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Foreword: **OPITO**

The enclosed survey, conducted by the Centre for International Labour Market Studies at Robert Gordon University on behalf of OPITO and Skills Development Scotland (SDS) illustrates and provides tangible evidence of the optimistic trends we have seen building in the Oil and Gas Industry through 2010. Indeed, the findings are consistent with other recent research conducted by the Aberdeen & Grampian Chamber of Commerce and the ECITB.

Although there is heartening evidence that many companies have chosen to retain and grow their indigenous talent, even through a period of economic downturn, the next five years will be a period of growth and it is clear that attracting, retaining and developing the right skills is essential if the planned projects and developments are to be realised.

The survey provides us with an insight into the key skills issues the UK industry faces as it gears up for growth. This must be regarded in the wider context of increased global activity, a growing UK power and renewable sector, constraints to imported labour and unprecedented public sector funding cuts which, added together, serve to generate ever increasing competition for talent.

The survey provides a quantitative measure of the opportunities, needs and challenges facing the industry. This information gives us in OPITO confidence that the many projects and services we currently run are on the right track. However, it does illustrate that much more needs to be done if the quality and quantity of skilled people, in particular from the UK education and training 'system', is capable of meeting the growing demand.

2011 will see us launch a number of significant additional interventions as a result:

- Increased attraction through the Next Generation project
- Oil and Gas specifics into the education curriculum through the Petrochallenge project – targeting every school in Scotland in 2011
- Up-skilling from other industries/regions under our transformation program
- ‘Skills for Growth’ strategy which ensures rapid alignment and commitment around skills priorities

In addition, to ensure that this analysis is kept up to date and targets the correct areas, OPITO will undertake this survey every 2 years and refresh more frequently as required.
The energy sector is one of Scotland’s key economic drivers. As we continue to benefit from continued development and investment within the oil and gas sector, there is also recognition that there are significant opportunities as the demand for renewable energy grows and new technologies emerge to support the low-carbon economy.

Skills Development Scotland recognises that effective collaboration with key stakeholders such as OPITO is required if Scotland is to fully capitalise on these developments, and to produce a workforce with the skills and capability to exploit these opportunities and deliver sustainable economic growth.

There is evidence of emerging skills shortages within many areas, and the sector faces significant new challenges. Add to this the demand for replacement labour and skills and the increasing competition for new entrants, and the need for a more robust and informed sector skills strategy becomes more apparent.

More ambitious and comprehensive assessments of potential opportunities and skills demands will enable partners to more accurately plan long term skills investment. SDS has been working closely with the Scottish Energy Advisory Board to review future growth demands and develop a Skills Investment Plan aligned to industry growth projections. The findings of this survey will help to underpin the development of that Plan.
The key findings of the survey are:

- The future looks optimistic. 81 per cent of companies who responded expect their business to grow over the next five years and 44 per cent predict growth in the size of their workforce in 2011.

- During 2010 – and under considerable economic downturn – the respondents (144 companies) offered over 2,000 vacancies. As our respondent companies are responsible for employing around 67,000 of an estimated 400,000 total employees in the UK oil and gas industry, it is clear that the number of vacancies across the industry is likely to be significantly higher. This may indicate that in aggregate, the industry is preparing for growth and replenishing skills.

- At the time of conducting the survey (second half of 2010), the majority of respondents anticipated further growth in their workforce: 12 per cent of companies expect to grow by more than 50 people in the next twelve months, and 5 per cent of companies expect growth of over 200 people in the same period.

- Although many parts of the industry sought to recruit in 2010, a third of respondents cut their workforce numbers. The drilling, manufacturing and fabrication sectors suffered most from this. Reduced exploration activity and lack of visibility of future project development for those sectors could explain a short-term reactive approach.

- Very few companies have increased their reliance on contract or more flexible labour, which indicates a drive to retain and maximise efficiencies from their core skills and experience. This seems particularly important as the industry moves into a period of growth and project development.

- Not surprisingly, growth – and hence skills demand – is being led by operators, contractors and the subsea sector, which reflects the nature of project development in the North Sea. The strongest growth expectations in the medium-term (five years) are seen in companies employing over 500 people. However, short-term growth (one year) is seen as most likely in companies employing fewer than 500 people. This could be illustrative of an ability on the part of smaller companies to better react to the demands of the market, and provides a lens through which to prioritise effort to address skills needs.

- The demand for appropriately skilled or experienced staff continues to outstrip supply. Attracting appropriately skilled and experienced staff and the resulting cost of employing such staff were the principal challenges facing virtually every sector of the industry. Over fifty per cent of respondents identified attracting appropriately skilled staff as the number one challenge facing their company. This indicates a general preference across industry to pay a premium to recruit experience rather than developing new entrants’ skills over the longer term and in-house.
• Respondents provided clear evidence that inter-company competition for skilled, experienced workers is increasing. Historically this has resulted in a culture of wage inflation and loss of skills continuity. With increasing demand for experience and skills in the short and medium term, this clearly points to an urgent need to increase the experienced talent pool through mechanisms such as bespoke training provision, transformation programmes and attraction of relevant skills from other energy sectors.

• Competition from other industry sectors is increasing; particularly from other energy sectors. Over the next five years, respondents are expecting a considerable increase in activity in international work and, to a lesser extent, in decommissioning and wind power. Indeed, our findings suggest that other energy sectors are already attracting talent from the oil and gas industry.

• The most difficult vacancies to fill are those for engineers, professional engineers and managers. This difficulty is compounded by the fact that the skills, knowledge and experience lost through retirement are more difficult to replace in these areas than is the case for other workforce areas. Furthermore, it is also important to note that the average proportion of managerial staff approaching retirement age is considerably larger than in other workforce areas.

• With the exception of managers, the industry appears to have taken steps to address the problems it previously faced in relation to an ageing workforce. In some workforce areas, a sizeable proportion of employees are aged 16-25. Whilst this injection of younger talent has redressed the age profile, it could also help to explain the increased need for experience. This is a particular problem given that the industry is gearing up for growth, and reinforces the need for effective Knowledge Transfer mechanisms between experienced and inexperienced employees, particularly in areas such as engineering.

• With the exception of administration and secretarial functions, women are under-represented throughout the industry compared with many other UK private sector companies (41 per cent across the UK’s private sector companies and 65 per cent in the public sector workforce). Whilst this does not provide a comparison with other engineering-dominated industries, it does indicate that other industries are better able to tap into the increased talent pool. Widening the pool of talent available to the industry will be essential if the recruitment difficulties identified here are to be addressed.

• Most respondents provide their employees with 1-5 days training per year. Respondents were generally satisfied with most aspects of training provision. However, access to funding and more cost-effective, tailored and local provision would encourage companies to take up more training.

• Few companies report a shortage of any relevant qualifications. However, findings from OPITO Industry Trend analysis suggest that the quantity of qualified personnel is not the greatest issue when recruiting for difficult-to-fill vacancies such as engineering. Rather than a shortage of qualified applicants, many companies report that the technical and behavioural skills of qualified applicants simply do not meet the required level. Again, this is a problem given that the industry is gearing up for growth. Although there is a generally high level of satisfaction with the current portfolio of oil and gas related qualifications, greater partnership working with providers of education will be vital in order to identify these gaps/shortages and to address them within the academic programme.
Introduction and Context

The Centre for International Labour Market Studies at Robert Gordon University was commissioned by OPITO to undertake a quantitative employment and skills foresight analysis for the oil and gas industry. The study was sponsored by Skills Development Scotland as part of a wider study to capture a demographic profile and skills ‘health check’ of the Oil & Gas, Renewable and Carbon Capture & Storage Industries.

The output from this report together with those from the other two sector studies will inform and guide strategy development of the Government’s Industry Advisory Board chaired by the First Minister, Alex Salmond.

While uncertainty in the financial markets during 2010 continued to impact business confidence in many industry sectors, the Oil & Gas sector enjoyed relative stability underpinned by a sustained (and increasing) oil price and a consistent growth in worldwide demand for energy. During the data collection period, the weekly price of UK Brent Blend fluctuated between a low of around $74 and a high of around $84 (US Energy Information Administration, 2010).

It was against this backdrop that OPITO undertook an initial piece of research (during May to July 2010) to develop a profile of Industry activity & investment over the next 3 to 5 years, from which we could then identify the underlying implications for skills and labour supply/demand.

This report comprises the analysis and output from a survey of companies involved in the oil and gas industry. Data was gathered during August and September of 2010 using a combination of online and paper surveys. Approximately 400 companies were approached to participate in the study.

144 responses were received. The companies who responded are responsible for employing over 67,000 salaried staff and contractors. Contrast this with Oil & Gas UK’s estimate that around 81,000 jobs in the north east of Scotland are provided either directly by the industry or via its supply chain (Aberdeen City & Shire Economic Forum, 2007), and we believe that our survey provides a representative snapshot of the industry as a whole in the UKCS.

This Summary Report aims to provide an overview of some of the headline themes and findings contained within the main report. Additional copies and copies of the full Research Report can be obtained from OPITO.
Oil and Gas - Employment Growth

As a truly internationalised industry, it could be assumed that the oil and gas industry would be subject to the same external financial pressures as other industries as a result of the global financial downturn from 2007 onwards. Indeed, the dramatic fall in the price of crude oil and the slump in natural gas prices in 2008/09 demonstrated that the industry was not immune to such externalities. However, despite the fact that the past 12 months have been a period of significant global financial instability, the respondents to our survey have remained active in terms of recruitment, offering vacancies for almost 2,000 salaried staff members. Given that they are responsible for employing in excess of 67,000 salaried staff and contractors, this is equivalent to 3 per cent of their total workforce.

In addition, respondents appear to be optimistic about the prospects for company growth and ongoing recruitment over the short to medium term. A very strong majority of respondents (81 per cent) expect that their company will grow over the next five years. In addition to this medium term confidence, there is also a large minority of respondents who are confident about the prospects in the short term, with 44 per cent of respondents predicting growth in the size of their workforce over the next year alone. In comparison, only 1 per cent of respondents predicted a decrease in the size of their workforce over the coming year.

Table 1: Breakdown of Respondent Companies by Industry Sector

- Equipment services: 12%
- Others: 7%
- Operators: 6%
- Subsea: 12%
- Consultants: 19%
- Well Services: 12%
- Manufacturing/Fabrication/Testing: 8%
- Contractors: 8%
- Unknown: 6%
- Drillers: 6%
- Inspection: 2%
A number of key industry sectors appear more confident of short-term growth than others. In particular, at least half of all respondents in the subsea, operators and contractors sectors foresee the size of their workforce increasing over the next year. By contrast, no companies in the inspection sector and only 13 per cent of those in the drillers sector predicted any increase. Predictions for five year growth were particularly confident in the operators, contractors, well services and subsea sectors.

In addition, we found that short-term growth looks likely to be most prevalent among smaller companies in the industry: the proportion of SMEs who predict a growth in the size of their workforce was double that of larger employers.

Analysis of our results shows that many companies are predicting a modest increase in the size of their workforce over the next year, with 38 per cent of respondents predicting an increase of just 1-5 people and 33 per cent predicting an increase of 6-10 people. However, some companies are clearly keen to increase even more than this, with 12 per cent of respondents predicting that the size of their workforce will increase by more than 50 people over the next 12 months and 5 per cent of respondents stating that they will be recruiting more than 200 people over the coming year. As such, demand for suitably skilled and qualified candidates is likely to remain high.

This will present a clear challenge in terms of the supply of suitably skilled staff. It is clear that if this level of industry growth is to be achievable, the supply of potential new recruits with relevant skills and experience will have to satisfy demand. In particular, efforts should be made to identify the specific workforce areas in which companies are seeking to recruit, particularly in those companies seeking to recruit significant numbers.
Mixed Impact of Recession

The recession has impacted upon companies in different ways. Firstly, there appears to be a difference in terms of the financial crisis’ impact upon industry sectors and specific companies. Secondly, companies have responded to these difficulties in different ways.

Just over one third of our respondents (36 per cent) believe that their company sector has been affected by the financial crisis. However, certain sectors seem to have been hit harder than others: respondents in the operators, contractors, inspection and manufacturing/fabrication/testing sectors were notably more likely to state that their sector has been affected, whilst the opposite was true for the drillers, subsea and equipment services sectors.

In contrast, 44 per cent believe that their own company has been significantly affected by the financial crisis. The impact has been most strongly felt in the supply chain, with a clear majority of respondents in the manufacturing/fabrication/testing sector (78 per cent) stating that they had been significantly affected, although a large proportion of drillers (60 per cent) and companies in the subsea sector (58 per cent) also stated that their company had been affected significantly. Interestingly, although they were most likely to state that their sector had been affected, the operators and contractors who responded to our survey were among the least likely of all respondents to state that their company specifically had been significantly affected. This apparent conflict between companies stating that their sector has been affected but their company has not (and vice versa) strongly suggests that in addition to there being a differential impact of the recession between sectors, there is also a very clear differential impact between companies within sectors.

Companies have also responded to the recession in very different ways. 23 per cent of our respondents have cut salaried staff numbers. Cuts in staff numbers were most notable in the consultants, drillers, manufacturing/fabrication/testing, subsea and inspection sectors: more than a third of companies in each of these sectors have cut staff numbers. However, only 12 per cent of companies who cut staff have increased their reliance on contractors, suggesting that many companies who are cutting back will have to give more consideration to asking their existing employees to work more effectively and productively.

Meanwhile, over a third (36 per cent) of companies have actually recruited new staff in response to the economic downturn. An even larger proportion (37 per cent) has sought to train or upskill their existing staff. Encouragingly, companies who had recruited new staff or who had invested in training or upskilling their existing staff were more likely to say that they are better positioned for growth than those who have cut staff numbers.
Our results show that there has not been a uniform effect of the recession, either across or within sectors. As a result, any assistance to help companies through the recession will also need to take account of their unique circumstances rather than being based around a generic, one-size-fits-all model.

Given the intense competition within the industry for skilled, experienced employees, better use of skills is likely to become a more popular concept in years to come, and industry bodies should look to engage with the debate and to learn from the experience of other industries in relation to maximisation of skills use.
The Pressures of Diversification

Over the next five years, respondents are expecting a considerable increase in activity in international work, decommissioning and wind power. 90 per cent of all respondents believe that their international activity will increase, 67 per cent believe that their decommissioning activity will increase and 63 per cent believe that their activity in relation to wind power will increase.

Further breakdown of our results shows that it is medium-sized companies (251-500 employees) who are most likely to be at the forefront of growth in these areas. In each of these areas, it is companies with 251-500 employees who most frequently report that their activity in these areas will increase a lot.

Table 4: International / Decommissioning / Wind Power Activity Next Five Years
In addition, certain industry sectors appear more likely than others to see their activity in these areas increase a lot. In relation to international activity, at least half of companies in the well services, subsea, inspection, consultants and other sectors expect their activity to increase a lot. The same is true of companies in the contractors, well services and inspection sectors in relation to decommissioning activity. Finally, a relatively large proportion of companies in the subsea, manufacturing/fabrication/testing, consultants and particularly the inspection sector believe that their activity will increase a lot in relation to wind power.

Given that small and medium sized companies are less likely to have the staff resources required to simply be able to move existing staff into new areas, it is very likely that any increase in these areas of activity will be dependent upon an increased supply of suitably skilled and experienced staff. If this is not the case, then better use of existing skillsets (as discussed above) will become ever more important. Either way, smaller companies will require support to develop their work in these areas.

In addition, any increase in decommissioning or renewables work is likely to require companies of all sizes and from all industry sectors to recruit staff with different types of skills and experience. It is therefore crucial for dialogue between education providers and industry to establish the type of skills and experience required in order to ensure that qualifications and transformation programmes operate with the industry’s future needs in mind.
The Labour Market

The Primary Challenge for the Industry

We asked companies to identify the greatest challenges facing their company over the next year. The greatest concern identified by respondents was their ability to attract appropriately skilled staff: just over half of all respondents (51 per cent) selected this as a challenge. This was seen as a problem by an above average proportion of companies in the operators, contractors, subsea, equipment services and manufacturing/fabrication/testing sectors, showing that this is a problem which affects virtually the entire industry.

Secondly, and perhaps as a reflection of the long-standing issue of wage inflation in the industry, the next most frequently identified problem overall was labour costs in the industry (33 per cent). Again, this was a problem that affected companies across virtually the entire industry, most notably those in the operators, subsea, inspection, manufacturing/fabrication/testing and consultants sectors.

Table 5: Key Operational Challenges Next 12 Months

<table>
<thead>
<tr>
<th>Challenge</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attracting appropriately skilled staff</td>
<td>51%</td>
</tr>
<tr>
<td>Labour costs</td>
<td>33%</td>
</tr>
<tr>
<td>Variable oil price</td>
<td>28%</td>
</tr>
<tr>
<td>Increased competition from outside Scotland</td>
<td>25%</td>
</tr>
<tr>
<td>Keeping existing customers/business</td>
<td>25%</td>
</tr>
<tr>
<td>Increased competition from within Scotland</td>
<td>25%</td>
</tr>
<tr>
<td>Cash flow</td>
<td>22%</td>
</tr>
<tr>
<td>Geographical location</td>
<td>18%</td>
</tr>
<tr>
<td>Declining reserves</td>
<td>18%</td>
</tr>
<tr>
<td>Seasonality of business</td>
<td>12%</td>
</tr>
<tr>
<td>Don't know</td>
<td>10%</td>
</tr>
<tr>
<td>No particular challenges</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
</tr>
</tbody>
</table>
Interestingly, the problem of increased competition was seen as a problem by a particularly large proportion of companies with 251-500 employees. We suggest that this may be reflective of their key role in driving short-term growth: as a result, it is perhaps unsurprising that these companies are also the ones most likely to identify an increase in competition both from inside and outside Scotland.

It is abundantly clear from our results that the overwhelming challenge facing the industry is not one of declining reserves, geographical location or the seasonality of the industry. Rather, it is the labour market which constitutes the major challenge facing companies. However, this is not one challenge, but many. The fact that this is a problem for companies across the entire industry suggests that the type of skills and experience required will vary considerably between sectors. Ultimately, the growth intentions of the industry will only be realised if the staff required to support this are available in the requisite numbers and with the skills and experience which companies want. As such, we would strongly recommend further sector-specific research in order to identify skills shortages and sector preferences with regard to addressing these.
Recruitment and Retention Difficulties

We asked companies to tell us about trends in recruitment. In particular, we asked about how many vacancies they had had in a number of key operational areas over the past year, which of these they find difficult to fill, and why this is the case. As well as recruiting staff, we asked companies to tell us about difficulties they faced in relation to retaining staff.

Vacancies: Engineers in High Demand
The vacancy pattern of the last 12 months suggests that there has been a very high level of demand for professional engineers. However, skilled manual employees were also in relatively high demand: there has been a large number of vacancies for operations and production staff, technicians and craftspersons.

It seems clear that whilst the industry is strongly dependent upon a plentiful supply of employees with higher education qualifications, it also remains important to focus on providing a plentiful supply of employees with more vocationally focussed qualifications or apprenticeships.

Table 6: Workforce Vacancies Last Year

Principal difficulty: filling vacancies dependent upon high levels of experience and/or qualifications
Our results showed that with the exception of the inspection sector, a sizable proportion of companies in each industry sector struggles to fill vacancies for managerial staff. Similarly, a large proportion of respondents has difficulty filling vacancies for engineers and professional engineers. These three job roles were the only ones which were consistently difficult to recruit across virtually the whole industry. Beyond this, a number of key sector-specific difficulties emerged: for example, we found that operators were virtually alone in having difficulty recruiting professional scientists, the equipment services sector has particular difficulty recruiting craftspersons and technicians, whilst operators and contractors appear to have difficulty filling vacancies for project support and operations and production staff.
The lack of qualified engineers must be addressed in conjunction with providers of tertiary education (i.e. colleges and universities): whilst there is a clear thirst for a greater number of qualified engineers, further research should aim to establish whether there is a problem of simply too few engineering graduates or a lack of interest among graduates in relation to careers in the oil and gas industry. Given the difficulties in filling managerial vacancies, there is a clear need for greater thought to be given to the way that aspiring leaders or managers can be developed internally or introduced from other industries.

The labour market has already been shown to be the primary challenge facing the industry. These findings – along with the consistency of these difficulties across different industry sub-sectors – simply serve to reinforce this conclusion. Without addressing the issues of supply/demand and the resulting symptoms of competition for labour within the Industry and consequent inflationary pressures wage inflation and poaching, companies seeking to grow over the coming years will find it very difficult to find the human capital necessary to allow this. There is a particularly large problem in relation to professional engineers. Vacancies for professional engineers are not only the most difficult to fill, but also represent the job role for which there has been the greatest number of vacancies in recent years. As such, the issue of supply and demand is particularly problematic in relation to professional engineers.

Why is it difficult to recruit?
The key issue behind recruitment difficulties is that industry demand for suitably skilled and experienced candidates continues to outstrip the supply: a lack of experienced applicants, a lack of skilled applicants and a high level of competition for applicants from other employers were – by some margin – the most common problems faced by the industry as a whole when trying to fill vacancies. The next most common problem – the financial reward package which could be offered to potential employees – suggests that wage inflation remains a problem within the industry and that the high demand for and low supply of suitably skilled and experienced candidates leaves some companies struggling to compete financially.
Difficulties in retaining staff
As was the case in relation to filling vacancies, our results show that the financial reward package on offer and competition from other employers for skilled and experienced staff were by far the biggest issues for companies when trying to retain their employees.

Anecdotal evidence from the industry would appear to confirm that competition from other employers and the use of financial reward packages to entice staff from other companies are direct contributors to a culture of wage inflation in the industry. However, despite the short-term appeal of using financial reward packages to attract staff, rampant wage inflation runs the risk of reducing overall profitability and the economic viability of projects. Ultimately, it does nothing to increase the overall supply of skilled and experienced workers in the industry.

The problems of supply and demand in relation to skilled and experienced employees mean that the labour market is fiercely competitive. This is not a new issue and previous growth cycles have been characterised by significant wage inflation as a consequence of internal competition for labour. The fundamental cause of the problem – a low supply of skilled and experienced recruits – must be addressed if specific ‘pinch points’ and competition (for skills and experience) are to be managed and, ultimately, overcome. This survey has identified that the industry is already expanding: this will only exacerbate the problem of competition for skills. Any industry response must be rapid and not targeted at delivering a new cohort of qualified individuals in five years’ time. To deliver on time we will have to accelerate the skill and qualification development process, as well as ensuring that efforts are made to attract highly skilled personnel from other industries in which the financial environment or reduced government spending will result in significant redundancies. Given that many such recruits are likely to be lacking in oil and gas experience, it will be important to ensure that appropriate transformation programmes or skills transfer courses are designed and implemented to take advantage of cutbacks in other industry sectors.
Qualifications – Satisfaction and Supply

Earlier results showed that companies have to deal with a clear shortage of suitable skills and experience when trying to recruit. Compared to ‘softer’ skills, a smaller proportion of companies identified difficulties in terms of specific qualification shortages. The most commonly identified qualification for which there existed an identified shortage was first degrees (15 per cent), followed by postgraduate degrees (13 per cent).

Table 8: Qualifications in Short Supply

<table>
<thead>
<tr>
<th>Qualification</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Degree</td>
<td>16%</td>
</tr>
<tr>
<td>Postgraduate Degree</td>
<td>14%</td>
</tr>
<tr>
<td>Vocational</td>
<td>12%</td>
</tr>
<tr>
<td>HNC / HND</td>
<td>10%</td>
</tr>
<tr>
<td>School level</td>
<td>8%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
</tr>
</tbody>
</table>

Respondents reported a very high level of satisfaction with the way that the current portfolio of oil and gas qualifications meets the needs of the industry: 90 per cent of respondents feel the current portfolio of oil and gas qualifications meets their needs. Once again, this suggests that the crucial issue is one of increasing the supply of qualified applicants rather than materially altering the content of relevant qualifications.

Given that a small – but nonetheless important – minority of respondents either face a shortage of a specific qualification or feel that the current portfolio of oil and gas related qualifications do not meet industry need, it is extremely important that education providers and industry representatives establish the areas of weakness or shortfall with a view to addressing any problems at the earliest opportunity. Further research would be helpful in identifying these areas.

In addition, there is a key role for education providers to play when it comes to incorporating softer and industry-specific skills into the qualifications they offer. Although it is extremely important to identify any ways in which these skills might be built into the existing portfolio of qualifications offered by further/higher education, many companies are already in the position where they face an urgent skills shortage. As such, there is also an immediate onus upon providers of training to the industry to ensure that their offering is tailored in such a way as to build upon baseline qualifications at a variety of different levels (e.g. school leavers, apprentices, graduates) in a way which provides employees with skills which are relevant and meaningful to their job role.
Ongoing and Resolving Demographic Issues

Gender

Analysis of MIST data obtained from OPITO (2010b) has found that female workers make up only 4 per cent of the total offshore oil and gas workforce, despite ONS figures showing that they make up 41 per cent of the UK’s total private sector workforce and 65 per cent of the total public sector workforce (Office of National Statistics, 2007). Our findings are based upon specific workforce areas, but as with the MIST findings, there is clear evidence of under-representation of women in most of these sectors. The mean percentage of women working in each of the industry sectors we considered passed the national private sector benchmark of 41 per cent in only one sector: administrative and secretarial (52 per cent female).

Table 9: Proportion of Female Employees by Workforce Area

<table>
<thead>
<tr>
<th>Sector</th>
<th>Mean % of Female Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin. and Secretarial</td>
<td>52%</td>
</tr>
<tr>
<td>Commercial and Marketing</td>
<td>18%</td>
</tr>
<tr>
<td>Managerial</td>
<td>15%</td>
</tr>
<tr>
<td>Project Support</td>
<td>12%</td>
</tr>
<tr>
<td>IT Support</td>
<td>10%</td>
</tr>
<tr>
<td>Operations and Production</td>
<td>8%</td>
</tr>
<tr>
<td>Professional Engineering</td>
<td>7%</td>
</tr>
<tr>
<td>Engineering</td>
<td>6%</td>
</tr>
<tr>
<td>Technical</td>
<td>5%</td>
</tr>
<tr>
<td>Professional Scientist</td>
<td>4%</td>
</tr>
<tr>
<td>Crafts</td>
<td>3%</td>
</tr>
</tbody>
</table>
Despite widespread perceptions of an ageing workforce, our results show that for some areas of the workforce the mean age of workers is considerably lower than in others. The workforce areas which contain the largest proportion of employees approaching retirement age (i.e. aged 56 and above) are managerial staff (16 per cent), operations and production staff (12 per cent), administrative and secretarial staff (11 per cent) and professional engineers (9 per cent).

In contrast, some workforce areas contain a particularly large proportion of workers aged 25 or under, most notably craftspeople (20 per cent) and technicians (19 per cent).

However, there are some job areas which appear to pose a particular problem for the industry in terms of loss of skills, knowledge and experience through retirements. The most prominent of these were engineers, managers and operations and production staff. To deal with this, the most common responses from companies have been to undertake succession planning exercises (34 per cent) or to invest in mentoring schemes (17 per cent). Although 22 per cent of companies state that an ageing workforce is not a problem for them, a considerable proportion of companies seems to be deferring the problem, with 15 per cent seeking simply to retain retired staff and a further 15 per cent offering flexible working for older employees.

At this stage, it is impossible to state how gender affects the likelihood of working in the industry. The industry needs to examine closely whether the problem is a supply-side or a demand-side one: is it simply the case that fewer women want to work in certain job roles (e.g. engineering and crafts), or do companies shy away from hiring women for certain roles?

Some of the professions we considered have traditionally seen an under-representation of women, most notably crafts and engineering (Office for National Statistics, 2008; National Skills Forum, 2009). However, their current low levels of representation are more surprising in sectors such as commercial and marketing (18 per cent), management (15 per cent), project support (12 per cent), IT support (10 per cent) and professional science (3 per cent). Current enrolment figures at RGU suggest that the reality may incorporate both supply-side and demand-side factors: whilst male undergraduates currently greatly outnumber females on engineering (92% / 8% split) and IT courses (83% / 17% split), females actually outnumber males in science courses (28% / 72% split) and management courses (44% / 56% split). The very small proportion of women studying in certain areas (such as crafts, engineering and IT) means that, to some extent, the industry has its hands tied in terms of recruiting female workers to these areas of their workforce. However, for other areas (e.g. science and management), there exists a large number of current and/or future potential female employees which the industry currently does not – or can not – attract. Given the current level of demand for skilled employees, it would be very much in the industry’s interest to consider ways in which it might better tap this currently under-used supply of skilled workers.

1 Figures represent the gender balance of students enrolled in the School of Engineering, School of Computing, School of Pharmacy & Life Sciences, and Department of Management, 2009/10. Data obtained from the Student Administration Office at RGU.
2 Additional work undertaken by OPITO suggests that the proportion of the entire industry workforce aged 56 or over is 12 per cent. See OPITO (2010a).
3 Additional work undertaken by OPITO suggests that the proportion of the entire industry workforce aged 25 or under is 8 per cent. See OPITO (2010a).
Clearly, concerns about the age demographic are more prominent in some workforce areas than others, and efforts to address this should be targeted accordingly. However, the industry needs to consider how it can assist younger employees entering the industry. People in the early stages of their career need assistance to ensure that they can actually deliver the crucial combination of skills and experience which have already been shown to be so important to employers. This is particularly evident in relation to technical workers, craftspeople and engineers: although these were the workforce areas in which the largest proportion of employees are aged 25 or under, they also constitute three of the top four areas in which the strongest need for additional training (i.e. skills development) was identified. The difficulties identified by companies in this regard suggest that simply increasing the supply of younger potential employees has not in itself resolved issues of skills/experience shortages or the problems associated with an ageing workforce. As such, there is a difficult balance to strike in relation to recruitment to support companies’ stated growth ambitions. Although younger recruits must be brought on board in order to offset the impact of an ageing workforce, it is also important to recognise that such recruits are unlikely to have the full range of skills and experience required. In addition to training, an encouraging proportion of companies have sought to address issues such as this through succession planning and mentoring. However, a considerable proportion of companies still appear to be simply deferring the problem of an ageing workforce, and it will be crucial to engage such companies in future work to address such issues.

Although our results suggest that the age profile of the industry may be lower than was previously the case, it remains important to be aware that a noteworthy minority of employees in some workforce areas are due to retire over the next 5-10 years (e.g. 16 per cent of managers). With our results showing that only 34 per cent of companies are currently investing in succession planning, many others will have to give serious thought to the retention and/or transfer of the skills, knowledge and experience held by these employees.

Table 10: Most Profound Skills/Knowledge/Experience Loss Due to Retirement

<table>
<thead>
<tr>
<th>Skill Area</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>35%</td>
</tr>
<tr>
<td>Management</td>
<td>30%</td>
</tr>
<tr>
<td>Operations</td>
<td>25%</td>
</tr>
<tr>
<td>Trades</td>
<td>20%</td>
</tr>
<tr>
<td>Design</td>
<td>15%</td>
</tr>
<tr>
<td>Technicians</td>
<td>10%</td>
</tr>
<tr>
<td>Drilling</td>
<td>5%</td>
</tr>
<tr>
<td>Health and safety</td>
<td>5%</td>
</tr>
<tr>
<td>Geoscience</td>
<td>5%</td>
</tr>
<tr>
<td>Construction</td>
<td>5%</td>
</tr>
<tr>
<td>Quality/Inspection</td>
<td>5%</td>
</tr>
<tr>
<td>Marine/Diving/ROV</td>
<td>5%</td>
</tr>
<tr>
<td>Science</td>
<td>5%</td>
</tr>
<tr>
<td>Environment</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
</tr>
</tbody>
</table>

% of Respondents

LABOUR MARKET INTELLIGENCE SURVEY
Training – Satisfaction and Motivation

Most companies currently provide their employees with 1-5 days (56 per cent of respondents) or 6-10 days (24 per cent).

Table 11: Key Areas of Training Needs

The areas of their workforce in which companies identified the strongest need for training were technicians, engineers, operations and production, and managers. However, the greatest overall need was identified in relation to Health & Safety training, with 85 per cent of companies stating that they either had some need or a strong need for this type of training. Companies were generally satisfied with the training available to them, with the exception of cost. Our results show that cost is a major driver of training uptake and satisfaction: only 26 per cent of respondents stated that they were satisfied with the cost of training opportunities, with 85 per cent of respondents stating that greater availability of funding would encourage them to undertake more training and 88 per cent stating that more free training courses would encourage them to do so. This message needs to be presented to government.

There is clearly an enormous role to be played by training in the short to medium term for two principal reasons.

Firstly, although the industry does now seem to be developing a younger age-profile, it seems that companies are struggling to find employees with suitable skills and experience. As such, the role of training will be crucial in ensuring that new recruits to the industry can be provided with the additional skills required.

Secondly, our earlier results also showed that companies who have invested in training are more likely to predict future growth than those who have not. However, the majority of employees covered by our survey receive 1-5 days training per year, despite the existence of clear skills gaps, particularly in relation to technical, engineering and managerial skills. In this respect, it would be interesting for future research to identify the operational areas in which companies currently train their staff (e.g. management, technical etc.). With reduced cost identified as the factor most likely to encourage companies to undertake more training, there is also a very clear need for the industry to articulate this need for financial support to government and funding bodies. Given that much of the Health & Safety training within the industry derives from statutory requirements, there is an added onus upon government to support the strong overall need which companies identified in relation to this type of training.
Conclusions

Whilst our results provide some interesting findings in and of themselves, we believe that this study should represent only one stage towards identifying and addressing some of the key labour market challenges facing the industry.

It is clear that despite a wider climate of financial instability, the price of oil and natural gas is in recovery and as a result, the industry appears reasonably confident of growth over the short- to medium-term. However, there is a variety of challenges facing the industry and bodies tasked with helping the industry.

The over-riding challenge is one which will be familiar to many within the industry. The demand for relevantly skilled and experienced employees continues to outstrip supply, and as a result, many companies are struggling to fill vacancies and others are finding it difficult to compete financially as a result of the wage inflation which stems from the competition for employees who fit this bill. In addition to recruitment problems, this causes difficulty for companies seeking to retain staff.

This has clear implications for the industry’s growth ambitions: such growth can only be delivered if the additional employees required are available in the right numbers and with the right blend of skills and experience. Some companies envisage significant growth in the size of their workforce over the coming year alone. Bearing in mind the fact that demand already outstrips supply, urgent work needs to be done in order to identify the pinch points which exist in terms of recruitment and to determine what might be done by the industry as a whole to facilitate such growth. The added combination of increased global competition for skilled workers and the competing for workers from emerging industries only serves to heighten the importance of prompt action.

In addition, the majority of companies who have cut staff have not become any more reliant on contractors than before. This suggests that companies will be looking to their existing staff to work more productively and use their skills more effectively. This chimes with the Scottish Government’s current emphasis on skills utilisation rather than skills development. Given the current favourable climate in relation to skills utilisation, the industry as a whole (as well as specific companies) might wish to explore ways in which this agenda can be pursued with the Scottish Government.

In this regard, it is worth noting the under-representation of women in many areas of the industry. With this in mind, further work to investigate the barriers to greater female participation in the oil and gas workforce (whether supply-side or demand-side) is recommended. Whilst it may not solve the industry’s staffing problems entirely, such work may help to unlock an under-used area of the labour market.

There are, however, areas in which the acquisition of new skills will be inevitable. This is particularly true of the industry’s envisaged growth in relation to decommissioning and wind power (not to mention other renewables). Again, support will be required to provide companies with suitably skilled recruits, or the opportunity to provide current employees with the skills required to support growth in these areas. In particular, the current financial barriers to training should be explored in greater detail with a view to delivering more cost-effective opportunities.
References


OPITO (2010a) MIST Statistical Analysis: Job Role and Discipline Split Against Age Range Grouping. Unpublished data provided by OPITO.

OPITO (2010b) MIST Statistical Analysis: Male – Female Split in the Industry. Unpublished data provided by OPITO.
