DNV·GL

A BALANCING ACT

The outlook for the oil and gas industry in 2015

SAFER, SMARTER, GREENER

ABOUT THE RESEARCH

The outlook for the oil and gas industry in 2015 is an industry benchmark study from DNV GL, the leading technical advisor to the industry. Now in its fifth year, the programme builds on the findings of four prior annual outlook reports, first launched in early 2011.

The report delivers a timely assessment of industry sentiment, confidence and priorities, in addition to expert analysis of the key pressures facing the industry in the year ahead and their likely impact. It is based on a global survey, incorporating the views of more than 360 senior industry professionals and executives, along with 18 in-depth interviews with a range of experts, business leaders and analysts. The research was carried out on behalf of DNV GL by Longitude Research. The findings and views expressed in the report do not necessarily reflect the views of DNV GL.

During January 2015 we surveyed 367 senior professionals and executives across the global oil and gas industry. Almost two-fifths (37%) of respondents are oil and gas operators, while 57% are suppliers and services companies across the industry. The remaining respondents are made up of regulators and trade associations. The companies surveyed vary in size: 41% had annual revenue of US$500m or less, while 18% had annual revenue in excess of US$10bn.

Respondents were drawn from publicly listed companies and privately-held firms. They also represented a range of functions within the industry, from board-level executives to senior engineers.

367

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41% <$500m

18% >$10bn

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Respondents represent a range of organisations within the industry: two-fifths (37%) of respondents are oil and gas operators

We would like to extend our thanks to all participants and, in particular, to the following interviewees for sharing their time and insights with us (listed alphabetically, by surname):

- **Richard Bailey**, Director, Asia Pacific and Middle East, DNV GL - Oil & Gas
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- **Peter Bjerager**, Director, Americas, DNV GL - Oil & Gas
- **Simon Hatfield**, CEO, WesternZagros Resources
- **Liv Hovem**, Director, Europe and Africa, DNV GL - Oil & Gas
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- **Paul Thomas**, Director, Inspection Services, DNV GL - Oil & Gas
- **Elisabeth Tørstad**, CEO, DNV GL - Oil & Gas
- **Robert Van Velden**, Finance Director, Sakhalin Energy
- **Eirik Wærness**, Chief Economist, Statoil

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THE OUTLOOK FOR 2015: FIVE KEY TRENDS

A sharp fall in oil prices that began in the latter half of last year, following prolonged high levels of production and weakening global demand, has given the industry a tough balancing act ahead in 2015.

The resultant environment will be more difficult than that which firms have had to cope with over the past five years, yet the new reality brings both opportunities and challenges. Executives will have tough choices to make on spending, costs, headcount and growth strategies, but at the same time new possibilities should open up – a chance to refocus on core projects, ease up on talent pressures, and explore more affordable acquisitions, as just some examples. This research highlights five key trends for 2015. The second half of this report then explores two key industry themes in closer focus.

Snapshot: Five trends for 2015

1 **Industry confidence shaken as oil prices fall.** Given the fall in oil prices, just 28% of our respondents remain confident about the oil and gas industry, sharply down from 88% in 2014, and a high of 89% in 2013.

2 **More innovative approaches to cost control come to the fore.** Rising costs and a tighter squeeze on margins are driving an urgent need for creative ways to save money, including the adoption of new technologies.

3 **Investment is on a tighter rein.** A far smaller proportion of companies in the industry is planning to increase capital investment in 2015 – falling from a high of 63% in 2012, to just 12% this year, although a further 33% will keep spending at 2014 levels. For those in a strong enough financial position, though, countercyclical investments may offer significant opportunities for the longer term.

4 **New talent challenges are emerging.** Nearly half (47%) of our survey respondents expect their company to reduce headcount this year. Accordingly, the proportion of companies citing skills shortages as a barrier to growth has fallen to less than one-third of the level from last year, but new talent risks remain.

5 **The industry's profit-confident firms are forging a different path to their peers.** Those respondents who remain confident of hitting profit goals next year differentiate themselves from their less confident peers not just in terms of their financial expectations, but also in their thinking on talent retention and other issues. They also show a greater ability to work beyond the oil-price cycle.

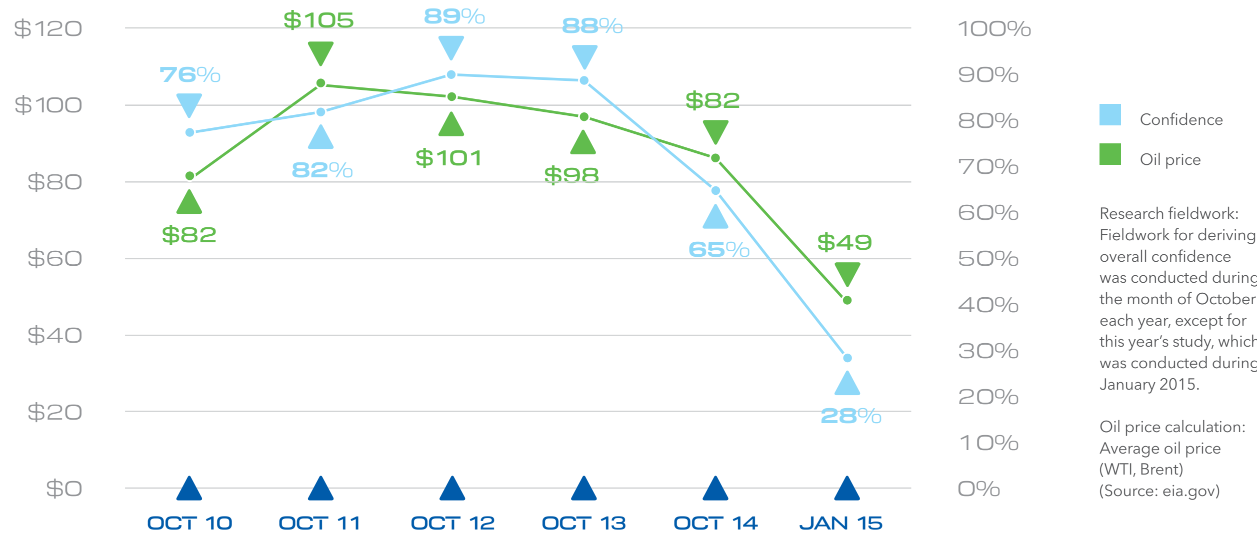
1 INDUSTRY CONFIDENCE SHAKEN AS OIL PRICES FALL

Despite weak economic growth in developed markets, and slowing growth in key emerging markets, oil prices have remained buoyant for the past four years, hovering around the US$100/barrel mark. However, during the latter half of 2014, oil prices dropped steeply. By January 2015, crude-oil prices had fallen to below US$50/barrel for the first time in nearly six years[1]. Though few predicted the extent of the price crash, the direction of travel was foreseen by many respondents last year. In 2013, 59% of respondents to our study thought energy prices would be weaker, or were at least unsure about prices in 2014 – and they must now rise to the challenges that this presents. "Most of us expected a price reduction during 2014 and into 2015. What is surprising is that the price stayed high for so long, and, when the fall came, it was so abrupt and large," says Eirik Wærness, the Chief Economist of Statoil, the Norwegian oil major.

Directly in line with this, our fifth annual industry outlook survey has seen a sharp drop in confidence in relation to the overall performance of the industry. The challenging climate identified in our study from a year ago – characterised by weakening demand in key markets, increasing operating costs, skills shortages and tougher competition, among others – is now paired with low prices.

The upshot is that only 28% of our respondents remain confident about the outlook for the oil and gas industry overall, down from 88% in 2014, and a high of 89% in 2013. As the chart below shows, the industry's overall confidence is highly correlated (0.96) with shifts in the oil price. "We're coming out of an extended boom period and, inevitably, things have to readjust at a certain point," says Paul Sullivan, Senior Vice President of Global LNG and FLNG, WorleyParsons. The price drop is driven by over-supply in the market, rather than a demand-side shock. In tandem with this,

Moving in tandem: oil price vs overall industry confidence



Research fieldwork: Fieldwork for deriving overall confidence was conducted during the month of October each year, except for this year's study, which was conducted during January 2015.

Oil price calculation: Average oil price (WTI, Brent) (Source: eia.gov)

many operators are dealing with competition from both unconventional energies and renewable energies. During 2014, for the first time, prices for solar power fell below that of conventional fuel sources such as coal and natural gas in parts of the US[2].

For executives who had grown accustomed to high oil prices in recent years, this price drop hits home in several key areas: far fewer are confident of their capacity to meet revenue and profit targets this year. Less than one-third predict that they will hit their revenue (32%) and profit goals (30%), and these percentages have more than halved from last year (72% and 69%, respectively). Low oil prices are clearly the primary driver, but other key risks for 2015 include a weak global economic outlook, sustained cost increases, a shortage in skilled professionals and tougher competition.

All of this poses a downturn dilemma for oil and gas leaders in 2015: Do they seek to tighten the reins and keep an eye on the longer term, or succumb to shorter-term pressures and cut back more sharply? "Firms are reacting to uncertainty by cutting staff and investment. While the strong correlation between oil price and confidence is expected, a certain proportion of firms need to work beyond the cycle this year. It is bad for the long-term health of the industry to see behaviour so tightly bound to oil-price fluctuations," says Elisabeth Tørstad, CEO of DNV GL's Oil & Gas business area.

Indeed, companies that are confident of hitting their profit targets are showing signs of countercyclical behaviour. About three-quarters (71%) intend to increase, or at least maintain, headcount, compared to 38% of those who are less confident.

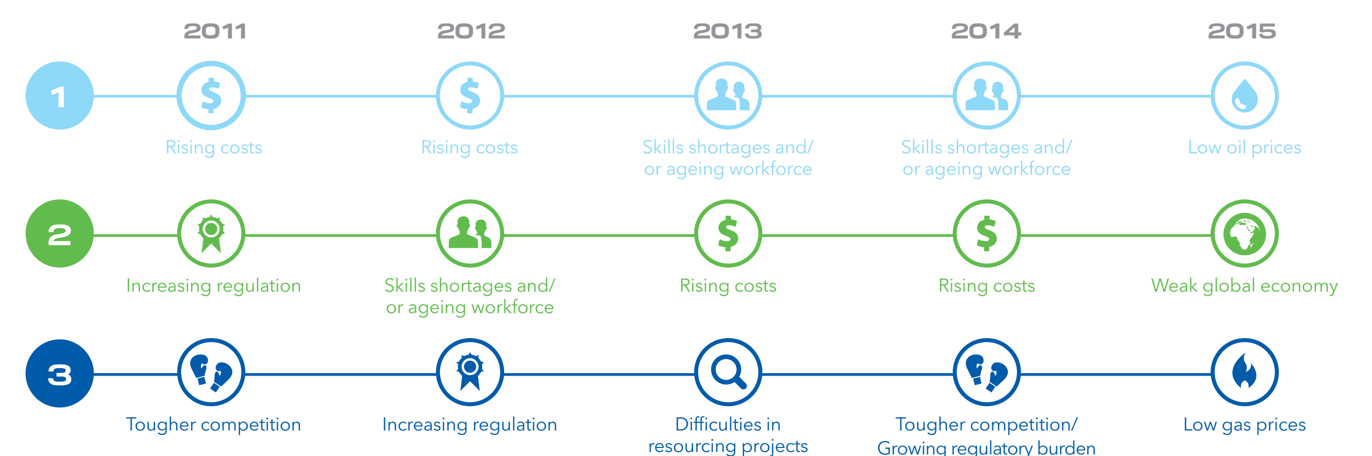
The majority of this 'profit-confident' group also state that they will maintain or increase R&D spending (70%) despite the downturn, compared to just 40% in the non-confident group. "I think some companies have learned a lesson that you should avoid cutting too much in your exploration programme, because you're just going to hit your own [performance] some years down the road," says Statoil's Wærness.

US oil firm, Hess, is one example of a firm remaining steadfast in the face of low oil prices. The company confirmed at the end of October that it will proceed with Stampede, the US$6bn development of a deepwater field in the Gulf of Mexico alongside Chevron, Statoil and Nexen. At the time of going to print, the company's intentions remain.

Shifting barriers to growth

Given the sharp change in oil prices, it is hardly surprising that this issue has supplanted skills shortages as the biggest barrier to growth in 2015, cited by 68% of respondents. The weak global economy is second (35%), followed by low gas prices (20%). Meanwhile, the industry's skills shortage – which has been the largest barrier to growth of the past two years – has now fallen to tenth place (14%). This is not to suggest that the industry's skills gap has been repaired, but, rather, that hiring will slow in a low oil price environment. However, even before OPEC confirmed in late November 2014 that it would take no action to curb output, companies were already announcing capital spending cuts, which started to deepen as the extent of the downward pressure on the oil price became clearer in January.

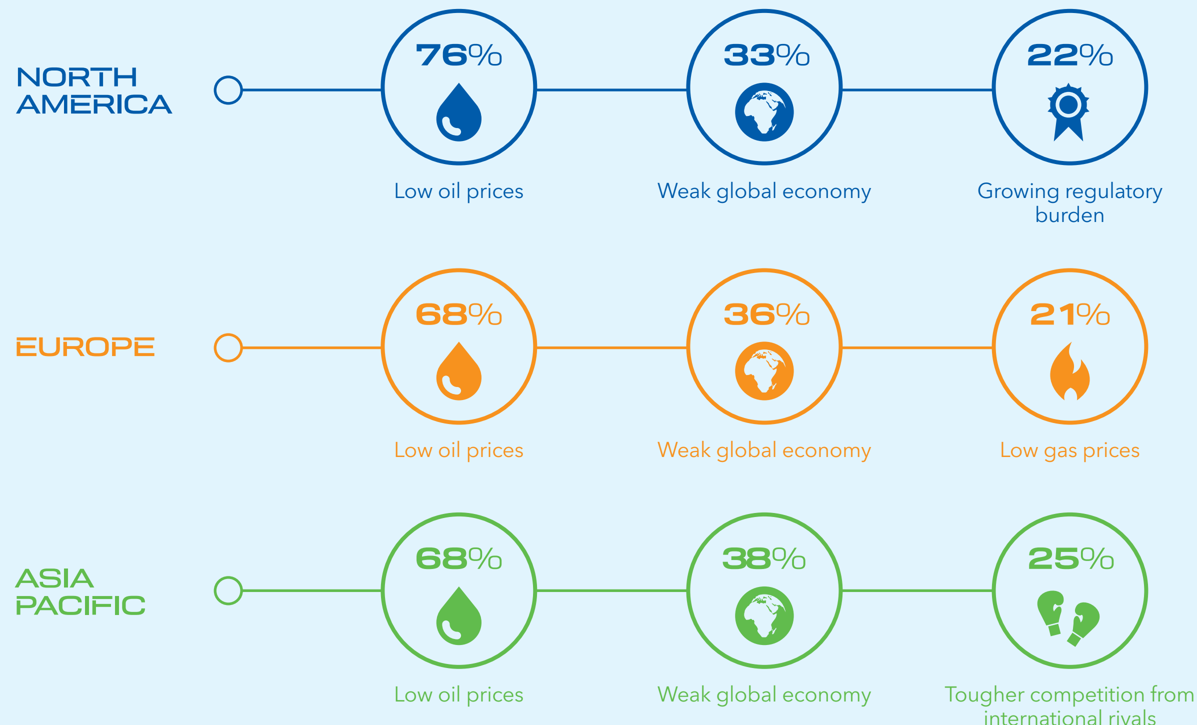
Top three barriers to growth, by year



1 'Oil extends crash into new year as glut fears deepen', *Reuters*, 5 January 2015

2 'Solar and wind energy start to win on price vs conventional fuels', *New York Times*, 23 November 2014

Top three barriers to growth in 2015, by region



Unconventional economics under pressure

One implication of OPEC's decision will be an increase in pressure on the economic viability of unconventional projects in the US. There is already evidence that investments there are on a tighter leash. Bakken Shale pioneer, Continental Resources, recently cut its planned capital spending for 2015 by US$600m, keeping it flat for that year[3]. "The US is a classic example, where sectors have been quite insulated from the global economic environment, and, as a result, have built up a lot of debt. So, any medium-term exposure to lower oil prices will have quite a dramatic effect on some areas of some businesses," explains David Messina, Managing Director at Hutton Energy, an independent oil company.

The Economist now forecasts a rash of bankruptcies during the year ahead, as over-indebted US shale firms are caught out by low prices, although, it argues, this will ultimately improve the health of the industry[4].

According to BofA Merrill Lynch, most shale-oil projects generate very little free cash flow, leaving output highly price-sensitive; it predicts that US shale-oil output growth will drop to half of 2014 levels[5]. Graeme Pirie, Business Development Manager for DNV GL - Oil & Gas in North America, says the unconventional sector in the US will be affected by the present market uncertainty, but the dynamic nature of the industry will render it capable of bouncing back almost immediately when prices stabilise. "A lot of the smaller unconventional oil producers will be susceptible in the downturn. We expect to see an increase in acquisition and lease transfers during this period. The vast supply of unconventional shale oil and gas in the US will remain regardless of the shape of the market and pressure from outside forces. The flexibility, pioneering spirit and innovative nature of the industry in North America will contribute to its long-term competitiveness," he said.

3 'Continental Resources profit soars as it exits oil hedging', *Reuters*, 5 November 2014
4 'Sheiks v shale: the new economics of oil', *The Economist*, 6 December 2014
5 2015 market outlook, BofA Merrill Lynch, 9 December 2014

The regional outlook

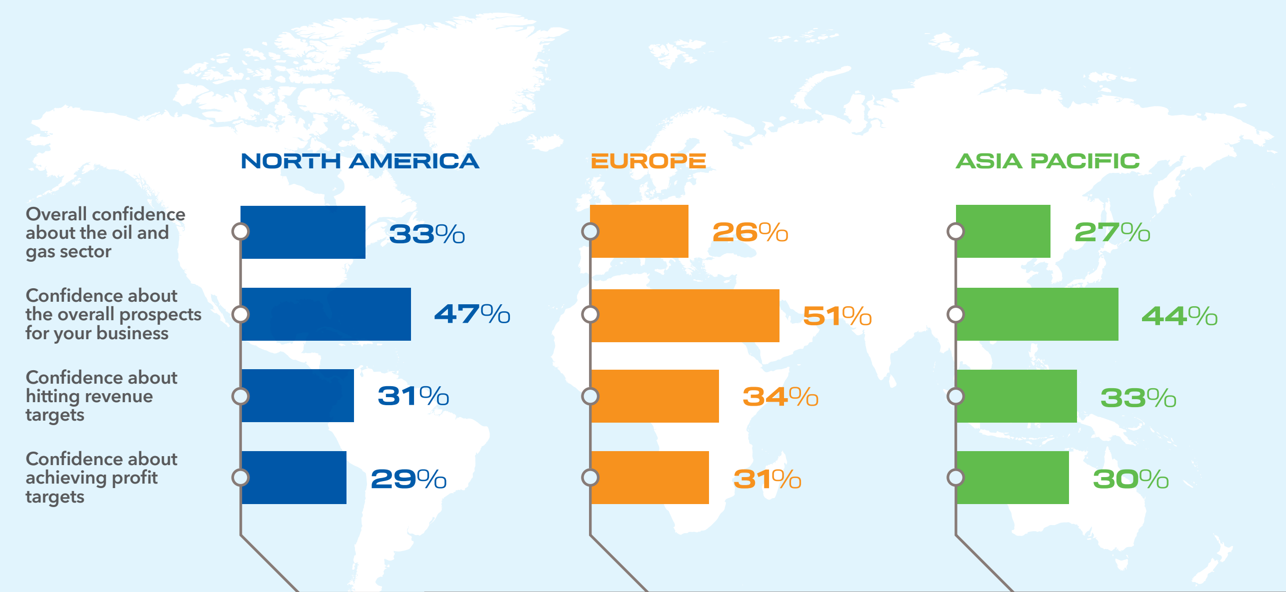
Industry confidence has taken a significant hit in all regions in comparison to 2014. In North America, for example, only one-third (33%) of respondents are either "highly" or "somewhat" confident about the year ahead, slightly ahead of Europe (26%) and Asia Pacific (27%).

Although North America remains only marginally more bullish compared with other regions - as has been the case over the five years that this study has been conducted - respondents there have still taken a clear knock in confidence. Less than half (47%) of North American respondents are confident about how their business will perform in 2015, sharply down from 2014. This is especially due to the unconventional oil and gas players facing sharp pricing pressures following a general over-supply in the market.

"If you look at where the US has come from, this golden age where onshore production rose by several million barrels per day in a few years, it is maybe not surprising to see more of a confidence dip there now uncertainty has been cast over the profitability at current oil prices," says Peter Bjerager, Director, Americas, DNV GL - Oil & Gas.

In Europe meanwhile, the proportion of respondents expressing confidence about hitting their revenue targets is down from 72% in 2014, to just 34% in 2015. Developments in the North Sea reflect this picture. US oil major Chevron is reassessing its Rosebank field, while energy consultants predict that around US$16bn of North Sea investment could be put on hold over the next five years if crude stays at about US$70, or lower[6].

Confidence weaker in all regions



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David Messina, Managing Director at Hutton Energy, an independent oil company

6 'North Sea oil worries wash ashore at Aberdeen', *FT*, 18 December 2014

2 MORE INNOVATIVE APPROACHES TO COST CONTROL COME TO THE FORE

Pressure on cost control was a key concern for the industry last year and our latest survey results suggest this pressure will intensify in 2015: three-quarters of respondents (72%) plan to become stricter on cost control in the year ahead. As one example, oil-services company, Schlumberger, has already reported "much stronger customer-capital discipline and focus on cost", as well as its intention to cut 9,000 jobs[7].

While low margins are a key driver for the heightened focus on cost management, another factor is steadily increasing project complexity, which is leading to persistent budget overruns. According to EY, almost two-thirds (64%) of multi-billion-dollar, technically and operationally demanding mega projects continue to exceed budgets, with three-quarters (73%) missing project-schedule deadlines. On average, current project estimated completion costs were 59% above the initial estimate. "Projects are getting more complex, not only in technology terms, but also because of the business environment, and complexity has a cost," says Rob Van Velden, Finance Director at Sakhalin Energy. Statoil's Wærness adds that the industry has become much more capital-intensive over the past decade. "We've invested much more, and the return, on average, has gone down," he says.

Rising costs were cited as the second-biggest barrier to business growth in 2014 and 2013, and that trend has continued this year: 85% of respondents said that cost management is either a high priority for 2015, or their principal focus. "There's a constant drive across the whole chain to reduce costs," says Torstein Indrebø, the outgoing Secretary General of the International Gas Union. "The majors are selling non-core assets to focus more on the core business, in a bid to drive their costs down and to secure financing of key projects."

At Repsol, the Spanish oil and gas operator, the company has long practised the discipline of operating successfully in very diverse price environments. "The long term projects in this industry, from definition phase to the end of production, require a long term profitability analysis," says Kristian Rix, the company's Deputy Director of International Communication. But as its focus on cost control deepens, the company is looking in particular to increase attention on operational excellence, ensuring a balanced portfolio of projects, and tougher renegotiations with suppliers on contracts. "In this current climate, the impact of price reduction is usually shared between all the players in the industry. Services companies and suppliers have to reduce costs and regulatory agencies have to change royalty and tax rates to adapt to this new price scenario," says Rix.

Time for some new approaches

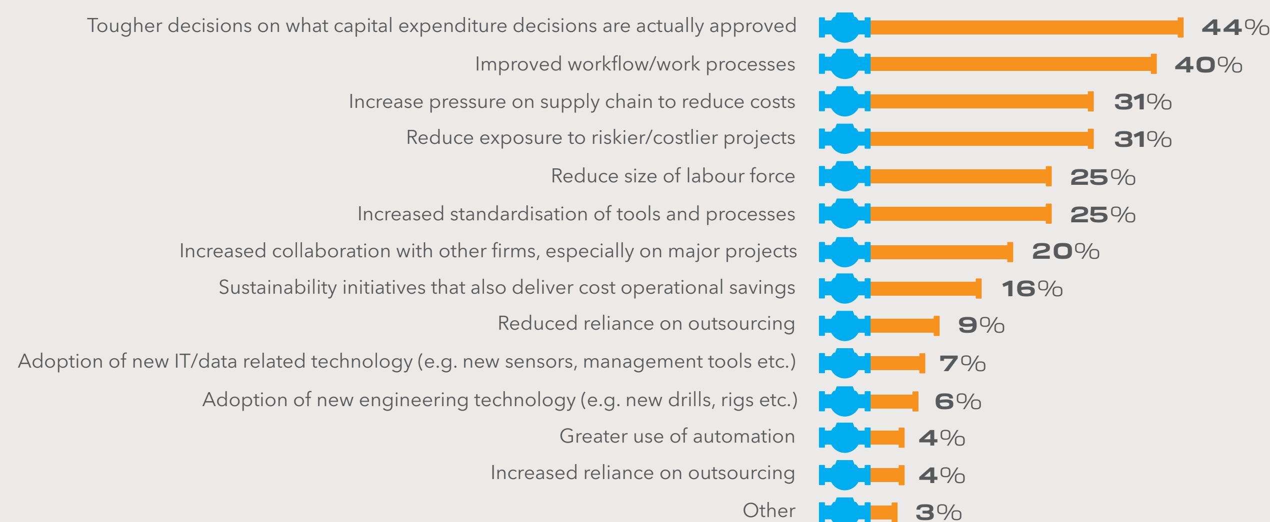
A side effect of heightened industry pressure to cut costs will be a greater necessity for more creative approaches to finding savings. For instance, Liv Hovem, Director, Europe and Africa, DNV GL - Oil & Gas, says environmentally focused sustainability initiatives might gain more traction, as they can deliver real cost savings. "For example, the capacity of batteries has improved, enabling us to run gas turbines in a more energy- and cost-efficient way," she says. Ernst Meyer, Director, Technology, Services and Governance, DNV GL - Oil & Gas, adds that firms that seize the initiative on digital technology will reap cost benefits in the longer term. "One example is the remote operation of offshore oil and gas platforms. If you have a portfolio of platforms, why do you need a fully manned control room on each of the platforms when they could sit onshore, and you could have a specialist following the same parameter on all the platforms? There is a lot of opportunity for efficiency improvements in that space," he argues.

More mergers on the way?

Another area of cost synergies will likely come from further industry consolidation. The US$34bn merger announced in November 2014 between the world's second largest oil-services company, Halliburton, and its smaller rival, Baker Hughes, provides an indication of the cost synergies that can be found through joining up. A Bloomberg report suggests the speed of the merger was triggered by concern that a lower oil price would make it too tough for them to keep operating profitably. The two companies are now projecting savings of US$2bn a year, in part by applying efficiency programmes and reducing duplication in key areas. The same month saw UK engineering group, Amec, join forces with Foster Wheeler, which is expected to generate annual cost savings of at least US$75m. Our 2014 outlook predicted consolidation in the industry, though in practice, the move towards consolidation was fairly muted in the first half of last year. According to Deloitte, the total number of M&A deals in that period was essentially flat, although the combined value of all deals increased by 38%, to US$141bn[8]. Nevertheless, falling oil prices might open up opportunities for new acquisitions during 2015.

See **Dealing with the fallout of a cost-constrained environment: New risks and opportunities** on page 20 for more on cost controls.

Priorities for imposing stricter cost controls in 2015



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7 'Schlumberger to cut 9,000 jobs as low oil prices bite', *Financial Post*, 15 January 2015

8 Oil & Gas Mergers and Acquisitions Report – Midyear 2014, Deloitte, August 2014

3 INVESTMENT IS ON A TIGHTER REIN

Weaker oil prices have fuelled a widespread perception that spending will be on a much tighter leash this year. As forecast in our 2014 outlook, a growing number of oil and gas companies announced plans to reduce capital expenditure (capex), even before crude prices started to fall. By the end of the first quarter, for example, Shell anticipated a 20% reduction in capital spending for the year, to around US$37bn. Furthermore, a recent Goldman Sachs report warns that almost US$1tn of spending on future oil projects is at risk, following an analysis of the economic viability of 400 oil and gas fields globally.

This year's survey finds that a significantly smaller proportion of companies in the industry are planning to increase investment in 2015. This decline has now been felt for three consecutive years: from a high of 63% in 2012, to just 12% this year (see chart below).

This drop-off has to some degree moved in line with industry confidence levels and oil prices over the same period, although it is also driven by other factors, such as sustained rises in operating costs, pressure from shareholders for higher dividends, and lower returns from capital invested.

For example, a recent report from Carbon Tracker, a research firm, found that the period 2008–13 saw widespread delays and cost-over runs across a range of projects, impacting shareholder returns. The report also showed that rising investment has been yielding progressively smaller increases in the global oil supply.

Time to tighten belts

The decline in crude-oil prices is only serving to tighten capital discipline in the industry. Companies are less comfortable about spending at prices below US$80 a barrel – let alone below US$50 – given that reduced revenues constrain the amount of cash available for reinvestment. In the US, for example, the International Energy Agency (IEA) anticipates falling oil prices as the driver for cuts in investment in shale oil by 10% during 2015[9]. As such, during 2015, the most popular cost-control strategy pursued by our survey respondents will be a further tightening-up of capital-expenditure decisions, as cited by 44% of respondents.

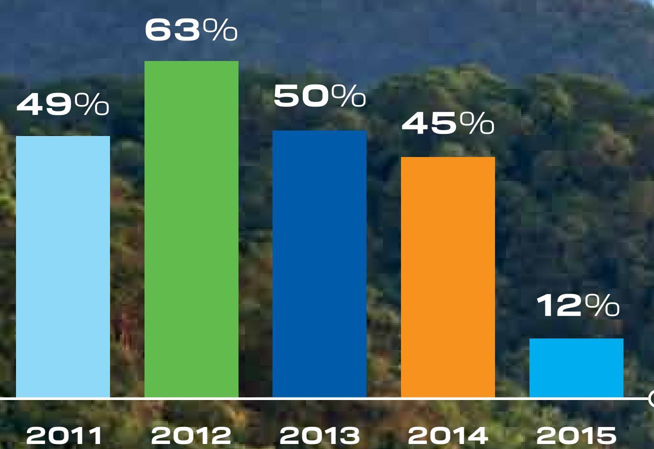
Recent corporate-spending announcements for the year ahead confirm the restraint on outlays. US oil major, ConocoPhillips, recently announced a US$700m cut in its capex for the year ahead, largely by slowing spending on some of its exploration projects[10], while Apache Corporation expects to spend US$4bn on its North American fields this year, a 26% drop[11]. Australia's Santos is to "significantly reduce" capital and operating expenditure (opex) in 2015[12]. Goldman Sachs estimates that European integrated oil companies require oil at US$122 a barrel to maintain their current capital-expenditure budgets[13].

For some firms, however, a prolonged period of low oil prices will open up opportunities to capitalise on the weakness of others. "I'm sure the companies that have the money will try to utilise this situation either to acquire companies at low prices or to buy fields and assets at great value," says DNV GL's Bjerager.

Meanwhile, in the Asia Pacific region, where many gas mega projects are in development, opex will likely pickup in many key projects. The mega capital projects coming into the market in Australia by 2020 are driving a new wave of opex. This isn't restricted to this region alone, however. "There is going to be more focus on opex, compared to capex, because of the greater emphasis on asset-integrity management in a cost-controlled environment," says Paul Thomas, Director, Inspection Services, DNV GL - Oil & Gas. "Getting optimisation in the opex phase requires a sustained effort. It's not 'let's-jump-on-that-this-week and then go back to something else next week'."

Some companies, such as Repsol, argue that they've long practised making investment decisions based on a range of price scenarios. "We make investment decisions based on profitability of the entire life cycle of projects, and continually work to review all of our investment opportunities," says Rix. "This price environment makes us very disciplined in capital allocation, combining the organic growth with selective inorganic acquisitions. Therefore it's possible to complement the business sustainability with the access to inorganic growth opportunities under attractive financial conditions."

Proportion of companies planning to increase capital investment



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> Paul Thomas, Director, Inspection Services, DNV GL - Oil & Gas

9 'IEA suggests oil prices rout could continue unless output cut', *The Wall Street Journal*, 14 November 2014
10 'Conoco sees third-quarter profit rise, 2015 capex seen lower', *Reuters*, 30 October 2014
11 'Apache gains from plan to sell $1.4B worth non-core assets – Analyst blog', Nasdaq report, 21 November 2014
12 'Falling oil prices prompt Santos to cut capex', Argus, 4 December 2014
13 'Facing lower oil prices, companies to borrow to protect dividend', *Reuters*, 28 November 2014

4 NEW TALENT CHALLENGES ARE EMERGING

"For the major producing companies, their revenues are well down, so their budgets are being cut substantially and they're hiring much less."

Simon Hatfield, CEO, WesternZagros Resources

Nearly half (47%) of our survey respondents say their company plans to reduce headcount during 2015, sharply up from 16% last year, and just 11% in 2013. Various companies have already begun implementing layoff programmes. Canada's Nexen Energy, acquired by China's offshore giant, CNOOC, announced in summer 2014 that it would reduce headcount, starting with senior management and progressing down through the organisation. BP has announced that thousands of redundancies are to be made by the end of 2015[14]. Statoil and Schlumberger have announced staff cuts too.

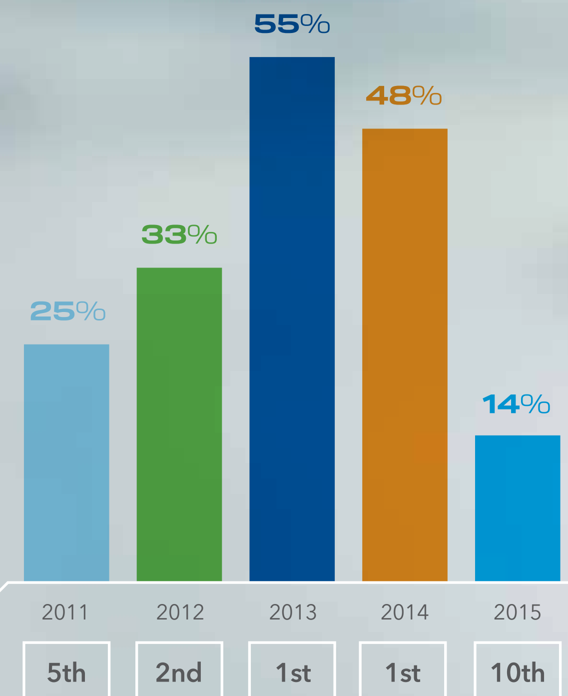
"For the major producing companies, their revenues are well down, so their budgets are being cut substantially and they're hiring much less," says Simon Hatfield, the Canada-based CEO of independent oil company, WesternZagros Resources. This trend adds to an ongoing concern over a shortage in skilled professionals, which has been a persistent worry over the five years that this study has been conducted. While shortages remain, this 2015 outlook suggests that the pressure has eased in the short term. The proportion of respondents citing skills shortages as a barrier to growth is less than one-third of what it was last year – at 14%, down from 48% in 2014 and 55% in 2013. However, this is not a reflection of a sudden turnaround in the availability of specialist skills. Rather, it reflects a combination of factors: companies' concerns over lower oil prices and weak growth, and a consequent caution in recruitment.

Where cuts might be made

While all areas of the industry are likely to be affected by strains on recruitment, the pain may be sharper for some. Contractors are often most at risk, notes Hutton Energy's Messina. "As a smaller E&P company, we try and keep our permanent teams quite tight, so, on that basis, we tend to be a little bit more insulated from the short-term cycles. What it does impact more are the contractors in our business, and how many of those we might have on at any one time."

The reality is that, while many of the job reductions will be focused on support staff, many specialist technical roles will remain challenging to fill. And, while short-term skills pressures may have abated for many, the problem will persist in the long term, and even worsen if the industry does not learn the lessons of the past, and fails to continue to proactively maintain its roster of skills.

The rise and fall of skills shortages as a barrier to growth



"We're bringing along younger people who see the opportunity, but they're not going to be fit to take on these projects in ten years' time. It's going to take them twenty years to get to that stage, so you're going to have a bit of a shortage in the meantime."

Paul Sullivan, Senior Vice President of Global LNG and FLNG, WorleyParsons

Over time, sustained periods of layoffs and recruitment freezes reduce the overall attractiveness of the industry to young people. Indeed, previous downturns have seen large-scale layoffs from oil companies, depriving the industry of skilled staff when the inevitable revival happens. This is especially the case in light of a large number of skilled workers now retiring, which will add to pressures on business critical skills and knowledge transfer in the years ahead.

"We're bringing along younger people who see the opportunity, but they're not going to be fit to take on these projects in ten years' time. It's going to take them twenty years to get to that stage, so you're going to have a bit of a shortage in the meantime," says Paul Sullivan, of WorleyParsons. "The other issue for engineering companies is there are very few long-term employees any more – it's basically an employment-at-will type of arrangement – and that doesn't help with the development of experienced project leaders."

The rapid implementation of new technology is a potential part solution to overcoming future skills shortage, according to DNV GL's Tørstad. "The opportunity to transfer big amounts of data in a secure and reliable manner will enable a much more free flow of competence. Both data and expertise for decision making will be available anywhere, anytime, and we will spend less time travelling. This will shift the competence needs of the industry and also the cost level in the longer term," she says.

14 'BP to spend $1 billion on thousands of job cuts', Reuters, 10 December 2014

5 THE INDUSTRY'S PROFIT-CONFIDENT FIRMS ARE FORGING A DIFFERENT PATH TO THEIR PEERS

While the overall proportion of respondents reporting confidence about hitting profit targets has fallen sharply from 69% for 2014, to 30% for 2015, there is a striking difference in the perspectives of this group compared with those who are pessimistic about hitting their profit goals. Dubbed here as the 'profit-confident' group[15], these respondents differentiate themselves from their less confident peers not just in terms of their financial expectations, but also in their thinking on investment, talent retention and other issues.

Talent management

Our survey suggests that 2015 will see greater staff cutbacks and lower overall recruitment across the oil and gas industry. The proportion of firms planning to reduce headcount has jumped from just 16% last year to 47% this year, while far fewer expect to expand recruitment (10%, down from 38%).

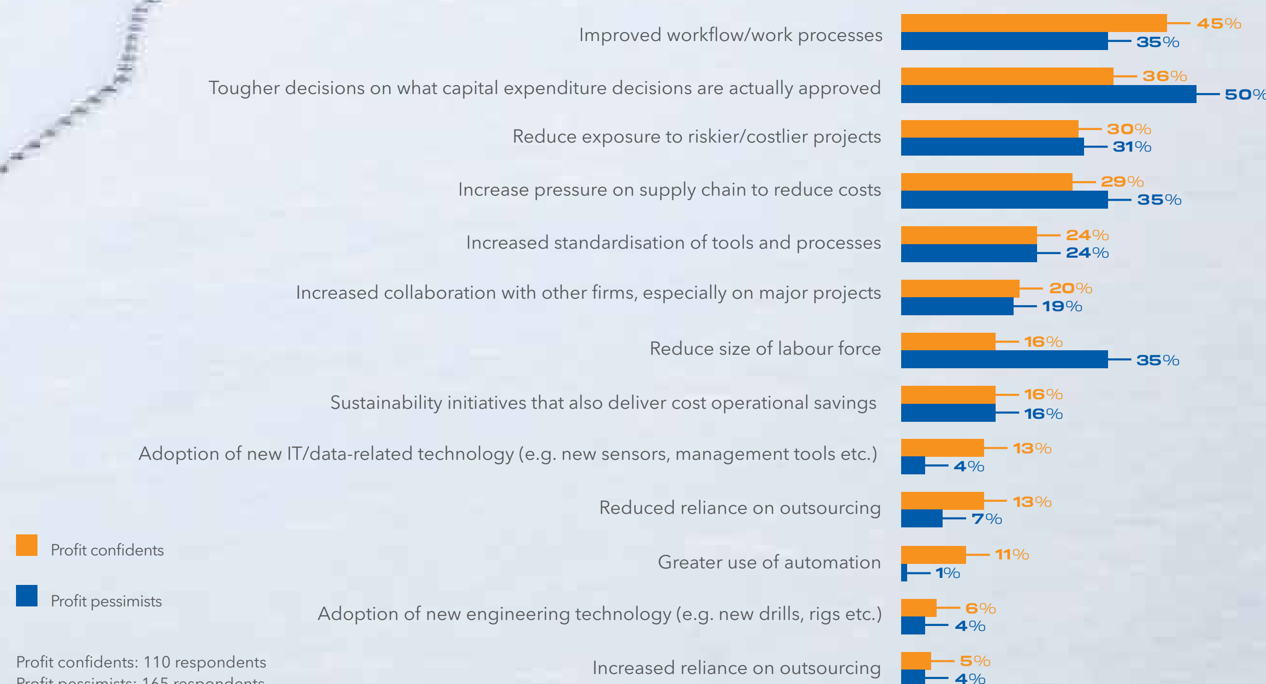
Among the profit-confident group, however, there is a clearer commitment to hold on to scarce skills. Most strikingly, while about one in four (28%) plan to decrease their overall headcount, nearly one in five (18%) actually expect to add more staff and a majority (53%) will maintain their current headcount. By contrast, only 4% of those who are pessimistic on profits ('profit pessimists') plan to add to their headcount, with 62% cutting back. The profit confident group is also more aware of the importance of skills to grapple with today's tough conditions: nearly twice as many consider skills shortages and the ageing workforce a key barrier to growth, compared with profit pessimists (18% versus 9%).

Only 4% of those who are pessimistic about hitting their profit targets, plan to add to their headcount, with 62% cutting back

The overall proportion of respondents reporting confidence about hitting profit targets has fallen from 69% for 2014, to 30% for 2015

Nearly one in five (18%) profit confidents actually expect to add more staff and a majority (53%) will maintain their current headcount

Priorities for imposing stricter cost controls in 2015: profit confidents versus profit pessimists



Profit confidents: 110 respondents
Profit pessimists: 165 respondents
January 2015

15 The 'profit-confident' group comprises those identified as being 'highly confident' or 'somewhat confident' in achieving their profit targets in 2015, while the 'profit pessimists' reported being 'somewhat pessimistic' or 'highly pessimistic'. The demographic profile of the profit-confident group is broadly similar to the overall survey sample, but is slightly more weighted to smaller companies with revenue of US$100m or less.

Cost control

Fewer profit-confident respondents view cost management as a top priority for 2015. Less than one-third are focusing on this as a top priority (28%, compared to 38% among profit pessimists). Furthermore, while 80% of profit pessimists are increasing strictness on cost controls, far fewer profit-confident respondents are doing the same (58%). However, when it comes to improving cost control, there are some marked differences in approach. Profit-confident respondents are putting greater reliance on automation and IT-related technology, while a larger proportion of profit pessimists are focusing on reducing the size of the labour force and making tougher decisions on capital expenditure decisions.

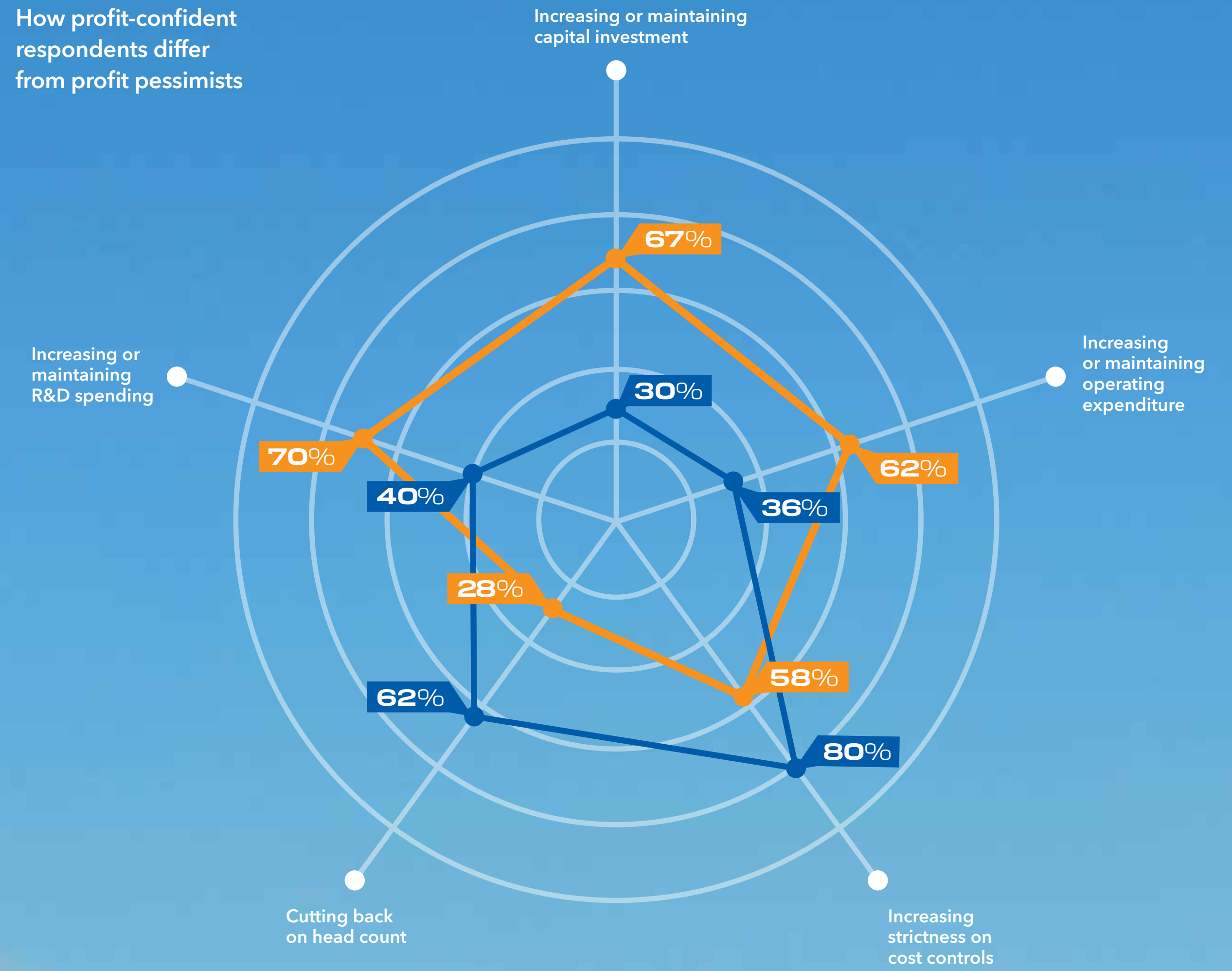
Both groups are putting more emphasis on increasing the standardisation of their operations. This fits a wider shift, with oil majors standardising operations wherever possible. Shell has signed long-term contracts with Technip and Samsung to help standardise operations on its FLNG programme. "Just by using the blueprint of the previous ship, you can save yourself a year of design work and a million dollars. That is why FLNG needs tighter relationships with suppliers," says Eric Janvier, Director, Head of Capital Projects Practice, Schlumberger Business Consulting. In another example, Statoil is driving standardisation of its subsea processing technology.

Playing the cycle

A further characteristic of the profit-confident group is a greater tendency towards counter-cyclical behaviour. The ability to work beyond the oil-price cycle requires both a degree of financial strength and a foresightedness to make bets for the long term. In this sense, it seems that these firms are parting from the traditional industry reaction to falling oil prices: 67% of the profit-confident respondents intend to either increase or maintain their overall capital investment; 71% will either take on more staff or maintain existing staffing levels; and 70% will maintain or raise their level of R&D spending. Given this more bullish outlook, these findings suggest this group is set to make some substantial gains during the downturn, looking to capitalise on cheaper investments and acquisitions, and to retain as much of their key skills and talent as they can.

> "Just by using the blueprint of the previous ship, you can save yourself a year of design work and a million dollars. That is why FLNG needs tighter relationships with suppliers."
>
> Eric Janvier, Director, Head of Capital Projects Practice, Schlumberger Business Consulting

How profit-confident respondents differ from profit pessimists



Profit confidents ■ Profit pessimist

Profit confidents: Those respondents who are somewhat or highly confident about reaching their profit targets in 2015

Profit pessimists: Those respondents who are somewhat or highly pessimistic about reaching their profit targets in 2015

Profit confidents: 110 respondents
Profit pessimists: 165 respondents

The ability to work beyond the oil-price cycle requires both a degree of financial strength and a foresightedness to make bets for the long term

The following 'In Depth' sections explore the cost control and skills issues in more detail

IN DEPTH

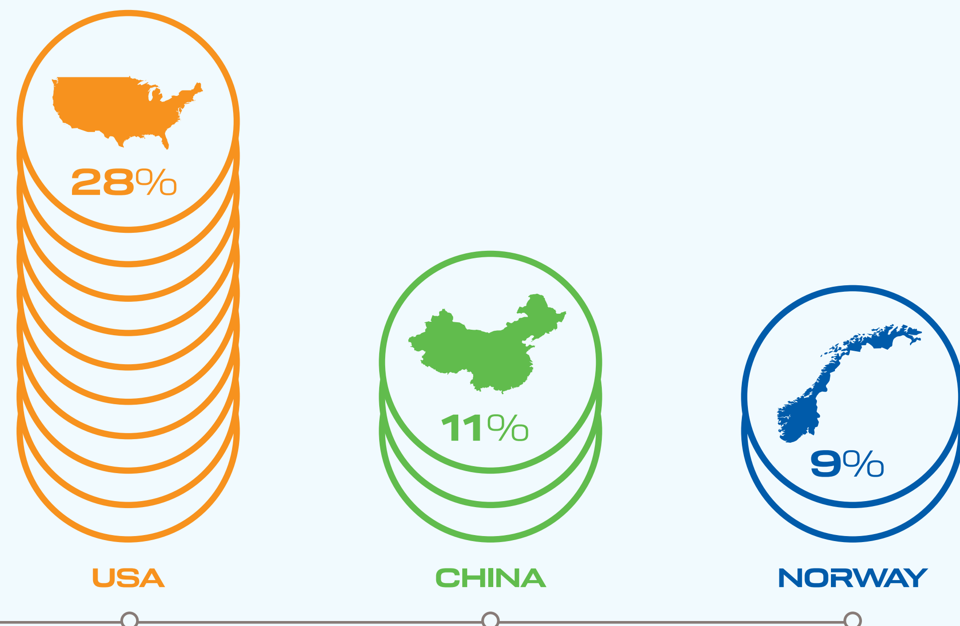
DEALING WITH THE FALLOUT OF A COST-CONSTRAINED ENVIRONMENT: NEW RISKS AND OPPORTUNITIES

The sharp downturn in oil prices has created a conundrum for oil and gas companies, whose plans have increasingly been set within the high-price climate that has been prevalent since 2010. For those most exposed to the weaker price climate, such as the oilfield-services companies, the response to the slide has been swift. Schlumberger, the largest player in this segment, announced at the start of December 2014 that it was cutting back its fleet for offshore geological surveys and taking an US$800m write-down on the value of its ships, on top of cutting about 7% of its workforce[16].

"If the price of a barrel is losing dollars, you have economic choices to make," says Schlumberger's Janvier. "You can delay some investment decisions, you can mothball projects if they're not too far ahead, but, once you have contractors who've been committed and agreements signed with those countries, you can't stop – or you can stop, but there's a cost to it."

Our survey respondents are adopting a variety of methods to secure cost and efficiency gains that go beyond "knee-jerk" responses. "Some international oil companies have announced a different approach to growth, more value-focused, and less focused on growth per se, introducing cost-efficiency improvement programmes," says Statoil's Waerness.

Top three most favourable investment environments for 2015



16 'Schlumberger cuts seismic survey fleet as oil weakens', *FT*, 2 December 2014

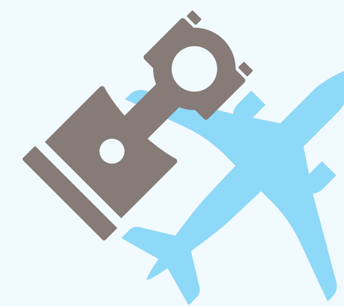
Perfecting standardisation

Standardisation – and securing economies of scale – has been identified by our survey as a key area in which to reduce some of the cost pressures on operations. A quarter of respondents will increasingly push to standardise their tools and processes in order to control costs. The advantages of pursuing this approach are significant. Standardisation can take numerous forms. The streamlining of the contractor base is one mechanism for keeping a lid on project costs (as identified in prior outlook studies[17]), but this can also make sense from an operational perspective. A strategy to "design one and build many" may prove more effective than the industry practice of "designing many and building only one," according to Janvier. Anadarko's offshore deepwater platforms in the Gulf of Mexico are an example, with an existing design concept being reused[18].

Standardisation is about much more than design, however. Improving the workflow and work processes is the second-highest priority for those seeking to impose cost controls in 2015, cited by 40% of respondents, and standardisation can have a big impact in this area. "Standardisation is about more than just having identical parts or materials; it's about company standards and procedures that help to improve work processes and can lower transaction costs. We could learn a lot from the automotive and aerospace industries, as just two examples that have efficient and standardised system, engineering and validation processes," argues Bjørn Søgård, Director, Subsea Technology, DNV GL – Oil & Gas.

It is important, too, that standardisation is not seen as running counter to innovation. It is about recognising the further potential of those designs that have proven their success, and systematically reusing those designs, or elements of them. Companies that do this can secure some quick wins. "There is no contradiction between developing new technology on the one hand, and standardising technologies on the other," says Margareth Øvrum, Executive Vice President for Projects Technology and Drilling at Statoil, in an interview for DNV GL's PERSPECTIVES magazine. "Multilateral wells on Troll [a field in the North Sea] are among our more complex wells, but they are the most efficient because we repeat the same process over and over," she adds.

This approach has evident repercussions for the broader supply chain, too. "If you decide you want to repeat one FLNG ship five times, you can't change contractors all the time, which is what the oil and gas industry is currently doing," says Janvier. "If you keep retendering, there is no way you can transfer the experience for the design from one phase to the next."



"Standardisation is about more than just having identical parts or materials; it's about company standards and procedures that help to improve work processes and can lower transaction costs. We could learn a lot from the automotive and aerospace industries, as just two examples that have efficient and standardised system, engineering and validation processes."

Bjørn Søgård, Director, Subsea Technology, DNV GL – Oil & Gas

17 Challenging Climates, DNV GL, January 2014
18 Interview, Eric Janvier

Supply-chain strain

There will inevitably be more deliberation in 2015 before the green light is given to projects in a high-cost, low-price environment. Our survey suggests suppliers must be prepared for tougher contract negotiations and greater scrutiny of project economics. Reflecting this, one-third (31%) of respondents intend to apply more pressure on suppliers to curb costs in 2015, making it the third most important cost control strategy in the survey.

"As major operators are forced into delaying or cancelling projects, this will have a big impact on the whole supply chain, which will need to adjust from several lucrative years into a reversed-cycle trend and reduce prices. Competition will become fierce between suppliers while operators seek to reduce costs," says DNV GL's Pirie.

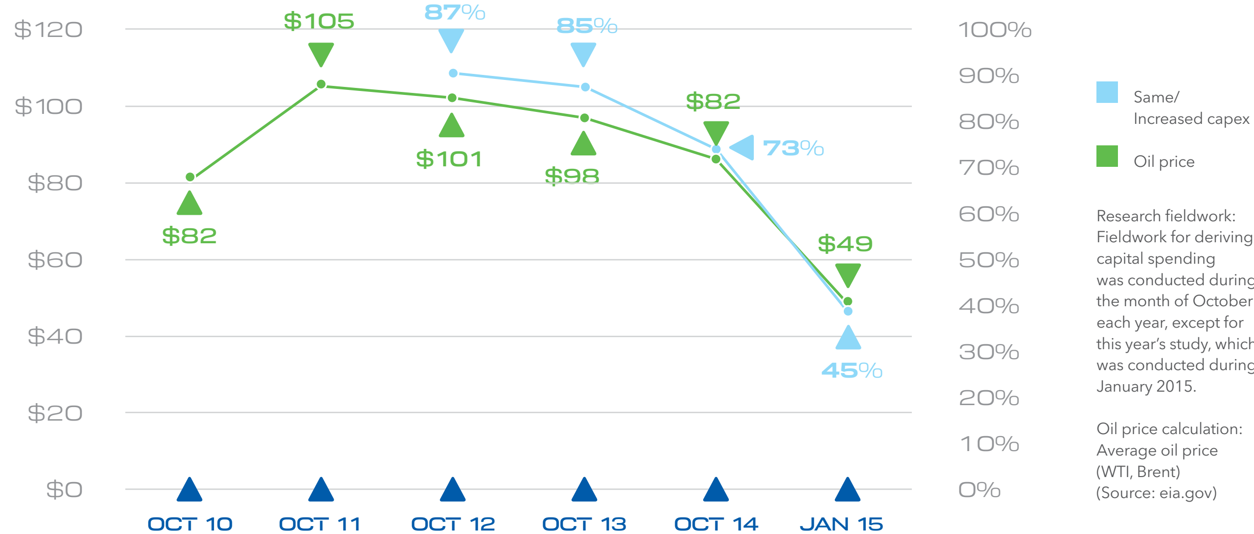
Approaches will vary, but for some suppliers the pressure being applied by those further up the chain will mean suspending investment and holding back dividend payments. Seadrill, an offshore deepwater drilling firm, recently announced that it will suspend dividend distributions and focus on debt reduction, as one example[19]. Fugro, a Dutch engineering services firm, has also scrapped its 2014 dividend. In the firm's third quarter statement, CEO Paul van Riel said it has stepped up cost reduction and performance-improvement initiatives to focus on restoring margin and cash flow[20]. The company also hopes to benefit "from a new era of no-frills services" by offering more standardised products[21]. Others will doubtless seek to merge, or acquire others, in order to find greater scale and cost synergies.

Consideration will also need to be given to how project risk is shared in a more challenging climate. Project owners will seek to further spread the risk of any projects more widely, including down the supply chain. "We need to identify what risks can be transferred sensibly from the clients and from the banks to the contractor and not just assume that they can all be passed through. It's a matter of dividing up the risk pie and coming up with a more plausible cost outcome than with the current client financier driven [lump-sum turnkey] model," says WorleyParsons' Sullivan.

At present, the main option project owners use in order to keep costs down has been to insist on fixed prices with contractors, though this is no guarantee of insulation against cost overruns. "There are areas in which fixed prices are possible. Somewhere between 40% and 60% of many LNG projects can be fixed-price and contractors will be prepared to take that risk, because it is something they understand and can manage and control," says Sullivan.

While the profit-confident group is primarily focused on key cost-control strategies, such as stricter capex decisions and process refinement, this group also feels more strongly that new technologies and the increased use of outsourcing can deliver savings. For example, 13% of the profit-confident group feel that adopting new IT-related technologies, such as sensors and management tools, can help them control costs, compared to just 4% of the profit pessimists.

Moving in tandem: oil price versus maintained/increased capex



Same/ Increased capex

Oil price

Research fieldwork: Fieldwork for deriving capital spending was conducted during the month of October each year, except for this year's study, which was conducted during January 2015.

Oil price calculation: Average oil price (WTI, Brent) (Source: eia.gov)

Solving the cost conundrum: A new approach to project planning

Falling oil prices have heightened the cost-management challenge facing the oil and gas industry, as it is forced to spend more to extract reserves amid ever more tightly squeezed margins. Yet many of the cost overruns that have enveloped mega projects are down to companies' own management practices; the underlying problem preceded the oil-market downturn. "Cost overruns are getting worse," says Eric Janvier, Director, Head of Global Capital Projects at Schlumberger Business Consulting. "Mega projects have always overrun, but they've been overrunning more than they used to, and it's not related to the dip in the price of oil."

There are valid reasons why cost overruns have increased. Firstly, projects have become bigger and bigger. "When you get a US$40bn project, the complexities increase and also start to hit local capacities in terms of employment, so salaries start to go up. That's what's happened in Canada and Australia, and that's what is going to happen in the US once the LNG starts to be developed," says Janvier.

Secondly, more marginal resources means that, for the same dollar, companies are getting fewer barrels. A well drilled at 5,000 metres provides about one-tenth of what used to be available 10 years ago, and the cost per barrel has also increased. Greater regulation, particularly after the Macondo incident in 2010[22], has also forced costs up. "Companies keep upgrading their standards, so now we have a situation where the CEO of a big contractor in the Gulf of Mexico noted that constraints on steel pipes have increased one-hundred fold. You are now very close to nuclear specifications in some places, which is good for corrosion, but that has a very substantial impact on costs," says Janvier.

What, then, can oil companies do to limit the cost impact? For one thing, they need to approach projects from a different point of view. Royal Dutch Shell's approach with FLNG projects provides a possible template. "The approach that Shell took at the beginning, was to ask, 'What is the size of an FLNG ship that can cover 80% of our future cases? And how can we make them more efficient, so that the second FLNG ship costs 20% less than the first one?'" says Janvier. Unconventional operators are also using this model. "Because they have short projects, essentially drilling and completing wells, they do the same thing over and over again and that drives costs down. Many of these companies have achieved very low costs by applying industrial approaches," says Statoil's Wærness.

19 Seadrill Limited (SDRL) – Third quarter 2014 results, Seadrill, 26 November 2014
20 'Fugro Q3 2014 trading and strategy update', Fugro, 29 October 2014
21 'Supply-chain suffers as oil majors battle price plunge', *Arab News*, 11 November 2014

22 'Reinventing Regulation: The impact of US reform on the oil and gas industry', GL Noble Denton, 2013

IN DEPTH

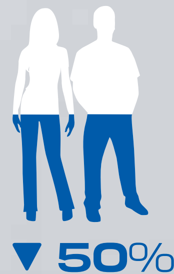
THE SKILLS SHORTAGE: AVOIDING THE MISTAKES OF PRIOR DOWNTURNS

The much weaker recruitment outlook anticipated in 2015 is unlikely to resolve what will fundamentally remain a long-term issue for the industry. Although a much lower proportion of respondents today view the skills gap as their main barrier to growth (the issue has fallen from being the greatest barrier in 2014 to tenth place in 2015), the reality is that this gap is likely to reappear again down the track – and potentially more seriously if the industry does not heed the lessons of prior downturns. These lessons suggest that cutting back on staff during more challenging economic times leads to a dearth of experienced, mid-career engineers and technical-project leaders when they need to start hiring again in the ensuing growth phase.

Our 2012 outlook report, Big Spenders, noted how various oil majors, such as BP and Shell, were trying to ensure that vital skills and new hires were not automatically pared back whenever oil prices dipped, but, rather, to ensure that the talent pipeline remained intact. This aspiration will now, once again, be put to the test. "When companies have a short-term mind-set, they tend to let the most experienced staff go before they manage to capture all of the knowledge they have – which includes that gained through weathering previous downturns," says DNV GL's Hovem. "The result may be that, when we come out of this tunnel again, it may be worse than it was before."

At one level, this means ensuring companies do not stem the pipeline of talent coming into the industry. But, already, signs are not encouraging here. "In the last two or three years, there has been a large scale recruitment of graduate engineers. All the oil companies can recruit direct from universities. But, recently, graduate recruitment within the industry has declined enormously and numbers are down 50% from what they were last year," says Robert Bell, Technical Director at Atkins.

Yet, for those who are able, 2015 could be an opportune moment for a recruitment drive. "The labour market will be less over-saturated. People will be looking for jobs and will perhaps accept something less than the scarcity-driven rates they were getting," says WorleyParsons' Sullivan.



▼ 50%

"Graduate recruitment within the industry has declined enormously and numbers are down 50% from what they were last year."

Robert Bell, Technical Director, Offshore Structures, Oil and Gas, Atkins

Internal-development ideas

So, what solutions can the industry embrace to ensure that there is not another major gap down the track in the industry's depth of talent? While the industry has long relied on more conventional measures such as poaching from rivals and seeking to fast-track junior management in order to fill gaps higher up the ladder, such measures will not suffice as a long-term solution.

Some companies are focused on other measures, such as more rounded compensation and development packages. Sakhalin Energy's Van Velden says the costs for qualified staff willing to work in remote areas of the Russian Far East have gone up substantially in recent years. "It's a matter of supply and demand. We are working the issues and trying to offer to staff, besides a competitive salary, interesting development opportunities, on which it is harder for others to compete with us." Beyond this, knowledge sharing, better apprenticeship schemes and clearer career paths could all form part of the solution to this long-term challenge to the industry's growth.

Looking further into the future, DNV GL's Tørstad believes that companies will increasingly be able to harness disruptive technologies to overcome any resource and skills shortages. "Thanks to emerging technologies such as digital oil-field innovations, the ability to place smaller teams offshore and more centralised teams onshore, will lead to higher flexibility, lower costs and a significantly improved opportunity for on-the-job training of new employees," she explains. "Sophisticated simulators can also be utilised for fast-track training."

But, for Atkins' Bell, there are some more fundamental industry forces at work that amplify the challenge in any of these approaches for those firms that have to bid for work on a cyclical basis. "Most engineering projects are competitively bid against fierce competition, with regular re-bidding. Hence, workforces need to be flexible, and must be able to scale up or down to meet cyclical and commercial challenges," he explains.

Looking outside of oil and gas

There are also a number of externally-focused measures available to address the skills shortage. Cross-industry talent transfer schemes hold significant potential, although these are underutilised at present. As one example, tapping the military's talent pool has risen up the agenda, particularly for mid-career staff.

Industry body, Oil & Gas UK, maintains close contact with the UK's Ministry of Defence (MoD) through a Career Transition Partnership. "We're not waiting for service leavers to find us. We're looking to develop a relationship whereby the MoD will be able to say to us, 'Over the next year, these are the skills that are going to be coming free,'" explains the organisation's Employment and Skills Policy Manager, Alix Thom.

Oil & Gas UK is also looking at ways for companies to help each other, and perhaps offer to develop graduates or apprentices between them. "We need to think outside the box and help companies to help each other, and promote industry-wide schemes, like the Industry Technician Training Scheme, so smaller companies know they don't have to start from scratch," says Thom. 'The technician training scheme has 17 participating companies with more than 200 people in training at the moment. In the 15 years of the scheme, 1,500 people have moved into the industry.

"When companies have a short-term mind-set, they tend to let the most experienced staff go before they manage to capture all of the knowledge they have – which includes that gained through weathering previous downturns. The result may be that, when we come out of this tunnel again, it may be worse than it was before."

Liv Hovem, Director, Europe and Africa, DNV GL - Oil & Gas

CONCLUSION

HOW TO SUCCEED IN 2015

In a climate of low oil prices, companies will be strongly tempted to slash capital intensive projects, particularly those that hit their cash flow. Similarly, there is a compelling argument to scrutinise new investments more closely, and to assess whether they are still bankable in a weaker market. However, argues Statoil's Eirik Wærness, companies need to learn the lessons of the past. "You should avoid cutting too much in you exploration programme, because you're going to hit your reserve replacement ratio 10 years down the road."

Taking the lessons from past downturns is one of the key tips for success in 2015. Senior executives who have provided input to this research have suggested some other key points for the industry to bear in mind for 2015:

Be flexible

During tougher periods for the industry, oil companies have tools that enable them to adapt and survive, so long as they know where to look. Proactive cost and value management is one element that can bring success. "Oil majors have the possibility across the portfolio to manage exposure, to price risk in different ways, and take different positions to remain robust in different price-environment scenarios," says Sakhalin Energy's Rob Van Velden.

Don't reinvent the wheel

When costs are high, standardisation can provide a model for helping to prevent unnecessary expenses. Streamlining processes can reduce risk and enable companies to manage risk better. Whether setting stricter contracting standards, or establishing viable technology templates, quick wins can be found in replicating successful models. "Instead of starting from the point of view that every field is different and, therefore, you need to design something from scratch, starting from what you as a company have done well in the past, and then, where necessary, designing adjustments in order to optimise," says Schlumberger's Eric Janvier.

"Oil majors have the possibility across the portfolio to manage exposure, to price risk in different ways, and take different positions to remain robust in different price-environment scenarios."

Robert Van Velden, Finance Director, Sakhalin Energy

Stick to your core business

In a low-price environment, it makes sense for companies to strip back on non-core assets and activities. Divesting non-strategic, underperforming assets is also an effective means of raising capital that can be put to work elsewhere – concentrating on the areas of the core business most in need of attention. As one example, the UK's BG Group in late 2014 sold a gas pipeline in Australia for US$5bn to the APA Group, with the proceeds used to cut debt and fund future investment growth[23].

Keep a focus on opex

Capital expenditure is vulnerable when revenues come under sustained pressure, as they could well do in 2015. That means devoting more resources to opex. "If you're not going to drive new capital projects, you're going to have to work on the opex side with operational cost reductions, life extension and EOR," advises Richard Bailey, Director: Asia Pacific and Middle East, DNV GL - Oil & Gas. "There's still a huge amount of potential for assets that have 25-year design lives. The question is, how do they get another 15 out of them?"

Don't scrimp on quality

Understandably, many companies prefer to push costs down by squeezing suppliers and perhaps tolerating lower quality thresholds, which are less expensive. This is inadvisable. "Yes, you can keep costs down through 'good enough' designs, but that's the wrong approach." says Janvier. "You get what you pay for."

23 'BG to sell liquefied natural gas pipeline for $5bn', *FT*, 10 December 2014

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