Hoek at IBCEMEA@ipaglobal.com.

Research Study Call for Participation

Quantifying the Relative Competitiveness of Capital Project Investment Locations in Asia and the Middle East

In a rapidly changing project environment, access to accurate country-level data and intelligence is of paramount importance in making robust investment decisions in the early project development stages. Such data are important for country screening and increased confidence in preliminary economic models.

At a client's request, IPA is launching a research study to assess the relative competitiveness of countries in Asia and the Middle East in terms of executing downstream (processing) capital projects. The overall goal is to help organizations make informed decisions in the early project development stages with a comprehensive view of the different investment locations' attractiveness.

IPA has previously executed a number of project-related research studies for countries and regions such as China, India, Singapore, South Africa, and West Africa. Unlike traditional country studies that provide views of country political risk and cultural aspects, our work focuses solely on aspects of the region that make projects more or less difficult. IPA has also conducted studies that assess the effects of macro and socioeconomic factors on project-related issues such as field labor productivity and contingency setting.



Study Objectives

Determining Relative Country Competitiveness

The study's first objective is to quantify the relative cost of executing projects in specific countries and determine the associated drivers by investigating differences for key project cost elements such as detailed engineering, bulk materials, and construction. The final group of countries included in the study will be selected together with the study participants. Countries currently under consideration include: **China, Malaysia, Singapore, South Korea, and Thailand.**

Assessing and Quantifying Intangible Location Benefits

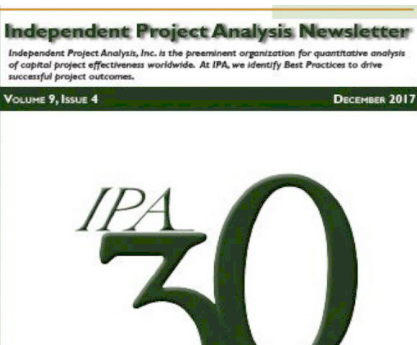
The study's second objective is to assess and quantify the intangible benefits offered by different locations. If a particular country is more expensive than others, what is the value for money and what are the benefits that may be associated with the additional cost?

IPA will use internal and public data to assess elements including, but not limited to:

- **Ease of doing business**
- **Quality of infrastructure**
- **Stability of regulatory environment**
- **Corruption perception**
- **Attractiveness of tax benefits**
- **Intellectual property protection**
- **Employee quality of life**

How to Participate

This IPA research study is open to all organizations that plan and execute capital projects in the downstream processing industries. A prospectus is available that includes additional details on the study objectives, execution schedule, and participation requirements. Contact Christos Lampris, Asia Pacific Research Team Leader, at clampris@ipaglobal.com to receive the full prospectus.



Past Editions Available Online

This is issue one of the 10th volume of the *IPA Newsletter*. The newsletter, going on 10 years now, is published quarterly and made available free to the public compliments of IPA. Its purpose is to keep readers informed about IPA news, research, products, services, and events. Many of the research topics and product overviews discussed in past issues of the newsletter are relevant today. The current and all past issues are available on IPA's website at: <http://www.ipaglobal.com/newsletter-archive>.

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IPA Out and About

IPA Manager of Mining, Minerals, and Metals Baqun Ding participated in the Mining Investment South America Conference that took place in Buenos Aires, Argentina, on February 15 to 16, 2018. Ding delivered a presentation covering the current status of mining industry capital projects performance. Ding also participated in a panel discussion titled, "Exploring Strategies for Strengthening Public-Private Partnerships for Escalating Growth in Mining."

On February 28, 2018, **IPA EMEA Regional Director Nekkhi Mishra** was a panelist at a Major Projects Association seminar, Global Trends in Client Models in Major Projects. The event was held in London. Mishra provided his perspectives on how companies can improve capital projects planning and delivery practices.



Mining Investment Conference: Baqun Ding, seated next to the podium, addressed attendees at the Mining Investment South America 2018 conference in Buenos Aires. (Photo credit: Spire Events) Excellence Through Measurement®

Upcoming IPA Events & Presentations

April 24-25, 2018 *Industry Benchmarking Consortium (IBC) EMEA 2018*

IBC member companies executing capital projects in Europe, the Middle East, Africa, and Russia will view how they compare to one another on key capital projects performance and practice metrics. During IBC EMEA 2018, IPA will present new research to further understand capital project effectiveness. The agenda also includes time for networking and discussions with IPA regarding your company's performance. For more information about IBC EMEA, please contact Nathalie van der Hoek at IBCEMEA@ipaglobal.com.

June 2018 *Upstream Cost Engineering Committee (UCEC) 2018*

The annual UCEC meeting will be held in The Woodlands, Texas. The UCEC strives to improve upstream project and business results by providing metrics for better cost engineering. Member company representatives gather once a year to learn about and review new UCEC metrics packages prepared by IPA. The upstream metrics packages are used by companies to compare their upstream project cost and schedule outcomes with industry cost and schedule norms and, in general, boost business project estimate assurance and evaluation quality. Contact Jonathan Walker at jewalker@ipaglobal.com for more information.

September 2018 *Cost Engineering Committee (CEC) 2018*

The CEC is a working subcommittee under the Industry Benchmarking Consortium (IBC) that assists cost engineers by providing metrics and tools that offer an unbiased snapshot of industry cost and schedule estimates and trends. The CEC focuses on all aspects of cost (or investment) engineering, including cost estimating, scheduling, and project control practices and metrics, with the goal of expanding the owner cost engineer's capabilities. The primary vehicles for accomplishing these objectives are validation metrics, Best Practices research, and practice sharing. Contact IBC Director Andrew Griffith at agriffith@ipaglobal.com for more information.

November 2018 *Upstream Industry Benchmarking Consortium (UIBC) 2018*

The Upstream Industry Benchmarking Consortium (UIBC) is solely dedicated to the exploration and production (E&P) industry. It provides an independent forum for each participating company to view key metrics of its project system performance such as cost and schedule, Front-End Loading (FEL), and many others against the performance of other companies and share pointed and detailed information about their practices. The consortium highlights Best Practices, reinforcing their importance in driving improvements in asset development and capital effectiveness. Consortium attendees learn how to improve specific elements of capital project execution through presentations and other more interactive discussions. For more information, contact IBC Director Andrew Griffith at agriffith@ipaglobal.com.

Airport Project Benchmarking and Research Consortium Week of September 10, 2018

Airports around the world spend tremendous amounts of money on capital improvement projects that range from very small upgrades to megaprojects. According to the International Air Transport Association, approximately \$1.5 trillion will be spent globally on airport infrastructure by 2030. With the encouragement of several airports IPA has worked with for years, a consortium of airport project organizations is being assembled to address the project challenges unique to airports. The consortium will focus on the creation of a quantitative airport projects benchmarking methodology that comprehends all key outcomes of airport projects. The consortium may also serve as a continuing research group supporting airport project systems in their improvement goals.

The head of project system, continuous improvement leader, and related functions within airport project organizations are invited to attend the event. For more information about the Airport Project Benchmarking and Research Consortium, please contact Melissa Matthews, IPA Airport Capital Improvement Manager, at mmatthews@ipaglobal.com.





2018 Public Course Schedule

The IPA Institute has announced its 2018 public course schedule. Based on participant feedback, the IPA Institute has reduced the durations of most courses from 3 days to just 2 days, resulting in lower registration fees and less time required out of the office.

Visit www.ipaglobal.com/public-courses to view the schedule online.

Complex Projects — Concepts, Strategies, and Practices for Success (22 PDUs)

May 1-3 (Perth, Australia)

Best Practices for Mining Projects (16 PDUs)

May 8-9 (Lima, Peru)

May 15-16 (Toronto, Canada)

Establishing Effective Capital Cost & Schedule Processes (16 PDUs)

April 17-18 (Singapore)

October 23-24 (Langkawi, Malaysia)

Project Management Best Practices (16 PDUs)

July 10-11 (Bangalore, India)

August 7-8 (São Paulo, Brazil)

September 25-26 (Houston, Texas)

October 9-10 (Bangkok, Thailand)

Best Practices for Site-Based Projects (16 PDUs)

April 3-4 (Las Vegas, Nevada)

May 15-16 (Frankfurt, Germany)

September 18-19 (The Hague, Netherlands)

October 9-10 (Rio de Janeiro, Brazil)

October 16-17 (Manama, Bahrain)

October 23-24 (Orlando, Florida)

Free Webinars Covering Key Capital Projects Industry Topics

Webinars on important issues facing the capital projects industry are available to download for free. The webinars are led by IPA leaders, project analysts, and project researchers. To get started, visit <http://www.ipaglobal.com/services/training-education/webinars>. Topics include: Choosing the Right People to Lead Your Projects; The 7 Deadly Sins in Industrial Megaprojects; and Gatekeeping: The Role and Limitations of Project Assurance.

Private IPA Institute Courses Tailored to Client Goals

The IPA Institute offers customized private training courses through its *In-House Learning Program*. The program allows project organization training program coordinators to work side-by-side with experienced IPA analysts and instructors. In-house courses can be led by IPA instructors, co-led by client and IPA instructors, or led by the client instructors themselves. Companies benefit from reach-back access to Institute course updates and client-specific project data in order to keep their in-house course instruction fresh and current. For more details, contact IPA Institute Director Andrew Griffith at agriffith@ipaglobal.com.

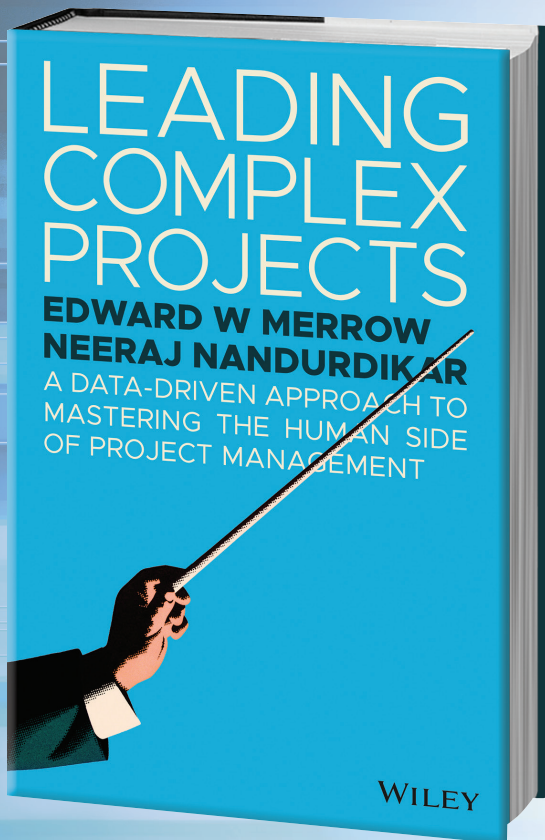


PMI Registered Education Provider

The IPA Institute is a Registered Education Provider (REP) of the Project Management Institute (PMI). All IPA Institute seminars align with current PMBOK standards, enabling PMI credential holders (PMP, PgMP, PMI-SP, PfMP, etc.) to claim Professional Development Units (PDUs) upon completion of each IPA Institute course.



UNDERSTANDING PROJECT LEADERS THEIR BACKGROUNDS, PERSONALITIES, HABITS AND HOW THAT EXPLAINS PROJECT SUCCESS OR FAILURE



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There are literally thousands of books on project *management*. But there are almost no books on project *managers*, the people who actually organize and lead projects to fruition. *Leading Complex Projects* fills that void and takes a unique approach to examine the leaders to whom we entrust our most important capital ventures. For the first time personal leader characteristics are quantitatively linked to project outcomes through a major global study investigating the role of the leader in the success and failure of complex industrial projects. Using hard data on early years, backgrounds, education, experience, personality and temperament, and habits of mind the authors connect the dots between project leaders and project success. They then dive into detailed profiles of 7 of the best leaders who share their stories of development and success. This book will help organizations learn what to look for in future complex project leaders and how to screen for and select future leaders to improve chances of successful projects.

The role of leadership is to generate *followership*—genuine cooperation from those who are not required to follow—to deliver a vision and successful outcomes. This means using their personality, emotional intelligence and prior experience to focus on the right tasks to generate successful outcomes. This book provides a wealth of practical, empirical and field proven insights to help current or future leaders to hone their skills to generate the followership necessary for successful outcomes.

- Understand the shortcomings in our current leader selection models
- Examine and learn from the personalities, experience, background, and habits of mind and tasks of over 100s of project leaders
- Understand the causal pathway of how a leader's personal characteristics and traits translate into the tasks they do (or choose not to do) and how that links to outcomes
- Get to know 7 very successful leaders from 6 global organizations through their detailed profiles

Drawing a database of complex industrial projects from around the world, this book provides a solid basis for a quantitative understanding of the human side of project management — the role of the leader. Although a majority of the complex project data is taken from projects in the petroleum industry, the insights gleaned from the analysis are widely applicable across industrial sectors for current or future leaders and organizations of any stripe. *Leading Complex Projects* provides clear, data-backed improvement guidance for anyone in a project leadership role.



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