Agile has inexorably changed the project management landscape. That's largely due to its adaptability: Iterative development allows teams to deliver functional pieces of a project quickly and adjust on the fly.

No Longer Buried in Paperwork

One of agile's basic tenets is to require less documentation and fewer defined specifications at the front end of the project, instead of relying upon constant tweaking throughout the life cycle. The goal is to free project team members from the need to document everything so they can focus on quickly producing high-quality deliverables.
GLOBAL JOBS REPORT:
6 Sectors to Watch

Both developed and emerging economies have the projects—they just need the right project practitioners.

BY KATE SYKES
ILLUSTRATION BY JOHN UELAND
In 2014, project management practitioners will continue to be in high demand. But what that demand means—the opportunities offered, the skills needed—will vary wildly by sector and location.

The rapidly growing economies of India and China have a strong need for project practitioners with a standard set of skills. “The fundamentals of project management are not clearly integrated in China, and there are lots of opportunities for growth in this area,” says Jerry D. Lainhart, PMP, a Haiyang, China-based coordinator for nuclear-power provider Westinghouse Electric Company. Chinese organizations are increasingly embracing project management processes—and striving to ensure their staffs are trained in them. “An experienced project manager will likely have many assistant project managers trying to understand the ins and outs of project management so the company will be self-sufficient in these skills on their next project,” Mr. Lainhart says.

Meanwhile, in developed countries still recovering from the global meltdown, increased pressure on an organization’s bottom line means an increased need for project practitioners who can think strategically when executing projects. “The ability to convert strategy into action is the emerging skill of our time,” says Tim Wasserman, program director of the Stanford University Advanced Project Management program, Stanford, California, USA. When project managers can grasp the larger ecosystem in which the project lives, they’re able to create more agile processes that lead to improved outcomes—not just for the organization but also for the economy.

And employers realize that. In July 2013, project manager jobs topped the list of open positions in healthcare IT in the United States just as overall job demand in that field reached a record high, according to Wanted Analytics. In Canada, “senior project manager” was the most commonly advertised senior-level job title across all industries, while project managers in the United Kingdom enjoyed a drop in unemployment.

These six sectors face differing challenges and economic outlooks, but they have one thing in common: job opportunities for project practitioners.
Energy

While renewable energy gets the media buzz, traditional energy hasn’t gone the way of yesterday’s news quite yet. New oil-field discoveries and advances in fossil-fuel extraction technology are leading to some of the largest energy projects in the world.

The mostly untapped oil fields off the coast of Rio de Janeiro could turn Brazil into one of the world’s leading oil producers. Yet to get there, the nation will have to overcome a shortage of qualified project practitioners. Among countries with the most difficulty finding skilled workers, Brazil ranks second to Japan, according to ManpowerGroup.

“Skilled project managers are very difficult to recruit in Brazil,” says Derek M. Stott, PMP, Brazil pre-salt project director for Dresser-Rand, Campinas, Brazil. Dresser-Rand supplies gas turbine and motor drive compression equipment for a US$73 billion exploration and production project led by Brazilian oil company Petrobras, based in Rio de Janeiro.

Over the next three to five years, Petrobras plans to deploy more than 20 new floating production, storage and off-loading facilities to access Brazil’s pre-salt reserves lying beneath thick layers of rock and salt. Such rapid industry growth, coupled with government restrictions on outsourcing parts and labor, has stimulated local industrial production beyond the capacity of the existing labor pool.

“If you have a degree, you’ll have no trouble finding a project management job in Brazil.”

—Derek M. Stott, PMP, Dresser-Rand, Campinas, Brazil
hit Europe’s North Sea. While oil production in the area has declined steadily over the last 10 years, experts predict the fields still have 30 to 40 years of production left. An industry survey released by Oilandgasppeople.com, the world’s largest oil and gas jobs board, found that 65 percent of North Sea oil and gas companies cannot recruit enough project engineers to meet demand. With a wave of North Sea workers retiring soon, the sector’s need for skilled project managers may reach near-crisis levels.

“With a highly educated workforce and low unemployment, Norway is importing their labor force,” says Mark Woeppel, president and CEO, Pinnacle Strategies, a global project management consultancy firm in Dallas, Texas, USA that supports several North Sea energy projects. Highly skilled project managers with engineering, construction or oil and gas industry experience will find plenty of work in the region.

Mr. Woeppel suggests job seekers look beyond the industry’s major players and investigate positions with the subcontractors and suppliers that support them. He also recommends attaining project management certifications to demonstrate a standard set of skills. “It shows a commitment to the profession,” says Mr. Woeppel.

Whom you know can be as important as what you know. “Most companies are looking for several years of project experience, and networking plays a big role in finding and landing a job,” says Giovanni Di Muoio, PMP, project leader at wind-systems manufacturer Vestas Nacelles, Copenhagen, Denmark.

With the economy still in recovery mode, many organizations in the energy sector have shifted their focus from R&D projects to cost savings—which means project practitioners will have to adjust. “When money is tight, companies tend to shut down projects that are long term. Project managers must be flexible and able to adjust to changes,” says Mr. Di Muoio.

Healthcare

Improve care, lower costs: That’s the imperative facing the private and public sectors of healthcare globally.

In the United States, the Patient Protection and Affordable Care Act has opened up the health insurance marketplace to more competition, forcing insurance companies to reassess the way they attract and retain customers. The need to reduce costs, boost efficiencies and improve customer experience will be an important driver for private insurers in the coming year, according to CIO Insight. Project managers with strong IT skills will find opportunities in healthcare projects that use mobile devices, social media and data analytics to unify service across multiple channels.

As developed countries such as the United Kingdom face an aging population and changing government regulations, “healthcare companies are having to innovate at a rapid pace,” says Tracy Muttu, PMP, a senior consultant specializing in healthcare technology at Muttu Consulting LLC, London, England. “There are many independent companies working with the National Health Service to accomplish these goals.” And those companies are turning to project practitioners. Healthcare firms that provide services in electronic health records, system integration and workflow optimization all offer opportunities.

Projects that capture healthcare data and use it to improve healthcare delivery and lower operational costs need project managers with skills in software development life cycles, large-scale budgets and cross-functional projects. “Given the rapid pace of innovation in healthcare technology, change management skills are critical,” Ms. Muttu adds.

Mobile health (mHealth) applications top the list of industry trends. By 2017, mobile health services are expected to generate US$23 billion in revenue. “Creating innovative and secure ways for consumers to interact with healthcare providers using mobile devices such as tablets and smartphones is a natural progression for the industry,” says Ms. Muttu.
Tech remains a powerful job engine with no signs of slowing. In the United States, technology outpaces all other industries in employment growth by three to one. Multinational IT corporations based in the United States are rapidly taking over smaller IT companies and expanding into emerging markets in Asia, the Middle East and Africa.

The IT industry has an insatiable thirst for growth, says Gustav Toppenberg, PMI-ACP, PMP, senior manager at IT company Cisco Systems Inc., San Jose, California, USA. “We’re acquiring and integrating new companies at a rate of one every six weeks,” Mr. Toppenberg says. As the company takes on thousands of employees from various cultural backgrounds, it has a strong need for project managers with a standardized set of skills to undertake system reorganizations. “Project managers are key conduits for turning strategic vision into tangible results and outcomes,” Mr. Toppenberg says.

In such a highly matrixed and fast-paced environment, practitioners who want to be competitive must develop their skills in enterprise-architecture-led project management. “Being able to understand how a project fits into the big picture and go back to the original blueprint to determine the way forward is critical,” Mr. Toppenberg says.

Alfredo Zangara, PMP, a business architect in the platform engineering group at Intel Corporation, Hillsboro, Oregon, USA, likewise emphasizes big-picture thinking. “IT project managers need to be more adept at understanding the political culture and principles of the organization they work for,” he says. The ability to think and act strategically is especially important in an increasingly complex marketplace, where a business’ strategy needs to account for the established relationships and evolutionary dynamics in a broader ecosystem, Mr. Zangara says.

The mHealth Alliance in Washington, D.C., USA and the Norwegian Agency for Development Cooperation have funded 10 new projects through the Innovation Working Group catalytic grant program, which encourages the development of innovative mHealth projects. These 10 projects will be implemented across Africa and Asia in the areas of maternal-child health and women’s healthcare.

The Next Eleven economies—Bangladesh, Egypt, Indonesia, Iran, South Korea, Mexico, Nigeria, Pakistan, Philippines, Turkey and Vietnam—also represent potential growth for privately funded healthcare projects. These countries’ expanding middle class is demanding better access to quality healthcare and driving a need for healthcare infrastructure projects to improve access and delivery, according to a 2013 Johns Hopkins Medicine statement. The International Finance Corporation, the world’s largest multilateral investor in private healthcare projects in emerging markets, is funding 86 emerging-market healthcare projects and has invested $US2.2 billion in similar healthcare projects in 53 countries.

The changing climate for healthcare in the United States offers opportunities for project managers with strong IT skills.
In the past decade, the growth of the global construction market has been shifting steadily away from developed economies to emerging markets—a trend that will only continue, according to 2013 Global Construction, published by Global Construction Perspectives and Oxford Economics.

By 2025, growth in the construction industry is expected to increase by more than 70 percent to US$15 trillion, and it will be concentrated in three countries: China, the United States and India. The United States has remained in the No. 2 spot among those three, but as a sign of the larger, ongoing shift, India has replaced Japan as No. 3. While Indonesia, Vietnam and the Philippines comprise a smaller (US$350 billion) construction market, it’s growing by more than 6 percent annually.

For project managers with construction experience, the job market in Asia is wide open. “Project management as a profession is not as mature in Asia as it is in developed markets,” says Mr. Woeppel. India, whose population growth has outpaced the growth of its infrastructure, predicts a shortage of 3 million professionals by 2022. The country needs as many as 1 million skilled project managers to fill gaps in large infrastructure projects that require high degrees of independence and complex regulatory compliance. “Highly qualified practitioners in Asia and India can really write their own ticket,” says Mr. Woeppel.

In developed countries, the jobs are concentrated in small pockets of economic growth. “Much of the U.K. housing market is still underwater,” says John Thorpe, managing director, Arras People, a project management recruitment and careers firm, London, England. General construction remains down, with projects primarily limited to luxury housing.

“Project management as a profession is not as mature in Asia as it is in developed markets. Highly qualified practitioners in Asia and India can really write their own ticket.”

—Mark Woeppel, Pinnacle Strategies, Dallas, Texas, USA

**Worldly Ways**

Project hot spots across the globe offer a wealth of job opportunities.

**UNITED STATES**
The U.S. healthcare sector has accounted for 13 percent of the country’s urban job growth during the economic recovery. Currently under construction, the US$1 billion Parkland Memorial Hospital in Dallas, Texas is the country’s largest healthcare construction project.

**CANADA**
According to PMI’s Project Management Talent Gap Report, 582,366 new project management roles are projected to be needed by 2020.
GERMANY

More than 1.6 million new project management roles are projected to be needed in the country by 2020, according to PMI’s talent report.

NORTH SEA

Deep-sea oil drilling in the North Sea region was expected to create 50,000 new jobs in 2013 alone. By 2030, the North Sea will need 100,000 new workers with college degrees in finance and administration.

CHINA

China boasts the world’s largest high-speed rail system: 10,463 kilometers (6,501 miles) of tracks. With an annual investment of US$100 billion, the country plans to complete 18,000 kilometers (11,185 miles) of track by 2015 and 120,000 kilometers (74,565 miles) of high-speed rail by 2020. Nearly 25 million project management roles are projected to be created by 2020, according to PMI’s talent report.

JAPAN

According to PMI’s Project Management Talent Gap Report, 2.6 million new project management roles are expected to be created by 2020.

BRAZIL

The country’s 10-year energy plan aims to attract US$133 billion in investments and triple its renewable energy by 2020. Yet more than two-thirds of employers in Brazil report that they can’t find enough workers with the right skills. More than 1.3 million new project management roles are expected to be needed by 2020, according to PMI.

INDIA

The US$100 billion Delhi-Mumbai industrial corridor development project is India’s largest-ever infrastructure project. Nearly 9 million new project management roles are projected to be needed by 2020, according to PMI’s talent report.

AUSTRALIA

Australia has three operating liquefied natural gas projects and seven more under construction, representing an investment of more than AUS200 billion. A corresponding labor shortage in Australia translates to higher salaries for project managers in that country. More than 375,000 new project management roles are projected to be needed by 2020, according to PMI.
Finance

The regulatory reforms that followed in the wake of the economic crisis forced financial institutions to direct their efforts at compliance projects. Many of these organizations are now ready to look beyond the cleanup process and focus on growth, but doing so means bridging a talent gap. More than half of all financial-services CEOs said a shortage of key skills in the available labor pool posed a threat to future growth, according to a global PwC survey.

“Skill gaps exist on both ends of the hiring spectrum,” says Ed Bradstreet, president of search firm Bohan & Bradstreet, Guilford, Connecticut, USA. Basic skill development in the industry hasn’t kept pace with the recent uptick in regulatory reform and global compliance. Finance jobs in risk management now require candidates to have a four-year degree plus additional certifications as well as a proven track record in managing projects.

At the same time, CFOs and high-level project managers increasingly play a critical role in strategic decision-making and business operations for profit and loss, balance sheets and budget accountability. “Companies are demanding a closer connection to leadership among their financial professionals,” says Mr. Bradstreet.

High-level finance positions require not only solid project management skills but also strong business acumen and soft skills such as cultural competency, network building and the capacity to adapt and innovate in rapidly changing environments. “The ability to persuade and influence others, understand stakeholder values and negotiate for scarce resources is critical,” says Mr. Wasserman.

As Europe undergoes a period of reorganization, banks across the euro zone plan to downsize and restructure in order to increase profits in their core business lines and established markets, according to a McKinsey survey. Up to 725 business lines may be shut down, opening the door for new acquisitions by non-European banks and creating new openings for project managers who specialize in merger and acquisition projects.

Project possibilities will also arise in Shanghai, China, as its free-trade zone will test looser controls on the country’s financial market in an effort to sustain growth and integrate China’s economy with the global one. “Some of the most promising opportunities for project managers in China will likely be associated with the new Shanghai free-trade zone,” says Mr. Lainhart. The plan to re-envision China’s financial sector will also open up construction opportunities, as the 11-square-mile (29-square-kilometer) section of Shanghai’s Pudong district transforms from an industrial zone into a financial center.

“...persuade and influence others, understand stakeholder values and negotiate for scarce resources is critical.”

—Tim Wasserman, Stanford University, Stanford, California, USA
Aerospace and Defense

Declines in U.S. and European government spending may signal turbulence ahead for public-sector aerospace and defense projects—but they also represent a need for project practitioners.

Defense companies have to operate more efficiently with smaller staffs and increasingly complex regulations, according to a PwC industry report. This environment is creating project practitioner jobs like the one held by Dan Schellinger, PMP, program manager for consulting firm Dynamics Research Corporation, Andover, Massachusetts, USA. Mr. Schellinger leads U.S. Department of Defense projects aimed at streamlining the movement of U.S. Air Force equipment, supplies and personnel around the globe.

“There’s a strong need in this industry for project managers who can understand the strategic vision of the organization, identify key projects and align them with those strategic goals,” Mr. Schellinger says. A program he manages at Scott Air Force Base, Illinois, USA aims to reduce fuel costs—a top strategic priority for the military—by US$284 million over three years.

Meanwhile, the commercial aviation sector has seen modest gains driven by emerging markets. India remains one of the world’s fastest-growing aerospace and defense markets as its burgeoning middle class increases demand for domestic air travel. Large-scale projects such as the US$11 billion fifth-generation fighter jet contract, a joint project between the governments of India and Russia, have focused attention on large employers like Hindustan Aeronautics Ltd. With India’s commitment to keeping manufacturing jobs at home, projects exist all the way down the supply chain in support of this and other commercial aviation projects in the country.

Great Expectations

Across countries, roles and experience levels, project managers earn a median salary of US$88,399. Yet a project manager’s salary depends as much on postal code as it does on skill set. Here are the 10 countries with the highest median salary in U.S. dollars.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Median Salary</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Australia</td>
<td>$134,658</td>
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<td>2</td>
<td>Switzerland</td>
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<tr>
<td>10</td>
<td>United Kingdom</td>
<td>$90,666</td>
</tr>
</tbody>
</table>

Source: PMI Project Management Salary Survey

More than half of all financial-services CEOs said a shortage of key skills in the labor pool threatens future growth, according to PwC.