



# Independent Project Analysis Newsletter

Independent Project Analysis, Inc. is the preeminent organization for quantitative analysis of capital project effectiveness worldwide. At IPA, we provide practices you can use to ensure your success.

Volume 2, Issue 1

March 2010

## Research Spotlight: *Development of Onshore E&P Capabilities*

Kelly Sonnhalter



Based on client feedback and forecasts of the emerging marketplace, IPA has identified a need to expand our onshore E&P analysis capabilities. As more onshore developments begin to emerge in regions all over the world, IPA seeks to assist our clients to benchmark and thereby improve the performance of their onshore business initiatives. Onshore E&P scopes of work include (but are not limited too) well construction, well pads, gas and central processing, re-injection, storage, and transportation facilities. IPA's new research will focus on developing scope-specific tools for cost and schedule analyses of all components of onshore E&P developments.

IPA launched the onshore E&P research initiative in January 2010. This research initiative has two phases. The first will inventory and assemble all onshore E&P projects in the IPA databases and supplement it with publicly available data. The second phase will develop specific tools, for both cost and schedule, to assess the performance of onshore E&P projects.

To date we have identified over 500 projects included in the IPA databases that comprise the range of onshore E&P developments. *Figure 1 (page 2)* provides a simplified Block diagram of the scopes of work being evaluated as part of IPA's benchmarking capabilities. Upon completion of the initiative's first phase, IPA will have a set of comprehensive comparison datasets categorized by scope component. These datasets will serve as launching pads for the development of future analytical tools.

E&P  
IPA Institute  
Seminars

IPA will then isolate the cost and schedule metrics for the varying components of the  
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## E&P Project Best Practices & Subsurface Excellence

Exploration & production (E&P) projects tend to overspend/overrun and underproduce relative to their planned targets. As larger amounts of capital are risked in more challenging projects, effective capital project management becomes even more critical to meet corporate objectives. The IPA Institute offers the **E&P Project Best Practices** course, which incorporates IPA's proprietary model, "Pathways to Asset Success." This model is based on a detailed root cause analysis of over 250 completed asset developments in the E&P industry. The model provides insights into overall project success and the quality of information in the early project phases; effective integration between the reservoir, facilities, and wells programs; and team experience and integration via a good work process.

In addition to the E&P Project Best Practices course, the IPA Institute also offers a **Subsurface Excellence** seminar. This seminar shares Best Practices for defining the subsurface elements of assets in E&P investments. Unlike the *E&P Project Best Practices* course, this seminar focuses specifically on practices and work processes for subsurface (reservoir and well construction).

Both programs integrate findings from IPA's extensive quantitative research that links project management practices to project outcomes. This research is based on IPA's database of more than 1,200 E&P investments. E&P Project Best Practices is a 3-day course and Sub-surface Excellence is a 2-day seminar. Each program uses a combination of lecture, facilitated discussion, and case studies. As with all IPA Institute programs, these can be customized to meet your organization's needs as some companies end the program by establishing implementation plans for improvement. To view registration details and program costs and to learn about special discounts, please visit our website at [www.IPAInstitute.com](http://www.IPAInstitute.com), or call +1 (703) 729-8300.

*The IPA Institute is recognized as a registered education provider with the Project Management Institute (PMI).*



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over 500 projects already identified. These metrics, in turn, will permit a more robust analysis of onshore E&P developments, including individual cost benchmarks by unit. Similar to our existing cost capacity models, these tools will provide industry cost and schedule benchmarks based on process and project inputs related to the individual components.

IPA plans to release the first set of enhanced analytical tools for onshore E&P developments at this year's UIBC, scheduled for November 2010. The UIBC will also provide a forum to discuss the expansion of our onshore E&P capabilities based on client needs. For additional information regarding our onshore E&P research and tools, please contact **Kelly Sonnhalter** at [ksonnhalter@ipaglobal.com](mailto:ksonnhalter@ipaglobal.com) or **Rolando Gächter** at [rgachter@ipaglobal.com](mailto:rgachter@ipaglobal.com).

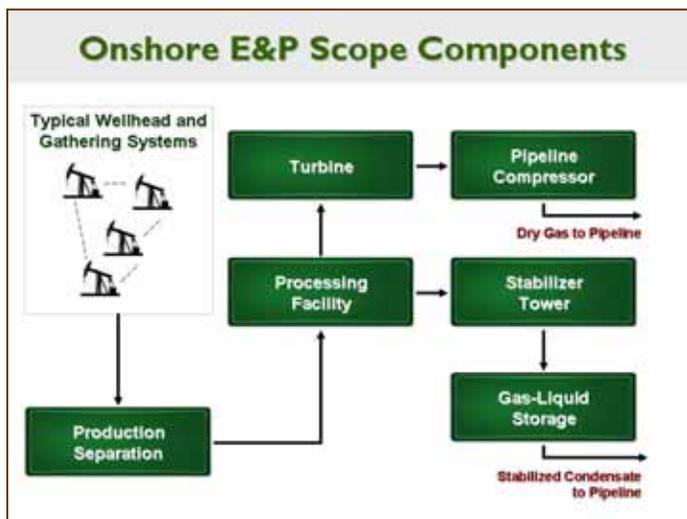


Figure 1. Block diagram of the evaluated onshore E&P scope components

### Professional Profile: *Kelly Sonnhalter, Senior Analyst*

Kelly joined IPA in 2001 and currently serves as a Client Coordinator for a major international oil company's downstream and upstream business areas. She has evaluated projects from many industries, including the refining, chemicals, mining and mineral, and pharmaceutical industries. In addition to conducting prospective, pacesetter, and closeout evaluations, she has led several special studies in the areas of megaproject execution and contracting strategies. Kelly's most recent research focuses on onshore E&P developments, including analytical tools and practices. Previously, Kelly worked for the Illinois Institute of Technology. Kelly obtained a M.S. in Biotechnology from Johns Hopkins University and a B.S. in Integrated Science and Technology from James Madison University.

## New IPA Study Focuses On Deepwater Gulf of Mexico

*In Move to Deepwater, Some Bending the Learning Curve Faster Than Others*



**While more and more operators are moving to the deepwater Gulf of Mexico (GOM), some are finding that there is a steep learning curve for executing projects in the area. Based on IPA's research that examines deepwater projects in this area, some operators are achieving significantly better capital and production performance than others. Early study results indicate that this is primarily because these operators have internalized learnings from their initial deepwater developments to understand the practices necessary to execute successful projects in the deepwater GOM.**

The move to deepwater is nothing new for the U.S. GOM. If anything, the move has accelerated in recent years. Projects here, as a class, have unique challenges and risks that need to be understood and mitigated to succeed. Interestingly, some have been more successful than others at applying past project lessons to succeeding projects. According to early findings of our recent study, the fast learners can capture a 20 percent cost advantage per project on a dollar-per-barrel basis for wells and facilities scope.

The **Deepwater Gulf of Mexico study**, underway since the start of 2010, will pool the learnings from a number of operators' deepwater GOM projects and distill them into deepwater GOM Best Practices, identify root causes of poor outcomes, and guide later projects on cost and schedule planning. The study will examine projects in greater than 300 m of water and also focus on the subset of projects in greater than 1,000 m of water.

Cost is not the only measure of project success and this study will also measure the performance of this class of projects in terms of production delivered (as opposed to production promised at sanction). Historically the exploration and production (E&P) industry has missed its first-year production promise by an average of 26 percent. We expect this particular metric to be more troublesome in the deeper waters where hard cost/data acquisition trade-offs are made more frequently than in shallow waters.

In addition, the study will help you avoid the pitfalls of past deepwater developments in the GOM because you will know

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how successful projects:

- Appraised the lower tertiary and subsalt trends effectively for a reliable basis for production forecasts
- Understood the effect of recent cost escalation on their estimates
- Built reliable sanction forecasts for cost and schedule
- Factored realistic learning curves for wells and facilities
- Avoided quality assurance/quality control (QA/QC) problems in the application of technology

IPA will base its study on data from more than 40 completed capital projects executed by 8 American and European companies in the deepwater GOM. Under evaluation is project performance based on scope-for-scope comparisons between projects executed by the super-majors and independents in the U.S. GOM.



This study is open to all E&P operators. For more information about the Deepwater Gulf of Mexico study, please contact **Rolando Gächter** at [rgachter@ipaglobal.com](mailto:rgachter@ipaglobal.com).

## *The Industry Benchmarking Consortium Marks Its 20<sup>th</sup> Annual Meeting!*

20<sup>th</sup>  
Anniversary!

In March, we will host the 20<sup>th</sup> annual conference of the **Industry Benchmarking Consortium (IBC)**. The IBC has come a long way since that first meeting hosted by Shell with Chevron, Dupont, and Eastman also attending. Present at that first meeting were some greats of the Industry—such as Bob Miller from Dupont and Jim Braus of Shell. Mary Ellen and I represented IPA and compared the strengths and weaknesses of the four project systems. (Even then, Mary Ellen did most of the work!)

At that first meeting, which was the brainchild of Al Norman of Dupont, the idea of actually comparing on a straight-up logo-on-logo basis seemed audacious, whereas now it seems almost commonplace—at least to us at IPA. Over the years, more and more companies have wanted to join. Those who met the membership criteria—system benchmarking and a commitment to excellence—have always been warmly welcomed by members new and old. It is that willingness to share and learn that has made the IBC such an important event for so many companies and for IPA. The first members were oil refiners and chemical companies, but soon afterward, pharmaceutical companies, specialty chemicals, and the minerals industry followed. The production part of the petroleum industry decided it wanted its own IBC, so we founded the Upstream Industry Benchmarking Consortium (UIBC) in 1995. The UIBC will celebrate its 15<sup>th</sup> anniversary in November.

The first couple of IBC meetings focused largely on system benchmarks, but as our databases grew, the members supported an increasingly ambitious research program. The research component has become central to the IBC's mission and has set the stage for the research programs and panels of other major industry meetings, albeit with a lag of 6 to 18 months. We focused our research program on issues both timely—such as handling the inevitable ups and downs of the Industry—and enduring—such as doing Front-End Loading (FEL) genuinely well, labor productivity, contracting strategies and their effects, team composition and quality, owner core competencies, etc. We started by looking at the relationship between FEL quality at authorization and project outcomes. In those days, we could only look at FEL as it mitigated cost, schedule, and operability risks in much the same fashion as the early work back at The Rand Corporation. Within a few years, however, we switched our focus more and more to the real business-relevant metrics: cost, schedule, and operational effectiveness. In doing so, we quickly realized that our attention on the front-end had to include the earlier phases of project definition—business case framing and scope development.

At IBC 10 in 2000, we rolled out our assessment of small projects executed by sites, and began in earnest to benchmark individual sites. Since then, we have looked at 338 sites many times. Soon thereafter, the member companies chose to devote the Thursday of the IBC meeting to site-based systems, both capital projects and turnarounds.

For my staff and me, the IBCs and the Committee Conferences spawned by them take all year to prepare and are eagerly anticipated by all of us. What started as a meeting of a dozen in a small conference room at Shell in Houston has developed into a 4-day celebration of project excellence and aspiration shared by nearly 50 companies and 300 attendees every year. I eagerly look forward to my 20<sup>th</sup> in a few weeks!

**Ed Merritt**  
President, and CEO,  
Independent Project Analysis, Inc.



## Best of IBC 2010 Roadshows

The **Industry Benchmarking Consortium (IBC)** provides an independent forum for each participating company to view its performance against that of other companies. The research presented at each conference identifies Best Practices for improving capital effectiveness.

IBC 2010 will be held from March 22 to 25, 2010, in Northern Virginia in the United States. During this conference, members are allowed to bring a limited number of participants to represent the company. Many participating companies have expressed interest in increasing the size of their delegation as well as enabling participants located outside the United States to participate. As a result of these requests, IPA will conduct a series of Best of IBC 2010 Roadshows around the world.

The road show is highly recommended for project and business professionals directly involved in the management of either large or small capital projects and turnarounds.

### Europe Roadshow

**i** April 15 - 16 (*The roadshow is 1.5 days*)  **Nathalie van der Hoek**  **BestofIBC@ipaglobal.com**  
 NH Hotel, The Hague, The Netherlands **+31.70.335.0707**

 Coinciding with the Europe Roadshow will be the **Pharmaceutical Forum 2010** and the **Turnaround Forum 2010** available for both IBC and non-IBC members. IPA will sponsor these forums to allow the participants to network and share experiences and knowledge with the Best-in-Class companies.

### South Africa Roadshow

**i** May 20  **Nathalie van der Hoek**  **Jorge Castañeda**  
 Johannesburg, South Africa **+31.70.335.0707** **jcastaneda@ipaglobal.com**  
 Hosted by Sasol **Nathalie van der Hoek**  
**BestofIBC@ipaglobal.com**

### Houston Roadshow

**i** May 25 or 26 (*2 separate 1-day sessions*)  **Ellie Reynolds**  **Mike McFadden**  
 Houston, TX, USA **+1 703.726.6471** **mmcfadden@ipaglobal.com**  
 Hosted by DOW **Ellie Reynolds**  
**ereynolds@ipaglobal.com**

### Calgary Roadshow

**i** June 3  **Ellie Reynolds**  **Keith Mayo**  
 Calgary, Canada **+1 703.726.6471** **kmayo@ipaglobal.com**  
 Hosted by Syncrude **Ellie Reynolds**  
**ereynolds@ipaglobal.com**

### Asia Pacific Roadshow

**i** June  **Christine Lim**  **APBestofIBC@ipaglobal.com**  
 Singapore or Kuala Lumpur **+65.6567.2201**



## EPC Market Forecasting Forecasting Capital Project Price Trends

IPA has been providing for over 2 years a quarterly newsletter forecasting capital project price trends 5 years into the future for nine regions of the world. The **EPC Market Forecasting** newsletter is available to existing IPA clients on an annual subscription basis. The goal is to inform clients of market price trends so that:

- Savings may be achieved through the timing of project expenditures
- Accuracy of future escalation estimates are more likely

### What Does This Product Provide?

#### Quarterly Newsletter:

Approximately 20 pages of color graphics, articles, and tables presenting various aspects of EPC price trends, by component and region. An example is available.

#### The Data:

A spreadsheet of the historical and forecasted values are provided for all of the price trends.

#### Attention to Your Concern:

Subscribers may contact us anytime to discuss recent EPC market trends. And we often call subscribers to solicit comment or to provide information about a recent event. We want to

provide the market information that is in greatest demand. For example, we have added regions and more detailed breakdowns of cost components at the request of subscribers.



### What Distinguishes IPA?

#### Database:

IPA collects estimated and actual capital project information directly from project teams at the rate of approximately 1,000 projects per year. This river of current and consistent data is unparalleled and is the source of all IPA products and services, including our market forecasts.

#### Development and Validation:

The Dow Chemical Company sponsored, reviewed, and independently validated IPA's market forecasting capability.

#### Statistical Modeling:

IPA's work is based on statistical modeling. This means historical patterns are quantified and then extended to a future project or point in time. With forecasting, the market response is measured and then extended.

#### A Forecast, Not Scenarios:

The IPA forecasts represent our quantification of EPC price trends. We are not offering a wide range of forecasts based on widely different scenarios. We simply provide the IPA forecast, based on unmatched historical data and sound forecasting methods.



Annual subscriptions are available to existing IPA clients. Terms and conditions are consistent with our existing contracts. For more information, please contact **Dean Findley**, Director, Product Development Group at [dfindley@ipaglobal.com](mailto:dfindley@ipaglobal.com) or **Robert Brown**, Manager, Cost Engineering and Cost Services at [rbrown@ipaglobal.com](mailto:rbrown@ipaglobal.com).

## Upcoming IPA Events and Presentations for 2010



**March 22 - 25**

### ***Industry Benchmarking Consortium (IBC) 2010***

The 20th annual meeting of the Industry Benchmarking Consortium (IBC 2010) will be held at the Hilton Washington Dulles Airport in Herndon, Virginia, USA. The IBC is a premier training opportunity in capital stewardship for both business and project professionals. For more information please contact Phyllis Kulkarni at [pkulkarni@ipaglobal.com](mailto:pkulkarni@ipaglobal.com).

**April - June**

### ***Best of IBC 2010 Roadshow Series***

IPA will offer a series of roadshows to share the metrics and top-rated research presented at the IBC 2010. The roadshows will be held in the following regions: Europe, South Africa, United States, Canada, and Asia-Pacific. Please see page 4 in this newsletter for more details. The roadshows are open to all IBC companies, and provide an opportunity to extend the IBC metrics and research to company participants that were unable to attend the main IBC. For more information, please contact [BestofIBC@ipaglobal.com](mailto:BestofIBC@ipaglobal.com).

**April 15**

### ***Pharmaceutical Forum 2010***

The Pharmaceutical Forum 2010 will coincide with the Best of IBC Roadshow in Europe and is open to IBC and non-IBC members that execute pharmaceutical projects. The focus of this year's forum is Global Project Excellence. Research focused on regional practices in Europe, the Middle East, Asia, and India will be shared. There will also be a discussion on portfolio management practices for pharmaceutical projects. For more information, please contact Valerie Roma at [vroma@ipaglobal.com](mailto:vroma@ipaglobal.com).

**April 16**

### ***Turnaround Forum 2010***

The Turnaround Forum 2010 will be hosted in parallel with the IBC 2010 Road Show in Europe to allow the IBC and non-IBC participants to network and share experiences and knowledge with the Best-in-Class companies. The purpose of the forum is to share learnings that result in shorter and more cost effective turnarounds. For more information, please contact Patrick Voogd at [pvoogd@ipaglobal.com](mailto:pvoogd@ipaglobal.com).

**June 21**

### ***Best of UIBC 2009 Roadshow***

The UIBC 2009 Roadshow will be hosted by Marathon in Houston, Texas. The UIBC Roadshow is open to all UIBC companies, and provides an opportunity to extend the UIBC metrics and research to company participants that were unable to attend the main UIBC 2009. For more information, please contact Rolando Gächter at [rgachter@ipaglobal.com](mailto:rgachter@ipaglobal.com).

**June 22**

### ***Upstream Cost Engineering Committee (UCEC) 2010***

The Upstream Cost Engineering Committee (UCEC) Annual Meeting will be held in Houston, Texas. The purpose of the UCEC is to improve upstream project and business results by providing metrics for better cost engineering. The UCEC metrics provide asset evaluation and concept development functions with a better understanding of costs and schedules. For more information, please contact Carlton Karlik at [ckarlik@ipaglobal.com](mailto:ckarlik@ipaglobal.com).

**September 14 - 16** ***Cost Engineering Committee (CEC) 2010***

The Cost Engineering Committee (CEC) will be held in Dulles, Virginia, USA. The purpose of the CEC is to extend the IBC forum to cost engineering practices with a focus on cost and schedule metrics. By using these cost and schedule metrics and research findings, companies can improve their project and business results. For more information, please contact Robert Brown at [rbrown@ipaglobal.com](mailto:rbrown@ipaglobal.com).

**November 8 - 10** ***Upstream Industry Benchmarking Consortium (UIBC) 2010***

The Upstream Industry Benchmarking Consortium (UIBC) will be held in Tysons Corner, Virginia, USA. The UIBC provides an independent forum for each participating company to view its performance against the performance of other companies. The consortium highlights Best Practices, reinforcing their importance in driving improvements in asset development and capital effectiveness. For more information, please contact Rolando Gächter at [rgachter@ipaglobal.com](mailto:rgachter@ipaglobal.com).



## 2010 IPA Institute Program Schedule

To view full course descriptions, pricing, up-to-date registration details, and special discounts, please visit our website at [www.IPAInstitute.com](http://www.IPAInstitute.com)

### *Executing Successful Megaprojects (18 Professional Development Units)*

April 6 - 8: Calgary, Canada	May 4 - 6: Perth, Australia
May 17 - 19: Johannesburg, South Africa	July 13 - 15: Santiago, Chile
October 5 - 7: Houston, Texas	December 6 - 8: Reading, England

### *Project Management Best Practices (22 Professional Development Units)*

April 13 - 15: Santiago, Chile	May 25 - 27: Houston, Texas
May 25 - 27: The Hague, The Netherlands	June 22 - 24: Chicago, Illinois
July 27 - 29: Denver, Colorado	August 17 - 19: Lima, Peru
August 24 - 26: Calgary, Canada	September 7 - 9: Buenos Aires, Argentina
October 26 - 28: Rio de Janeiro, Brazil	November 24 - 26: Johannesburg, South Africa

### *Gatekeeping for Capital Project Governance*

April 14 - 15: Houston, Texas	May 18 - 19: Arlington, Virginia
May 25 - 26: Melbourne, Australia	June 14 - 15: Calgary, Canada
June 8 - 9: Singapore, Singapore	

### *Exploration and Production Project Best Practices (22 Professional Development Units)*

April 20 - 22: Bogotá, Colombia	September 6 - 8: Reading, England
September 14 - 16: Anchorage, Alaska	November 23 - 25: Rio de Janeiro, Brazil

### *Best Practices for Small and Plant Projects (22 Professional Development Units)*

April 27 - 29: Brisbane, Australia	June 22 - 24: Shanghai, China
August 3 - 5: Houston, Texas	November 16 - 18: Beijing, China

### *Establishing Effective Capital Cost and Schedule Targets*

May 3 - 4: Houston, Texas	May 17 - 18: Singapore, Singapore
May 25 - 26: Santiago, Chile	August 24 - 25: São Paulo, Brazil

### *Best Practices for Mining Projects*

May 18 - 19: Belo Horizonte, Brazil	June 30 - July 1: Lima, Peru
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### *Mitigating Risks of Innovation*

June 2 - 3: Houston, Texas
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### *Contracting in the Changing World of Projects - A Seminar on Contracting Strategy*

September 28 - 29: São Paulo, Brazil	October 13 - 14: Santiago, Chile
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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.

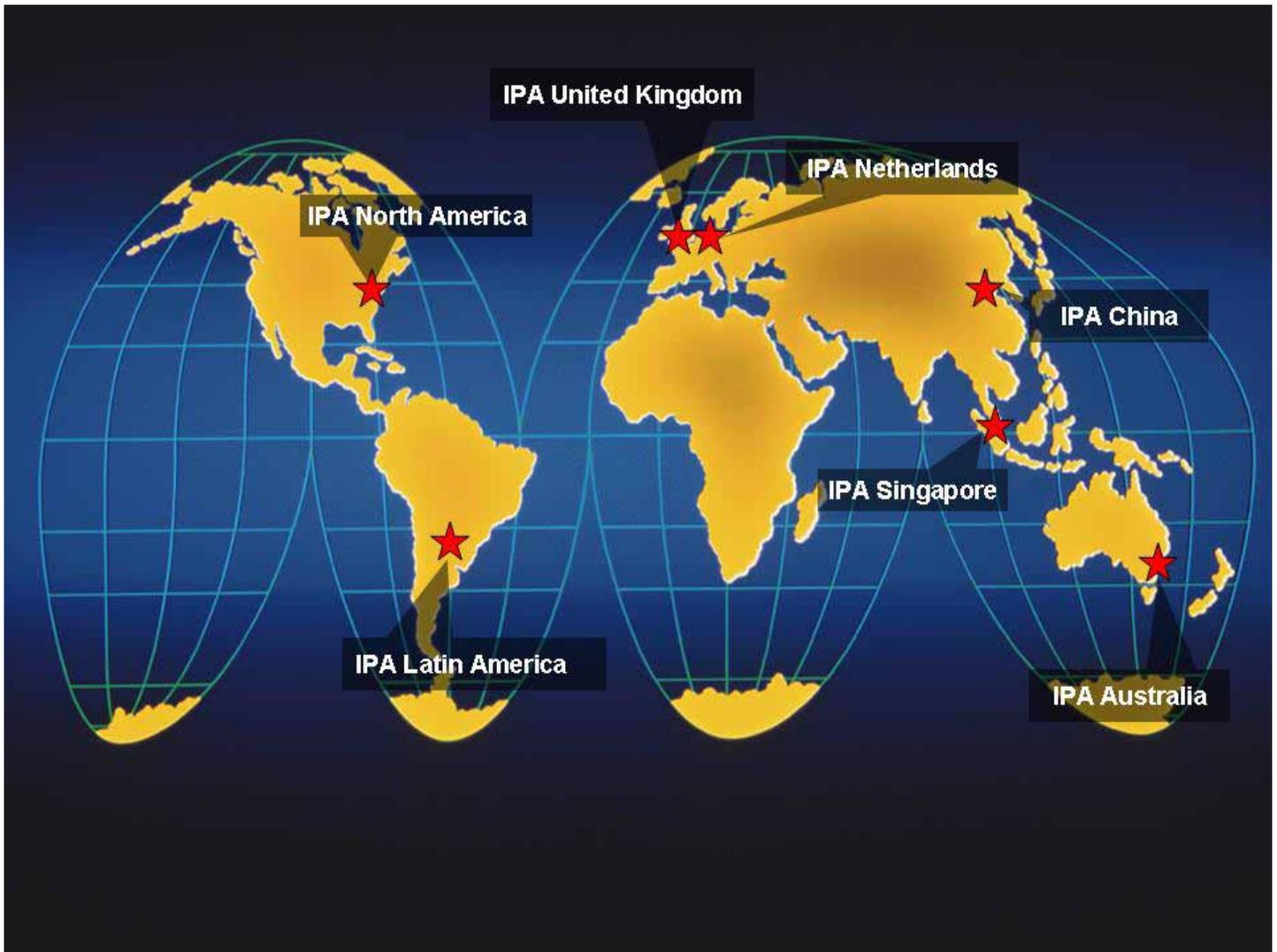


The IPA Institute's mission is aligned with the overall IPA mission to improve the capital productivity of its clients. The programs offered provide a forum for in-depth understanding of key elements of the capital project process and how to apply these learnings to effect positive changes and improvements, resulting in the more effective use of capital.

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