



cutting through complexity

GLOBAL CONSTRUCTION SURVEY 2013

Ready for the next big wave?

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Introduction

KPMG International's 2013 Global Construction Survey catches the industry in a more upbeat mood after several years of falling backlogs and tight margins that felt like a hangover following the previous boom. Economic recovery is stimulating manufacturing, while growing urbanization is driving a continued demand for infrastructure in all forms. Power and energy are essential forces behind such expansion, accelerating the need to extract and transport conventional and unconventional coal and gas, and build new installations for generating traditional and sustainable energy.

The scale and duration of large engineering and construction programs means that contractors – particularly the bigger, global players – require some time to prepare for market upswings. Having tightened their belts and rationalized following the recession, are they fully ready to catch the next big wave of mega-projects?

Risk management remains high on the agenda of senior executives across the sector, and this year's survey asks why the significant investment in controls has not managed to halt large-scale project failures or damaging incidences of fraud and corruption. Leading industry experts add authoritative insight into how to create a stronger risk culture, where key decision-makers carefully evaluate potential threats across the organization.

What makes our global survey unique is that each participant is personally interviewed face-to-face by a KPMG senior representative. This year a record 165 senior executives of leading engineering and construction companies from around the world took part in the survey, and I would like to thank all those who gave their valuable time to contribute to this vital and ongoing assessment of the future of the sector.

Geno Armstrong

International Sector Leader
Engineering & Construction
KPMG in the US

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Executive summary

In 2013, KPMG interviewed executives from 165 engineering and construction companies around the world. The respondents' annual revenue varied in size from turnovers of US\$250 million to more than US\$5 billion, and served a range of markets including energy, power, industrial, healthcare/pharmaceutical, manufacturing, mining, education and government.

Forces shaping the industry: what is powering the next wave?

Demand for infrastructure is the driving force

- 66 percent feel that national governments' infrastructure plans are the single biggest driver of market growth
- economic growth, urbanization and population increases are also influential

The slow road to recovery: paddling beyond the breakers

Steady performance has led to optimism over future prospects

- a general upward trend in backlogs and margins between 2010 and 2013
- 54 percent of respondents experienced a backlog increase of at least 5 percent for 2012-2013
- 80 percent foresee stable or higher margins for 2012-13, a significant improvement over the prior period



Growth is on the agenda, but may take several years

- two-thirds of respondents expect their company's revenue to grow by up to 25 percent in 2013
- 75 percent feel it could take 2 to 5 years to see a real industry upswing
- 71 percent believe growth will be organic, rather than through M&A
- 56 percent say that effective mega-project management is crucial to future growth

Areas for expansion: in which direction are the waves breaking?

Power is attracting more and more interest

- of all the new sectors being considered, power and energy top the list by a significant distance
- other target sectors include water, rail, mining, and roads and bridges

Many are targeting international expansion

- 47 percent say that they plan to move into new geographies, with the most popular region being Africa
- much of the interest in this region is from firms in Europe and the Middle East
- Americas firms are focused foremost on the Middle East

Barriers to growth: red flag conditions that could cause a wipe out

The industry is heavily reliant on government spending on infrastructure – and is uncertain about alternative funding

- 72 percent say budget deficits and public funding is the biggest barrier to growth
- private sector financing is the next biggest worry, yet only 28 percent feel public-private partnerships (PPPs) are an important driver

Risk management remains a challenge for the sector

- 79 percent of respondents believe their investments in risk management have paid off
- however, 77 percent also report underperforming projects, due to delays, poor estimating processes, and failed risk management processes.

The path to growth: setting out from the shore



54% of the respondents expect a backlog increase of at least 5% for 2012-2013

A general upward trend in backlogs and margins is giving cause for optimism across the industry, with further growth anticipated. However, most respondents feel that any real breakthroughs could take as long as 2-5 years, adding a touch of realism to forward planning.

As economies recover after a prolonged recession, more new projects are starting to emerge, with increased funding available to maintain and build infrastructure, and develop power and mining capabilities.

KPMG's 2013 Global Construction Survey reflects the general positive mood of the industry. Over half of the respondents reported an increase in backlog of at least 5 percent for 2012-2013, which is an improvement on 2011-12. Fewer than one in seven believe their backlog will decline in 2013.

Engineering and construction companies in Asia Pacific experienced a difficult time between 2011 and 2012, when almost four in 10 suffered a backlog fall of at least 5 percent. These results were partly due to particularly difficult trading conditions in Australia. However, this appears to be a relatively short-lived phenomenon, and hopes are high for continued growth in 2012-13.

Interestingly, the smaller companies involved in the survey – those with a turnover of less than US\$1 billion – forecast the largest rise in backlogs. These organizations tend to be more nimble and can staff up more quickly to meet fluctuating demand. Their larger colleagues, on the other hand, have shed positions in recent years and are a little reluctant to ramp up their resources, preferring to take a more cautious 'wait-and-see' approach.

Margins are not rising at the same rate as backlogs, although four out of five respondents foresee stable or higher margins for 2012-13. This is a positive sign for the industry and indicates a significantly better performance than in 2011-12. The renewed confidence within the Americas is demonstrated by increasingly large margin growth year-on-year between 2010 and 2013 – an indication of greater efficiency and cost management. Only a handful of executives from this region believe their businesses will see lower margins over the next 12 months.

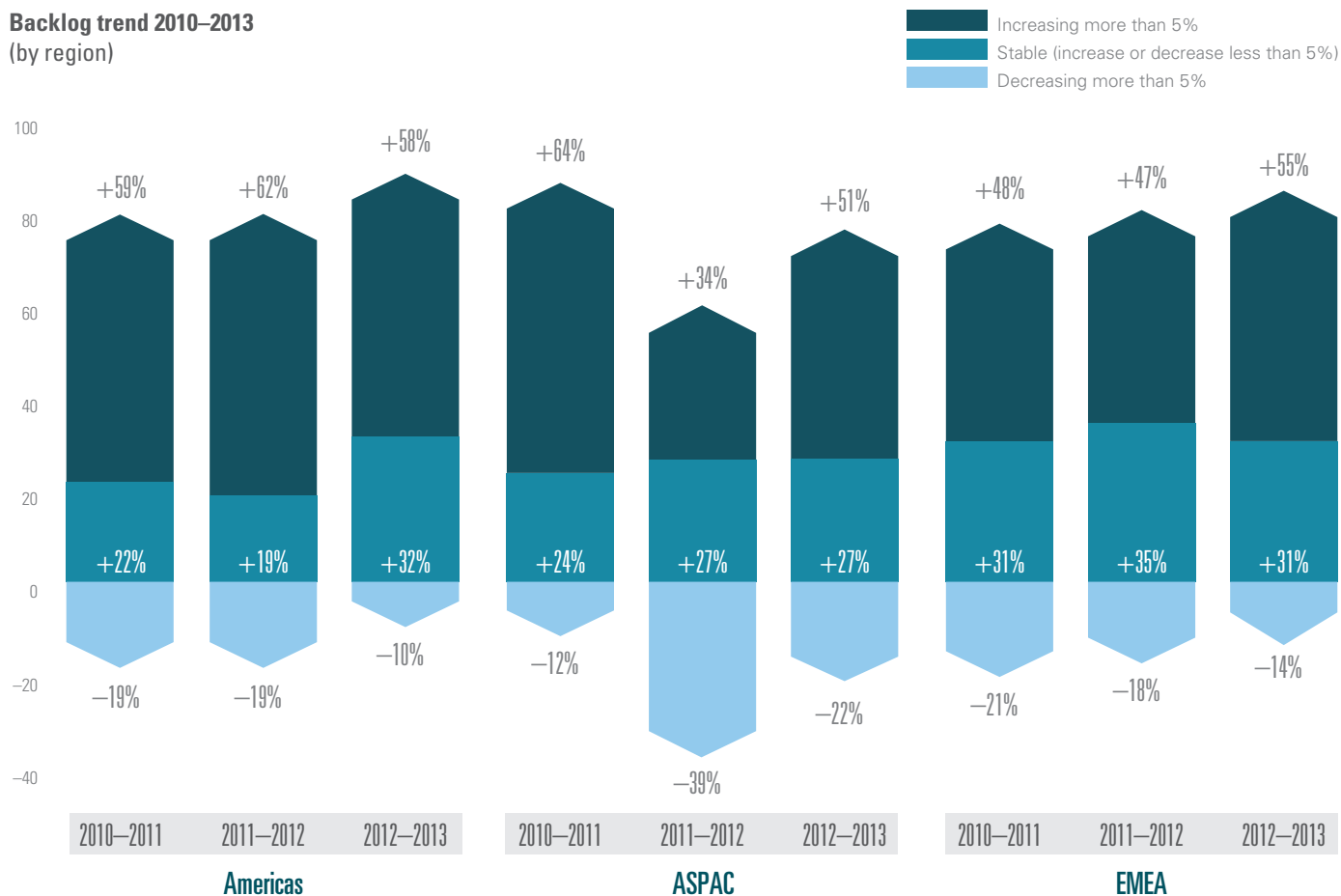
The same small companies that have managed to increase their backlogs are not achieving similar success with margins. Three out of 10 respondents from this segment anticipate margins to be down by at least 2 percent in 2012-13. Having been particularly hard-hit by the recession, these firms may be prepared to price low in order to win new business. According to an executive from an Asia Pacific contractor: "We are in danger of carrying recession type behaviors into the growing market. We need to start saying "no" to contracts instead of "yes" and being very selective; not getting locked into discounting prices as we move into a rising market."

Mid-to-large players (with US\$1 billion-plus turnover) are enjoying more steady returns, with most benefiting from rising or static margins. Funding for large projects is still limited, so rather than take a big risk by employing a lot of new people, they have chosen to grow more steadily but also more profitably.



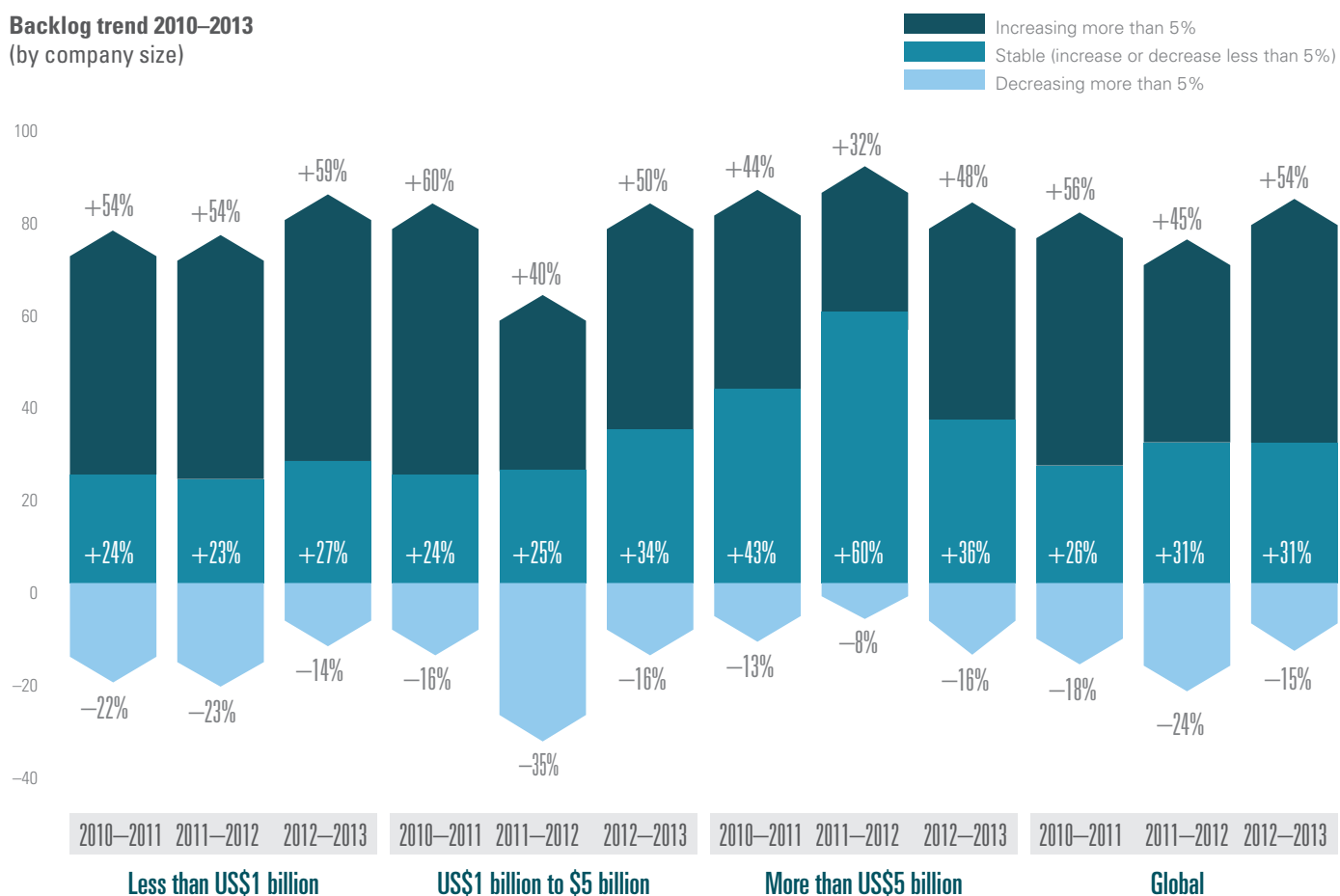
80% of respondents expect stable or higher margins for 2012-13, a significantly better performance than in 2011-12

Backlog trend 2010–2013 (by region)



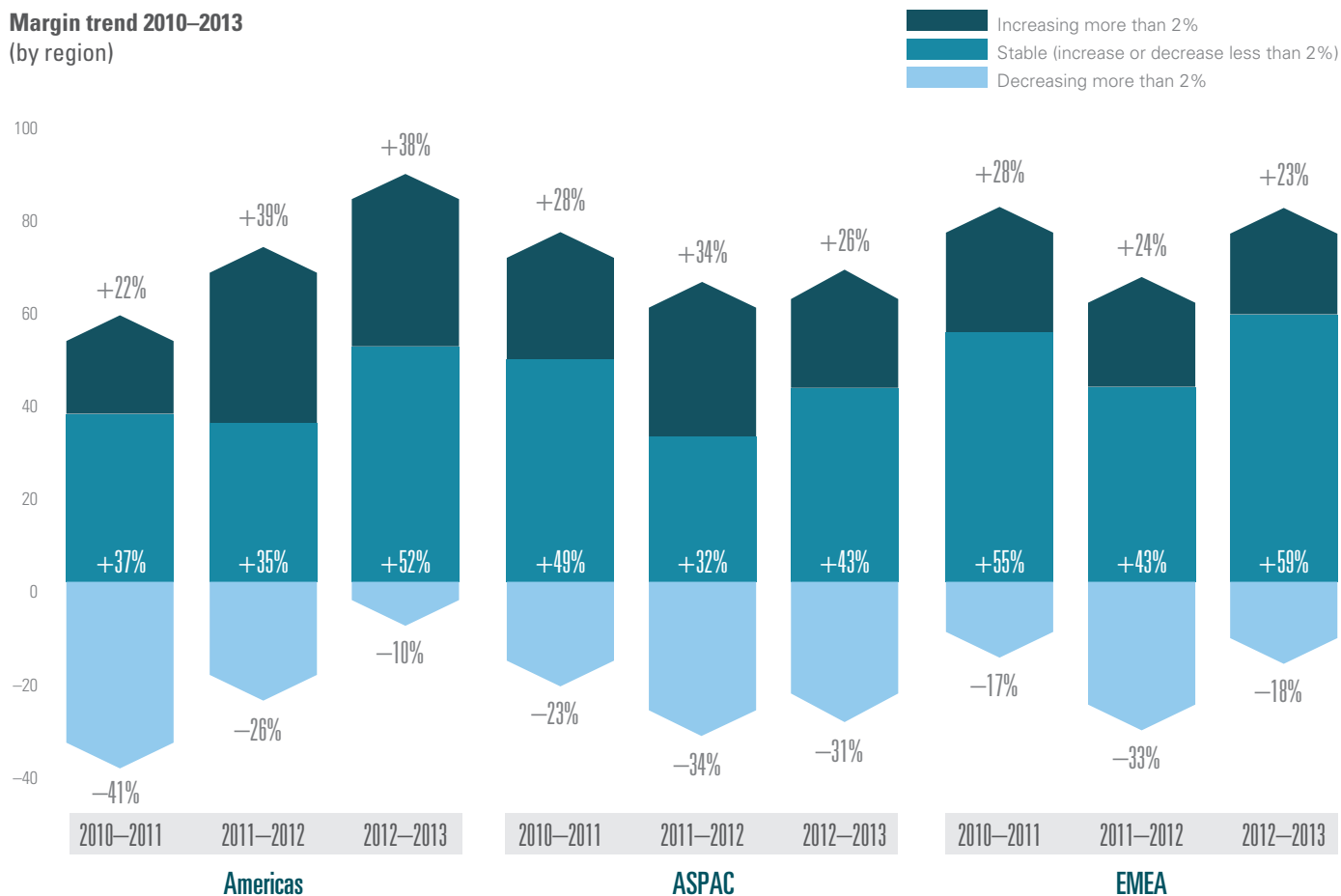
Source: KPMG International, 2013

Backlog trend 2010–2013 (by company size)



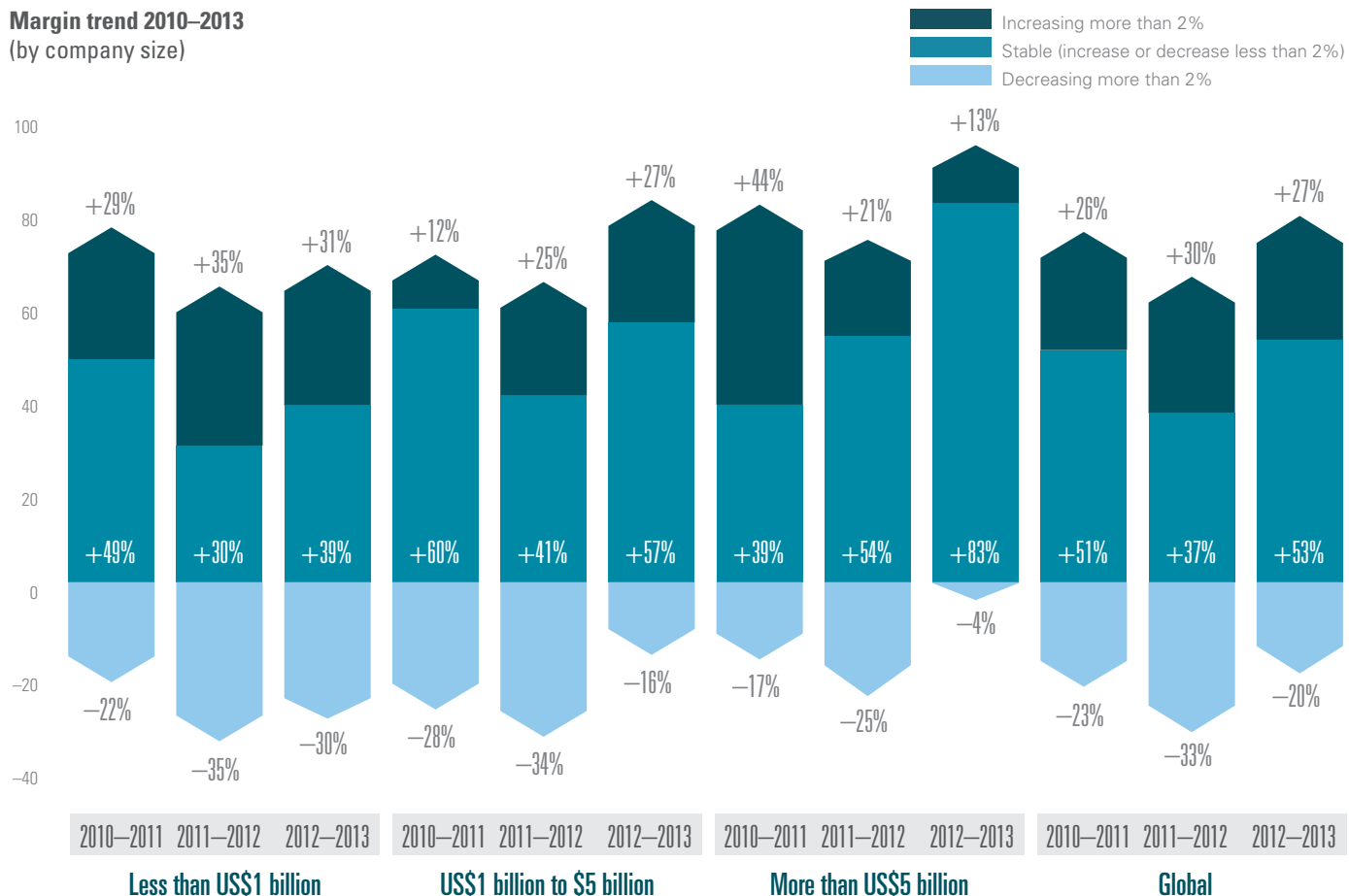
Source: KPMG International, 2013

Margin trend 2010–2013 (by region)



Source: KPMG International, 2013

Margin trend 2010–2013 (by company size)



Source: KPMG International, 2013

Mixed views on growth

Looking forward, 23 percent of respondents are pessimistic over future prospects and foresee either static or falling turnover in 2013. However, 14 percent forecast revenue to grow by over 25 percent, with the average growth rate for the survey being 17 percent.

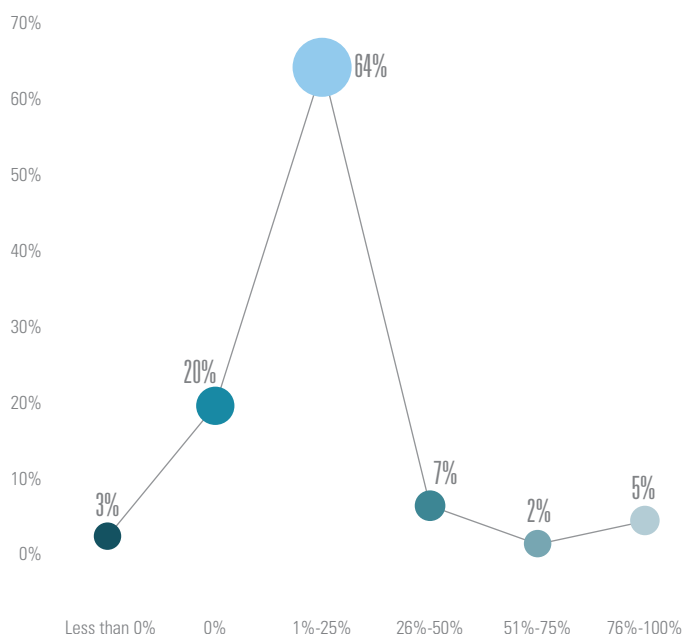
The most positive responses come from businesses in Central and South America and Africa, while Australia, the UK and the Middle East are the least hopeful. Such findings are largely consistent with the trading conditions in these regions, with high hopes for mining, oil and gas in certain parts of Africa and South America.

The industry's largest players are the most optimistic about the next year, predicting revenue growth levels well above the sector average, and twice as high as the next tier down (those with annual turnover of US\$1-5 billion). Having rationalized and reorganized since the recession, these companies feel they are well placed to capitalize on the economic upturn.



75% believe they will have to wait between 2 and 5 years to see a real turnaround for the sector.

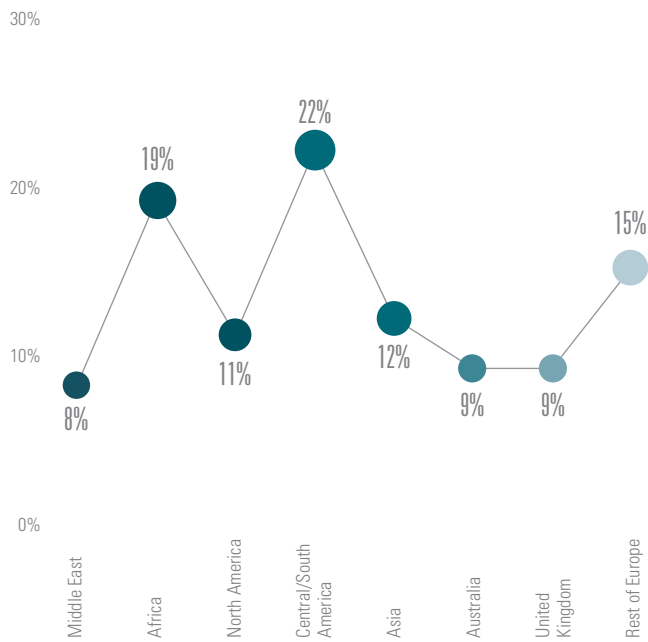
2013 growth (%) forecast



Source: KPMG International, 2013

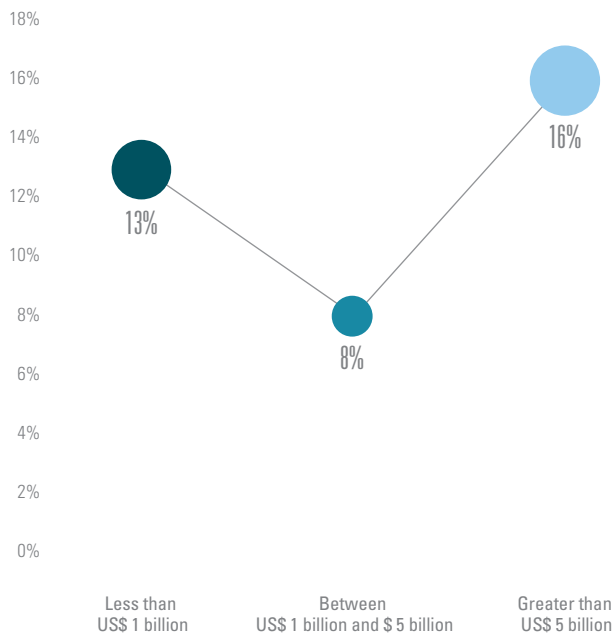


2013 growth (%) forecast (average by region)

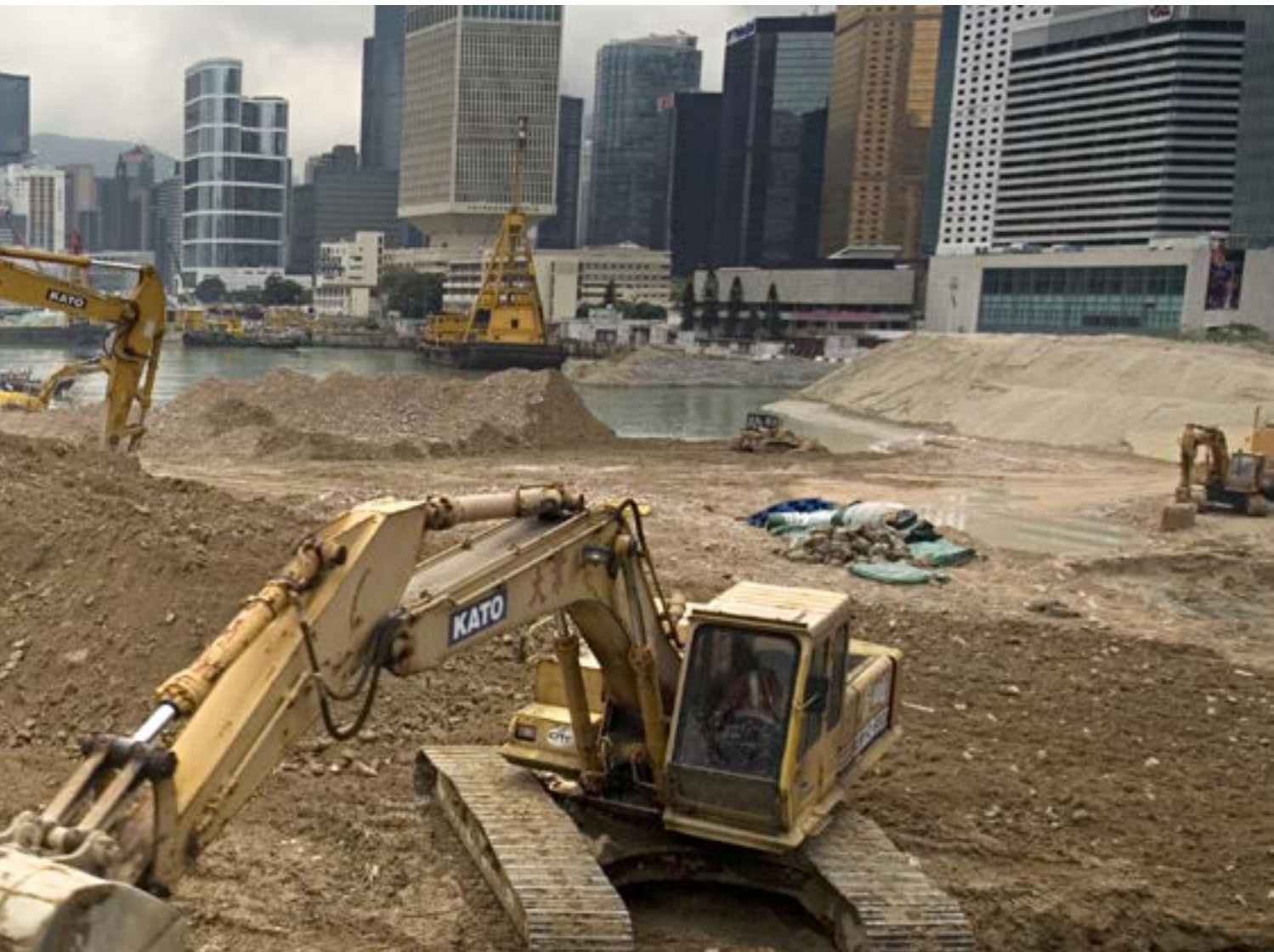


Source: KPMG International, 2013

2013 growth (%) forecast (average by company revenue)



Source: KPMG International, 2013

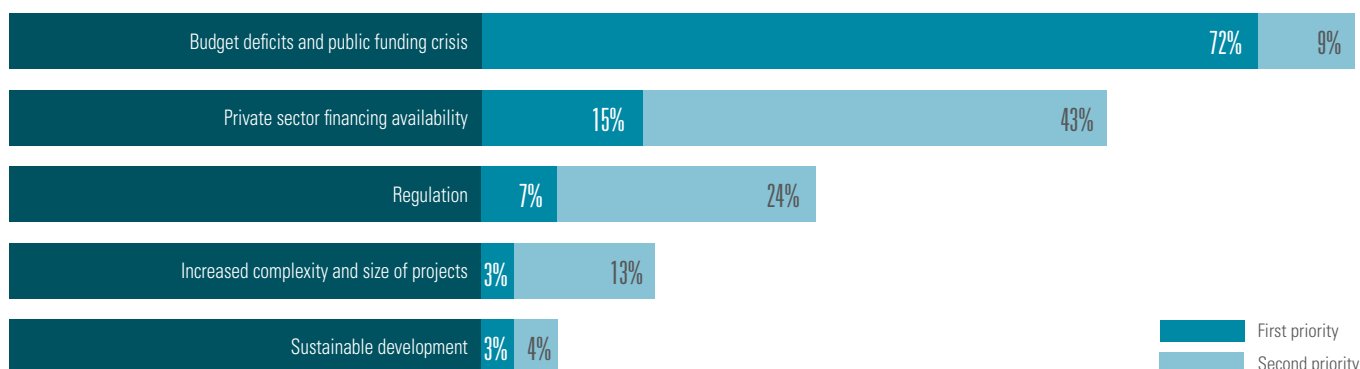




When asked about their thoughts on the longer-term outlook for the industry, the respondents are largely enthusiastic, although a majority (75 percent) believe they will have to wait between two and five years to see a real turnaround from the recession. Market conditions, though improving, have still not reached the levels of 6 or 8 years ago, and with finite private and public sector investment capital, companies are naturally cautious about prospects.

It is therefore not surprising that, of all the potential barriers to progress, the biggest concern is over budget deficits and public funding. Seventy-two percent view this as the number one worry, with private sector financing second and regulation in third place. One survey participant from the UK commented that: "Government debt is of major concern, since current levels leave little flexibility to provide a stimulus to the economy."

Barriers to progress over the next year



Source: KPMG International, 2013



Caught between the waves?

Robert Walker

Managing Director, Corporate Real Estate,
Design and Construction for United Airlines

According to Robert Walker, large engineering and construction companies may not be fully ready for the next wave of growth: "The construction industry is coming back, backlogs are starting to build on companies' balance sheets and there's a hunger for picking up new work. However, the emphasis upon maximizing efficiency has improved cash flow but reduced flexibility. Many businesses have shed a lot of staff during the recession, and invested in innovations such as just-in-time procurement, which means that, when a big project comes along, they can't get the people or materials and equipment into the field quickly enough."

However, he does feel that construction is being run in a more sophisticated manner than in the past: "Contractors used to effectively "give the project away" by bidding low

prices, and subsequently make their profits on change orders. That mindset has largely disappeared, and companies now make far greater use of pre-assemblies, delivering more complete pieces of kit to improve efficiency, with less work carried out on the site. The "design, bid, build" approach is also on its way out, because technology is changing so fast that many designs become outmoded during the actual construction process. The contractor has to therefore take greater responsibility for design throughout the project, by getting confident with building information modeling (BIM) software, and incentivizing teams for meeting strict design deadlines."

Mr. Walker is also confident that the new controls environment has been largely beneficial: "In our experience, the potential for fraud and unreliable people has been largely phased out. Technology has solved a lot, creating transparency, where everyone can go online and see at an instant the location and movement of materials and parts. You have to be very creative and clever to hack into these new control systems."

When and where to expand: watching for the waves to break

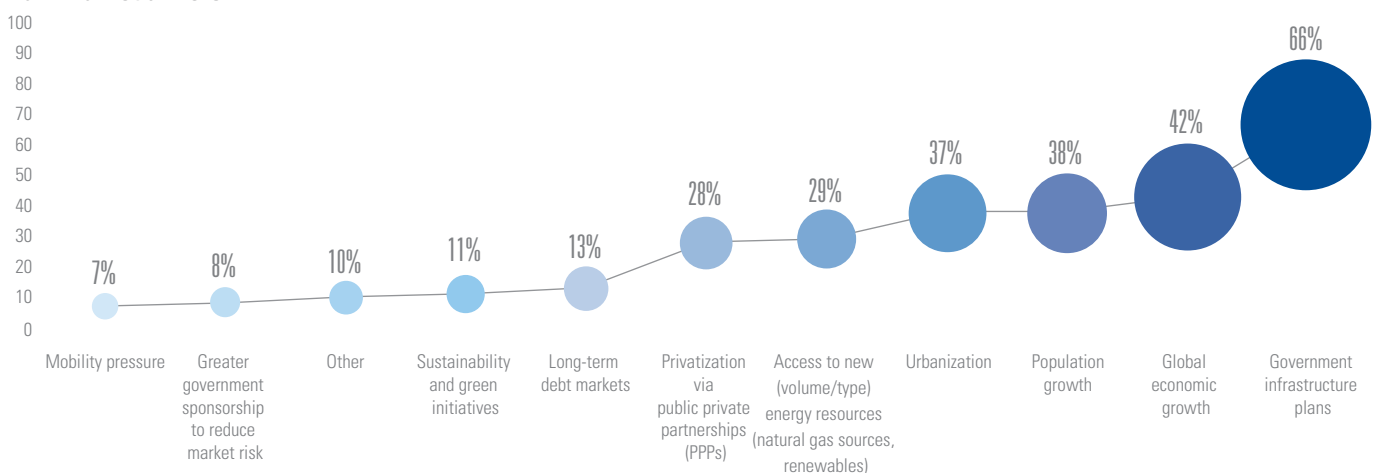
Infrastructure – the central theme of KPMG’s previous Global Construction Survey – is still the dominant force in the sector. This has led to a big push in the energy, mining, rail and water sectors.

This year’s survey results confirm that engineering and construction firms are still heavily dependent upon national governments’ infrastructure plans for future growth, with two-thirds of respondents citing this as the single most important market driver. Such reliance means any further public belt-tightening could potentially cut off a vital source of new projects; indeed, 72 percent believe that budget deficits are the biggest threat to the sector.

Economic growth, urbanization and population increases are considered to be the next most influential factors, fuelled by the BRICs (Brazil, Russia, India and China) and other growing economies. As more people move to cities, water, electricity, sewage, telecommunications and roads and bridges all need to be built or upgraded.

Less than one in three feel that new energy resources will be a prime driver, which is surprising, given that the rising demand

Main market drivers



Source: KPMG International, 2013



66% of respondents consider government infrastructure plans to be the single most important market driver

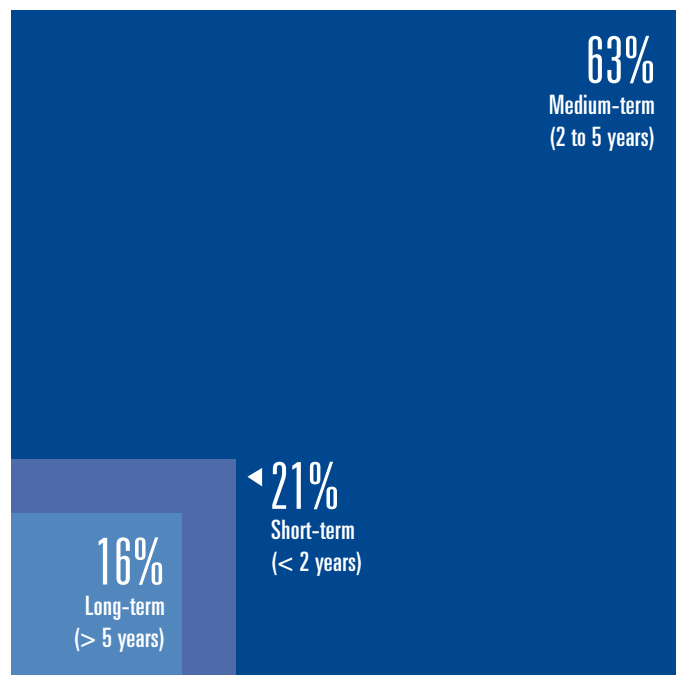
for power is causing a boom in unconventional sources such as shale gas and oil, as well as renewables.

Interestingly, public private partnerships (PPPs) were cited as important by just 28 percent of the survey participants, which suggests a degree of uncertainty about the future of such funding sources as they have proved controversial in some countries. As national governments struggle to find funding, they may have little alternative than to turn to the private sector, a point emphasized by one executive from the US: "Relying on governments for our growth is risky, although PPPs can help."

A further comment from a senior industry executive of a Turkish engineering and construction company reinforced the risk of becoming over-reliant on public sector programs: "One of our projects signed in 2003 was recently cancelled, due to government funding problems."

Most of those taking part in the survey agree that the full effects of growth will not be felt for at least 2 to 5 years. Such caution is perhaps understandable in a sector that over the past decade has ridden the waves of success before experiencing a serious wipe out. It seems that leaders of engineering and construction groups are seeking further evidence of a sustained commitment from governments and the private investment community, before committing to scaling up resources.

Time horizon of main market drivers to impact on industry



Source: KPMG International, 2013

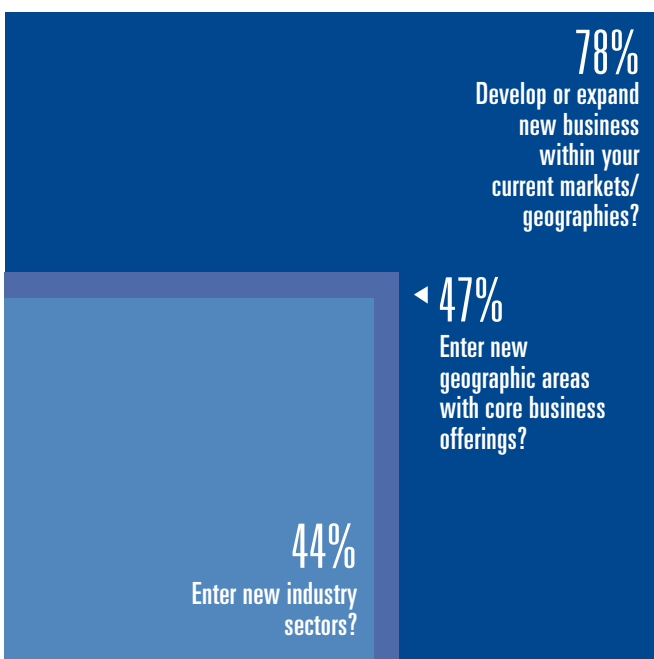


47% say they plan to move into new geographies, and **44%** are prepared to enter new industry sectors.



A strong push for international expansion

Growth strategies



Source: KPMG International, 2013

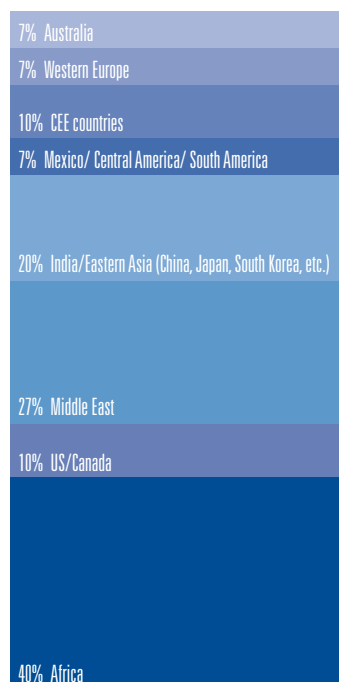
Respondents to this year's global survey appear to be open to new sources of business. Forty-seven percent say that they plan to move into new geographies, and 44 percent are prepared to enter new sectors of the industry.

The most popular region for expansion is Africa, followed by the US and Canada, with the Middle East third. Engineering and construction companies from the Americas are the big exception, with 64 percent placing the US and Canada as their first choice. These findings suggest that Central and South American companies may be attracted by the geographical proximity and economic and regulatory stability of North America. Twenty-seven percent of respondents from Asia Pacific are considering entering the Middle East, despite the turmoil in Egypt, Syria and Iraq. Very few senior industry executives plan to move into Western Europe, reflecting the challenging business climate in this region.

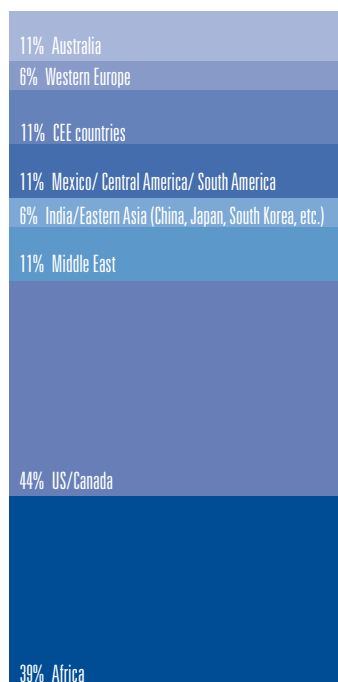
The US and Canada are the top choices for medium and larger firms taking part in the survey, which once again indicates that markets such as Africa are seen as carrying higher risk. However, only one in 10 smaller companies expect to enter the US and Canada; these organizations may feel that the level of competition is too great in this part of the world, and are more comfortable setting their sights on Africa. Overall, the survey shows that the bigger the company, the more likely they are to have ambitious overseas growth plans.

Target market focus by company

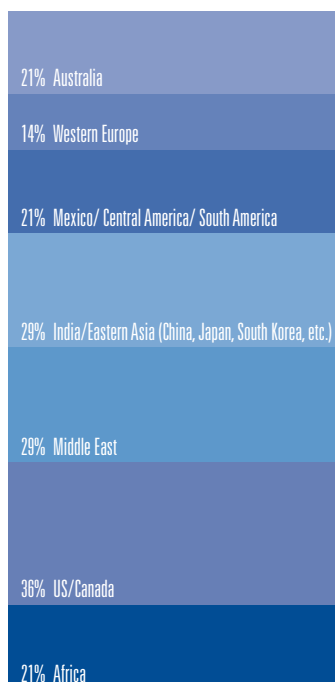
Less than US\$1 billion



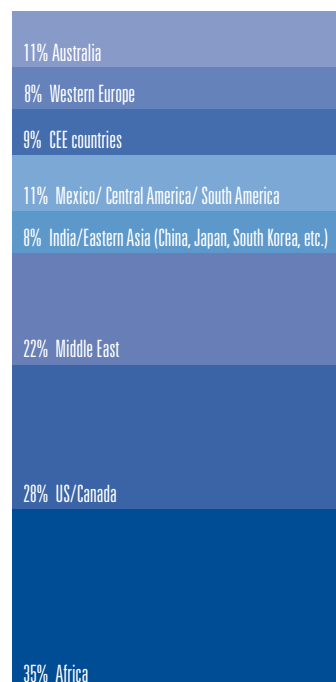
Between US\$1 billion and \$5 billion



Greater than US\$5 billion



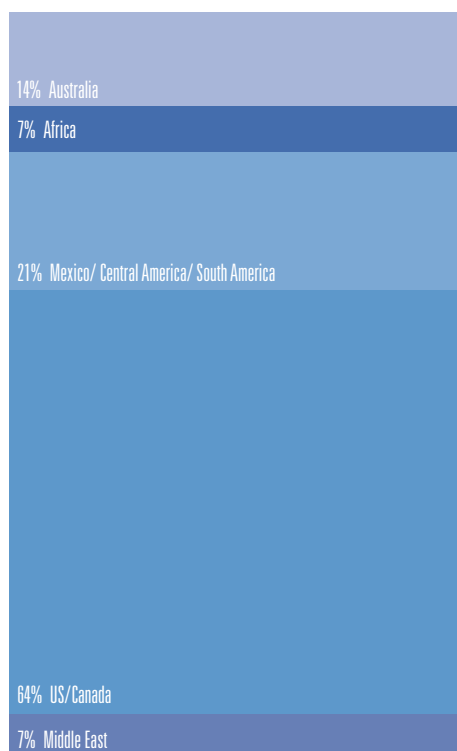
Global



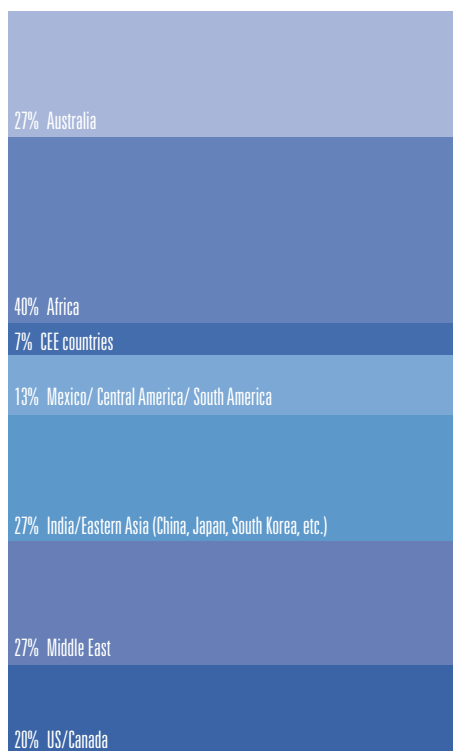
Source: KPMG International, 2013

Target market focus by region

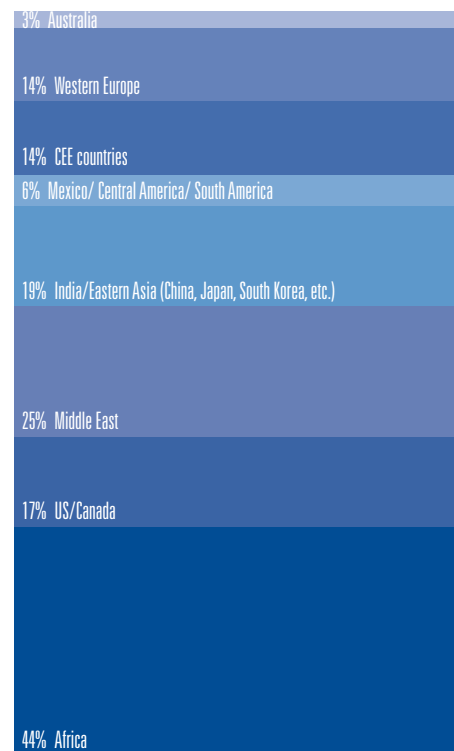
Americas



ASPAC



EMEA

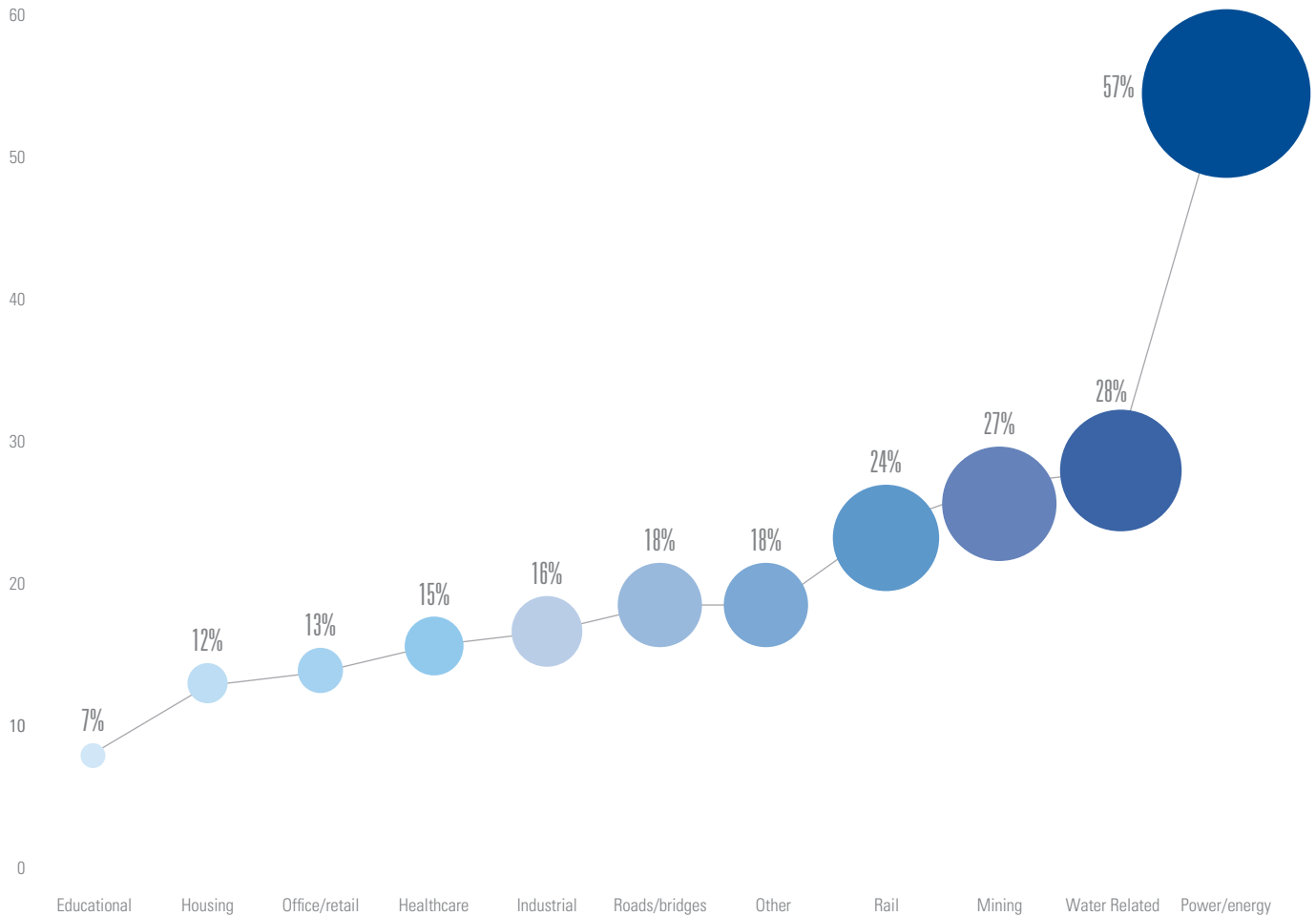


Source: KPMG International, 2013

Power is undisputedly the dominant new sector, which is consistent with the increase in economic activity and the global quest for greater energy security, fuelled by cheap prices for gas. Power stations are being built around the world for coal, nuclear, gas and renewables. Mining is another high priority, with growing demand for copper, iron ore and specialty metals. In second place is water, to support urbanization and water-intensive industries such as mining and other forms of manufacturing.

Twenty-four percent of respondents state that their company sees good prospects in the rail sector, which is enjoying a boom thanks to initiatives such as the Delhi and Rio de Janeiro metros, California's high-speed development, New York's ambitious plans, and the UK's London Cross-Rail and High-Speed 2 programs, as well as various national projects to transport coal, liquid natural gas and other raw materials essential for energy. Businesses from Asia Pacific place high hopes on roads and bridges, reflecting their infrastructure needs.

New sector focus



Source: KPMG International, 2013



Power and energy is by far the most popular new market sector, followed by mining, rail and water-related industries

As they move into new sectors and geographies, leaders should be aware of the necessary skills and knowledge associated with these industries and regions. One respondent from a Greek contractor says his company suffered from such inexperience: “The project that underperformed was in the field of offshore engineering, where we had limited previous experience, technical skills and expertise within the group.” Another executive from a Canadian firm affirmed this concern: “We are experiencing growing pains due to our recent rapid revenue growth. We have key project players operating outside of their comfort zones negatively impacting project execution.”

Across all regions and all company sizes, growth is expected to come primarily through organic routes, with less than 10 percent believing that mergers and acquisitions (M&A) will fuel such expansion. A number of respondents mentioned that cash shortages restricted their options to pursue M&A.

A new dawn for energy?

KPMG’s 2013 *Energy Industry Outlook Survey* “Is energy independence on the horizon?” highlights the growing importance of natural gas, as evidenced in the increased production of shale gas (and oil), which could lead to greater energy independence for nations such as the US, as well as lower prices that stimulate manufacturing and economic growth.

The respondents say they plan to increase their capital investment in geographic expansion, expanding facilities, and business acquisitions to enhance growth efforts. The shift to unconventional energy sources is putting further strain on aging, inadequate infrastructures, with a lack of rail links and an urgent need to develop liquid natural gas (LNG) conversion terminals. To finance essential upgrades, companies are seeking additional capital and entering into alliances and joint ventures with global and domestic partners.

The energy mix in most countries is likely to become more diverse, and renewables such as wind and solar technologies remain firmly on the agenda, with continued research and development (R&D) expenditure on alternative sources of energy. However, there are concerns that regulatory pressures and legislative uncertainties could restrict growth.

Taking a stake in the power and energy sector

Regina Mayor

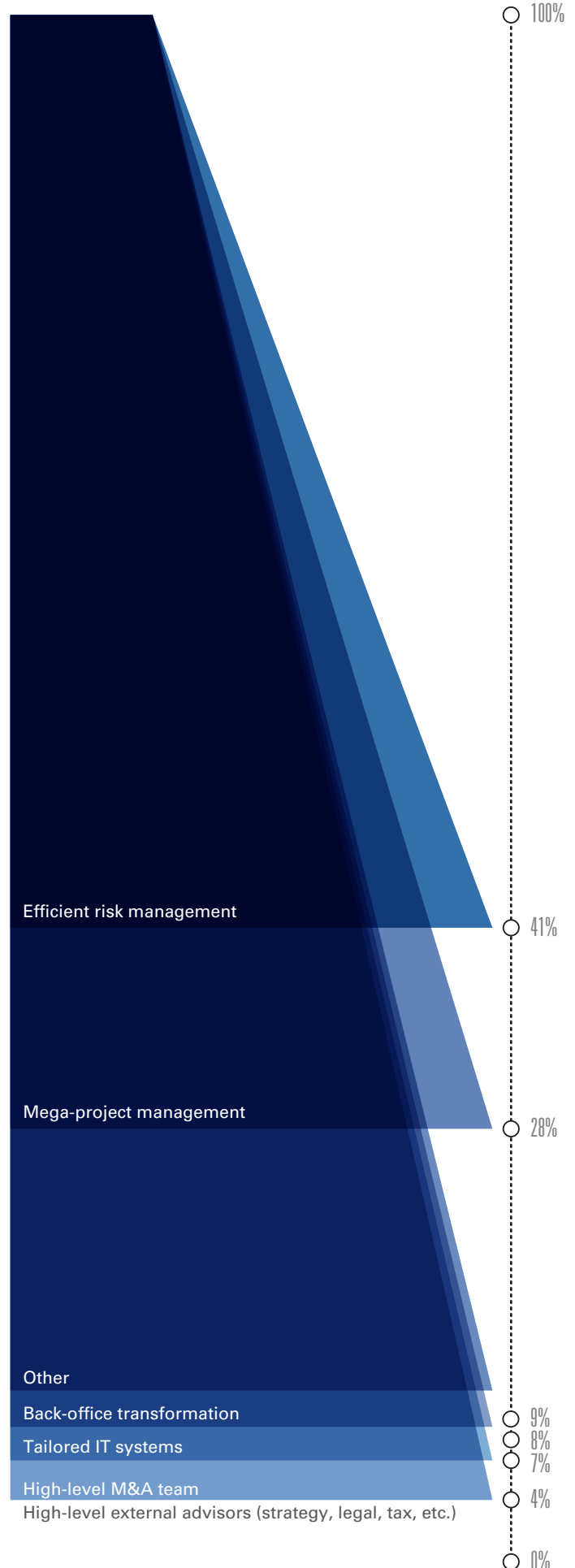
Principal, KPMG in the US

The boom in unconventional shale oil and gas is spawning a host of new capital projects, particularly in the US, to build new chemical, methanol and ethylene plants, liquid natural gas (LNG) processing plants and export terminals, and gas-fired power stations. Even mining – which is in a down cycle due to low commodity prices – has a positive future, with demand from the electronics sector for certain key metals.

Uncertainties still persist, as environmental concerns over hydraulic fracturing (“fracking”) slow down the release of exploratory permits, and governments consider whether to export energy or use it to stimulate domestic economies. With resources increasingly state-owned, oil and gas companies have to work in partnership with these national institutions, putting greater pressure on cost, and requiring complex portfolio management across the globe.

To help meet this challenge, engineering and construction firms need to take a more active role in their energy clients’ businesses by helping to enforce engineering standards, protecting intellectual property and improving facilities design. They also need to demonstrate a greater level of sophistication in controls and governance, and adopt a more strategic, portfolio-wide view by introducing innovative ways to implement multiple projects, to bring greater efficiencies and to reduce costs.

Factors contributing to growth



Source: KPMG International, 2013

Multiple answers allowed, percentages do not add up to 100.

Tools for growth

As the sector prepares for a period of expansion, leaders acknowledge that their organizations need to have the right support in place. Mega-project management is seen as a crucial component to deliver expensive, complex programs on time and on budget, minimizing waste and avoiding the expense caused by idle physical and human resources.

Of all the factors necessary to growth, however, efficient risk management ranks highest, with 81 percent naming this as the most important. A robust risk culture helps avoid some of the pitfalls that can destroy margins and damage reputations, yet, as the next section shows, the industry still has some way to go before it can have real confidence in its ability to manage risk.



56% of respondents say that mega-project management is a major contributor to growth

Minimizing the potential for failure: riding smoothly back to shore

Although the engineering and construction industry has made great strides in managing risk, 77 percent of respondents report underperforming projects, due primarily to delays, poor estimating and failed processes.



Having invested heavily in risk management over the past decade, most engineering and construction executives believe that this expenditure has paid off, with only 7 percent claiming that their practices and controls are not working effectively.

Such confidence is backed up by one of the respondents, whose business is based in the US: "Investing in project risk management pays off significantly. A strong contract negotiation tracking system is key to identifying the risks, which allows for better pricing of the contract. It is also important in mega-contract negotiations, to understand which terms can and cannot be negotiated, so that risks are identified and considered in the pricing."

Despite this confidence, more than three-quarters of respondents admit to the presence of underperforming projects, with the prime causes being delays, poor estimating processes, and failed risk management processes. Companies also suffer from poor subcontractor performance and design errors and omissions. One respondent from the Europe, Middle East and Africa region comments that: "Loss-making contracts severely impacted results," while another executive from Canada admits that: "Project execution is to blame for the decrease in margin."

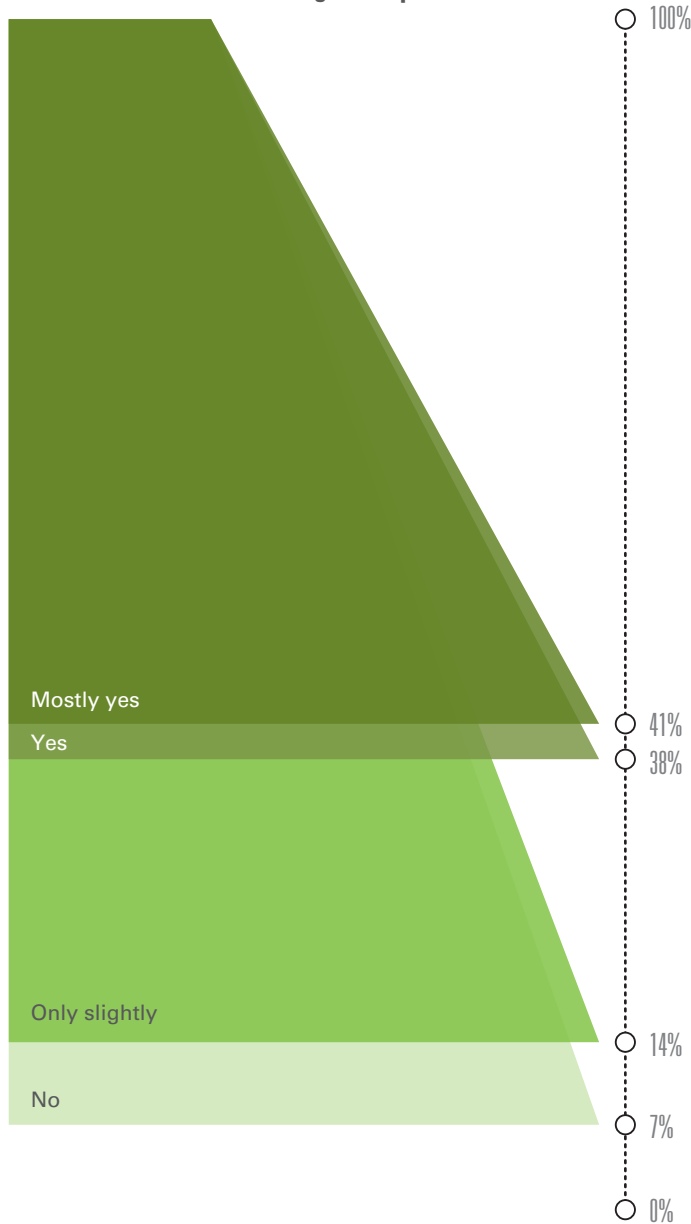
In some cases, clients are not as reliable as anticipated, which suggests a lack of due diligence when bidding, as a

respondent from a construction business in Ireland mentioned, in reference to a troublesome location: "This country had been identified as a major area of concern for contractors, with incidences of non-payment, and clients not adhering to the contract conditions."

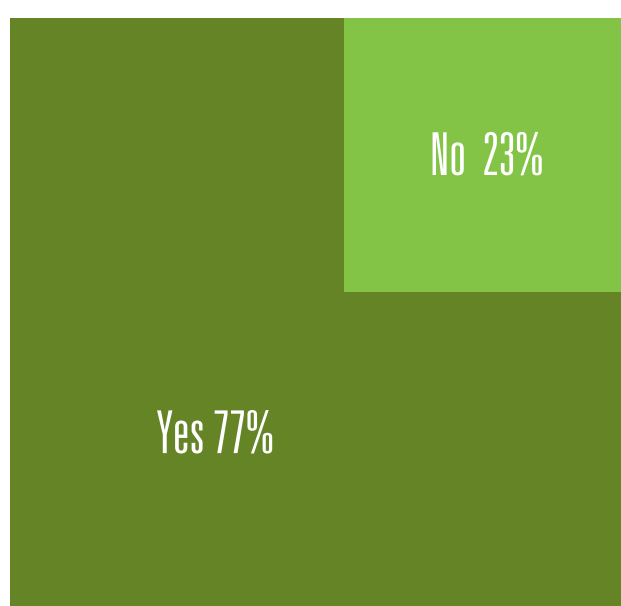
The potential for such incidents could be reduced significantly by better risk management, so the sector needs to consider why it has not achieved the levels of some other industries, and figure out how to embed a stronger culture. Clients are increasingly ranking contractors on their risk management competency, as another survey participant from Europe explains: "The rise of the PPP model has also meant more qualified people are making decisions and including risk assessment – not just price – as a key determining factor."

However, good risk management is as much about people and culture as it is about processes and procedures, as one executive from a US contractor observes: "As primarily a very large services organization, we don't take project risk. When we have projects that underperform, it's mostly due to the human element, not a failure in controls." This concern was put even more succinctly by a senior manager from a Canadian company "They knew the risk; they just did not correctly qualify it."

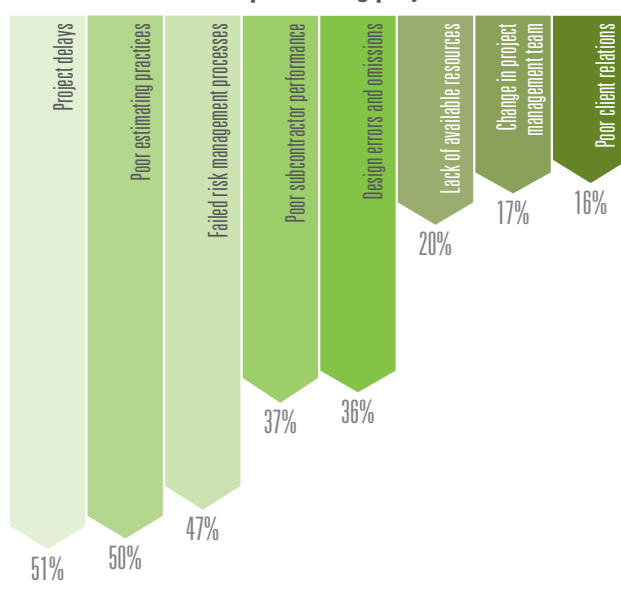
Has investment in risk management paid off?



Did you have underperforming projects?



Main causes of underperforming projects



Source: KPMG International, 2013

Making risk management part of everyday culture

KPMG's 2013 global, multi-industry survey, carried out in conjunction with the Economist Intelligence Unit (EIU), quizzed more than 1,000 C-suite executives about their organization's risk management practices. The report, entitled *Expectations of Risk Management Outpacing Capabilities – It's Time For Action* concluded that senior management continues to struggle with assessing enterprise-wide risk exposures, and that few organizations are articulating their risk appetite effectively.

The respondents believe that business units are the most adept at assessing and managing risk (rather than leaving it to risk management departments or internal audit), but that a lack of resources and expertise is holding back the integration of proper risk and controls across the business. Finally, the report also concludes that organizations are not making enough use of risk-related incentives to influence decision-making.

Deon Minnaar, Partner Risk Management and Global Risk Compliance, KPMG in the US, feels that it takes time to operationalize risk and make it fully part of the corporate culture: "Management may be getting better information on practices and violations, and may have policies and procedures in place; yet this is not always closely aligned with strategy. For example, when moving into a new territory, it is vital to evaluate the specific business and regulatory risks that could undermine the business, which could include a scenario analysis to figure out the impact of worst-case events. In a global structure, with multiple regions and business units, organizations must find a way to aggregate all the various risks to gain a top-level view across the enterprise."

“
77% of executives surveyed say that their organization is experiencing underperforming projects

VIEWPOINT

Where next for risk management?

Geno Armstrong, International Sector Leader, Engineering & Construction, KPMG in the US

In KPMG's 2005 Global Construction Survey, risk management was cited as the foremost concern facing engineering and construction industry leaders. In the face of unprecedented volumes of work, executives were nervous about their risk management systems, procedures, and controls for managing projects and avoiding significant contract losses. Around the same time, the engineering and construction community within the World Economic Forum identified risk management as a pressing global industry concern, second only to fraud and misconduct.

In response, the sector collectively funded and formed the Engineering & Construction Risk Institute (ECRI), to help advance program and project risk management practices and procedures. Companies also began efforts to systematize risk management practices by investing in people, processes, and technology.

KPMG's 2008 Global Construction survey captured industry sentiment during the initial wave of the construction boom, where risk management dropped to fourth place on the list of executives' concerns behind craft experience, workforce availability, and the rising cost

of labor and materials. At that point, only 50 percent of respondents ranked their own risk management systems as "adequate," despite substantial investment.

By the 2010 survey, respondents' confidence in their risk management had increased to 75 percent. However, as the economy started to cool, engineering and construction firms reported a reduction in spending on risk as part of a broader corporate rationalization, sparking fears that this could reverse the gains and increase the chance of underperforming projects, disasters or fraud.

Today, despite a sputtering global economy, the demand for projects is reaching critical levels in many client industries, leaving engineering and construction executives bullish, but also wary that tight cost pressures provide little margin for error. In this environment, respondents' optimism over their risk management practices has to be set against the continued incidence of well publicized project failures, which calls into question the effectiveness and maturity of the controls and systems built up over recent years. As the sector looks forward, it needs to gain greater confidence that it is receiving full value for its substantial investment in risk.



View from the Engineering & Construction Risk Institute

The Engineering & Construction Risk Institute (ECRI) is the leading international risk management consulting forum for the engineering and construction industry, working with government and industry to promote and institutionalize best practices. President & Managing Director Rod Kyle explains that the industry has come a long way: "There is no question that there is a greater emphasis upon risk at enterprise, portfolio and project levels than when the institute was formed in 2005. It's not just about systems and procedures – although these are very important – it's that we take risk more seriously, so that it becomes a core value of the business."

Nevertheless, Mr. Kyle acknowledges that the complexity of the industry and the size of projects leaves plenty of room for disasters: "As demand for projects goes up faster than the volume of available money, clients are asking for more and more, and the contractor ends up taking a higher level of risk. Yet, at the same time, clients are expecting to see sound risk management as a precondition to being invited to tender for business. They want to know who is working on projects and their level of qualifications, which indicates the importance of creating career paths for risk professionals. Currently there is a shortage of appropriately skilled, qualified people; one

reason for this is that fewer individuals are prepared to live away from home for so long in remote locations, with more concern over work-life balance."

As risk management matures, it needs to be treated like other essential business activities, as Mr. Kyle explains: "Risk controls have to be measured and signed off, to show stakeholders that everything is working properly. Unfortunately, we're still witnessing catastrophic or near catastrophic incidents – such as asbestos-related problems – that can affect the entire reputation and financial future of company. The sector also needs to be aware of emerging areas such as social media and cyber security, and keep up with regulations on conflict minerals; something that many firms are unaware of."

As Mr. Kyle concludes, it ultimately comes down to people: "The ECRI offers extensive training for members, of which 'soft' skills play a major part. Even the best controls can be overridden, so we place a lot of emphasis on developing the right behavior."

Conclusion: catching the perfect wave



KPMG's 2013 Global Construction Survey shows an industry in better shape now than 4 or 5 years ago, with rising backlogs and largely healthy margins. The recovery in the global economy is driving infrastructure, power and energy projects, while cheaper gas prices are leading to manufacturing growth.

Nevertheless, contractors have to balance the longer term need for capital projects with more immediate pressures on owners' funding sources. Invest too much, too soon, and the demand may not arrive in time, leaving companies with idle resources. Invest too little, too late, and they may miss the wave altogether.

While issues such as government funding and capital markets movements are beyond their control, engineering and construction leaders can take steps to position themselves for the future. The respondents to this year's survey made the following recommendations:

1

Invest in people

As they move into sometimes unfamiliar areas, it is essential to have sufficient skills and sector knowledge. For example, one respondent from a UK company says that his company's priority is: "Recruitment of key personnel with industry experience of the rail and energy sectors."

2

Enhance management of mega-projects

The scale of infrastructure projects is increasing, and companies have to step up accordingly, as a US executive notes: "We must have the right people in the right location to participate in mega-projects that result from new opportunities, as energy costs decreases. This includes transportation and construction of power plants, and large-scale manufacturing. The key to success is how these projects are obtained and managed. We will have to acquire companies that already have the people and experience in key markets."

3

Create a true risk management culture

Many of the controls appear to be in place. Now it is time for contractors to make sure that people are fully aware of and observing these procedures, and that management has an enterprise-wide view of risk. One executive from a US firm summed this up by stating: "We need to get more people to follow the process. We have invested heavily in risk management for more than a decade now in a formal way. Our emphasis continues to be to intensify training and communication about risk." Another respondent from the Asia Pacific region agrees that it is all about people: "We must ensure people think of risk management as a fundamental part of the construction process and have it top of mind at every stage of work."

4

Standardize

In a sector that has grown rapidly through mergers and acquisitions, standardization has been an important goal that contributes to project and risk management. According to a senior executive from a South African contractor "This (standardization) process is ongoing, and is a difficult challenge as every project is different. Whenever new people start on a project, they bring with them different processes." To spread good practices, contractors can increase their use of project management software and step up training. As a respondent from India emphasizes, the goal is to: "Build efficiency and controls, consolidate project delivery, and tighten all leakages as much as possible."

5

Become a strategic partner to clients' businesses

By working more closely with clients from all sectors, engineering and construction companies have the opportunity to gain more control over future projects, and help find innovative ways to reduce costs. This should bring more reliability to forecasting and ensure that they have the proper human and physical resources available to cope with mega-projects.

About the survey

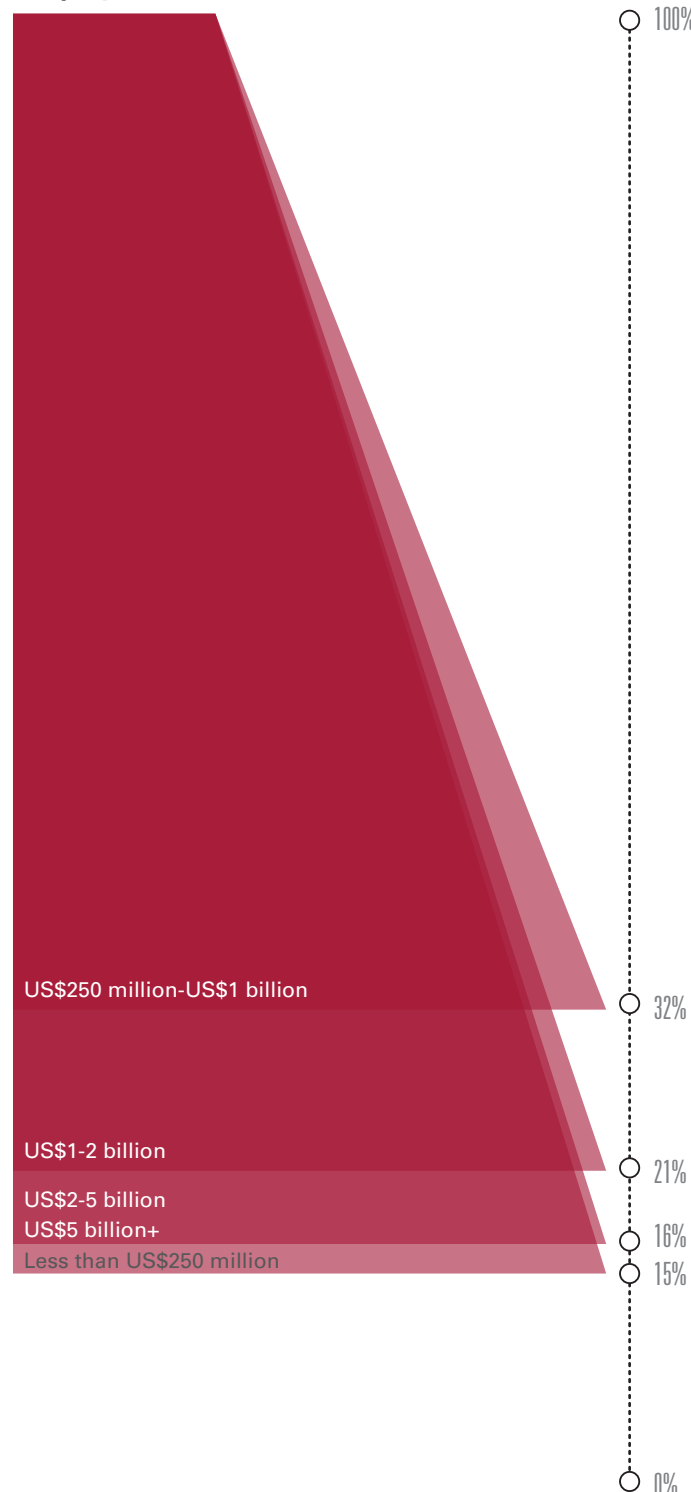
All survey responses were gathered through face-to-face interviews in 2013 with 165 senior leaders – many of them Chief Executive Officers – from leading engineering and construction companies in 29 countries around the world.

The interviews were carried out by senior representatives from KPMG member firms specializing in the engineering and

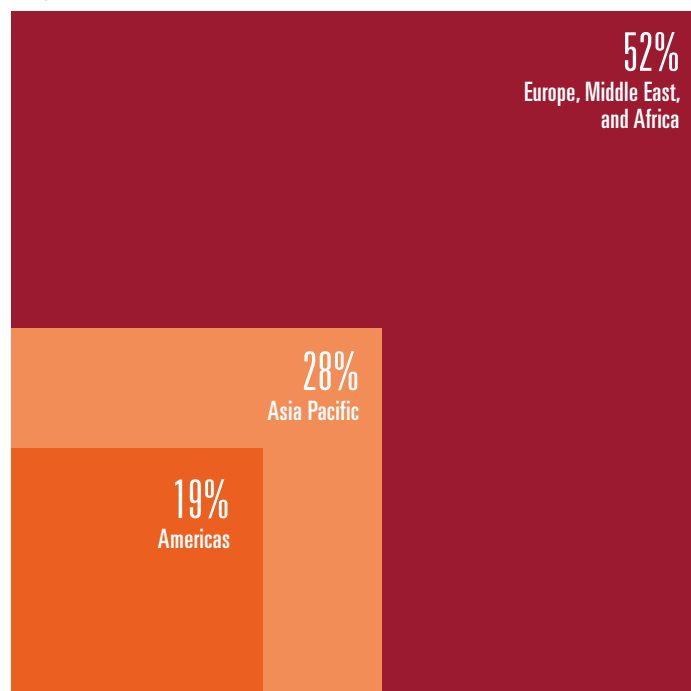
construction industry, with the questions reflecting current and ongoing concerns expressed by clients of KPMG member firms.

Respondent companies' turnover ranged from less than US\$250 million to more than US\$5 billion, with a mix of operations from global through regional to purely domestic.

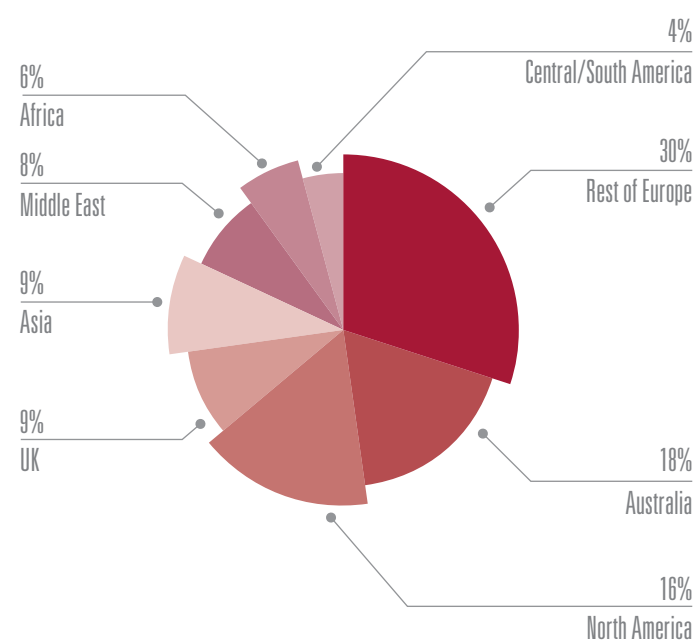
Company turnover/revenue



Region



Sub-region



Multiple answers allowed, percentages do not add up to 100.

Source: KPMG International, 2013



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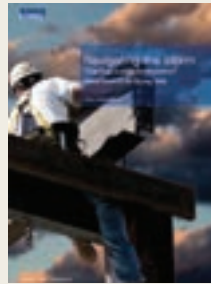
Global Construction Surveys

KPMG conducts the Global Construction Survey to monitor Engineering & Construction issues and provide timely summaries and insights to help professionals make more informed business decisions in today's rapidly changing environment – this is the eighth edition of the KPMG Global Construction Survey.



2008 KPMG Global Construction Survey: Embracing Change?

This survey presents the views of CEOs and other senior executives from some of the world's leading construction contractors in areas impacting the industry including resource shortages, risk management, escalating costs and sustainability.



2009 KPMG Global Construction Survey: Navigating the Storm: Charting a Path to Recovery?

More than 100 senior executives from the Engineering & Construction industry responded to this survey, which focused on how organizations were weathering the impact of the global financial crisis.



2010 KPMG Global Construction Survey: Adapting to an uncertain environment

The latest survey highlights the cautiously optimistic outlook of many E&C companies about their immediate prospects and discusses key industry issues and the measures adopted to seize the new opportunities identified.



2012 KPMG Global Construction Survey: The great global infrastructure opportunity

The 2012 survey focuses on the insatiable demand for energy and infrastructure in all forms, and the resulting fundamental shifts in focus for nearly all E&C firms.

Other Thought Leadership

KPMG's Engineering and Construction, Major Projects Advisory, and Infrastructure professionals conduct research and develop thought leadership for clients and industry leaders. This information on current issues facing contractors and owners in a rapidly changing construction environment provides key insights and tangibly contributes to their decision-making processes.



Building a foundation for a contract audit

This white paper supplies valuable insights to help E&C companies ensure effective construction management and build the foundation for successful contract audits to assess and improve their construction management processes.



Effective Reporting for Construction Projects: Increasing the Likelihood of Project Success

This publication explores strategies for effective project and program reporting to increase transparency and accuracy.



Cities Infrastructure: A Report on Sustainability

This report captures some of the most innovative concepts and practical insights from our firm's publications to provide one of the most definitive reviews of literature on the subject of sustainable cities.



Infrastructure 100

We are pleased to announce the much-anticipated second edition of the Infrastructure 100: World Cities Edition – a high-profile report showcasing 100 of the most innovative and inspiring urban infrastructure projects from around the world.

MPA Project Leadership Series

KPMG's Major Projects Advisory (MPA) Project Leadership Series is targeted toward owners with major construction programs, but its content is applicable to all entities or stakeholders involved with construction projects. This series describes a framework for managing and controlling large capital projects based on the experience of professionals from KPMG's MPA practice. They provide services to hundreds of leading construction owners, and engineering, procurement and construction contractors.



- From Concept to Project – Critical Considerations for Project Development
- Stakeholder Management and Communication
- Project Organization & Establishing a Program Management Office
- Governance and Project Controls
- Budgeting, Estimating and Contingency Management
- Monitoring Capital Projects and Addressing Signs of Trouble
- Project Risk Management (future)
- Investing in Tools & Infrastructure (future)

Insight – The Global Infrastructure Magazine

Insight is a semi-annual magazine that provides a broad scope of local, regional and global perspectives on many of the key issues facing today's infrastructure industry.



Issue No. 5 – Resilience

This edition of Insight explores some of the world's most impactful stories of resilience. It also includes an exciting Spotlight Special Report on the important changes and opportunities within Latin America's infrastructure market.



Issue No. 4 – Megaprojects

This edition of Insight magazine explores some of the key challenges and opportunities impacting megaproject deliver, and includes a Spotlight Special Report on Africa's infrastructure market, a key growth area.



Issue No. 3 – Infrastructure Investment: Bridging the Gap

This edition explores the complex world of infrastructure finance and funding, including critical topics ranging from direct investment, to innovative financing and funding models, and the evolving infrastructure fund market.



Issue No. 2 – Urbanization

Insight: Urbanization explores the infrastructure challenges being faced by cities, including feature interviews with key city leaders and private sector executives to shed light on how they are specifically responding.

Energy and Natural Resources Thought Leadership

The Global Mining network provides mining executives with access to valuable industry research, thought leadership, events, webcasts and podcasts. Whilst we recognize the truly global nature of the mining sector we have also included a regional sector focus on the Americas, Europe, Middle East & Africa and Asia Pacific.



Mining Projects: Seeking greater value

This document showcases the mining project life cycle, including what mining companies need to consider when creating a successful mining project. The publication covers the five core topics: project development, feasibility studies, project financing, tax structuring and project execution.



Shale Development: A Global Update

This report discusses the global shale market and looks at developments in the big three – US, China and Argentina – as well as in Australia, Indonesia and the UK. It provides some compelling insights into an evolving sector as well as some pointers to the future shape of global shale markets.

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