

The Skills Gap & How to Manage It

In our January 2016 industry survey we asked respondents for their views on the future of the industry and the skills needed to succeed in it. Last month's newsletter covered their views on the future of the industry ([read here](#)); this month we look at what skills they felt are required, and the skills gap that exists within the industry.

Generally, respondents were pessimistic about the short term, but confident about the long term. This longer term confidence, however, is dependent on improved leadership and greater innovation than has been achieved in the past two decades (notwithstanding the achievements of shale and deepwater). For an industry that is facing the "Great Crew Change" with a new generation of professionals moving into management roles, and requiring even more innovation, this is likely to be quite a challenge. In this paper we examine our respondents' views against the context of various industry studies, and make some suggestions as to how companies, HR teams and individuals can best manage both the skills gap and career development in a downturn. Along the way we also take a look at the generational issue of managing Millennials, and at the question of Innovation.

Executive summary:

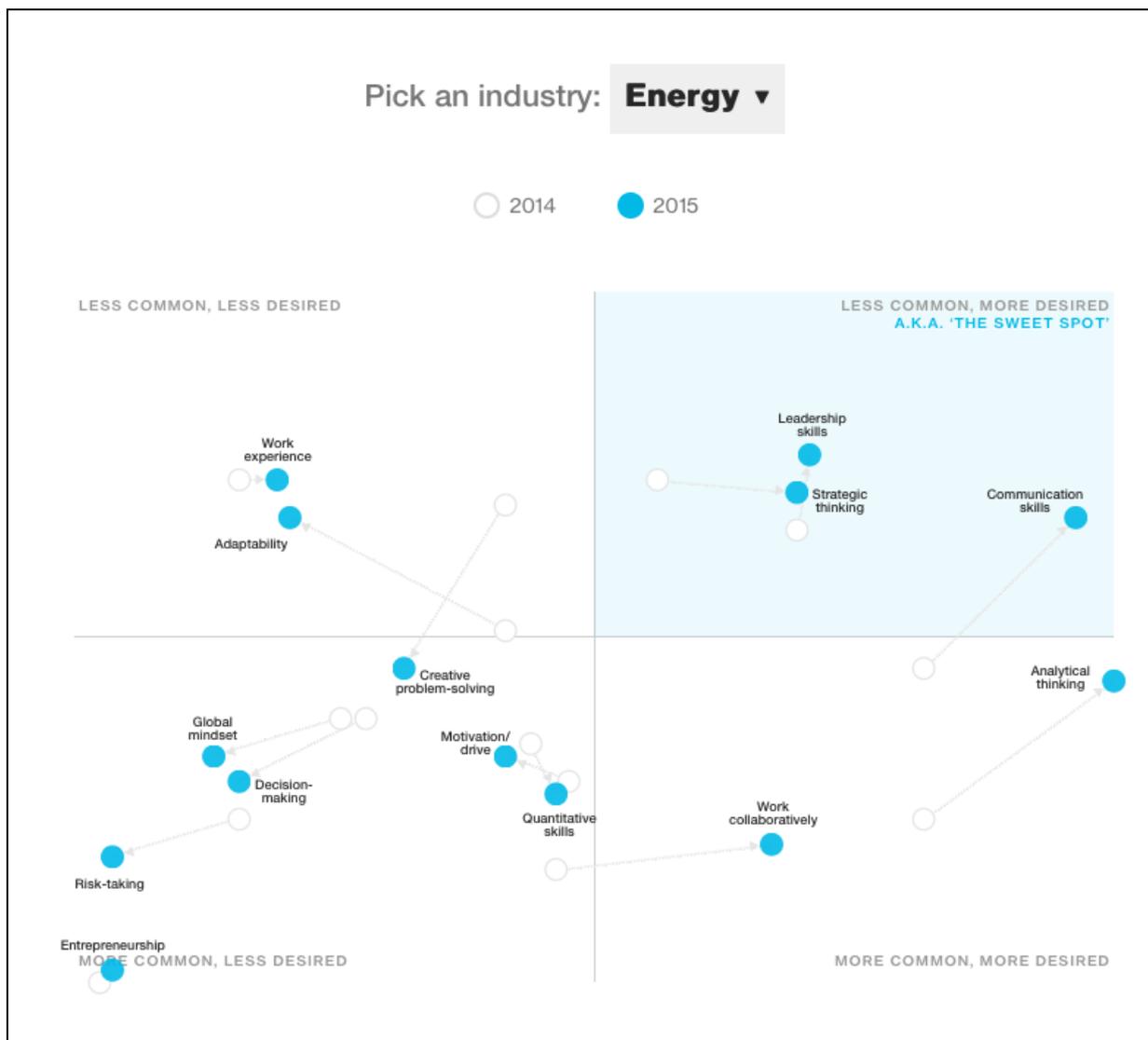
- Leadership skills still seen to be lacking
- Great Crew Change impact delayed, but challenge remains, with complication of Millennials (Gen Y) culture clash
- Leadership, strategic thinking and communications skills most desired by employers, but also most uncommon
- Technology and "digital" is likely to prove a weak spot for many firms
- Strategic planning, negotiating & deal making and inspiring & motivating teams are the skills respondents most want to develop
- Companies need to encourage collaboration and foster innovation; individuals need to take responsibility for own career development

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The Skills Gap

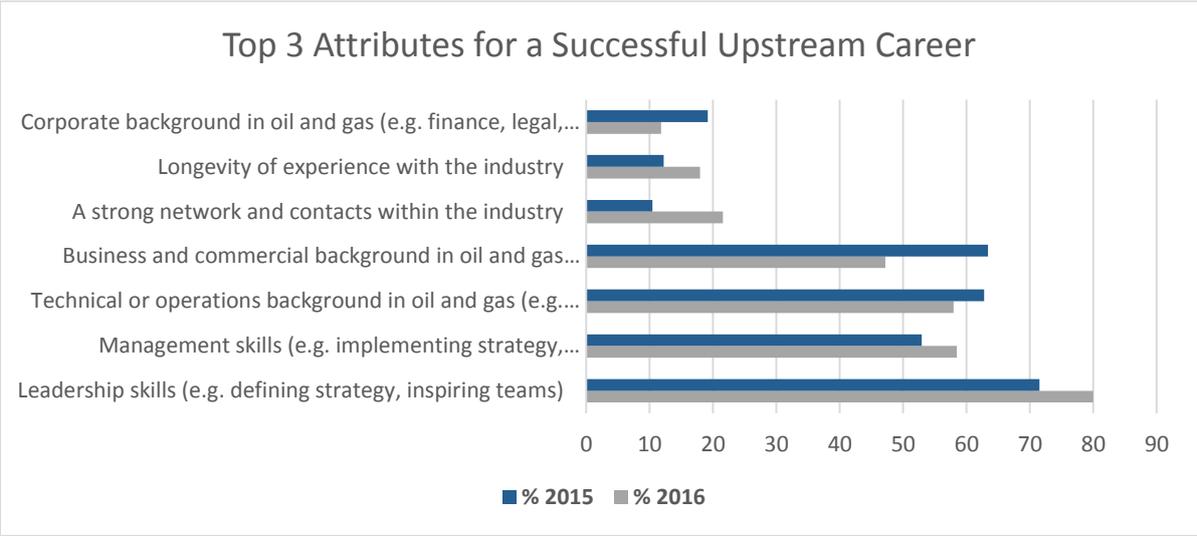
Shortage of Leadership skills continues

The 2016 Bloomberg Job Skills Report highlighted Leadership Skills, Strategic Thinking and Communications Skills as the three areas within the energy industry where there is a skills gap; they asked recruiters which skills they wanted most, and which they had trouble finding. In the upper right hand corner are the truly valuable skills: recruiters want them but consider them rare. These three have all become less common and more desired than in 2014, and tend to be less common and more desired in energy than in industry as a whole.



Source: Bloomberg 2016 Job Skills Report: <http://www.bloomberg.com/graphics/2016-job-skills-report/>

This ties in closely with the findings of our survey, in response to the questions about key attributes for a successful career, and skills to be developed.



Source: WBC Industry Predictions Survey 2016

While the priorities are hardly surprising, it’s interesting to note that Leadership and Management skills, a strong network and longevity have all increased in importance, while corporate and commercial experience has declined in importance. In the current climate, keeping the business on track, and benefiting from experience takes precedence over deal making and back office functions, while a strong personal network becomes increasingly important when the threat of redundancy looms over every role.



Source: WBC Industry Predictions Survey 2016

There’s little change from year to year here, with the exception of “mastering operational details” – in turbulent markets respondents want to step back from the day-to-day operations and try to see the bigger picture – where and how will the industry emerge in three years time?

Verbatim comments on personal development emphasised this desire to see the bigger picture – wanting to know more about the “Energy industry as a whole” – as well as communications – “improvement in writing skills” though the short term pessimism came through in some comments eg “firing people effectively”, and of course a need for “more technical experience”, encompassing renewables, robotics, and HSE.

How Significant is the Skills Gap?

Lack of leadership skills was forecast back in 2008

Until 2014, the skills shortage was often cited as the industry’s biggest challenge. The Great Crew Change had been identified years earlier and numerous studies and papers, some of which we look at below, analysed the problem and highlighted particular areas of weakness. The Hays 2014 report had 30% of O&G companies citing skill shortages as their biggest concern, followed by 24% giving economic instability as their main worry. Since 2014 however, there seems to have been very little analysis of the issue: there’s no doubt that in the short term, the downturn has eased the pressure on recruitment. In our view, this is simply storing up trouble for the future. At the root of the problem is the generational mix within the industry.

Back in 2008 a study by the Energy Institute, Deloitte and Norman Broadbent showed a decline in recruitment among Generation Xers (those born between 1960 and 1980), leaving the industry dominated by Baby Boomers (pre 1960) and Gen Yers (after 1980 – also known as Millennials, as the first of them started entering the workforce in 2000). Respondents in this study were asked about staffing issues: 70% believed the industry would not have sufficient leadership talent to meet the challenges; nearly half said that management and leadership skills were lacking. So this is not a new problem.

At the root of the problem is the generational mix

2008 Energy Institute Study: 70% believed industry would not have sufficient leadership talent

Subsequent studies and reports demonstrate a continued anxiety over skill shortages: in 2012, Schlumberger’s comprehensive Oil & Gas HR Benchmark study looked ahead to 2016 (obviously with no inkling of

the oil price collapse), and highlighted concerns over the lack of experienced petrotechnical professionals (PTPs), as the generational gap kicks in:

- **Estimated talent gap among all PTPs in 2016:** - 4,300
- **Estimated experienced PTP* talent gap 2016:** - 8,900

**Experienced PTP defined as being over 35.*

In 2012, Schlumberger reported that despite the looming skill shortages, the Majors had a relatively low level of vacancies – between 1% and 2% across all disciplines. Independents and NOCs, however, had more a problem, with Independents experiencing vacancy levels of 9-10% and NOCs 8-14%. Crucially, it highlighted that NOC lacked leadership competence in most areas.

Schlumberger study 2012: NOCs lacked leadership competence in most areas

In the 2012 forecast, 2016 was predicted to be the turning point, after which the skills shortage would ease, as the first Millennials/Gen Yers moved into the “experienced” category and took on leadership roles. However, the 2013 study still showed a significant shortage of experienced PTPs in 2018.

Digital & Technology issues

Shortage of technology skills likely to hold oil co's back

Although the oil and gas industry has always been reliant on technology to improve discovery and extraction, as well as improve performance and environmental impact, it does not have a great track record in R&D compared to other sectors. A 2010 study of the top 1000 companies by R&D spend had no oil companies in the top 25 ([see earlier 2013 WBC report here](#)). Where new ideas do come in, it has often been the service companies or independents, rather than the majors and NOCs, who have led the way. This inevitably shows through in staffing issues, and it looks as though this may be one of the crunch points in the near future for E&P firms – enabling firms from outside the industry to disrupt existing models.

A recent survey among O&G employers by Russell Reynolds, the headhunters, picked up on this, and on the importance of “digital” in the future shape of the industry. 65% of their respondents expect some form of “digital disruption” to the industry in the near future, but only 43% felt they

Russell Reynolds 2015: fewer than half have the right people to define and execute a digital strategy

had the right people to define their digital strategy and even fewer said they had the right people to execute it. A report and survey by DNV GL showed a similar skill gap: only 20% of their respondents considered themselves to be well-advanced in digital adoption across their physical assets and operations.

Time to look ahead to the recovery

Whatever the future shape and size of the industry, the skills gap is still there

Of course, it's too early to know how 2016 will turn out. With companies focusing on cost-cutting and lay-offs as they fight for survival, it's unlikely that the skills shortage ranks so highly on the list of top management concerns.

But for those companies looking ahead to the recovery (and the oil price has risen by 40% in the past 2 months), it's a problem postponed, not solved. Like the respondents in our survey, respondents to Hays' 2016 O&G salary guide were confident that the industry would recover. 37% were planning to hire new staff and 50% expected salaries to increase. While the lay-offs might help manage costs in the short term, they will have accelerated the departure of a swathe of experienced professionals from the industry and reduced the pool of younger talent from whom future leaders will be picked.

Even if, as most of our respondents predicted, the industry recovers, albeit in a reduced form, these reports suggest there is still going to be a significant problem with skills shortages, especially among NOCs and Independents.

Managing Millennials

Ever since they entered the workplace, there has been talk of how the Millennial generation is different and how they need to be managed differently (and, from a training perspective, how they learn differently). Myths abound, and many of the early demands made by Millennials disappeared as soon as the recession hit. However, certain key themes keep coming through:

- Millennials place a higher value on work/life balance than earlier generations
- Business must be socially responsible as well as profitable
- Teamwork, collaboration and a sense of community are as important as salary and seniority (as long as these are competitive)
- They expect to be supported and appreciated in return for their contribution, eager for feedback and advice
- Flexibility is hugely important, enabled by technology – the ability to do things in their own time and at their own pace, as long as they deliver
- High expectations on autonomy and fast career progression

In some cases these are no different from what previous generations wanted, but Millennials are more open about requesting them, supported by technology and communications that allow information to flow faster and more freely.

Deloitte 2016 : 63% of Millennials say "my leadership skills are not being fully developed"

Teamwork and sense of community comes into play with training: millennials see learning as a collaborative activity, expecting to contribute to each other's learning and development, and to learn to work as teams and share responsibility for learning. The move is away from lecture delivery and personal study towards a collaborative learning experience. Universities in the developed world have been making huge investments in new infrastructure to promote collaborative learning. The physical and IT infrastructure is being fully aligned with this new teaching and learning philosophy. Businesses need to take note of these developments, and many already do, with a new approach to office layouts and L&D programmes.

Managing, and being managed by, Millennials can pose challenges: because of the generation gap, and the small size of Generation X (just over half the size of the Baby Boomer generation), they tend to get promoted earlier. In the Beyond/FutureWorkplace 2015 survey 83% of respondents had experienced Millennials managing either Baby Boomers or Gen Xers, but the experience wasn't always positive: only 14% of the BBs and Xers thought they made the best leaders, and 45% think that Millennials' lack of management expertise will adversely affect business in the future.

Beyond/FutureWorkplace 2015: 45% think Millennials' lack of management expertise will adversely affect business in the future

At the same time, a Deloitte survey of Millennials showed that 63% of them didn't think employers were good at giving them opportunities to develop leadership skills.

So what do all these statistics add up to? An ambitious workforce, ready to challenge the status quo and find better ways to do things? Or a pampered group with unrealistic expectations and limited work ethic? Whatever the answer, it adds an extra dimension to the challenges of team building.

Sources: Schlumberger 2012 HR Benchmark Study; PwC NextGen 2013; BeyondFutureWorkplace 2015 study; Deloitte 2016

Solving the problem

Investment in mentoring, long term planning, training in soft skills and defining ROI

We have little to add to the debate at a macro level. Greater minds and bigger organisations than ours will argue the case for long term investment in STEM education and increasing the supply of qualified graduates and making the case for the industry as a worthwhile career path.

On an individual level, and for HR leaders managing talent for their businesses, however, we can identify some themes coming through on how to manage the issue at a micro level, based on conversations with partners and experts as well as some of the academic research.

One of the first questions that comes up is who is responsible for career development, and it's here that the generational divide comes into play. Many Baby Boomers were used to working for a large organisation with well-mapped out career paths than included properly funded training and development. Millennials take a slightly different view (see box above), preferring to be more in control of their own career development, but still expecting support from their employer.

Who's responsible for career development – the individual or the employer?

It's accepted that in a downturn, training is an easy cost to cut, so the burden increasingly falls upon individuals to take charge of their own development, making the case for employer funding on an individual basis. The trend is towards the individual being responsible for their own career paths (all the more so in a downturn), but a far-sighted employer will act as a supportive enabler, providing funding, opportunities and content.

Best Practice – for individuals and employers

Advice on how best to manage career development in tough markets tends to boil down to a few key points, and – not surprisingly – there's considerable correlation between what individuals should do and what employers should do:

Individuals	Employers
Find a mentor	Develop a coaching/mentoring programme
Have a 5-year plan	Ensure recruitment and staff development has a strategy linked to the overall business strategy – not done just on a local, short-term basis
Expand range of skills and knowledge	Offer job rotation schemes and knowledge management programmes
Build a network of peers across functions	Identify High-Potentials across the organisation and bring them together regularly

Soft Skills

For many petrotechnical professionals – used to dealing with data and hard facts – there was also the (rather patronising) recommendation they should develop their soft skills. This has become something of a cliché but there's no doubt that leadership, especially in tough markets, depends on a very strong understanding of human behaviours, not just the ability to read charts, diagrams and spreadsheets. "Soft skills" – sometimes known as emotional intelligence (EQ) - typically covers communication, empathy,

"The paradox is that hard skills are easier to develop than soft skills" – O&G Banker

teamwork, self-awareness, professionalism, creativity, strategic thinking and other personal attributes.

“The paradox,” an O&G banker once said, “is that hard skills are actually easy to master and manage. Spreadsheets and numbers don’t have opinions or personal agendas, computer programs will follow logical instructions and the laws of physics are the same in Indonesia as they are in the US. For many of us, mastering the soft skills is much tougher, as it involves emotions, unpredictable human behaviour and ambiguity”

The link between investment in career development and staff retention is well established – with a clear return in lower recruitment and selection costs. For employers, Bain also had a counter-intuitive suggestion for dealing with skill supply shortages: reduce the demand for talent. A willingness to disrupt, to be innovative by restructuring and cutting out unnecessary processes and complexities will enable firms to make the most of limited resources – leadership talent included (see box on Innovation).

Talk of investment inevitably raises the question of ROI, a priority for HR professionals all over the world, particularly in the current climate. Establishing ROI on training is hugely important, not least for us at Warren Business Consulting, and this is too large a topic for this paper. It’s clear that attendance records and evaluation scores, while essential, are not enough. Understanding the impact a course will have on both the individual and the business needs a clear definition of the business goals; confirmation that training is the right answer (often it isn’t), and above all, metrics – financial and non-financial – that measure the desired outcomes.

Establishing ROI is a priority – understanding and measuring the impact of training on the business

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Innovation

In last month's paper, we highlighted the point made by our respondents that the industry has to change – that it risks having its own Kodak moment if attitudes and processes don't change. Innovation is one of those corporate themes, like customer focus, employee engagement and even diversity, that every company claims to champion, but often results in little more than lip-service – eg a corporate suggestion box. We asked **InnovationWorks**, a training and consulting firm with clients that include Oxford University, Saïd Business School and participants from Goldman Sachs, EY, Disney and others, to comment on how to create a genuinely innovative culture, and the role HR teams can play:

- Innovation – a process, not just an output - starts with the individual, with behaviours and mindsets that support original thinking and the exploration of new ideas. Ensure this is embedded in recruitment and appraisal processes.
- Structure the organization to support these individual behaviours, with teams working together to introduce agile working practices that combine speed and flexibility in solving problems.
- Create a sense of confidence in exploring new ideas, learning from failure and changing direction, to make sure individuals feel they have “permission” to challenge the status quo.
- Incorporate as much difference as possible: too often, “confirmation bias” means that only ideas that conform to an existing view of the world will get through. Be ready to identify such bias and challenge it.
- Introduce Design Thinking: pioneered by Stanford University and originally used for product design (especially in Silicon Valley), this is an approach to problem solving that combines both analysis and intuition – involving both right brain and left brain input (or perhaps hard and soft skills - see above).
- Test and implement ideas with agile processes – short, fast and flexible – with a bias to action rather than discussion. Instead of having a definitive plan at the outset, this means finding the right path as you go along.
- Provide the right support to teams, backed by senior management, as they go through this process – the uncertainty can be unsettling.

Another issue with Innovation is identifying the “Real Guys” in the business. Professor Gordon Hewitt, of the Ross School of Business, University of Michigan, talks of the undue influence certain people have on the “dominant logic” of a firm – the basic assumptions about the business and its market that underpin strategy. These “Real Guys” tend to dominate discussions about strategy, resources and new initiatives. For a management team that wants to drive innovation through a business, rather than simply re-badge it under a new name, it's vital to understand who the “Real Guys” are and get them on side.

Who are the “Real Guys” in the business?

There's a strategic role for HR teams throughout this – from the recruitment process, team structures, training programmes through to appraisals and remuneration policies – and in particular, in ensuring the lessons in one part of the company are applied in others.

InnovationWorks, founded in 2014, offer learning programmes including both skills development for individuals and processes for working within groups. Find out how innovative your organisation is. Take the InnovationWorks quiz. Click through to www.innovationworks.guru, for more information.

Conclusion

Innovation seems to be a good point on which to end this review of the skills gap in the oil and gas business. Our 2016 Industry Predictions survey had a clear message that the industry needs to change, and that requires new ways of doing things as well as new attitudes. The downturn may have delayed the impact of the skills shortages but reviewing all these past studies in the context of today's market suggests that the problem has not gone away – indeed, it may have got worse with all the redundancies. In the long term, the industry needs leaders with a strong strategic view and an ability to drive innovation on the back of new technologies. The pre-2014 surveys we have reviewed suggest they'll be hard to find. How much have things changed since then – what's the current state of the talent market?

March 2016

About Warren Business Consulting

We deliver Oil & Gas courses all over the world, helping NOCs, IOCs and service companies develop local talent. We believe success in the international oil markets depends on a thorough understanding of the industry's complexities. Technical expertise is not enough – it is essential to understand the geopolitics, the technology, the finance and the many different stakeholders, as well as knowing how to get the best out of a team.

As well as public courses, we also run in-house programmes, customised to meet clients' needs.

"Hands down, the "3 Day MBA in Oil & Gas" is the quickest, most effective way to understand the E&P business model. I wish I had taken this course at the beginning of my career."

Upcoming Courses

- April 11-13: 3 Day MBA in Oil & Gas, London
- April 25-27: 3 Day International Oil & Gas Contracts, Lagos
- May 9-11: 3 Day MBA in Oil & Gas, Houston
- May 16-17: 2 Day Risk Management, Jakarta
- June 6-7: 2 Day Risk Management, Houston
- June 27-29 3 Leadership in Oil & Gas, London

For our other programmes or to discuss in-house courses, please contact us at training@warrenbusinessconsulting.com or visit our website www.warrenbusinessconsulting.com