PM NETWORK

MAKING PROJECT MANAGEMENT INDISPENSABLE FOR BUSINESS RESULTS.®

2012 PMI PROJECT OF THE YEAR

UNDER INTERNATIONAL PRESSURE, A PROJECT TEAM DESTROYS **OVER 220,000 DANGEROUS WEAPONS** ON DEADLINE

The URS team, from left:
Peggy Zipperer, PMP,
Pat Mohondro, Steve Warren, PhD,
Larry Dow, Rich Stone,
Laura Jendro, PMP, Will Leslie

Congratulations
Recipients of
2012 PMI
Professional
Awards!

AWARD WINNER
PMI Project Management Institute
2012
BEST OF THE BEST
IN PROJECT MANAGEMENT

PMI Project of the Year Award

Umatilla Chemical Agent Disposal Facility
Operations Phase | Hermiston, Oregon, USA
U.S. Army Chemical Materials Agency and URS
Corporation

PMI Project of the Year Award Finalists

Pacific Northwest National Laboratory's Capability
Replacement Laboratories Project
Richland, Washington, USA | Pacific Northwest
National Laboratory, a research laboratory of the U.S.
Department of Energy Office of Science, and the U.S.
Department of Homeland Security

Procter & Gamble Ordering, Shipping and Billing
Project | Cincinnati, Ohio, USA and Kronberg,
Germany | Procter & Gamble

PMI Fellow Award

Yanping Chen, MD, PhD, PMP
Mark Owen Mathieson, PE, PMP
Aaron J. Shenhar, PhD, PMP
Thomas Walenta, Dipl.- Math, PMP

PMI Distinguished Contribution Award

John H. Cable, RA, PMP
Agnieszka Maria Gasperini, PMP
Gary M. Hamilton, PMP, PgMP
Pablo Lledó, MSc, MBA, PMP

PMI David I. Cleland Project Management Literature Award

The Basics of Project Evaluation and Lessons Learned
by Willis H. Thomas, PhD, CPT, PMP

PMI Community Advancement through Project Management Award

Organization Category
Recipient: PricewaterhouseCoopers and Beyond Sport
for Project GreenHands

2012 PMI Continuing Professional Education Provider of the Year Award

Corporate/Government/Association Category
Recipient: IBM Project Management University

Individual Business Provider Category
Recipient: Velociteach Project Management

PMI Continuing Professional Education Product of the Year Award

Individual/Business Provider Category
Product: SimProject® | **Recipient:** Fissure

PMI Research Achievement Award

Brian Hobbs, MBA, PhD, PMP | Professor, University of
Quebec | Montréal, Quebec, Canada

Project Management Journal® Paper of the Year Award

Paper Title: "Knowledge Transformation in Project
Networks: A Speech Act Level Cross-Boundary Analysis"
Recipients: Pauli Alin, DSc, John E. Taylor, PhD, and
Riitta Smeds, DSc (Tech)

Announcing the
Call for Nominations
for the 2013 PMI
Professional Awards.

PMI Professional Awards honor the organizations and individuals whose passion, talent and expertise make the greatest contribution to the project management profession.

Demonstrate excellence in the theory, practice and implementation of project management best practices. Send your nomination today.

The list of awards, guidelines, submission information and FAQs are available at PMI.org/Awards.

Projects • People • Organizations • Literature • Education and Training

Winners of the 2013 PMI Professional Awards will be honored at the PMI Professional Awards Ceremony during PMI® Global Congress 2013—North America.
Secure your place among the best in project management.
Start now by visiting **PMI.org/Awards**.

PMI®
Project Management Institute

36

The Whole World Is Watching

Megaevents bring big budgets, intense public scrutiny and legions of stakeholders. And looming over the entire project is that immovable deadline.

by Sarah Fister Gale

Michal Olszewski,
PL.2012, Warsaw, Poland

Features

12

18

22

66

[feedback]

Does an agile approach require a project manager?

Krishnakanth Perumahanti, PMP, asks: With agile picking up its pace, do you think the position "project manager" exists in the software industry anymore?

Alexander Lehming, PMP, responds: In agile, if anything, there is an even greater demand for project/program/portfolio managers.

Project managers are still needed, especially in agile frameworks like Scrum. They are also needed on project initiation to gather requirements and turn them into the product backlog for risk assessment. In that scenario, project managers are heavily involved in monitoring and control, as well as stakeholder management and, eventually, closing projects.

How should project managers explain the need to re-estimate to sponsors or executives?

Cindy Lee Weber, PMP, asks: How do you, as a project manager, deliver the news that the estimates you came to at the beginning of initiating/planning a project are different after the planning process, and you must re-estimate?

NK Shrivastava, PMP, responds: I set expectations from the very beginning that estimates would change after the detailed planning has been completed. I give examples such as the "cone of uncertainty" and "progressive elaboration."

I normally set expectations that estimates may be 100 percent off at the initiation/chartering stage. It means a project of 1,000 hours may be estimated anywhere between 500 and 2,000 hours. After the detailed planning, the estimation errors could be within 15 percent.

I treat estimation error as a risk and create response plans to handle it. At times, I keep an estimation error reserve and integration in the project schedule. The process really works very well.

[POLL]
On PMI's Career Central LinkedIn page, Sarika Kharbanda, PMP, asks: **What characteristic or personal value in a leader would you rank the highest?**

52% Honesty

29% Commitment

11% Effectiveness

5% Forward-thinking
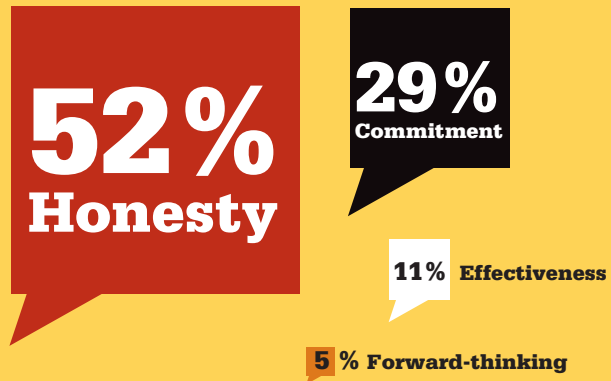
[VOICES ON PROJECT MANAGEMENT BLOG]
In a post, V. Srinivasa Rao made this project management prediction: **Project entrepreneurship will be a trend to watch for the next decade.**

Don Kim responds: While I agree with the idea of the project manager [becoming] more entrepreneurial, ironically, this runs contrary to most companies' cultures of conformism and aversion to risk-taking.
As a project manager, you have to be very careful about taking on risks and treating a project like a startup if the company you work within doesn't have a culture that encourages such bold initiatives.

[FACEBOOK]
PMI asked project professionals: **What are the most important skills a project manager needs to help organizations improve or meet strategic goals?**

Jan Helge Hansen responds: Analytical skills, communication skills, insight into the strategy and the process of developing a strategy, insight into the market, management skills, control skills, breakdown skills, risk management, and good knowledge of the business and its culture.

Ramy Ibrahim answers: Communication, planning and managing the triple constraints of scope, time and cost.

Chris Crafts says: Consulting skills and the ability to manage sponsor/stakeholder expectations.

Get the Right Training

Use Only PMI Registered Education Providers for Your Project Management Training Needs

You will find thousands of training organizations that offer courses related to project management. How do you know that the training you choose is of high quality and that it will be accepted by PMI for Professional Development Units or contact hours on your credential application?

The answer is simple: Select a **PMI Registered Education Provider (R.E.P.)**. PMI assessed the training these organizations offer and established that they meet rigorous quality standards for project management training and education.

Go to **PMI.org/FindREP.aspx** to find your quality training provider. And here is what you get when you select any R.E.P.:

FACTORS DIFFERENTIATING PROJECT MANAGEMENT TRAINING	R.E.P.	Non R.E.P.
Demonstrated alignment with PMI, the world's largest project management member association.	Yes	No
Pre-approved by PMI to offer PDUs. Credential holder PDU claims are automatically expedited for processing.	Yes	No
Qualifications are verified before acceptance and every three years thereafter through PMI's quality review process.	Yes	No
Every project management course registered with PMI must be reviewed by an appropriate and valid PMI credential holder.	Yes	No
Verified focus of courses on learning outcomes.	Yes	No
Project Management Professional (PMP)® credential prep courses must be taught by valid PMP credential holders.	Yes	No
Instructors must be current in learning methods and must continuously enhance their skills.	Yes	No
Courses must be current and aligned to the latest PMI global standards.	Yes	No
Verified mechanism in place for students to provide feedback on courses to the organization and PMI.	Yes	No
Demonstrated continuous improvement of courses based on student feedback.	Yes	No
Continuous quality improvement process and procedures demonstrated throughout the organization.	Yes	No

* The "No" classification means that non-R.E.P.s do not or may not offer this benefit since it has not been confirmed on an individual, case-by-case basis.

PMI Project Management Institute

RESIDENCE INN BY MARRIOTT®

TOWNEPLACE SUITES BY MARRIOTT®

thePul

670 million
The number of people
affected by the
July blackout in India

44%
The amount by which the Indian
government aims to increase its power
generation capabilities by 2017

16%
The portion of power-generation capacity
the Indian government hopes will come
from alternative energy by 2022

Sources: The New York Times *(first from left),* TriplePundit

Se

Tidal turbines in Cobscook Bay, Maine, USA

Powering Through India's Energy Shortage

After years of maneuvering around a decrepit energy infrastructure, India paid the price in late July: a blackout of apocalyptic proportions. Three of the country's northern power grids collapsed simultaneously, cutting off power to about 670 million people—roughly 10 percent of the world's population.

The outage only lasted a few hours, but the repercussions linger, raising difficult questions over whether the world's second-most populous country can keep up with the energy needs of its booming population.

"India subsists with a constant peak power deficient of 10 percent to 16 percent," says Russell Green, an economic fellow at Rice University's Baker Institute in Houston, Texas, USA. "The grid is always operating under a certain amount of strain, and there is little surplus capacity."

Even slight shifts in demand can immediately overburden the already struggling system—and the situation looks to only get worse. The International Energy Agency estimates India's electrical needs will triple by 2035. The Indian government has responded with an ambitious plan to expand its power-generation capacity by a whopping 44 percent over the next five years. And it wants 16 percent of that to come from renewable sources by 2022. At the same, a faltering economy is prompting the country to scale back its target of investing US$1 trillion in infrastructure.

Power Vacuum

Much of India's chronic energy problem can be traced to byzantine government regulations that too often stymie potential projects. Though the power grid is nationally owned, facilities are operated by the states. That's where the trouble arises. "State electrical boards don't want to raise tariffs because it's politically unpopular, so many states have dug themselves into deep financial holes," Mr. Green says.

As a result, most states lack funds to build or maintain new power plants.

Furthermore, the private sector is wary of investing in new power generation over fears that state electrical boards won't be able to pay for it. "If your primary customer is bankrupt, its kills incentives for devel-

"The grid is always operating under a certain amount of strain, and there is little surplus capacity."

—Russell Green, Baker Institute, Houston, Texas, USA

WINNING WAVES

In September, Ocean Renewable Power Company became the first U.S. organization to deliver tidal stream power into the electricity grid.

While the project's early results in Cobscook Bay, Maine, USA, may appear meager—the turbines deliver enough power for just 25 to 30 homes—tidal and wave energy proponents hope success from these kinds of small efforts will eventually make waves.

Project teams face numerous risks when jumping into tidal stream projects, including the propensity of generators, which are built like underwater windmills, to break under the pressure of strong currents.

Building more durable generators increases project costs, meaning current tidal projects produce energy at five to six times higher the price of onshore wind power and seven times the price of natural gas power plants.

Tim Yeo, a lawmaker in the British Parliament who heads the Commons' Energy and Climate Change Committee, is undeterred. He told *The New York Times* these projects can produce "a huge prize, and therefore it is worth going for." He believes wave and tidal energy could eventually meet 20 percent of Great Britain's electricity demand.

The U.S. Department of Energy agrees, estimating wave and tidal power could meet 15 percent of U.S. electricity needs by 2030.

For now, organizations are looking to launch projects in Scotland, which is known for its rough waters and powerful tides. Those conditions could prove to be the final test for this renewable energy source.

opment," Mr. Green says.

The blackout may be enough to force India to look at some new project options, such as transferring ownership to private companies or joining forces with them, as was the case with the Gujarat Solar Park. The US$600 million project was developed in less than two

years through a partnership of 21 global companies and the Indian government. Billed as Asia's largest solar park, the 1,200-hectare (3,000-acre) site can supply 214 megawatts of electricity. Following the blackout, India announced a project following the same model in the Bijapur district.

Yet the Indian government will need to demonstrate a willingness to reform the country's regulatory environment if it wants more so-called "ultra mega power projects" like the one in Gujarat to succeed, says Mr. Green.

Gujarat, billed as Asia's largest solar park at 1,200 hectares (3,000 acres), can supply

214

megawatts of electricity.

In addition, project owners must be willing to look beyond India's borders for project management talent and expertise.

"There is an odd reluctance in India to ask for foreign advisers on projects, and [project owners] like to use local talent," he says. That may be good for the local economy—but bad for project delivery.

"It's a matter of sharing best practices," Mr. Green says. "The more [the owners] are willing to work with industry experts, the more productive these projects will be." —*Sarah Fister Gale*

LAWYERS BUILD A CASE FOR PROJECT MANAGEMENT

The jury is still out, but it appears the days of law firms billing by the hour may be numbered, replaced by other payment schemes such as fixed-fee. Law firms have long relied on hourly billing, but the practice often masked inefficiencies and prevented transparency in the way attorneys worked.

Now, recession-battered clients are increasingly demanding changes in the structure to foster greater accountability. That, in turn, is pushing many law firms to adopt project management practices.

Just over half of the 236 U.S. firms in an ALM Legal Intelligence August report said they use project management. Although resistance to change may be a factor behind that relatively low number, 56 percent of the firms that use project management said it helped increase efficiency and productivity.

"Lawyers are turning to project management to find ways to give more value for less money, because clients are demanding more quality for less money," says Jim Hassett, founder of LegalBizDev, a legal project management and business development firm in Boston, Massachusetts, USA.

The Verdict?

Alternative fee arrangements, which were used by 95 percent of the respondents in a 2011 Altman Weil survey of large and midsize law firms, are fueling the rise in project management practices. A firm may handle a single case or portion of it for a negotiated, agreed-upon amount, for example. That's where project management fundamentals such as scheduling and scope management can be useful.

"In these fixed-fee scenarios, it can be easy to lose money. Project management can help lawyers be more efficient with their time," says Bob Bruce, PMP, project manager at iPay Technologies, Louisville, Kentucky, USA. He is also the marketing lead for the PMI Legal Project Management Community of Practice.

Before leaving his job as a legal project management specialist at Frost

---

FLYING ACES

Heightened international competition. A clouded global economic climate. A downturn in Western defense markets. When faced with these challenges, what weapons are aerospace and defense (A&D) program professionals using to gain a competitive edge?

Answer:

inn**⬤**vation

64%

64% of senior executives believe program innovation gives their organizations a competitive advantage.

Brown Todd, Mr. Bruce worked on a project, now 80 percent completed, in which he negotiated a flat-fee arrangement for an attorney working with a record company to summarize contracts and enter them into an online database.

As part of the project launch process, he looked at resourcing and budgeting.

"I started capturing people's time through a pilot program to determine how long each entry would take. I looked at the budget, scope and team that was needed based on cost parameters," he says. "Without project management, there is no way the attorney would have made his budget."

With a still-fragile economy, law firms need all the efficiencies they can get. At Frost Brown Todd, only a small percentage of litigation went to trial, Mr. Bruce says, but when cases did, the time and effort increased greatly.

For more on project management in the legal sector, visit the **Legal Project Management Community of Practice** on PMI.org.

"In litigation, not only are there project risks, but the project manager/attorney actually has an opponent actively involved in derailing the project," he says.

Yet the ALM survey also showed law firms still have some work to do. For example, respondents ranked how well their law firm adhered to eight project management practices, including defining scope, assessing risk and measuring ROI. With a scoring range from 1 (does not follow) to 5 (completely adheres), the average firm scored 2.6.

Culture Shock

While some progress has been made, many in the legal field are still trying to understand what project management really means. Some lawyers believe it's a fad, Mr. Hassett says. Of respondents to the ALM survey who use project management, only 29 percent said their firm was "very supportive" of it.

Those responses reflect a strong resistance to change in the law firm culture. And the structure of many firms—with management often spread among hundreds of partners—makes implementing new policies inherently difficult.

Project management advocates can increase buy-in at law firms with the same strategy that has worked in other industries: small, early wins. That means "targeting initial efforts in areas that would be most receptive, incrementally rolling out initiatives and getting experienced help," according to the ALM survey.

Mr. Hassett agrees, pointing out that lawyers tend to respond to precedent. "There needs to be some buy-in, as in a project manager comes in [and] applies elements of project management, and the ROI is there," Mr. Hassett says. "If other partners see this, they will get on board. Project managers will need to change the perception one lawyer at a time."
—*Heidi Hjerpe*

> "Lawyers are turning to project management to find ways to give more value for less money, because clients are demanding more quality for less money."
>
> —Jim Hassett, LegalBizDev, Boston, Massachusetts, USA

What other practices do executives say help A&D programs deliver benefits?

45% managing globalized supply chains

45% Keeping tight control of program costs

41% Relying more on partnerships

27% Risk-sharing with the supply base

27% Delivering programs more quickly (better time to market)

SAVING BIG WITH TECH PROJECTS

The Australian federal government, looking to save AUD2 billion in spending, is launching a new program management office.

Created in October, the office will launch a number of projects designed to increase the effectiveness of information and communications technology (ICT) across departments.

Backed by a three-year strategy, these investments also aim to provide greater transparency in ICT activities, particularly for common systems such as human resource and financial management, according to *iTnews for Australian Business*.

Projects ranking highly on the government's strategic agenda include an ICT services catalog, a parliamentary workflow solution, government-wide mobile and big data strategies, and improved participation in academic and industry forums about new technologies, according to *iTnews*.

Making Urban Sprawl Sustainable

The stress on the world's urban infrastructure continues to mount. More than 70 percent of the global population will live in cities by 2050, up from roughly half right now, according to consulting firm KPMG. As city populations increase, so too will the demand for infrastructure—water, power, transportation—necessary for sustainable urban living.

KPMG's *Infrastructure 100: World Cities Edition* report, released in July, highlights cutting-edge projects with new solutions for a potential urban crisis. The projects were chosen by an external and independent group of industry experts based on the criteria of scale, feasibility, technical or financial complexity, innovation, and impact on society.

"One of the primary objectives of the *Infrastructure 100* is to spur people to be bolder in their aspirations," says Steve Beatty, Americas head of global infrastructure at KPMG, Toronto, Ontario, Canada. "These cities are thinking big, investing within their means and keeping the end game in view."

Three such projects, each addressing a modern city's pressing need in one area, showcase both the importance of such efforts and the difficulties teams face in executing them.

Eco-cities Made Anywhere

Project: Tianjin Eco-City
Location: Tianjin, China
A sharp counterpoint to China's polluted megacities, Tianjin Eco-City is designed as a model for sustainable development, a standout for a country leading the world in eco-city development projects, according to a report from the University of Westminster, London, England.

The new city will feature an advanced light-rail system, solar energy production and smart-grid technology. Project leaders also included 12 square meters (129 square feet) per person of green space, and are planning for 20 percent of the city's energy to come from renewable sources.

Singapore and China launched the project in 2007 in one of China's fastest-growing regions, the Tianjin Binhai New Area. The team had a very specific purpose in mind for the region, which seemed an unlikely choice.

"In the past, so-called eco-cities have been built in ecologically important areas or on useful arable

---

A&D ranked their program management as ...

30% Excellent
25% Fair
45% Good

If a program is run well, what will happen to its profit margin over the

29% of executives expect the margin to **remain the same.**

>10%
14% say it will **increase more than 10%.**

<10%
29% say it will **increase less than 10%.**

Source: A&D Insights: A New Intensity, Programmes Under

East Side Access project,
New York, New York, USA

In 2009, New York's MTA estimated the East Side Access project would cost

US$7.33 billion

and wrap up in 2016.
The budget has since jumped to

US$8.24 billion

and the completion date pushed back to August 2019.

land," Ho Tong Yen, head of Sino-Singapore Tianjin Eco-City Investment and Development, the firm charged with building the city, told the BBC in May. "We wanted to show that it's possible to clean up a polluted area and make it useful and livable."

The eco-city will comprise 30 square kilometers (12 square miles) of land previously overrun by dry soil and contaminated bodies of water.

The three-year clean-up included the development of a new technology that removes the heavy metals from a central reservoir, which will be turned into a boating lake, according to the BBC.

One of the main goals of Tianjin and other eco-city projects is to harness innovation that lets cities expand—in a sustainable manner—as the number of inhabitants grows.

"You don't have to build big, but you should plan big," Mr. Beatty says. "If you plan too small, that can make later expansions difficult or impossible."

Upon completion—currently estimated by 2020—the US$40 billion Tianjin Eco-City will house 350,000 residents.

Major Moves for Better Mobility

Project: East Side Access
Location: New York, New York, USA

With long lead times and big budgets, urban transportation projects are notoriously complicated. But they also serve as the backbone of big-city living.

For New York's Metropolitan Transportation Authority (MTA), the goal of the East Side Access project is to increase rail capacity between two of the city's eastern boroughs and the east side of Manhattan by close to 50 percent and save commuters 30 to 40 minutes per day. In addition, the lines aim to improve regional air quality by encouraging mass transit and relieving train congestion.

One of the largest and costliest mass transit projects in the United States, the undertaking calls for seven miles (11.3 kilometers) of underground tunnels and 24 miles (38.6 kilometers) of new track. The team must also find ways to rebuild rail crossings without causing major disruption to the three train lines currently running, according to *The Wall Street Journal*. To minimize conflict, crews perform the majority of their work at night and on weekends.

"This project is an example of one of the biggest infrastructure issues over the

Station rendering, East Side Access project, New York, New York, USA

next decade?

<10%

24% say it will **decrease less than 10%.**

>10%

5% say it will **decrease more than 10%.**

What will affect a program in the next 10 years?
"Complexity is coming from the changing environment. Customers are facing difficult budget situations and, as we internationalize more, there's more complexity in those relationships. The challenge for all of us, both from the industry and the government side, is to deal effectively with that new environment."
—Nan Bouchard, vice president of program management, Boeing Defense, Space & Security

next 10 years: finding new ways to generate capacity in an urban environment," Mr. Beatty says.

Despite its great potential, the project has faced time and budget overages. In 2009, the MTA estimated the project would cost US$7.33 billion and wrap up in 2016. The budget has since jumped to US$8.24 billion and the completion date pushed back to August 2019.

Connecting Emerging Powers
Project: BRICS Cable Project
Location: Vladivostok, Russia to Miami, Florida, USA

A strong communication infrastructure can provide a powerful competitive advantage through "better trade, efficient manufacturing and connected knowledge economies," according to the *Infrastructure 100* report. The ambitious BRICS Cable Project aims to open up those opportunities to BRICS countries—Brazil, Russia, India, China and South Africa—by linking them via the third-longest cable in the world.

The telecom hubs currently connecting the five nations are inefficient, expensive and present data security risks, according to the BRICS Cable Project website.

The upgrade entails laying a 34,000-kilometer (21,126-mile) submarine cable from Vladivostok, Russia to Miami, Florida, USA. Along the way, it

will connect to China, India, Singapore, South Africa and Brazil. It will also interconnect with several other cables, including the in-progress West African Cable System and SEACOM, on the east coast of Africa.

As part of the planning phase for the BRICS project, traffic and feasibility studies were recently completed, and feedback from the respective governments has been positive so far, according to the report.

Though the project comes with risk, it should help the group of fledgling economic superpowers jump into the big leagues. "The size of the aspirations of BRICS needs to be matched by the scale of these countries," Mr. Beatty says.

The estimated completion date for the US$1.4 billion project is late 2014.
—*Heidi Hjerpe*

DORM PROJECTS GO BACK TO SCHOOL

College dormitories no longer look like the drab military-style barracks of old. In response to the more refined design sensibilities of today's students, schools are launching projects to create luxurious living quarters, on the theory that boosting amenities will also increase enrollments.

Some of the improvements would be more at home at a four-star hotel than on campus. Last year, Montclair State University in Montclair, New Jersey, USA, spent US$211 million on a residence hall complex that includes private bathrooms, plush furniture, flat-screen televisions in lounge spaces and restaurant-style dining. At the University of Western Australia, a new AUD68 million, 500-room dorm project slated to open next year promises students their own kitchens and an underground parking garage.

Furthermore, students prefer that these fancy amenities come with an

Student housing phase III complex, California State University, Fullerton, California, USA

environmentally friendly side. A recent survey from the French Network of Students for Sustainable Development shows 98 percent of respondents wanted sustainable elements from their campus residences.

The project team working on the student housing phase III complex at California State University in Fullerton, California, USA built sustainability into the project requirements from its launch.

"The entire campus has a forested environment, so it was important for the dorms to complement that environment," says Mark Josten, senior construction manager on the project at PCL Construction Services, Los

IMAGE COURTESY OF PAUL TURANG PHOTOGRAPHY/PCL

The average cost of room and board at U.S. colleges rose to
US$9,315
in 2012.

Source: U.S. News & World Report

Angeles, California, USA.

Able to house 1,056 students, the complex includes features such as outdoor LED lighting, sunshades and energy-management systems that helped the building earn a Leadership in Energy and Environmental Design (LEED) platinum certification.

Such amenity-loaded dormitories come at a premium, however: The average cost of room and board at the 1,066 U.S. colleges surveyed rose 3 percent in 2012, to US$9,315, according to *U.S. News & World Report.*

It's up to project leaders to find the delicate balance of innovation, sustainability and cost.

In some cases, that requires new approaches to project budgeting. In the case of Montclair State's residence hall, for example, the university entered into a public-private partnership. The move allowed the school to skip the public bidding process, thereby shortening the project timetable.

Taking a more innovative approach can also help construction companies build a portfolio to woo future project owners. When California State University officials asked Mr. Josten's team to use energy-efficient LED exterior lights, the cost presented budget concerns. But then he found companies willing to do it at a lower price in exchange for a public-relations boost.

Sometimes, though, creative genius gets slightly more complicated. It took four contractors, for example, to coordinate and install the sensors that automatically turn off the air conditioner when someone opens a dorm room window.

"When there are a lot of units, the lessons learned on the early units can be applied to many repeating units, so that construction productivity will be improved over a large portion of the work," says Mr. Josten.

On dormitory projects, learning isn't confined to the classroom. *—Louis La Plante*

FAST AND FURIOUS

Over the past year, 65 percent of executives say the speed at which their organization processes data has increased. That's boosted business across organizations—and created more challenges.

THE BENEFITS OF SPEED

Where organizations have seen the benefits of that speed, and where the potential exists:

Strategic decision-making
41% Have seen benefits
48% See potential benefits

Operational efficiency
39% have seen benefits
47% see potential benefits

Customer service
38% have seen benefits
46% see potential benefits
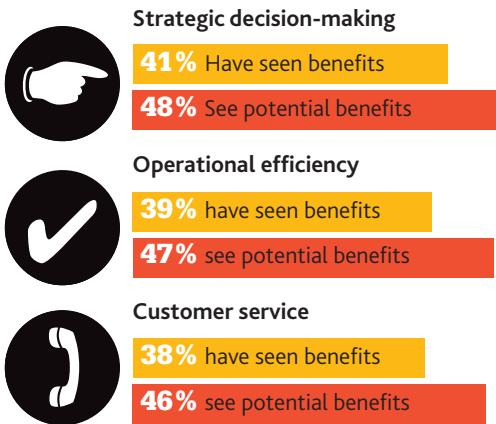
53%

The portion of respondents who named **systems for identifying new products and services** as the area with the greatest potential

COMING UP SHORT

The top four challenges organizations face when attempting to process data faster:

41% Lack of the right skills

39% Delays caused by validation and scrubbing the data

38% No formal data management processes

32% Lack the necessary technology
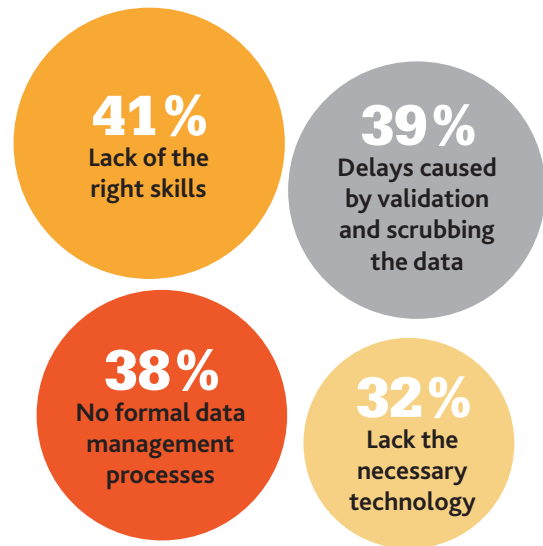
68% of respondents said their organizations possess the data storage and collection infrastructure needed to exploit the potential of their data.

But only **52%** report having data security infrastructure up to the task.

WHO'S MINDING THE DATA?

When organizations face those challenges, who is primarily responsible for the organization's data-management strategy?

30% CIO
22% Senior business executive
22% Senior IT executive
18% CEO
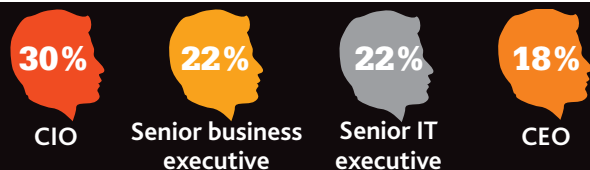
MISSED OPPORTUNITIES?

Only **46%** of executives said their organizations collect data from social media sources, including Facebook and Twitter...

46%

... Yet social media juggernaut **Facebook** has more than

a billion users

Source: Big Data: Lessons From the Leaders, *Economist Intelligence Unit. Results based on a survey of 752 global executives conducted in March 2012.*

Your project team members don't need to know every Here's how to determine the right amount of information to person, says John Tukums, PMP.

Finding the Perfect Fit

As a project manager, I have never complained about having a complete or "perfect" set of information about a project. Give me everything, and I will figure out where I need to focus.

Yet the same amount of information can overwhelm specialized team members. The challenge for the project manager is to find the right balance between too much and too little information for team members.

> A bottom-up approach of slowly ratcheting up access to additional information and keeping information silos at the onset takes too long and erodes too much trust. Team members may feel you are withholding information.

How Much Information Is Too Much?

Because every team member is different, the quickest way to find the right level of detail for individual team members is through a top-down approach to dispensing information. A bottom-up approach of slowly ratcheting up access to additional information and keeping information silos at the onset takes too long and erodes too much trust. Team members may feel you are withholding information.

Instead, I often initially provide too many details—a little bit of an "information overload"—at the beginning of the project, which allows the individual team members to prescribe the level of information they require for their own personal communication style and individual work effort.

For example, some team members with whom I work are meticulous and home in with incredible speed and mental agility on the creative information and direction needed to execute. Others are extremely cerebral and try to see the big picture before they begin assimilating information.

On one particular software project, I attended a meeting to share my experience working with the client. One project team member was a senior partner and big-picture thinker. I shared the traditional requirements for the project, as well as a deeper registry of information that included anecdotes and financial insights entrusted to us by the client. As this big-picture thinker asked further questions and gained insight, you could see a mental map forming. By the end of the meeting, the information was finally distilled down to its core.

John Tukums, PMP, is a project manager at Desire2Learn in Kitchener, Ontario, Canada.

How Can the Perfect Set of Information Be Used?

Here are quick-start ideas to establish and utilize a perfect set of information:

1 **Compose detailed contact notes** for conference calls and/or face-to-face team meetings. Break the notes into the main topics of the discussion, followed by sub-bullets denoting each person who contributed to the discussion. For example:

> *Analytics Discussion*
> *Steve: Captured feedback from usability*
> *Angela: Proceeding with second phase of analytical effort*

2 **Take ownership of setting up**—and more important, keeping up-to-date—a central data repository of project information that enables multiple team members to access, publish and download project working files.

3 **Deliver project communications**, including contact reports and status updates, scaled to each project team member. From time to time, sprinkle in extra information that you entrust to the team. This offering might be some financial information for a non-financial person or some creative information for a non-creative person. Extra information creates a deeper level of trust and exposes team members to new ideas.

Once a project manager discovers how and when to share a perfect set of information, he or she will gain the trust of the team, and facilitate dynamic communication and high-quality work. Ultimately, our teams can have a greater impact on our organizations' bottom line. **PM**

thing.
give each

Building Blocks

The AUD1 billion building upgrade at the University of Technology goes far beyond bricks and mortar. The school is also adding cutting-edge digital features such as a robot retrieval system in a library and 360-degree visualization in an arena.

But it's not about throwing in some cool bells and whistles; it's about delivering strategic benefits.

"The university's strategic vision is to be a world-leading university of technology. This includes having state-of-the-art learning, research, social spaces and infrastructure," says Christine Burns, who headed a law firm's IT department before becoming the university's CIO last May. "The building program is a key response to those long-term strategic plans."

Along with overseeing a significant portfolio of technology projects for the new buildings, Ms. Burns also leads IT and audiovisual teams. Her focus is on the portfolio managed by the project management office, and the university's long-term data center strategy.

> Like any CIO, I've seen projects that work well and those that don't. And I'm convinced that **using a formal project management methodology improves results, particularly in large, complex organizations.**

Describe the project management culture at the University of Technology.

The university has always had a strong project management focus, and we use traditional project management methods on all projects. We put a very strong emphasis on appropriate documentation to make sure executives have all the information needed to make decisions and evaluate risk. This way, they stay informed about project progress, and it ensures the project managers get the support they need when they need it.

What do you see as the biggest issues you face in your role?

My focus initially will be on the implications of the building program for the IT team. We're providing advice during planning on the technology going into these buildings and support throughout the building process. We're also devising a new support model for the highly digital campus that will result from this program.

What does the upgrade entail?

It involves a whole program of projects, including a refurbishment of the great hall with huge LED screens; a new building for the faculty of engineering and IT departments that will include an arena with a 360-degree visualization room to display large sets of data; and a building for the faculty of science that will include an underground library retrieval system operated by robots.

All of the new buildings will have a variety of collaboration spaces with interactive boards, touch-activated surfaces, wireless access points, shared monitoring displays and a lot of other exciting technology.

IT teams are often criticized for not communicating well with executives. How can your past experience in the private sector help bridge the gap?

Executives are busy people, and they need someone who speaks their language—who will provide them with the information they need to make decisions. For example, if they're choosing between two systems, they don't need to know technical details of what each one can do. They need to know how each one impacts the business. That's why it's helpful to have a CIO with a business background, because it's easier for me to understand how executives think. It's about focusing on what's important to the stakeholder, not to the IT team.

How do you see your role helping integrate the IT team into the overall organization?

I'll continue to work with the IT team to communicate our goals and projects to the rest of the organization, and to help other parts of the university understand why our methods are important to achieving better outcomes.

It's important for the IT team to be seen as the part of the organization that facilitates getting things done rather than acting as a roadblock. I want my team to be seen as the internal experts. Otherwise, people make technology decisions without understanding the implications of their choices. **PM**

Lead Time

What's the most important leadership trait for a project manager to have?

Swapnil Thakkar
senior systems designer, media engineering, Canadian Broadcasting Corporation, Toronto, Canada

The most important trait is the ability to delegate. An effective project manager knows who should participate in a particular job and perform the task for a section or item. It's always a good practice to get signoff from departmental managers of the individual you want to assign to a specific task. This also makes you look very methodical and respectful.

But remember, the project manager is ultimately held accountable for the success of the project regardless of whether he or she delegates work to others. So strong delegation skills include effective follow-ups; without those, delegation is little more than doling out tasks and hoping they turn out well.

Marco Antonio Solano, PhD
senior principal systems engineer, Raytheon Space and Airborne Systems, Dallas, Texas, USA

The most important trait is the ability to empower your team by providing an environment where members grow personally and professionally, and feel themselves vested in the project. Influence goes so far; having realistic buy-in is essential in allowing team members to take ownership. When this happens, they will go the extra mile, ingenuity flourishes and the team feels comfortable sharing bad news, which in turn enables the project manager to mitigate issues before they become unsolvable. I've benefited from this management style by seeing the team contribute extra effort when needed without being asked and develop superior solutions grown through open discussions.

Samer Kabbara, PMP
customer project manager, project office, Davidson Consulting for Ericsson, Paris, France

The most important trait is negotiation during all project phases, from initiation to closing. A good negotiator gains the trust of his or her team, sponsor, customer and other stakeholders by guiding them, explaining why they need to take a particular direction and, of course, how to get there. For instance, I negotiated with functional managers to secure a nine-month team, then explained to the team why it is important to cope with specific constraints such as time. Even though negotiation was smooth with some people and more elaborate with others, the stakeholders took my direction to execute the project.

David Wakeman, PMP
account executive, Mack Crounse Group, Washington, D.C., USA

The most important leadership trait is judgment. Often you are making a decision based on limited or imperfect information and changing circumstances, so having good judgment can keep your projects moving forward. If you have many options and none are clear, you can't be afraid to make a decision. It's better to make a decision and have to adjust to changes in the project brought on by your decision than to have a project stagnate or veer off course due to an inability to make a tough decision.

Rajahgopal Rooban Annamalai, PMP
project management office lead, Wipro Retail UK Limited, Bradford City, England

The most important trait is the ability to choose the right people at the right time and put them in the right place. In any organization, people create the processes, processes create the delivery and delivery creates the revenue. So people are the foundation of any organization, program or project. The ability of an organization to achieve its objectives depends on individuals' success.

Revenue generation, business development, quality products, margin improvement and, ultimately, an organization's success are all related to the ability to choose the right people. Training and development—i.e., coaching and mentoring—also add value to the project and the organization.

Divide and Conquer

Two project professionals share how to distinguish priority risks from urgent ones.

Is there a difference between priority and urgent risks?

Mushtaq Ahmed Syed, PMP: "Urgent" is not synonymous with "priority/ important."

"Priority" tells you how important a risk is and how much time you want to spend on it. This is independent of urgency and is what you *want* to do. "Urgency" tells you *when* you need to deal with it.

For example, you might learn a team member with specialized skills will leave the company in three months. You absolutely need to find a replacement, but you have three months to do it. Finding a substitute is a high priority, because your project will run into problems or fail if it's not taken care of. But it's not urgent—even if it takes you two months to find a substitute, nothing bad will happen.

Marian Haus, PMP: Both risk priority and urgency are qualitative dimensions of project risks.

By assessing risk priorities, project managers can identify and focus on high-priority risks. By appraising risk urgencies, project managers can ascertain the time left before measures or responses would need to be implemented. This is the main difference between risk priorities and urgencies: When treating risk priorities, the main focus is on impact; when treating risk urgencies, the main focus is on the measures or responses to be implemented.

How should project managers treat priorities versus urgencies?

Mr. Syed: Project managers should differentiate problems into four categories.

Tasks that are urgent *and* priority—issues, for example—must be worked on now. These are critical and support project goals, so you must make a decision to complete them.

Tasks that are urgent but not priority—watch-list triggers in a risk register, for example—tend to be generated by others. You don't want to spend much time on tasks not connected with your goals, so delegate them to a competent assistant.

Tasks that are priority but not urgent—risks, for example—need to be completed before they become urgent. Ensure you allow adequate time to do them.

Lastly, tasks that are neither urgent nor priority are probably not your responsibility anyway. Delegate them to a team member, but keep watch just in case they escalate in importance or urgency.

Mr. Haus: In my opinion, both deserve equal attention from project managers.

A common approach to assess priorities is a probability/impact matrix. Additionally, an impact/urgency matrix helps project managers focus on high-

impact, immediate risks. Finally, a priority/urgency matrix can help project managers assess risk severity.
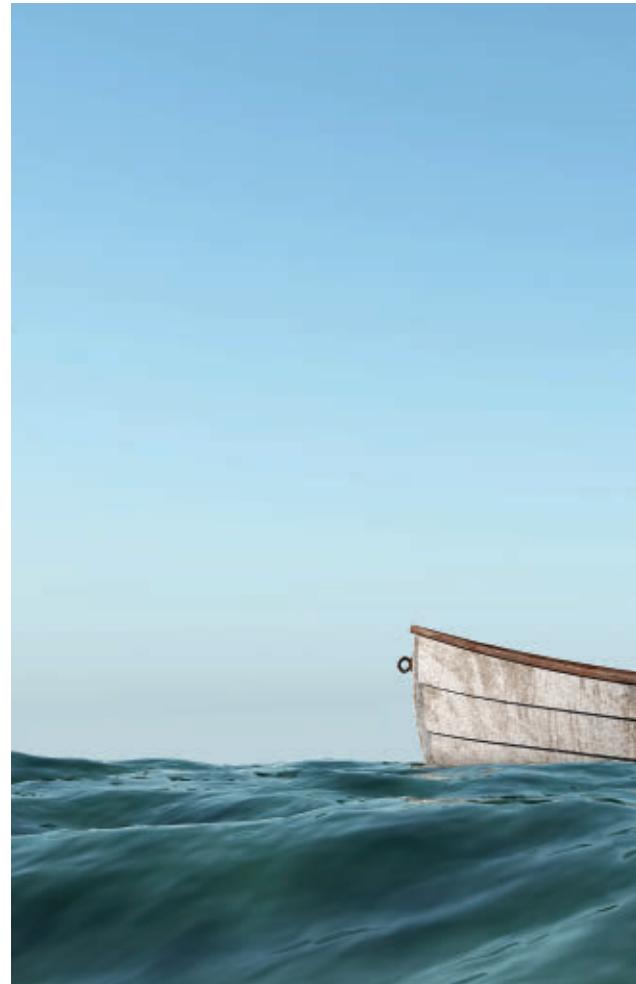
For example, "Our enterprise database servers will reach their disk size capacity during the project." The probability would be "medium," considering the data volume increase observed during the past 12 months. The impact would be "high," considering this could lead to business interruption and financial loss. Finally, the urgency would be low, considering a response is needed in six to eight months.

The probability/impact matrix will rank this risk as a "high" priority, yet in the impact/urgency

Mushtaq Ahmed Syed, PMP, is a software project leader at Continental Automotive GmbH in Wetzlar, Germany.

Marian Haus, PMP, is a technical project lead at BMW in Munich, Germany.

72%
The portion of projects that use risk management that meet original goals and business intent

71%
The portion of organizations that always or often used risk management in 2011, up from 68% in 2010

Source: PMI 2012 Pulse of the Profession

matrix, the "low" urgency will categorize this risk as one that will not require immediate action.

Can a risk be both a priority and an urgency?

Mr. Haus: Yes, consider this hypothetical example: A storm forecasted for next weekend can lead to power outages in a manufacturing line.
The probability is "medium," considering this has happened a few times in past years, even though the power infrastructure is now more reliable. The impact is "high," considering this could lead to a temporary production standstill. And the project team must verify immediately the status of the battery backup solution.

The probability/impact matrix will tell us this risk cannot be ignored, and the impact/urgency matrix will tell us this risk requires immediate action.

What's the danger in failing to distinguish between urgencies and priorities?

Mr. Syed: In large projects, there could be thousands of risks. If we don't clearly identify them, we will create chaos and nervous customers, managers and project teams.
The project manager will develop a sense of "everything is needed today" and multitask. Multitasking tries to please everyone and ends up pleasing no one. **PM**

BE THE BEST

To be a top project manager, you must be the most effective leader.

BY NEAL WHITTEN, PMP, CONTRIBUTING EDITOR

Are you the best at your craft as a project or program manager? At being a leader? To consistently build the best products, provide the best services and create the best teams, you must think and behave with the mindset that you're the best at what you do.

Here is a starter list of tenets that top practitioners embrace. My experience is that many folks in leadership positions do not follow all of these principles, but if you want to consistently be the best leader, these practices are not optional.

1. Get out of your office. Problems are not typically discovered there.

2. The stupid question is the one you don't ask. Listen to your instincts and follow through appropriately.

3. Be willing and able to say "no." Only you can manage your commitments.

4. Solve problems rather than blame others. This is what true leaders do.

5. Focus on your top three priorities/problems each day. Your performance here defines your value, contributions and, ultimately, career.

6. Do not allow what others think about you to be more important than what you think about yourself. Listen for helpful snippets but remain in control of you.

7. Readily ask for help and advice from others. There is a treasure trove of knowledge, wisdom and experience surrounding you.

8. Think for yourself. Routinely challenge tradition, authority, the status quo and your performance—professionally and maturely.

9. Don't trust that things are going well. Stay interested and involved.

10. Practice the mindset that it's not about the ability of those around you to lead. It's about your ability to lead, regardless of what is happening around you.

11. Treat others as you would want to be treated. There is no better rule for all seasons.

12. Behave as if you own the company. The "company" is defined by your domain of responsibility.

13. Never avoid necessary confrontation. Always give problems the sense of urgency and importance they deserve.

14. Routinely practice courage and boldness to be an effective leader. This behavior can help transform you into leading the charge rather than merely following it.

15. Demonstrate integrity in all matters. Build a reputation of character.

16. Hope is not a strategy. Thoughtful action is required.

17. Survey your clients for feedback. The client's satisfaction with your performance and project is a far better measure of your effectiveness and success than your own biased assessment.

18. Do not make it personal or take it personally. It's all about what's best for the business.

19. Look forward to, and even welcome, problems. They are an important part of your job.

20. Create an effective work culture that helps the team be successful. Your team members excel when they know what you expect from them and what they should expect from one another.

21. Good business is not about everyone agreeing on an outcome. It's about achieving the best outcome.

Do these tenets define your mindset as you lead day to day? Are you the best? If not, do you want to be the best? Are you up for embracing these thoughts and behaviors? If others can walk this talk, you can learn to do so as well. **PM**

Neal Whitten, PMP, president of The Neal Whitten Group, is a speaker, trainer, consultant and mentor. His newest book is *The Gift of Wisdom: Lessons for a Lifetime.*

Considering a degree in project management? With an accredited program, employers will look at you more closely.

Everyone knows project management is one of today's hottest fields. But that doesn't mean all programs will prepare you equally for the job market. If you want a degree from one of the best academic programs in the field, you should enroll in a program that's been qualified by the PMI Global Accreditation Center for Project Management Education Programs (GAC).

Attending a GAC-accredited program tells employers around the world that you've met a more rigorous standard of project management knowledge and expertise. GAC accreditation standards are tied to real-world learning outcomes. And because employers know that the program you've completed follows established best practices, you'll have a leg up on other job hunters in your field.

If you want to get more out of your project management education, learn about the degree that puts more into it. One that has GAC accreditation.

Find a GAC-accredited degree program today at GACPM.org/Students.html

DEFYING THE

Umatilla Chemical
Agent Disposal Facility,
Hermiston, Oregon, USA

**GIVEN A LESS THAN
1 PERCENT CHANCE
OF MEETING ITS
TREATY DEADLINE,
A PROJECT TEAM
SAFELY DESTROYS
MORE THAN 220,000
MUNITIONS.**

BY KEITH JACKSON II

ODDS

HOLDING MORE THAN 220,000 AGING AND DECAYING WEAPONS CONTAINING 7.4 MILLION POUNDS (3.4 MILLION KILOGRAMS) OF VX, SARIN AND MUSTARD GASES, THE UMATILLA CHEMICAL DEPOT FACILITY COULD BE A DANGEROUS PLACE.

The Hermiston, Oregon, USA site held 12 percent of the U.S. chemical weapons inventory, one of the largest stashes in the country, created for use in previous wars.

Under a disarmament treaty signed by 188 countries, the project team at the Umatilla facility was tasked with safely destroying the stockpile by 29 April 2012.

Recognizing the great risk and complexity of the project, the U.S. Army brought in the engineering firm URS. Even with the company's extensive chemical demilitarization experience, it was still a "massive undertaking," says Steven Warren, PhD, project general manager at URS.

And the team would be completing the project with the world watching. Along with international treaty inspectors on site, Oregon's Department of Environmental Quality set up an office near the facility to monitor compliance.

SAFETY CHECK

Given the dangers inherent to dealing with such volatile weapons and chemicals, URS knew it had to make safety a priority. Any slip-up could have serious—even deadly—consequences, from sarin gas and VX nerve agent polluting the surrounding environment to a munitions fire scorching the landscape.

To reduce these significant risks, the team packaged each nerve agent into different "campaigns," during which only the designated chemical could be incinerated. For instance, from September 2004 to

The URS team, from left: Steve Warren, PhD, Rich Stone, Laura Jendro, PMP, Peggy Zipperer, PMP, Larry Dow, Pat Mohondro, Will Leslie

July 2007, only sarin agent munitions were destroyed.

"Creating campaigns helped us in terms of safety, because it allowed us to always know what was being incinerated," says Laura Jendro, PMP, life cycle manager at URS. "When dealing with such volatile chemicals, it is extremely important to have that transparency."

Safety aspects were featured prominently at meetings to reinforce this critical focus, and the team added prominent signage around the facility. One sign contained a "safety message of the day" and safety statistics, such as the number of hours since the last work injury.

Project leaders also established an Operational Readiness Review board comprised of staff from the Centers for Disease Control, the U.S. Army Chemical Materials Agency (CMA) and other URS chemical demilitarization sites across the country, as well as other technical experts. The group helped ensure the site had the systems and processes to safely process the weapons in compliance with regulations.

"It let us know where we were succeeding and where we needed to get better," says Dr. Warren. For example, the board confirmed that plant equipment, personnel and procedures were tested and fully capable prior to initiating munitions destruction operations.

Despite the extensive safety precautions, in March 2010 a worker ignored protocols and was exposed to mustard agent. It could have been a fatal mistake, and even though the worker suffered only

"The shutdown ended up helping us. It made the possibility of something happening real, instead of just a 'what-if.'"

Peggy Zipperer, PMP, URS, Hermiston, Oregon, USA

TIMELINE FOR DESTRUCTION

February 2003: Trial incinerations launched to train workers and test machines

8 September 2004: Started chemical agent processing

9 June 2006: Bomb destruction completed

December 2007: Spray tank destruction completed

2003 — **2004** — **2005** — **2006** — **2007**

2005: U.S. Army Chemical Materials Agency audit shows Umatilla has less than a 1 percent chance of meeting the treaty deadline and changes projected project close to May 2014

11 February 2007: Project surpasses the 50 percent mark in munitions destroyed

minor injuries, URS and the U.S. Army shut down the site for a month as they investigated. At the same time, the URS team conducted a thorough root-cause analysis, convened a meeting of the review board and implemented corrective actions.

"The shutdown ended up helping us," says Peggy Zipperer, PMP, project controls manager, URS. "It made the possibility of something happening real, instead of just a 'what-if.'"

In response, a new department was created to identify potential risk behaviors. The specialists assigned to the new department observed toxic entry performance to ensure employee safety and provide feedback to improve performance. These specialists were also empowered to escalate problems to management. The move was so successful that Umatilla's sister site in Pueblo, Colorado, USA created the same department.

IN A CRUNCH

The weapons disposal process started on 8 September 2004. One year later, projected budget increases at the facility and its sister sites forced the CMA to restructure the timelines for all remaining campaigns. Based on demonstrated processing rates at three other chemical demilitarization sites, Umatilla's project completion date was estimated to be 17 May 2014. The CMA risk models showed the site had less than a 1 percent chance of meeting the treaty date of two years earlier.

The URS project team faced the challenge head-on, looking at every possibility that allowed for a safe shortening of the schedule.

"The team really pulled together," Ms. Zipperer says. "We looked at each campaign individually—what opportunities were there, what needed to be done, what could be shortened, what could be done early—and put together a plan to shorten each campaign."

In one case, for example, the team figured out a new—and more effective—way of dealing with the caked mustard agent that gathered at the bottom of storage containers. Normally, the team would
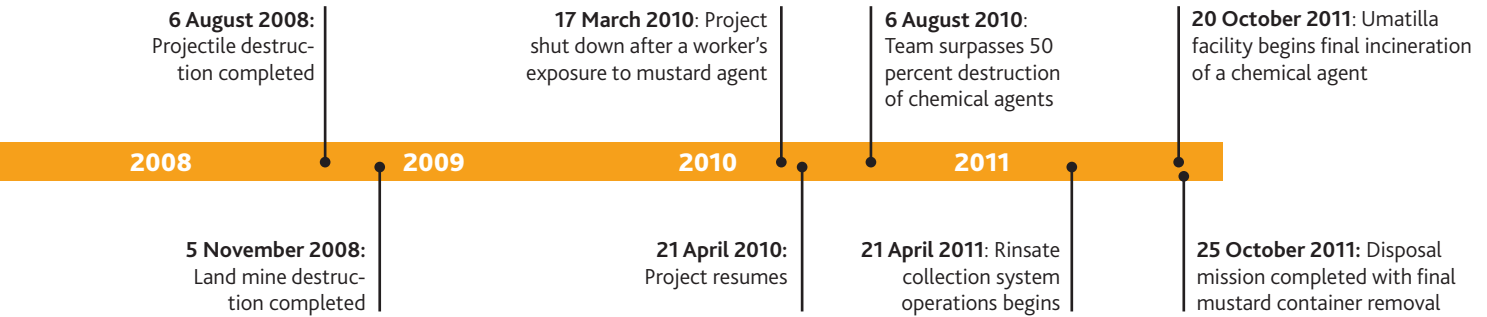
break up the hardened mass with high-pressure water, forming a waste called rinsate mixture, which was then put back into the containers for incineration.

But regulations limit the amount of rinsate incinerated to approximately 40 gallons (151 liters), and the volume of mustard agent on site would require twice the number of containers the facility had. Instead, the team created a system that pumped the leftover rinsate into a liquid incinerator, eliminating the need for extra containers.

The process improvements didn't end there. The team conducted daily, weekly and monthly scheduling meetings that covered everything from critical path analysis to scope changes—all in an effort to keep the project on track and avoid violating the treaty.

NO GUTS, NO GLORY

Completed nearly six months ahead of the treaty deadline and millions of dollars under budget, the initiative was honored as the 2012 PMI Project of the Year. In the end, URS destroyed 155,543 sarin or GB nerve agent munitions, 2,635 ton containers of mustard blister agent and 62,426 VX nerve agent containers. And even with the mustard gas incident, the team closed with a remarkably low injury rate, all the more impressive given the risk-laden sector it was working in.

"Destroying the munitions is a fantastic accomplishment and something we are all extremely happy about, but to do it safely with all the pressure we had is simply phenomenal," says Dr. Warren. "I couldn't be prouder of this team." **PM**

Check out case studies of the 2012 PMI Project of the Year Award winner and the two finalists on the PMI YouTube channel.
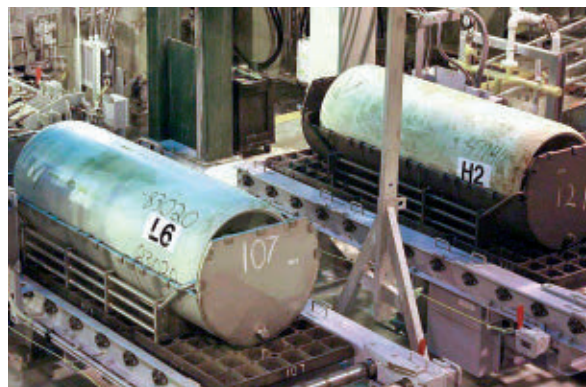
Two containers filled with mustard agent at the Umatilla facility.

FILLING A TALENT GAP

Even before work began on the Umatilla Chemical Agent Disposal Facility Operations Phase project, leaders from engineering firm URS faced a major roadblock. Although they were able to recruit roughly 20 percent of the site's workforce from similar facilities, local talent with the ability to decommission chemical weapons was scarce. The company had no choice but to rely on largely inexperienced personnel.

To mitigate the risk of using staff with little background in the sector, project leaders hired most of the workforce a year early and immediately started training.

"We had mockups of most of the things they'd be doing, and allowed them to actually do their job in a dry run," says Steven Warren, PhD, URS, Hermiston, Oregon, USA.

For example, team members responsible for weapons incineration simulated the proper way to start up, operate and turn off the machines. That early learning enabled a smooth transition for the team at the outset of the project, helping workers become comfortable with their positions and safety measures.

"That year of training allowed the team to realize what needed to be done, how to do it and, most important, how to do it safely," says Laura Jendro, PMP, URS.

The whole world is watching

MEGAEVENTS BRING BIG BUDGETS, INTENSE PUBLIC SCRUTINY AND LEGIONS OF STAKEHOLDERS. AND LOOMING OVER THE ENTIRE PROJECT IS THAT IMMOVABLE DEADLINE.

BY SARAH FISTER GALE ■ ILLUSTRATION BY JUSTIN RENTERIA

Debating the readiness of the Olympics host city has become as much a part of the games' tradition as the lighting of the flame or the parade of nations.

This year's megaevent in London, England hadn't even begun before questions started swirling about the state of preparations in the 2016 host city of Rio de Janeiro, Brazil.

Despite all the handwringing, history says the Rio games, like its predecessors, will start on time and provide the expected spectacle.

Whether it's the Olympics, political conventions or massive citywide festivals, megaevents simply don't allow for scheduling slipups. The show must go on—no matter what.

But that doesn't do much to mitigate the other big risk: the oh-so-fickle opinions of stakeholders.

"Most risks are connected to public perception regarding preparations for the event," says Michal Olszewski, project management office director for PL.2012, coordinator and overseer of Polish preparations for the Euro 2012 football tournament.

Stakeholders can be merciless—and noisy—if it looks like a megaevent team is faltering. Publicizing key milestones met along the way not only quells criticism, but it helps teams stay on track. The sheer scope of megaevents makes that a daunting task; they often require massive build-outs of specialized facilities and extensive supporting infrastructure.

Megaevent project leaders must apply the same rigor that an organization would use to manage any megaproject, says Jorge A. Dueñas Lozano, project

manager on the organizing committee of the 2011 Pan American Games in Guadalajara, Mexico. In preparation for the event—which featured more than 6,000 athletes from 42 countries—Mr. Dueñas oversaw a portfolio of 18 programs, with up to 108 projects under each of them.

"You must have advanced project management coordination for this kind of event, so you know what's happening and where the money is to make sure every milestone is delivered on time," Mr. Dueñas says. "Without effective project management, it would be chaos."

And as the event date nears, the need for greater control and project oversight coordination increases, says Andrew Binns, CIO of the 2012 Democratic National Convention Committee in Charlotte, North Carolina, USA. His work on the convention began 18 months before the 3 September kickoff. "At first, we just set a goal of general tasks and milestones," he explains. "When we got to two months out, these items became much more specific and detailed."

TRUST BUT VERIFY

Overseeing so many projects on such a rigid schedule can be hard, says Arnaldo Nardone, sales, marketing and convention director at the Radisson Hotel and Conference Center in Montevideo, Uruguay. "One of the biggest project management chal-

lenges for a megaevent is the logistics," he says. "For large events, you may be managing a thousand people, all focused on different tasks and multiple venues."

To stay on track, megavent leaders must delegate responsibilities and trust their team to deliver the needed results, whether that means negotiating hotel rates to meet the budget or tracking down 1,000 desks to accommodate an influx of conference attendees.

"While I oversee the entire operation, I rely heavily on my team of deputy directors, project managers and help-desk managers," Mr. Binns says, noting that collaboration between those groups is a cornerstone of the whole operation.

It's the only way to deal with the swirling mix of project requirements facing Mike Butz, senior managing director for open championships and association relations for the U.S. Golf Association (USGA), Far Hills, New Jersey, USA, as he manages the annual men's U.S. Open Championship. Planning for the next seven tournaments—each at a different venue—is in progress. "We've got projects in every planning stage, depending on when and where the events are taking place," he says.

Separate teams are responsible for corporate hospitality sales and fulfillment; ticket sales, event promotions, logistics coordination and implementation; catering and concessions; and construction of the hundreds of temporary facilities required for each project. And depending on which event a group is working on, it might have thousands of tasks and goals to focus on.

"Every venue is different, but they all need to follow a specific timeframe," he says. "We work backward from the event to make sure everything will be done on schedule."

ALL ABOARD

Megaevents, by their very nature, often take place in densely populated urban areas, adding a slew of public stakehold-

Michal Olszewski,
PL.2012, Warsaw, Poland

ers to the mix. Local, state and federal government agencies and organizations may be involved in everything from transportation to security.

Next year's U.S. Open, for example, is slated to be held just outside Philadelphia, Pennsylvania, USA, a crowded residential environment with limited spectator parking nearby. So the USGA plans to use remote parking lots at a stadium 15-20 minutes away, with shuttle and rail service to the course. Before the team agreed to the venue, it secured the support of the state and local governments, as well as police and transportation departments to manage traffic and transportation between the two sites.

Though such a commitment can be costly to the host city, hosting a megaevent can bring economic benefits. Following the 2008 Olympics in Beijing, China, for example, the direct contribution of travel and tourism to GDP rose 6.4 percent, according to U.K. market intelligence firm Key Note. Those kind of numbers can be a powerful selling tool for the team as it works to convince city officials to pay for the additional staffing. "We have to make sure we have the right support locally, or it won't work," Mr. Butz says.

In the run-up to the Pan Am Games, Mr. Dueñas' team met regularly with the governor of the state of Jalisco and leaders from the Pan American Sports Organization, which represents the Olympic committees of 42 North and Latin American nations.

The team also shared its plans with sports organizations around the world and received feedback from experts who'd managed similar projects in the past. "As we designed our stadiums, they gave us advice on key needs and design techniques," he says.

THE BEST LAID PLANS…

There are no second chances on megaevents. "We get one shot to do the convention right, and we have to make it work in front of thousands of people in person and millions of people on television," Mr. Binns says.

That means securing a backup for every piece of equipment so all presentations at the conference can be delivered on schedule, regardless of technical glitches.

At the 2012 Democratic National Convention, that meant moving President Barack Obama's speech indoors due to weather concerns.

At the U.S. Open, it means developing backup plans, including a precise way how to move as many as 60,000 players, officials and spectators out of harm's way in case of severe weather.

And at the Radisson, it means thinking outside the box in the face of an unusual crisis. Two days before the kickoff of the 2011 meetings industry trade show FIEXPO Latin America in Punta del Este, Uruguay, the Puyehue volcano erupted. The resulting ash cloud shut down airports across South America and stranded thousands of participants in other cities.

Rather than cancel the conference, Mr. Nardone's team bought more than a hundred ferry tickets for participants traveling from Argentina.

About 100 people remained stuck in Brazil, which was too far away for busing, so the team set up a virtual event at a local hotel. It also arranged for a local event coordinator to launch a series of networking activities so the Brazilians still felt like they were a part of the event.

"You can't give up when things like that happen," he says. "You have to do what you can to solve the problem, and if you have a really strong team you will find solutions."

SECURING THE LEGACY

The project isn't over when the event ends and all the attendees go home. Planners still have a lot of work to do, measuring the results of their efforts and recording lessons learned for the next time around, notes Mr. Binns. His team will write extensive exit memos for the next planning team, and his group created an archiving system to give the 2016 convention team access to all of their project documents.

"Make sure you are flexible when you need to be," he advises, "but know that you can—and you must—put your foot down when necessary."

In London, the Olympic Delivery Authority worked to capture lessons learned and document best practices as a way to help the construction industry in the United Kingdom. The organization created a website with reports, tools and templates, and case studies in 10 construction-related areas, including project and program management.

Those efforts help ensure that long after the last attendee has gone home, megaevents leave a lasting legacy on the local—and project—landscape. **PM**

A Public Relations Score

When Poland and Ukraine were picked to co-host the Euro 2012 football tournament, the skeptics came out in full force. All 13 previous tournaments had been held in Western Europe, and critics seemed doubtful that the two countries had the project management prowess to pull off such a prestigious megaevent.

But the two Eastern European upstarts proved the critics wrong, with Ukraine pouring US$13 billion into projects linked to the tournament, while Poland spent about double that.

"From a project management standpoint, it was a huge undertaking," says Michal Olszewski, director of the project management office (PMO) for PL.2012, a Warsaw, Poland-based organization created by the Polish government to organize the tournament in that country. "Hundreds of institutions were involved, and they were not accustomed to working in such close cooperation."

The PMO oversaw more than more than 450 projects leading up to the event, ranging from training volunteers and preparing police officers to building stadiums, all in anticipation of the 1 million rabid fans expected to attend the tournament.

Poland had little experience hosting such a massive global affair, and risk management was a constant concern, Mr. Olszewski says.

The organization's risk registry had more than 2,000 entries of varying probabilities. "Not all of these risks were at the highest level, and many never materialized, but they all had to be considered," he explains.

One of those risks identified by his team was making sure the police force and other public officials would be ready for football's notoriously exuberant fans.

To mitigate that risk, the PL.2012 project team created a police training program that outlined a three-step process for dealing with fans:
- Take care of our guests.
- Tolerate "expressive behavior."
- React as a security officer when necessary.

"It was all part of our integrated security concept," Mr. Olszewski says.

National Stadium in Warsaw, Poland

It worked. While police officers did get involved in occasional skirmishes and detained at least 100 people for fighting, they found a balance between ensuring public safety and quashing enthusiasm.

"The training reduced the risk," he says. "And in polls following the event, police and security ratings achieved very high levels."

Another critical risk was managing Poles' perception of their country's preparations. When stadium construction fell behind schedule due to technology infrastructure issues or road projects interfered with public transportation, bad publicity quickly followed, Mr. Olszewski says.

When such incidents occurred, teams not only had to fix the problem, but also address negative feedback before it damaged public perceptions. So a dedicated communications team worked to proactively target local journalists and stakeholders with project status reports and details on how issues were being addressed.

"It's the PMO's job to make sure the public debate is based on facts and figures, not just emotions," he says.

In the end, the country did its part, hosting the tournament without any major glitches despite a whopping 1.44 million attendees.

> "MOST RISKS ARE CONNECTED TO PUBLIC PERCEPTION REGARDING PREPARATIONS FOR THE EVENT."
>
> —Michal Olszewski, PL.2012, Warsaw, Poland

The Taste of Collaboration

With its melting-pot population, Chicago, Illinois, USA is known for both the variety and quality of its food. To showcase that diversity, the city hosts Taste of Chicago, one of the world's largest annual food festivals.

The megevent, held in the city center each July, attracts more than 1 million visitors who come to sample cuisine from dozens of restaurants, listen to live music and enjoy other street-fair activities.

"Planning and implementing Taste of Chicago is more than just one big project," says Mary Slowik, who has managed the event since 1995 for the city's Department of Cultural Affairs and Special Events. "It's a whole lot of projects within the larger event, and everyone has [his or her] own area to deal with."

Ms. Slowik and her team were put to the test this year when they decided to mix things up.

"The event needed a change," she says. For more than 30 years, the Taste spanned over U.S. Independence Day in July—starting as a one-day event and eventually lasting 10 days. But attendance started to lag, and the city and some of the participating restaurants had been losing money at each event since 2009.

Ms. Slowik's team decided to cut the fest to five days, schedule it for later in the summer, add one-day, pop-up restaurants, and sell tickets to the big-name music acts for the first time. Then Ms. Slowik's team sold the new ideas to stakeholders, including dozens of municipal groups, restaurants, private and not-for-profit participants, and corporate sponsors.

The team depended on these stakeholders to deliver many of the key facets of the megaevent. Nearly every city agency was involved in the planning, including the police and fire departments, healthcare services and agencies such as the Chicago Transit Authority.

"I'm not the boss of any of these people," Ms. Slowik says, "but there is a huge sense of collaboration to get things done."

She assigned groups of employees to lead each part of the event, which includes booth construction, site sanitation and marketing. As the project manager, she oversaw the teams, meeting with them every other week during the year to identify problems and finalize contract negotiations. The meetings increased in frequency in the two months leading up to the event.

Then, in the days before the launch, the team held several trial runs of the new elements, including running test tickets through ticket scanners for paid performances.

"You have to do practice runs, because there's no way you can fix problems the day of the event," Ms. Slowik says. Based on the experiment, her team swapped out the scanning equipment with a backup system to speed up the admissions process.

Early estimates showed daily attendance was up 2 percent and visitors liked the changes, she says. "The only way to get through an event like this is to be conscious of your risks, and when something is not going to work, bring people together to talk it through."

> "PLANNING AND IMPLEMENTING TASTE OF CHICAGO IS MORE THAN JUST ONE BIG PROJECT. IT'S A WHOLE LOT OF PROJECTS WITHIN THE LARGER EVENT, AND EVERYONE HAS [HIS OR HER] OWN AREA TO DEAL WITH."
>
> —Mary Slowik, Taste of Chicago, Chicago, Illinois, USA

Taste of Chicago, Chicago, Illinois, USA

A Royal Rock Concert

From royal dinners to the finish line of the Olympic marathon, the courtyard outside Buckingham Palace hosts its fair share of events.

Still, a pop and rock concert on royal grounds is about as rare as a diamond jubilee celebrating 60 years on the throne. But as the citizens of London, England honored Queen Elizabeth II in June, the two unlikely occasions merged into one megaevent.

The project team aimed to not only pack 12,500 attendees and royalty around the Queen Victoria Memorial outside Buckingham Palace, but also make sure everyone had a great view of the action. Because London-based event-management company Arena Group was planning to try out its new temporary seating system, project manager David Moynes built extra time into the schedule for the team to make adjustments.

That extra time came in handy when the project sponsor, Robbie Williams Productions, notified the team of a new requirement nine months prior to the concert: a media compound with equipment and towers needed for an international broadcast. "There was a huge amount to build in such a short time," Mr. Moynes says.

To remain focused on the event infrastructure, he split the team into seating and structures, each focusing on one area of the project. Mr. Moynes also recruited Arena Group team members from offices outside of London. The additional staff worked on an accelerated schedule, spending long days on-site in sometimes inclement weather to complete the broadcast towers.

Royals in attendance also required a special viewing box, one that could only be accessed through an elevator built on-site. The apparatus required rigorous testing before it was ready for its high-profile cargo. "The last thing we would have wanted was a broken-down lift with the queen and the Duke of Edinburgh inside," says Mr. Moynes.

The 2012 London Olympics created yet another issue. Preparations for that megaevent, happening a month after the queen's jubilee, created high demand for equipment, such as a portable roadway system used for construction projects. Mr. Moynes worked it out with contractors, drawing on his long-standing relationships with them and building on the fact the jubilee came first on the calendar.

"I'm happy to say that nothing went wrong on the Diamond Jubilee project, he says, "and we accommodated any daily changes or additional requirements that cropped up."

"THE LAST THING WE WOULD HAVE WANTED WAS A BROKEN-DOWN LIFT WITH THE QUEEN AND THE DUKE OF EDIN-BURGH INSIDE."

— David Moynes, Arena Group, London, England

THE PROBLEM WITH

BY MICHELLE BOWLES JACKSON

PET PROJECTS

EXECUTIVES DON'T ALWAYS KNOW WHEN THEY'RE GETTING TOO CLOSE TO A PROJECT— AND THE CONSEQUENCES ARE FAR-REACHING.

Yuvi Gill, PMP, thought he had a straightforward assignment on a recent project:

He needed to find synergies between the warranty processes of various product lines. But the scope of the project expanded like a hot-air balloon thanks to an executive sponsor with a personal interest in the endeavor. Pretty soon, the scope included the vendor management groups for each product line. Eventually, several more areas and groups were added, extending far beyond the original vision.

In other words, it had become a dreaded pet project.

"Consistent scope creep is a sign that the executive sponsor is getting away from the business needs of the project and is focusing on his or her own needs," says Mr. Gill, senior manager of operational excellence at Genentech, San Francisco, California, USA.

Executive sponsorship can make or break a project. PMI's 2012 *Pulse of the Profession* report found that organizations with active project or program sponsors on at least 80 percent of their projects have a success rate 11 percentage points higher than the overall survey average. The report also identified an engaged sponsor as the top indicator of a project meeting its original goals and business intent.

However, there's such a thing as *too much* involvement, when executives play favorites and grow overly attached to a certain project.

Roman Baranovsky, PhD, PMP, chief project officer at fraud management consultant Experian Decision Analytics, Moscow, Russia, identifies several characteristics of pet projects:

- Undertaken to satisfy a stakeholder's personal interests
- Launched for a solid strategic reason but not terminated when no longer valid
- Initiated regardless of very high risks or potentially negative returns
- Receives an unjustifiably large amount of effort and attention from the sponsor

When executives make projects too personal, they risk losing sight of overall strategic needs.

"The biggest risk—particularly as organizations try to go more and more lean—is that pet projects do not bring much value to the organization," Mr. Gill says. "Most don't even align with the objectives of the company. That's really a drain on resources."

To avoid falling into the pet project trap, look for these warning signs.

Who Needs Rules?

"Pet-project initiators shortcut standard procedures—such as identifying a business case, generating a charter and formally allocating resources—and data is missing," says Steffen Thieringer, PMP, program manager at manufacturing firm NMB Technologies Corporation, Minneapolis, Minnesota, USA. "A proper cost-benefit analysis also may be nowhere to be found."

Before executives decide to opt out of procedures, Dr. Baranovsky suggests they ask: Why was the procedure established? What are the consequences for not following it? Am I ready to face those consequences?

"THE BIGGEST RISK IS THAT PET PROJECTS DO NOT BRING MUCH VALUE TO THE ORGANIZATION. MOST DON'T EVEN ALIGN WITH THE OBJECTIVES OF THE COMPANY. THAT'S REALLY A DRAIN ON RESOURCES."

—Yuvi Gill, Genentech, San Francisco, California, USA

"If you still believe the rule can be bypassed, ask your project manager to evaluate the risks involved with your decision and treat them as he or she would treat any other risk on the project," he says.

So Everyone Agrees, Right?

Sponsors should welcome healthy dissent—and project managers should beware if that dissent suddenly evaporates.

"Once an executive has made up his or her mind about a project, people who object will either stop voicing their opinion or stop attending meetings altogether," Mr. Gill says.

To prevent this situation, he recommends implementing a vetting process that includes multiple high-level stakeholders. "Having a structure in place limits the amount of pet projects that get through," he says.

This Shouldn't Take Too Much Time.

Pet projects have a nasty way of soaking up resources, not to mention project funds. "The high costs result from using resources in no-value work and not being able to use those same resources in valuable work on real projects," explains Raed Odetallah, a senior-level project manager at healthcare and lighting tech company Philips, Riyadh, Saudi Arabia.

Spreading the team too thin can also take its toll on deliverables. "People usually work on pet projects on the side, in addition to their other tasks, which impacts the overall work quality," Mr. Thieringer says.

Can I Just Get a Little More Detail?

Executives can't afford to get caught up in project minutiae. They shouldn't be constantly following up directly with team members about small tasks or getting all the finer points of scheduling plans. "If the executive requests all types of details in the project dashboard and progress reports, he or she might be getting too close to the project," Mr. Odetallah says.

To avoid becoming too attached to a pet project, executives should stick to the big picture, monitoring critical high-impact risks and issues.

There is one gray area: when an underperforming project manager requires increased executive involvement. In those cases, Dr. Baranovsky suggests the executive request a project review by the project management office or an outside consultant to ensure that the problem is with the project manager, and not the nature of the project itself.

"If the review finds the project manager to be incompetent, seek a replacement. Otherwise, relax," he says. "All you need to do is review the communication plan with your project manager and agree that, in addition to regular project reports, you will get early warnings of all potentially serious problems."

Failing to eliminate pet projects can have severe consequences beyond wasted resources and misaligned strategy. "The practice of launching pet projects can easily cascade, and the number of people looking after only their personal interests will grow," Mr. Odetallah says. "If this practice becomes widespread, trust between all levels becomes hard—or even impossible—to build. And over time, the organization might lose its edge over its competitors."

That's a pet no executive can afford to keep. **PM**
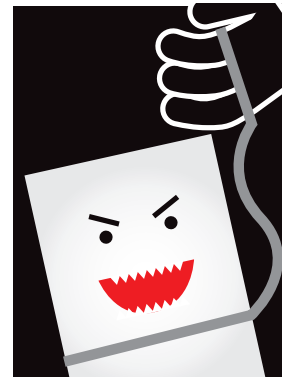
Stuck With a Pet Project?

Project managers are often in a good spot to identify executive pet projects. Of course, they can't simply call out an executive who has lost sight of the big picture. Three project professionals offer their advice for handling this delicate situation:

Raed Odetallah, Philips, Riyadh, Saudi Arabia, recommends forging a strong relationship beforehand. "It's very important that the project manager builds a good level of trust with the executive before trying to persuade him or her."

Steffen Thieringer, PMP, NMB Technologies Corporation, Minneapolis, Minnesota, USA, maintains that the project manager's power lies in his or her ability to use project data to support the argument. "Status reports—which are hopefully published, reviewed and signed off by a group of executives—should contain information the project manager can use to suggest changes to the project—or even suggest its closure."

Yuvi Gill, PMP, Genentech, San Francisco, California, USA, suggests junior-level project managers go in armed with strong data and present it with a director-level colleague. "And don't just give them one option; give them two or three."
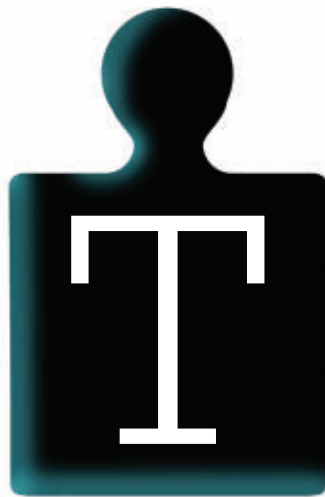
THE

ABCs

OF
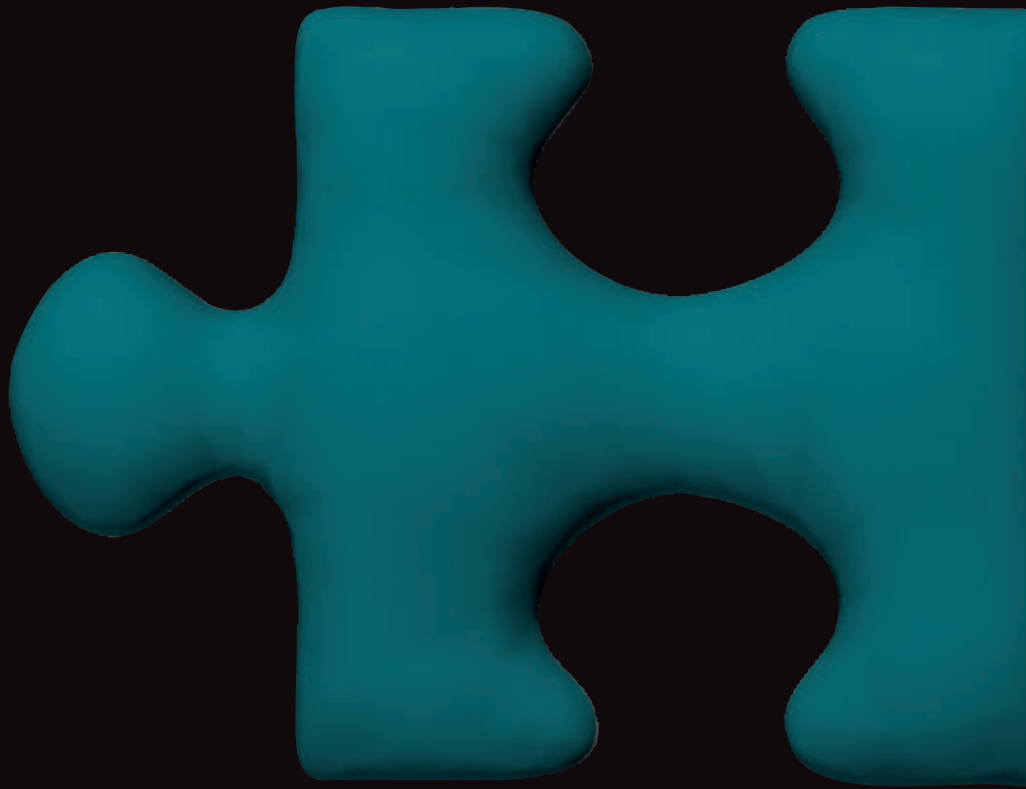
SMEs

SUBJECT-MATTER EXPERTS CAN DELIVER COMPELLING INSIGHTS AND EXPERIENCED GUIDANCE. HERE'S HOW TO USE THEM WITHOUT LEAVING HURT FEELINGS OR KNOWLEDGE GAPS IN THEIR WAKE.

BY CINDY WAXER

HE RIGHT SUBJECT-MATTER EXPERT (SME) can play a starring role in the success of a project, filling knowledge gaps to take a team from good to great. Though they may only work on a limited part of an effort, SMEs often make all the difference, whether they're providing complicated technical insight or lending their specialized risk-management expertise.

Marc Gorcey, PMP, has worked with numerous SMEs as a project manager for IT services firm CGI in Toronto, Ontario, Canada. He relies on the expertise of SMEs on key projects, most of which involve building interactive mobile and web applications.

"Imagine if you were planning to do a bunch of renovations to your house and there was one key piece that you thought would be great, but you didn't know how to do it," Mr. Gorcey says. "If there's somebody who can help you with that one key thing, that somebody would be an SME."

Yet, for all their compelling observations and spot-on strategizing, SMEs can present both personal and professional challenges as they fly from one project team to the next. Before bringing an SME onto a project, carefully weigh these pros and cons.

PRO

High-Speed Productivity

Skilled SMEs can help project managers circumvent much of the uncertainty that comes with getting a project off the ground—a particularly prized advantage in fast-paced, technology-related fields. That quick validation of the project's strategy and direction coincides with another speed boost: SMEs can replace the need for trial-and-error when it comes to project work, Mr. Gorcey says.

"We can go to an SME and say, 'Here's what we're thinking of doing,' and they can say right off why it may or may not work," he says. "In the end, that

"We can go to an SME and say, 'Here's what we're thinking of doing,' and they can say right off why it may or may not work."

—Marc Gorcey, PMP, CGI, Toronto, Ontario, Canada

When developing a specialized financial tool, Mr. Gorcey called upon an SME with customer relationship management (CRM) expertise to convey what the market was looking for and review proposed solutions for viability. Thanks to the SME's experience implementing CRM tools in the company's target industries, he identified several quick and easy usability improvements that helped circumvent costs and speed product development.

"In the end, the SME gave us important guidance at a key moment in our design process," Mr. Gorcey says.

PRO Freeing Up Resources

SMEs can liberate project managers from tending to the minutiae of day-to-day tasks, allowing them to focus on core competencies such as managing communication and timelines, says Gaurav Chauhan, PMP, a property services project manager in Haryana, India.

"An SME can absorb the tasks that float within the scope of his or her expertise, such as finance or risk management," he says.

For example, if the project manager possesses sharp business skills, an SME could take on everyday project oversight details while the project manager focuses on interacting with the stakeholders. In addition to freeing the project manager's time, this SME can improve team members' efficiency by helping them understand the project's requirements and the roles of each team member, says Cees Pijs, a program manager at Valid, an IT services provider in Eindhoven, Netherlands.

CON Added Liability

Just because a project manager retains the services of an SME doesn't lessen his or her burden of responsibility. In fact, an SME can

saves us a lot of time, money and rework."

In addition to managing his own projects, Brian Thomsen, head of professional services at information management company Stibo Systems in Melbourne, Australia, is often brought on other projects as an SME because of his in-depth knowledge of e-commerce. For one project, he lent his knowledge of e-commerce workflow processes. In doing so, he discovered the client could onboard 10 times as many products and images with the same staff and headcount by replacing spreadsheets and manual data entry with an automated workflow system. This prevented the company from making approximately 90 unnecessary hires.

PRO A Path to Business Benefits

One of the most beneficial contributions SMEs can make is to deliver business value by "advising on a project's overall strategic value, looking at the marketplace, looking at customers and where they actually are in the market, and guiding a project manager in the right direction," Mr. Thomsen says.

If projects are defined only by process- or technology-oriented people, project teams risk downplaying or even overlooking business value and ROI. "That's where we need to use SMEs: to gain a bigger business perspective on a particular project," Mr. Thomsen says.

add to a project manager's overall liability on a project.

"The SMEs that I work with on my team are responsible for their work, but ultimately, I'm responsible for delivering the project; for the triple constraint of time, budget, quality and scope; and for making sure the project is a success," says Mr. Gorcey. "To be successful, you have to let go and let the SME do his or her work."

Giving an outsider that kind of freedom can be a scary proposition. If the SME fails, it's left to the project manager to clean up the mess—or take the fall.

CON Personality Clash

Bringing in an SME can create interpersonal conflicts, particularly when the SME is an external contractor. After all, team members aren't likely to appreciate taking direction and orders from an outsider without good reason. As a project management consultant in Ann Arbor, Michigan, USA, Richard Bollinger, PMP, knows that reality all too well.

He says uncomfortable moments can result if team members are reluctant to let SMEs do their job. "I've been on projects where there was somebody who didn't know what they were talking about," Mr. Bollinger says. "I had to confront that person and make sure they stood out of the way."

"A project manager always has to be mindful of human resources issues and make sure people understand what they're being used for and what their field of expertise is," Mr. Gorcey says. He suggests project managers sit down with team members to define distinct roles and responsibilities before bringing an SME on board.

CON Knowledge Gaps

SMEs are generally temporary participants in a project, and the issues they're brought in to address may come up again after they're gone if project managers fail to properly transfer knowledge from an SME to

"An SME can absorb the tasks that float within the scope of his or her expertise, such as finance or risk management."

—Guarav Chauhan, PMP, Haryana, India

team members. These knowledge gaps can easily take a project off course, leading to unnecessary delays and added costs, Mr. Pijs says.

To ensure proper knowledge transfer, Mr. Gorcey carefully documents project deliverables with as much detail as possible. This way, "the team takes ownership and is answerable to what was delivered after an SME moves on," he says.

When project managers consider incorporating SMEs on their project teams—whether for technical expertise, keen market awareness or knowledge of the business—they must remember it's not sufficient to sit back and watch the pieces fall into place. Rather, it's up to them to maximize the pros and minimize the cons to achieve the best possible result. **PM**

Don't

Leave

Withou

TWO PROJECT RISK REGISTERS ILLUSTRATE HOW PLANNING FOR PROJECT RISKS **TODAY** CAN PREVENT PROJECT DISASTERS **TOMORROW.**

BY MATT ALDERTON

Home

t

It

#	Section	Consequence	Vulnerability	Trigger
5	Information Technology	Cost	Service deterioration due to ongoing project (loss of knowledge, technical issues etc.)	System availability not up to expected level
6	Project Organization and Business Case	Benefits	Project does not deliver expected strategic results	Delays beyond control force a project stop
7	Project Organization and Business Case	Benefits	Business benefits are perceived as not realistic by major stakeholders	Resistance during project submission process
8	Project Organization and Business Case	Benefits	GREW is the first globally integrated, online business transaction system	Unexpected issues due to interference with local business processes and IT infrastructure
9	Project Organization and Business Case	Cost	**Fixed scope, resources and timeline** Ⓐ	Milestones are not achieved
10	Project Organization and Business Case	Time	Changes to business requirements	Unexpected requirements are identified
11	Project Organization and Business Case	Cost	Suppliers fail to deliver	Serious delays or quality defects
12	Time to Deliver	Time	**Timeline** Ⓑ	Planned production start delayed

WHEN IT COMES TO PROJECTS, the words of management guru Peter Drucker hold true: "If you can't measure it, you can't manage it." But when it comes to specific risks on those projects, if it can't be identified, it can't be mitigated.

That's why the risk register just may be the handiest tool in the project manager's toolkit.

Yet a 2011 study by risk management services provider Aon found that organizations still rely on senior management intuition and experience (43 percent) over risk registers or risk indicator worksheets (21 percent) to identify and assess major risks.

André Guyer, head of global transformation for Zurich Insurance Company Ltd. in Zurich, Switzerland, maintains that risk registers are important tools on which all projects should be built. "In a way, risk management *is* project management," he says. "As a starting point, it helps to do a formal risk assessment and document it in a risk register."

By anticipating risks—including opportunities—and working to either prevent them or capitalize on them ahead of time, project teams can increase the chances of positive project outcomes. "The benefit is that the probability of successfully completing the project is higher," Mr. Guyer says.

Just what risks to include and how to present them in the risk register are another matter. While the typical register includes risk identification, probability, severity and mitigation, elements can vary widely across organizations.

Consider how two organizations used their registers to turn risk into reward.

CASE STUDY #1

Company: Zurich Insurance Company
Location: Zurich, Switzerland
Project: Design and implement a global risk engineering workstation that standardizes risk grading methodology and aggregates risk insights across industries and geographies.
Dates: 2009–2012

The Zurich Insurance Company's risk engineering group consists of more than 800 risk engineers consulting in 25 different industries in 39 countries, and although they have the same job—helping customers identify, assess and minimize risks to property, liability, employee safety and other areas—those risk engineers used disparate local systems to do it. So in 2009, the group launched its global risk engineering workstation (GREW) project to replace disparate systems with a single networked solution. The new solution would allow Zurich to accumulate global risk engineering data and establish risk information globally, which can be used for risk benchmarks across geographies and industries, or for other risk insights.

"There are hundreds of thousands of customer touch points when our risk engineers go on site, so the idea of collecting this into a central database is a very powerful thing," says Mr. Guyer. "By doing this, we can help our customers reduce their overall loss costs—financial and reputational—and also reduce our losses as an insurance company."

This large-scale project needed a 360-degree view of potential risks.

Consequence	Risk Cat level 1	Risk Cat level 2	Risk Cat level 3	Actions	Progress report
Delay in development, deployment and rollout C	Operational Risk	External Risk	Sourcing/ Third Party Provider and Brokers	Develop backup plan (i.e. rollback to existing platforms)	Backup plans developed
Write-off of all investments, benefits cannot be realized, unplanned cost for rollback (upgrade of legacy systems)	Business and strategic risk	Strategic development		Assign project to a highly experienced program director and team	Highly experienced team assigned to program
Project not approved	Business and strategic risk	Strategic development		**Quantify and clarify business benefits and discuss with key stakeholders** D	Measurable set of KPIs developed and agreed with stakeholders
Delay and additional costs	Business and strategic risk	Strategic development		Conduct global impact analysis and minimize IT infrastructure footprint (browser-based application)	Impact analysis completed; solution design based on browser-only technology
Delay, additional cost or project stop	Business and strategic risk	Strategic development		Introduce time-box approach and adjust resources where possible	Release planning completed, weekly stakeholder meetings and change management process for requirements prioritization established
Replanning required	Business and strategic risk	Strategic development		Establish change management process Implement QA process	Regular 'Application Owners' and 'Global Change Network' groups established
Overall project delay, increased cost	Business and strategic risk	Strategic development		Implement QA process	**Code inspections and walk-throughs completed** E
Missed year-end window: 6-12 months delay	Business and strategic risk	Strategic development		Apply timeboxed approach, use standard software, minimize additional functions ("80/20 rule")	Tight change management process established

Note: Risk register and risk map are re-creations based on the actual GREW project. Only a sampling of risks is included.

As part of Zurich's custom "Risk Checker" tool, project teams answer 261 questions in 12 areas, ranging from "project organization and business case" and "time to deliver" to "legal and regulatory" and "information technology." They then figure out how to address the risks, including mitigating, accepting, avoiding or exploiting. This questionnaire ultimately results in a high-level summary of the perceived risk in each of the relevant areas, as well as a detailed breakdown of specific risks and mitigation actions. It's based on the same risk analysis methodology that risk engineering has been utilizing for years with customers.

A The constraint of having limited time, finite resources and fixed scope heightened the probability that milestones might not be achieved and increased the severity of the consequences. "If the first milestone was not achieved, then everything else would get delayed," Mr. Guyer says. "So we introduced a timeboxed approach. We said, 'We'll keep the timeline, but if necessary, we'll make some compromises with scope.'"

B The project timeline was rigid because the new system could only be rolled out at the end of a calendar year; starting the project late could force a 12-month delay. "We couldn't just switch the timeline by a month or two, so we decided to use standard software rather than develop the whole thing from scratch," Mr. Guyer says. "We found something that covered 80 percent of our functionality and had the other 20 percent developed."
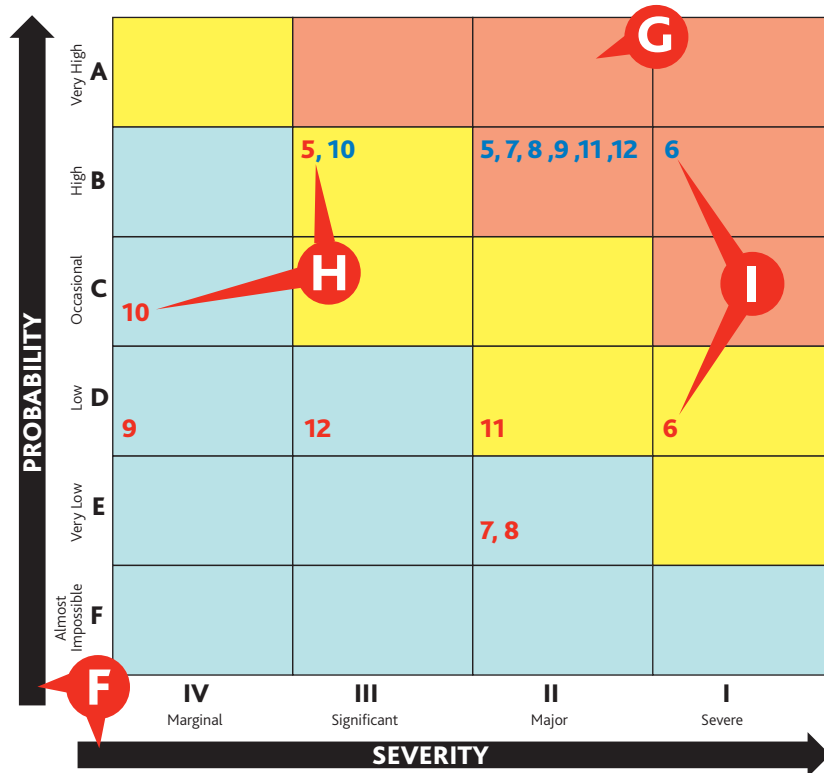
C Just before its scheduled rollout in 2010, the GREW project was interrupted by an unrelated problem that impacted the availability of Zurich's central data center. As a result, rollout was delayed by 12 months. Still, the impact was moderate, as the project team had a backup plan that allowed operations to continue on existing legacy systems during the interim. "If we had not anticipated possible infrastructure issues in our planning, the consequences on business operations would have been severe," Mr. Guyer says.

D Because GREW would be Zurich's first globally integrated online business transaction system, the risk of the unknown was apparent. The solution: maintain control over as many project variables as possible. The team conducted in-depth research with field representatives to anticipate potential problems and selected an existing web-based solution that minimized the need for application development.

E Suppliers also represented a significant risk. "One of the reasons to have suppliers in the first place is so you don't have to manage everything yourself," Mr. Guyer says. "On the other hand, you want to make sure what you get is of required quality." So the project team implemented a thorough quality-assurance process, including a variety of code inspections, to ensure visibility of the suppliers' work.

Key: (Numbers refer to projects in the previous page)
Current Risk Target Risk

RISK MAP

At Zurich, a companion document to the risk register is the risk map, which offers a visual representation of project risks.

F Zurich project teams look at risk severity (from "marginal" to "severe") and probability (from "almost impossible" to "very high"). "As a company, we are prepared to accept a risk with a very high probability as long as the severity is only marginal (yellow), but would reject the same risk with high severity (red)," Mr. Guyer says.

G Project teams cannot accept red risks. "Whenever you have a risk that's in the red area, you need to do a mitigation action to move it to at least the yellow area and possibly to the green area," Mr. Guyer says.

H Changes in business requirements are common and can have dramatic implications for projects—hence the red. To reduce their impact and move them into the yellow, Zurich established a tightly controlled change-management process to manage stakeholder expectations.

I One of the worst things that can happen to a project is failure to deliver expected outcomes. "Here, the improvement action is making sure we have the right key people on the team," Mr. Guyer says. "This is probably the most critical success factor, and you have to do this at the very beginning of the project. If you do, it really reduces the risk of failure—in this case reducing it from high to low."

"THERE ARE HUNDREDS OF THOUSANDS OF CUSTOMER TOUCH POINTS WHEN OUR RISK ENGINEERS GO ON SITE, SO THE IDEA OF COLLECTING THIS INTO A CENTRAL DATABASE IS A VERY POWERFUL THING."

—André Guyer, Zurich Insurance Company Ltd., Zurich, Switzerland

CATEGORY	ACTION	LEVEL	RISK RESPONSE
Security	Delays due to security Issues	Medium	The project is on an existing Afghan National Army (ANA) base. Contractor access must be coordinated with the local ANA commander. Every worker and vehicle must be on a list provided to the gate/ECP. Unexpected arrival of materials and/or personnel are often delayed or denied access.
Location	Delays due to proximity to airport	Medium	Due to the proximity of this project to the airport, road closures due to VIPs traveling to or from the terminal often delay traffic, which affects both personnel and material arriving on site.
Time	Delays due to weather and holidays	Low	Start date of construction will be defined by the time of year. When bad weather begins, project manager will communicate with the customer on any delays and/or restart dates.
Cost	Delays due to theft	Low	Contractor's ability to secure materials on an existing military base.
Real Estate	Land ownership	Low	License for construction issued 29 June 2011.
Civil Engineering	Soil concerns, drainage or erosion problems	Low	The site is basically flat with no known soil issues.
Electrical	Electrocution	Low	All equipment used needs to be inspected. Don't store equipment next to water. The North Resident Office will provide daily project oversight to ensure the contractor's safety program is actively working.
Change Management	Pre-award	Low	Project manager to coordinate closely with customer and contacting to meet pre-award schedule.
Materials	Delays due to shipping Issues	Low	Project manager works closely with the customer to ensure that external transportation issues are addressed and that the customer is kept informed of delays. The North Resident Office will follow closely the shipment activities of the contractor to ensure long-lead items are ordered and delivered in an expeditious manner.

CASE STUDY #2

Organization: U.S. Army Corps of Engineers, Kabul Area Office
Location: Kabul, Afghanistan
Project: Upgrade existing buildings, design a new dining facility and build a new motor pool for an Afghan military base.
Dates: 2012–2014

In January 2012, the Kabul Area Office (KAO) of the U.S. Army Corps of Engineers broke ground on a construction project on the Afghan National Army military base in Kabul, Afghanistan. The project, slated for completion in 2014, consists of various upgrades to existing buildings; design, construction and site adaptation for a new motor pool, including parking, fencing and related buildings; and completion of a new mess hall. In other words: a typical project in a very atypical place.

"In a non-combat area, the major concerns are to complete projects accurately with properly identified requirements and scope, on time and on budget," says Lt. Col. Richard Smith, PMP, officer in charge at the KAO. "In a combat area, additional concerns that impact project completion are the diverse stakeholders, project location and access, and security."

Given that, the project's obstacles aren't just about time, scope and cost; safety is a paramount concern, which makes addressing how to handle risks—from mitigation to acceptance—especially important.

KAO built its risk register based on lessons learned from past projects. For example, during the construction of a U.S. military compound completed in 2011, KAO was required to install split air conditioners—units with components both inside and outside the building—for the offices and billets. The split packs

were held in transit, however, because of the closure at the border with Pakistan. A workaround had to be found to install temporary split packs. Lt. Col. Smith says KAO learned its lesson: "Currently, all projects have a medium risk associated with materials due to delays at the border."

J KAO classifies risks as "low," "medium" or "high." Whereas many project locations in Kabul would have necessitated high risks, "overall, the risk assessment for this project was low due to its location on an existing Afghan National Army (ANA) base and the high amount of security surrounding the airport," says Lt. Col. Smith.

K For typical off-base projects, security and site access are dire concerns. "When we visit projects, we wear all of our personal protective equipment, including battle armor and weapons," Lt. Col. Smith explains. On an inspection trip to the ANA military base, a large force of more than 15 armed personnel arrived, and the base commander became upset over the excessiveness. So an alternative security mitigation route was chosen: Access must be coordinated with the local commander, and every worker and vehicle must be on a list.

L The project's proximity to Kabul International Airport creates significant risk for delays. Security is provided by the ANA and Afghan National Police, who occasionally delay shipments into the site for three to four hours. "The airport is often closed when senior Afghan personnel are moving in or out," Lt. Col. Smith says. "This becomes critical if the contractor is trying to deliver concrete."

M KAO emphasized the importance of securing construction materials because of the risk it poses to the project's budget. "Theft is an important consideration for all projects," Lt. Col. Smith says. "The contractors can usually secure their equipment and materials inside their compound, reducing the risk to low."

N A risk register isn't a static document, Lt. Col. Smith says. "It should be reviewed weekly or monthly to assess new concerns or remove items that are no longer a concern," he says. For example, the risk that long-lead items will not arrive on time is removed once they are on site. "KAO evaluates risks associated with security daily, safety weekly and long-lead items monthly," Lt. Col. Smith adds. **PM**

"A RISK REGISTER SHOULD BE REVIEWED WEEKLY OR MONTHLY TO ASSESS NEW CONCERNS OR REMOVE ITEMS THAT ARE NO LONGER A CONCERN."

—Lt. Col. Richard Smith, PMP, U.S. Army Corps of Engineers
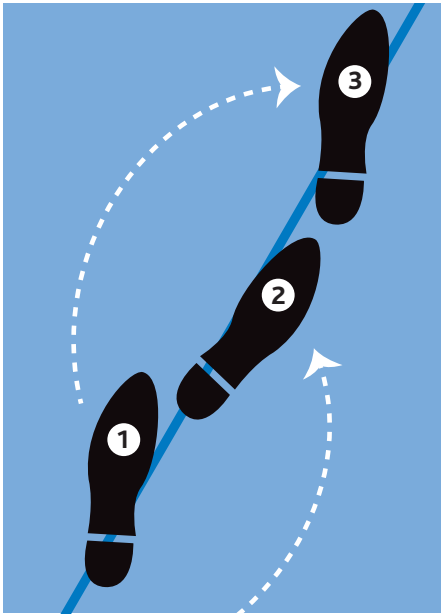
3 Tips for Registering Risks

As useful as risk registers can be, simply having one doesn't guarantee project success. "If it's garbage you put in, it will be garbage you get out," says André Guyer, Zurich Insurance Company Ltd., Zurich, Switzerland.

To make sure a risk register offers value, he offers a few risk planning tips:

1 **Start early:** "The ability to manage and mitigate project risk is easiest in the beginning of a project. Once a path has been set and project choices made, the resulting cascading impacts can make changes increasingly difficult and expensive to make."

2 **Engage diverse stakeholders:** "You have to include people with different backgrounds—legal, sales, IT, regulatory, human resources, finance—who bring completely different perspectives to risk assessment and identification."

3 **Regularly revisit and re-evaluate:** "A risk register isn't a snapshot that's taken once at the beginning of the project for administrative reasons. The risks must be managed dynamically on a continual basis, because risks can change from one week to the next."

"IN A WAY, RISK MANAGEMENT *IS* PROJECT MANAGEMENT. AS A STARTING POINT, IT HELPS TO DO A FORMAL RISK ASSESSMENT AND DOCUMENT IT IN A RISK REGISTER."

—André Guyer, Zurich Insurance Company Ltd., Zurich, Switzerland

POWER TO THE
PEOPLE SKI

PROJECT MANAGERS NEED MORE THAN TECHNICAL PROWESS, BUT HOW CAN YOU SPOT INTANGIBLE PEOPLE SKILL GEMS —AND DANGEROUS RED FLAGS—IN AN INTERVIEW?

BY RACHEL ZUPEK FARRELL

WHILE DELIVERING PROJECTS ON TIME, scope and budget are key parts of every project, success ultimately comes down to the right people doing the work.

It's the intangible qualities—interpersonal skills, communications and the like—that consistently rank as the strongest indicators of project success across organizations, industries and regions. According to the 2012 *Workplace Issues Report* by training firm Six Seconds, those who use emotional intelligence as a basis for leadership outperform their peers by 32 percent in leadership effectiveness and development.

"The project manager is the central hub of the project team, holding together team members from different groups, different organizations, with different goals and even different languages," says Murray Duke, PMP, portfolio manager at insurance firm ING Life in Tokyo, Japan. "This is done through the project manager's people skills."

But unlike technical skills that can be easily quantified, people skills often are more difficult to gauge, particularly during the hiring process. "During the interview, it's easier to find out if a project manager has good technical skills than to evaluate his or her soft skills," says Eric Pepin, PMP, PgMP, human resources director at video game developer Ubisoft in Shanghai, China.

—Deborah H. Herting, PMP, The Deborah Group, Doylestown, Pennsylvania, USA

For senior-level project leaders, program and portfolio managers, and project management office (PMO) directors charged with hiring project managers, knowing what to look for—and what *not* to look for—in the interview will help find the right people person.

WHAT TO TARGET

The people skills that helped a project manager flourish at one organization may be very different at his or her next stop. Before identifying which skills to target in an interview, you must first define the high-performing project manager for your particular organization.

"Take a close look at the organization and current projects underway," Mr. Duke suggests. "Different projects will require a different set of people skills."

An individual with strong cultural intelligence skills may be ideal for leading a project using virtual teams, for example, whereas a creative leader might be the right choice on a project with a tight timeline.

Once you know the skills you're targeting, you can identify the right questions to ask in the interview, says Deborah H. Herting, PMP, founder and CEO of The Deborah Group, a project and talent management advisory firm in Doylestown, Pennsylvania, USA. For example, "How did you address a challenging project where a problem needed to be solved quickly, and why?"

"The candidate's answer will lend visibility into their communication styles, behaviors and workplace values when faced with an issue out of the norm," says Ms. Herting, author of *The Power of Interpersonal Skills in Project Management.*

Try these five questions in your next interview with a potential project professional to determine if he or she possesses the people skills you seek:

1 **Can you describe a time when you devised an innovative approach to complete project deliverables?** "You are looking for demonstrated behaviors in their responses—specifically, the competency demonstrated by the situation or task, the action that he or she took and the forthcoming results," says Corey Sullivan, PMP, human resources business partner for technology company Riverbed Technology in San Francisco, California, USA.

2 **If you could build a "perfect" project team, what would it look like?** The answer: "There is no perfect team. Everyone has strengths and weaknesses," Ms. Herting says. "It's important to have a project manager who can build a diverse team by using co-workers' strengths and partnering them with areas of weakness."

3 **How do you share a project's status with your team?** The response gives insight into how the project manager communicates with his or her team, Mr. Pepin says. For example, which tools does he or she use? Does he or she do weekly status meetings with team members? How are project team members updated about progress?

4 **How do you deal with two project team members who don't get along?** This question helps identify if the candidate has dealt with this type of difficult situation and how it was handled, says Mr. Pepin. The story should demonstrate the person's maturity. Is the project manager capable of dealing with difficult people without losing focus on project deliverables?

5 **If the canvas were blank and you could shape your position, what would it look like and why?** Interpersonal skills such as teambuilding, communication and leadership are as crucial as executing the triple constraints of scope,

schedule and budget. "The preferred response includes understanding that both art and science are important to achieve project and organizational objectives," Ms. Herting says.

WHAT TO AVOID

Knowing what *not* to look for can narrow the search, too. "A red flag for me is when project managers are unable to explain a problem in a clear way," says Mr. Pepin. "If they are not able to explain the problem, I wonder how they can communicate well with their team."

Ms. Herting searches for warning signs of subpar communication skills by paying attention to body language, voice and tone. "Is a candidate articulating well, but also actively listening? Do they know their audience? Are they respectful and do they appear to try to connect with the interviewer?" she says.

Other warning signs include:

1 **Does the candidate's previous experience indicate trouble working well with others?** "Does the candidate speak disrespectfully of someone or a previous organization?" Ms. Herting says. If so, he or she is unlikely to earn the trust of team members and respect them in return. The candidate should appear to make an effort to connect with people and want to work collaboratively. At the same time, they shouldn't avoid making a decision when necessary.

2 **Does the candidate shy away from conflict or immediately escalate problems to senior management?** Ask candidates how they have handled a contentious team member; be wary if they passed the buck without tackling it first themselves. "This may be a red flag that a candidate is weak in people skills and relies too much on technical skills to deliver a project," says Mr. Duke.

HOW VALUABLE ARE PEOPLE SKILLS?

PwC's 2012 *Insights and Trends: Current Portfolio, Programme, and Project Management Practices* survey found projects that employed effective and efficient communication methods performed better in the areas of:

Delivering project scope	68%
Meeting quality standards	66%
Delivering intended business benefits	58%

3 **Does the candidate seem to manipulate circumstances in order to control an agenda?** "Look for emotional versus resilient characteristics by asking scenario-based questions," Ms. Herting says. For example, ask how a project challenge affected team dynamics. "Was the issue resolved and were people happy, or did tempers fly and were people blamed? What role did the project manager take in resolving the issue?" she says. Follow up with a question about the project manager's style: For example, does he or she resolve issues by gathering a consensus or make unilateral decisions?

4 **Has the candidate missed deadlines?** "A project may have been delivered late due to last-minute or incomplete communications by the project manager, and not because the technical skills were absent," says Mr. Sullivan. "In most situations, a project manager must use his or her interpersonal skills to get team members to do things they wouldn't otherwise know to do."

Once you find a well-rounded project manager with a balance of interpersonal and technical skills, you've likely spotted a good candidate for the job. After all, projects don't occur in isolation; they are delivered by teams. "Focusing on a candidate's technical skills and experience over attitude and people skills is a mistake that could haunt you and the project team for a long time," Mr. Duke says. **PM**

MOVING ONWARD

Taking the next career step isn't easy. Here's advice for putting the best foot forward.

BY LINDSAY SCOTT

Q: I'm currently working as a senior project manager, and I have an opportunity to move into a program manager position or head up a new portfolio management office. I'm unsure which opportunity is right for me.
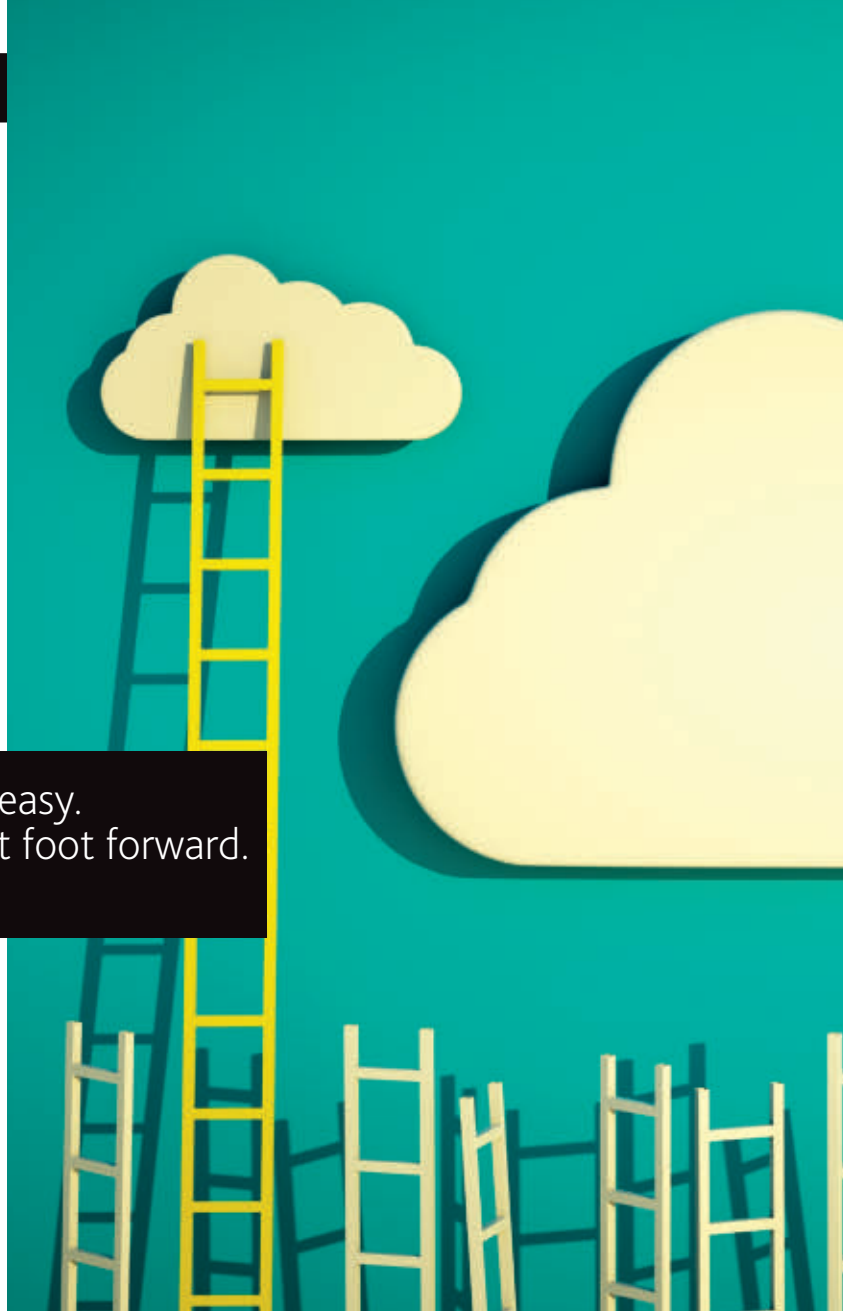
A: Ultimately, the two positions are distinctly different: The program manager role is predominantly a delivery-focused position, while the portfolio office moves into strategy and business planning. Still, specific questions about each promotion will help determine the right move.

For the program manager position, ask yourself:

- **Why is a program manager needed?** Is it a new role or a replacement? The answers will give insight into the current state or situation of the program.
- **What does the organization understand a program manager to be?** What are the differences between a program manager and a senior project manager? Understand how your superiors see the role of a program manager and their expectations.
- **What programs are already in the pipeline that I will likely manage?** Are these challenging enough? Determine if there are long-term opportunities for program managers or if it's just a short-term fix.
- **What level of authority and empowerment does this position have?** To whom would I report? Assess where this role sits within the hierarchy of the organization to determine if you can succeed in the role.
- **What is the span of control for this position?** Understand how many direct reports or other resources you will manage.
- **How will my success in this position be measured?** Make sure you are happy with these measures and objectives.

For the portfolio office promotion, consider similar questions:

- **What is the objective of the portfolio office, and why does the business need it?** What links to organizational strategy planning already exist? Make sure there is a strong foundation for you to build on and the basic objectives are understood.
- **Who is the champion and sponsor for the portfolio office?** What will be our working relationship? This key relationship needs to allow you to be successful.
- **What authority do I have in setting up the portfolio office, choosing resources and influencing organizational decisions?** Understanding what you can and can't do from the beginning ensures there are no nasty surprises further down the line.

Once you have a better understanding of what the organization is looking for, the final decision will feel more comfortable and straightforward. Remember, this is just one of many crossroads you likely will come across in your career. Choosing one option does not necessarily mean you rule out choices forever.

Q: For the past five years, I've felt stagnant in my career—no pay raise, training or new challenges. What should I do next?

A: Five years is a long time to go without recognition and rewards, and I suspect you already know what to do next but need a sounding board to work through different scenarios.

First, what is the most important change you are looking for: financial, personal development or just a change in day-to-day work? Are you fundamentally happy with the organization for which you work? Do you understand your employer's situation? Change may be just around the corner, and it could be a case of waiting just a little longer.

The second option is looking externally for new opportunities. Your next move could be a permanent role or an opportunity to freelance. This depends on your approach to risk-taking and the level of challenge you seek.

One area to address straightaway is your own professional development. Project professionals should not rely totally on their employer to provide training and career development. If you are considering asking for a pay raise or looking for a new opportunity externally, you need to demonstrate that you take your development seriously. **PM**

What level of authority and empowerment does this position have? To whom would I report? Assess where this role sits within the hierarchy of the organization to determine if you can succeed in the role.

■ **What are the critical success factors for the portfolio office?** Understand these factors from the point of view of the board, senior management, project practitioners and other departments. Then consider your own thoughts to bring a balanced view.

■ **What level of investment is the organization putting into the portfolio office?** This will help you do a little risk analysis up front to understand the threats and opportunities of this role.

Lindsay Scott is the director of program and project management recruitment at Arras People in London, England. Send career questions to pmnetwork@imaginepub.com.

PMI Marketplace
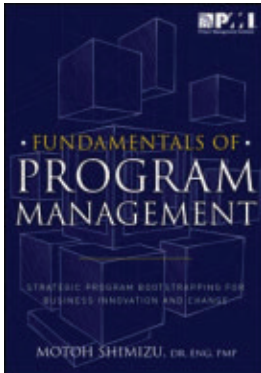
Motoh Shimizu, Dr. Eng., PMP

Fundamentals of Program Management: Strategic Program Bootstrapping for Business Innovation and Change

This breakthrough book provides a linkage between strategy and project management through programs. It offers a framework for integrating strategy, programs and projects—a disciplined alternative to leaving the matter to the personal knowledge and expertise of project managers engaged in actual tasks. Its distinctive approach defines a program as a refined expression of a strategy itself. The language is reader-friendly, and the book is peppered with helpful sidebars that explain or clarify key terms or points. This revolutionary approach points the way to improved program practice.

Project Management Institute, 2012, ISBN: 9781935589631, paperback, 201 pages, $27.95 Member, $34.95 Nonmember

---

Douglas Macbeth, BSc, MSc, C.Eng; Terry Williams, MA(Oxon), MSc, PhD; Stuart Humby, BSc, MSc; and Ken James, MA, OBE

Procurement and Supply in Projects: Misunderstood and Under-Researched

Procurement Management is one of the nine Knowledge Areas of *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*—Fourth Edition. Yet in many business sectors, the contribution of procurement is not fully realized. This research report begins with a literature review that shows the increased importance of procurement in projects versus continuing operations, and that early involvement of suppliers in project planning can yield benefits in later project performance. Results are detailed in a series of graphics that display the data, accompanied by succinct text that explains their meaning. This report describes solid research and is a "call to action" for those who can and should do more to reap the benefits of this key project process.

Project Management Institute, 2012, ISBN: 9781935589549, paperback, 75 pages, $23.95 Member, $29.95 Nonmember

---

Randall Englund and Alfonso Bucero, MSC, PMP

The Complete Project Manager: Integrating People, Organizational, and Technical Skills

This practical guide addresses the project management people skills that are so essential to successful project, program and portfolio management. Through a storytelling approach, the authors explain the necessary skills—and how to use them—to create an environment that supports project success. They demonstrate both the why and the how of creatively applying project management people skills in the areas of leadership, conflict resolution, negotiations, change management and more. A companion workbook, *The Complete Project Manager's Toolkit*, is available separately.

Management Concepts Press, 2012, ISBN: 9781567263596, paperback, 280 pages, $56.05 Member, $59 Nonmember

---

Randall Englund and Alfonso Bucero, MSC, PMP

The Complete Project Manager's Toolkit

As the companion piece to *The Complete Project Manager*, this book provides the tools needed to integrate key people with organizational and technical skills. The hands-on, action-oriented tools in this book help readers develop a complete set of skills to excel in today's competitive environment. The "how-to" in this book is provided through assessments, checklists, exercises and examples of real people applying the concepts. Readers may use these tested methods immediately to overcome environmental, personal, social, organizational and business barriers to successful project management. This companion text may also be used as a stand-alone guide.

Management Concepts Press, 2012, ISBN: 9781567263602, paperback, 203 pages, $37.05 Member, $39 Nonmember

Cynthia Stackpole Snyder, PMP, EVP, MBA

Manage to Lead:
Flexing Your Leadership Style

What does it take to succeed as a project manager?

That's the question PMI asked more than 700 project managers around the world in 2011. In this highly accessible guide, you'll not only learn their answers, but you'll also receive the practical tools, techniques and knowledge you need to develop the skills they identified as the most important to project success.

Leaders aren't born. They're made.

Leadership is not a set of elusive traits. It is a practical competency, a concrete set of knowledge, skills and behaviors that will help improve your team's effectiveness.

Authored by Cynthia Stackpole Snyder, PMP, an award-winning project manager and educator, this handbook includes actionable content drawn from her decades of experience managing projects for organizations such as JPL and HP, as well as the latest in cutting-edge research from top universities.

Topics include:

- How to develop a foundational understanding of your own strengths and weaknesses
- Tools to increase your awareness and mastery of the complex emotional dynamics that affect you and your team's success
- Practical strategies on how to build, motivate, manage and communicate with a team—whether they are across the room or around the world
- Effective ways to manage conflict

The book also explores such advanced topics as risk-taking, gender differences, cognitive theory and the effect of technology.
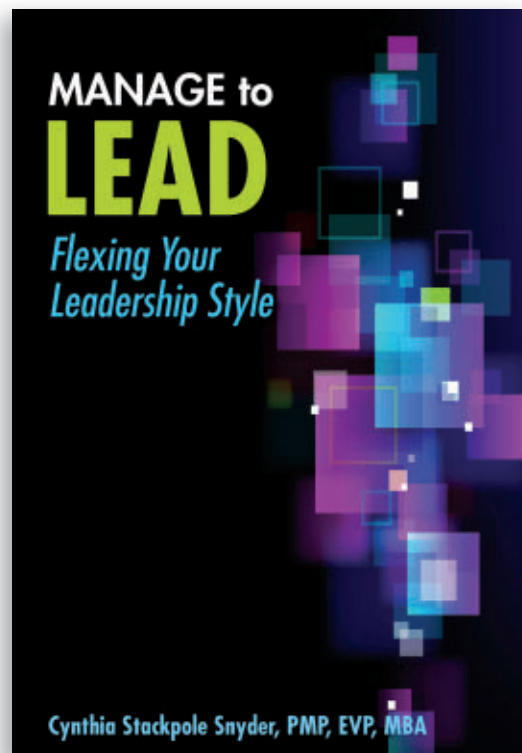
Leadership is not a set of elusive traits. It is a practical competency, a concrete set of knowledge, skills and behaviors that will help improve your team's effectiveness.

Successful careers take different roads

Do you need guidance mapping out the best route?

The global business environment is in constant motion. Staying competitive and relevant often requires an occasional detour to refuel your skillset.

Face-to-Face Courses | Instructor-Led e-Learning | Online Self-Study

Accelerate your career with
project management training courses:
PMI.org/refuel

PMI Project Management Institute

ADVERTISER DIRECTORY

To receive free information about products or services advertised or listed in this issue, please contact advertisers via their web address below.

"We don't need to put people on a boat to go out and perform these functions. We can have [the robots] run autonomously for days or months on end."

—Steven Springsteel, Liquid Robotics, Sunnyvale, California, USA, to *Fast Company*
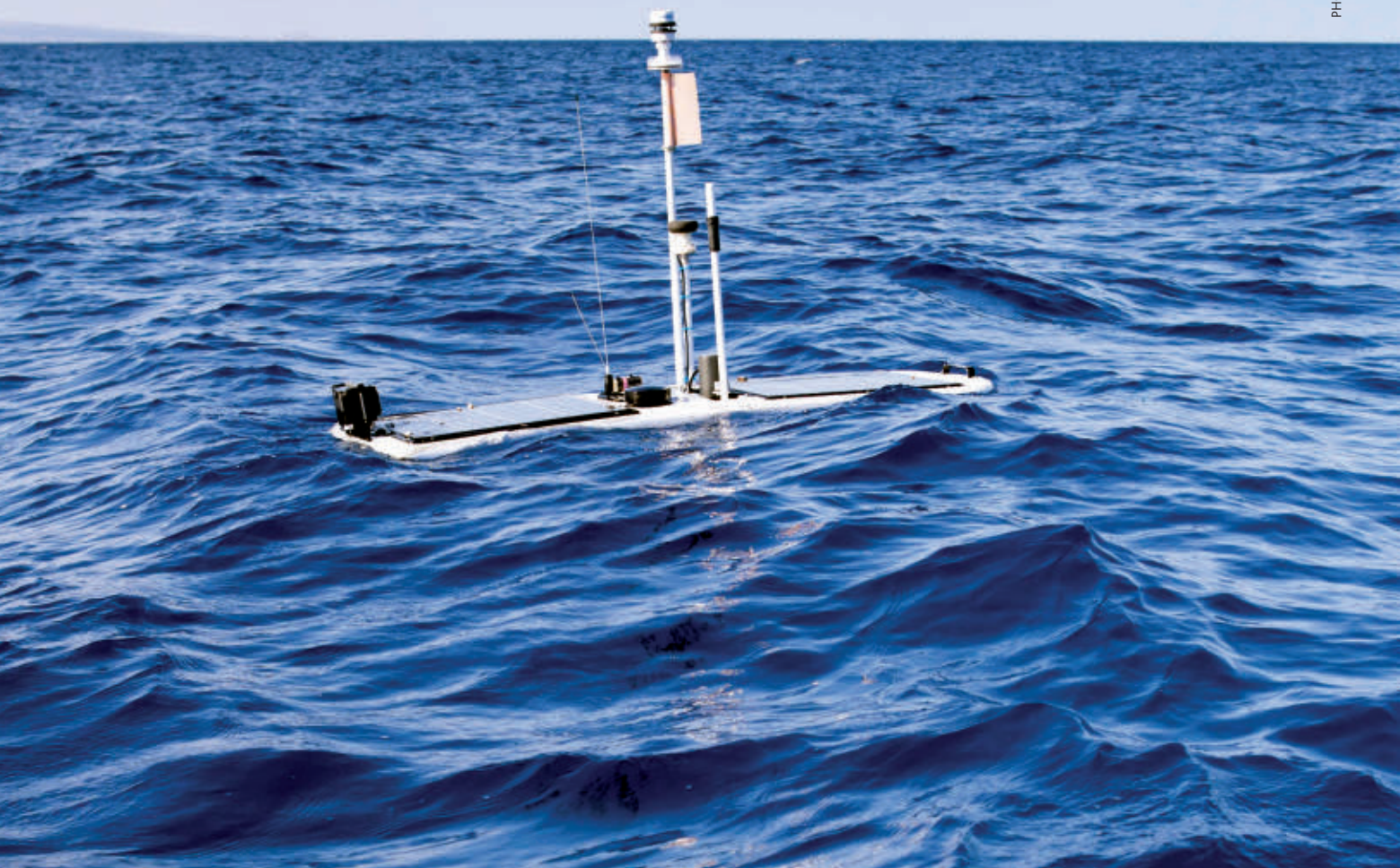
CLOSING
Credit

PROJECT: Offshore oil exploration
WEIGHT OF GLIDERS: 250 pounds (113 kilograms)
LESSONS LEARNED: More than 100 gliders have been used on previous projects.

These underwater robots are big—but it isn't their size that will help projects.

Originally designed for projects to track scientific endeavors such as improving predictions of impending tsunamis, the robots, known as Wave Gliders, are powered by the continuous motion of the ocean's waves. The devices are now being deployed for projects in the oil and gas industries.

Wave Gliders are packed with sensors that can detect changes in the ocean's chemistry and collect atmospheric data. These machines also come equipped with a satellite and wireless communications system and a GPS.

A new joint venture has two sponsors: ocean data services provider and Wave Glider creator Liquid Robotics in Sunnyvale, California, USA and global oil services company Schlumberger.

The partnership is perfect for the oil industry, an area in which companies "face more and more resource-intensive projects," according to Schlumberger's website.

The company sees these gliders as a way to lighten the resource load because the machines have a host of features to detect spills, track remediation after spills and measure potentially dangerous wave heights.