

# Skills in advanced engineering in the south west of England

The third annual report on the supply and  
demand for skills in the region

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## Advanced Engineering Skills Project (AESP)

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The AESP project has been designed for the aerospace, automotive, rail, medical engineering, machine tools and specialist machinery sectors.

This dynamic project, which is part funded by the South West Regional Development Agency, EU and LSC's, has been brought together by organisations that have the Advanced Engineering Sector at the heart of their work. It has been designed to deliver a programme that the sector itself has identified as being needed to address both long and short term skills needs. A Steering Group has been brought together to ensure that the industry drives this agenda forward in the way the sector believes will be most beneficial.

## Acknowledgement

Acknowledgement is given to those companies that contributed to this report in recognition of their valuable input to the survey. Without this co-operation we would be unable to publish this information.

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## About EEF

EEF is a trusted partner to businesses across Britain. We work on behalf of over 6000 companies, in manufacturing, engineering, technology and beyond. Together, they employ close to a million people. On any given day you'll find us helping our members tackle a whole range of employment challenges.

Belonging to EEF means that we can help you run your business more effectively. Whether it's offering you practical HR and legal advice through our helpline, getting the best from your workforce, giving you the latest pay data, checking through the small print of your contracts, implementing best health and safety practice, or speaking up for your interests at national and European level.

EEF creates a direct link between your business and the policy makers. Through our offices in London and Brussels, we stay closely involved in the legislative process. We speak up for our members' interests and give advance notice of any changes in the pipeline. Our targeted campaigns secure support for business, whilst limiting the damage of proposals which would harm competitiveness. At the same time, we use our strong relations with the media to make sure important issues are covered and our members' side of the story is heard.

We also deliver services at a local as well as national level, working through a strong network of regional associations. It brings us much closer to the businesses we support – especially in our understanding of the issues they face.

Our services reflect the breadth and depth of our knowledge: HR & Legal; Health & Safety; Environmental Services; Training & Development; Policy & Representation; and Information & Research. The result is an unrivalled source of advice, support and expertise, designed to help businesses succeed – now and in the future.

EEF Western was commissioned by the Advanced Engineering Skills Project to conduct a skills audit of the advanced engineering industry sector in the south west of England. The results of the first two annual audits were published in 2004 and 2005.

## About the Advanced Engineering Skills Project

The Advanced Engineering Skills Project is a dynamic project. It is part funded by the South West Regional Development Agency, EU and Learning and Skills Council's and has been brought together by organisations that have the advanced engineering sector at the heart of their work. Its aim is to deliver a programme of events and training that the sector itself has identified as being needed to address its long and short term skills needs. The private sector dominated steering group has been brought together to ensure that industry drives this agenda forward to reflect the sectors' needs.

This innovative approach has been designed to address the journey through a career in engineering. It will encourage youngsters to understand more about maths and science, two key subjects they will need on their journey. It will give them practical experiences of engineering and offer them and their teachers the opportunity to see modern engineering techniques for themselves. It will offer hands on programmes that will take the form of an alternative to company placements.

The project has been designed to cover all the routes into engineering from Modern Apprenticeships to graduate entrants. Many themes have been developed with the help of the industry to ensure that those taking up the journey remain in the sector and develop the skills the sector needs over the coming decade. In addition, the project will offer opportunities for post graduate development and grant assistance for life long learning and individual development.

As part of its ongoing development, the project is committed to identifying future trends and issues that are affecting the sectors skills needs. The results of EEF Western's annual skills audit will provide the latest information on such issues which are vital for driving forward an action plan relevant to the sector's skills agenda.

This report provides a completed presentation of results from the 2006 survey into skills in the advanced engineering sector in the south west of England. The survey was conducted amongst companies in the sector in August 2006.

The survey was undertaken as part of the Advanced Engineering Skills Project and is the third annual survey of skills for the advanced engineering sector in the south west of England. The aim of the research is to provide intelligence to enable local and national government and the educational sector to assess the provision of resources and skills so that the labour market can supply good quality labour to the industry in the region.

The report assesses how employers perceive the supply of skills from Secondary Schools, Colleges of Further Education and Universities. It is intended that this regional, sectoral data can then be used to assess the performance of the industry in the south west comparatively with the UK as a whole.

The report does not address specific policy issues but rather is intended to provide an authoritative representation of the difficulties faced by the sector.

The data presented in this report provides a full analysis of the data gathered from the survey conducted in August 2006. It also assesses the impact of secondary factors and what may influence the degree of difficulty faced by organisations when trying to recruit or retain skilled staff. It will also draw upon other recent research (including the second annual audit published in December of 2005) which has been conducted in the region and across the UK and conduct a comparative analysis against these studies.

At the time of writing the Leitch Review of Skills full report was published. This research report makes reference to the Interim Report of December 2005. It has not been possible include full details of the latest report in our analysis. However, in light of this recent publication it is encouraging to note that the review is recommending that:

- there is greater urgency to ensure skills provision responds to employer needs;

- the introduction of a Commission for Employment & Skills is aimed at raising the voice of the employer;
- there is greater focus on a sector-led approach with an increased clarity of purpose for the Sector Skills Councils.;
- there is greater focus on vocational and intermediate qualifications, especially apprenticeships, as well as the need to address basic skills;
- methods of improving the effectiveness of Investors In People will be reviewed;
- new measures will come into place to enhance adult skills through working more closely with Higher Education and creating a new adult careers service.

The Leitch Review suitably puts into context the importance of the advanced engineering project and this report:

'Without increased skills, we would condemn ourselves to a lingering decline in competitiveness, diminishing economic growth and a bleaker future for all. The case for action is compelling and urgent'

Leitch Review of Skills, December 2006

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## executive summary

This study shows that many companies in the advanced engineering sector in the south west of England are continuing to suffer from an imbalance in the level and quality of skills demanded and the level and quality of skills supplied.

The key findings of this study are that:

- there is a major concern that employees will not be fully proficient to meet future business objectives;
- skills gaps are likely to widen due to the lack of supply and rising demand for skills in the next 12 months, particularly specialist technical and management skills;
- companies with fewer than 50 employees are suffering the most from a lack of 'soft skills' such as the ability of managers, supervisors and team leaders to effectively communicate with their subordinates;
- there is an underlying shortage of skilled technical and manual workers, both in the workplace and the labour market;
- an intensively competitive labour market is making it increasingly difficult to attract talented employees and this is restricting the ability of organisations to meet their strategic objectives;
- profitability and reducing operating costs are the top priorities for businesses over the next 12 months;

- the deficiency of skills is causing the quality of product and new product development to suffer;
- many organisations are looking to expand their UK operations over the next 12 months despite the problems with rising costs and shortages in key skill areas;
- companies have responded to skills deficiencies by increasing the training and development of existing staff;
- technical, skilled manual and managerial employees are most likely to receive training, with on and off the job training the preferred method;
- Two-thirds of companies approach training in a systematic way. 53% had a training plan and a further 13% had the accredited Investors in People standard;
- private training providers were preferred to Colleges of Further Education when improving the skills levels of employees;
- dissatisfaction with Colleges of Further Education has increased as the provision of labour with the basic skills required and the range and value for money of courses is failing to meet industry demands;
- companies with fewer than 50 employees struggled to find a training provider that met their needs;
- over a third of companies reported having no links with educational establishments;
- accessibility of training grants has improved since 2005, but the proportion of small and medium sized enterprises not receiving a grant is still too high;
- advice on skills and training from government supported organisations has been welcomed by those who used it, but some companies are still unaware or confused as to what is available and how to access this help.

This report will show that organisations remain positive about the future despite the difficulties being experienced by the sector due to globalisation, the emergence of new economies and rapid technological change. Many intend to expand their businesses in the UK and enter new markets, but they risk doing so with a non-fully proficient workforce. One of the main reasons for this is the lack of technical and managerial skills in both the workplace and the labour market. This is continuing to stifle recruitment initiatives and the achievement of business objectives throughout the region.

The imbalance between supply and demand for skilled workers has forced companies to turn inwards by training and developing existing staff to fill their skills gaps. Consequently, greater responsibility has been put on training establishments to provide the quality of training that organisations need. Access to training grants must also become more simplified and widespread, whilst awareness of sector specific government support will be vital for networking company demands to the training and skills providers.

Government initiatives such as Business Link's Train to Gain, the implementation of Sector Skills Agreements and support from Sector Skills Development Agencies may help to address some of the skills issues, particularly for technical roles where level 2 qualifications are demanded but are in low supply. In future research it will be interesting to assess the impact of the introduction of National Skills Academies, including a National Manufacturing Skills Academy, as announced by the Government in November 2006.

It remains essential that such initiatives are supported by preparation for the workplace, particularly in the area of vocational education and training. Organisations have become increasingly reliant upon such sources of information and guidance as the regional skills problem changes the nature in which they operate.

## The UK skills problem and the challenges ahead

‘The UK is in a strong economic position. It is the fourth largest economy in the world and has the highest employment rate in the G7. However, its prosperity has been constrained by its relatively poor skills base. Poor skills have constrained productivity, innovation and investment.’

Leitch Review (interim report), 2005

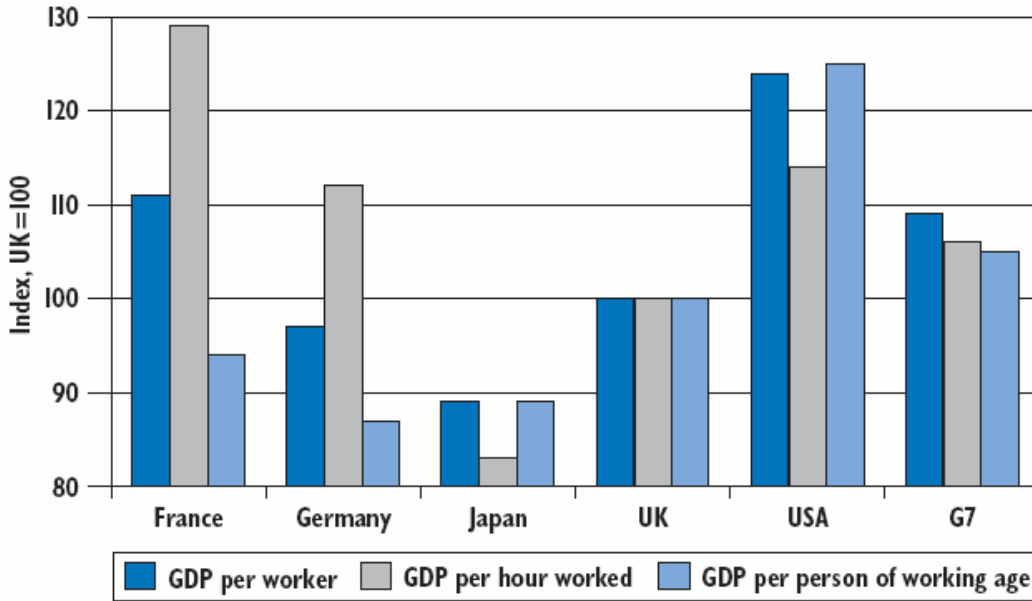
The skills problem of the UK workforce has been well documented and researched over recent years. The publication of the Leitch Review (interim report) (2005) successfully identifies the fundamental issue facing the UK in the new global economy. The review argues that the development of skills within the UK economy should be prioritised as the current skills base is preventing UK productivity levels from reaching its true potential and reducing the benefits of innovation and investment.

The result is that the UK continues to have relatively poor productivity and poor human capital performance in comparison to rival nations. More importantly, the Leitch review has warned that if the UK is not more ambitious in its pursuit of an improved skills base, projections for 2020 suggest the UK would have simply ‘stood still’ during a period of globalisation and greater competition, leaving the economy in a weaker position.

There is significant evidence to reinforce the link between lack of skills and poor productivity. For example:

- Output per hour worked is almost 30 per cent higher in France and more than 10 per cent higher in Germany and the USA than it is in the UK. (Figure 1)

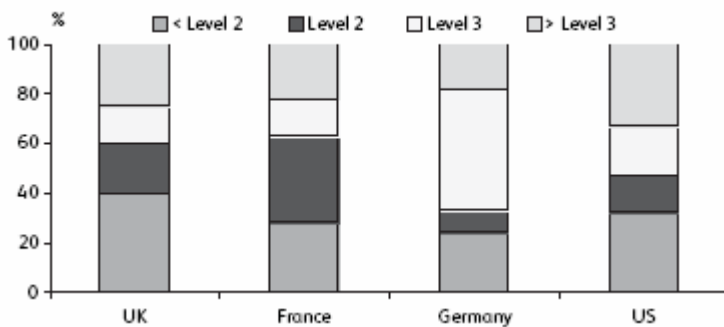
Figure 1: International Comparisons of Productivity



Source: quoted in "Skills in the UK: The long-term challenge - Interim Report" (The Leitch Review), December 2005; from original data published by ONS and HM Treasury

- Up to 20% of the productivity gap with the UK, France and Germany can be accounted for by relatively lower skill levels in the UK (O'Mahony, 2002)
- The UK has a higher proportion of the workforce with low or no qualifications compared with its main competitors in the US, France and Germany (Figure 2).

Figure 2: UK skills base lags behind competitors - % by workforce qualification



Source: quoted in EEF "Learning to Change"(2006) from original research by Steedman et al (2005)

- In international league tables of skills and human capital, the UK is middling at best.

- 17<sup>th</sup> (/30) in the Organisation for Economic Co-operation and Development (OECD) comparison of post-16 participation rates.
- Among the working age population, UK secondary school educational attainment ranks 22nd out of 30 OECD countries.
- The proportion of the UK workforce with level 4 qualifications ranks 11th (/30) in the OECD.
- The UK is placed 17th on the World Economic Forum's Human Capital League.

This is clearly a multi-faceted problem that encompasses the quality of teaching in schools, careers advice and guidance, getting vocational education and progression routes right and ensuring the output from Higher Education meets business needs. The main priority of this report is to assess the resulting skills needs of the advanced engineering sector in the south west of England, in order that the mechanisms for supporting the effective investment in the workforce can be improved.

## New challenges and opportunities

Globalisation, the rise of emerging economies and the rapid pace of technological change means the UK workforce must be sufficiently skilled to adapt to the opportunities and threats these changes bring. It is also important that businesses and individuals are able to acquire these new skills quickly. The UK economy and its engineering and manufacturing sector in particular must continue to develop new products, services and processes to maintain competitiveness in the face of the low cost economies from Asia and Eastern Europe.

The UK is not facing these challenges alone; countries across the developed world are under similar pressures.

‘Many countries are currently adding to their stock of high-skilled workers faster than the UK – even those that have a larger proportion of their workforce with high skills, such as Finland, New Zealand, Australia and the US.’

*HM Treasury, Skills in the Global Economy (2004)*

The UK cannot afford to take a relaxed approach to improving its skills base. Transition economies such as China and India are also beginning to put into place public policies aimed at increasing the skills levels of those entering the workforce in an attempt to move into higher value-added production.

The shifting balance of economic activity will certainly result in greater competition, but there is also an opportunity for companies to enter new markets and take advantage of cheaper inputs of production. As the Leitch Report critically underlines, this is something the UK could use to its advantage, but would have to coincide with the development of a world class skills base. This is necessary to reap the benefits from innovation, growth and the ability to adapt in an environment of technological change, allowing the UK to maintain and subsequently build upon its position in the world economy.

An example of the productivity issues that UK manufacturing now faces is shown by the Confederation of British Industry (CBI) survey of conditions for November 2006. Despite reporting the strongest export demand for 11 years and a sharp run-down in manufacturing stocks, expectations of future output declined this month in comparison to October.

There is concern amongst economists that manufacturers are taking a ‘lazy approach’ to improved trading conditions by raising prices in response to higher demand, rather than adopting methods of boosting production. It is the latter which is necessary to survive in an increasingly competitive market and the skills levels of current and prospective employees will have a fundamental role.

## Addressing the skills needs of the UK

An essential component of maintaining such competitiveness is to ensure there is a skilled workforce and labour market. However, the annual National Employers Skills Survey 2005 (NESS)<sup>1</sup> suggests that parts of the workforce are still not equipped with the skills to be fully proficient in employment. In the south west, 23% of employers also believed that one or more of their employees are not fully proficient to meet the requirements of their job. While skills gaps were found across all occupations, gaps were most common in skilled trades, where level 2 and 3 skills are important, and also in technical and semi-skilled jobs. Technical and practical skills are of course essential to manufacturing; hence it is necessary to investigate this claim in more depth during the analysis of this survey.

Similarly, although skill shortage vacancies have fallen in the south west, they have fallen at a slower rate than hard to fill vacancies. The result is that although difficulty in recruiting is falling (down from 47% to 31%), skill shortage as a factor in recruitment difficulty is increasing.

Ultimately, there is a need to develop a system in which employers understand the benefits to their business of investing in skills, receive support where appropriate, know where to go for guidance and are able to shop in a market place which understands and responds to their needs.

This report is aimed at identifying such needs, with particular attention to the demand for skills from the advanced engineering sector in the south west of England. It will highlight the areas of skills shortage within the labour market, skills gaps of current staff and likely demand for skills in the next 12 months in which the sector skills councils, training providers and local governments of the region must respond to.

## A view of the south west of England

Manufacturing is a major contributor to the south west economy. As shown in the table below, in 2003 the sector was the second most important industry sector in the region, contributing 15.2% to the economy of the region and employing 235,702 full time

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<sup>1</sup> National Employers Skills Survey (NESS) 2005

workers. This equates to approximately £11.4bn Gross Value Added for the region. This is a decrease on the value of the industry in the region a year ago when contribution stood at 16.2% to the economy of the region and was valued at approximately £11.7bn. This reduction in comparative contribution to the economy is reflected in the figures for England as a whole in which manufacturing contributes 15%, falling from 16% the previous year. This is broadly in line with all economic and employment predictions.

**Table 1: Industry contributions to GVA 2002-2003 - South West of England**

<b>Industry Sector</b>	<b>South West 2003 %</b>	<b>South West 2002 %</b>	<b>GVA England 2003 %</b>	<b>GVA England 2002 %</b>
Real estate, renting and business activities	23.2	22.1	26.1	25.6
<b>Manufacturing</b>	<b>15.2</b>	<b>16.3</b>	<b>15.0</b>	<b>16.0</b>
Wholesale and retail trade (including motoring trade)	12.8	12.9	12.8	12.9
Public administration and defence	7.0	7.1	4.7	4.9
Health and social work	6.9	6.7	6.6	6.5
Transport, storage and communication	6.6	6.7	8.3	8.4
Education	6.4	6.5	6.0	5.9
Construction	6.2	6.5	6.2	6.0
Financial intermediation	5.7	4.9	7.7	7.0
Hotels and restaurants	4.0	4.1	3.4	3.4
Electricity, gas and water supply	2.4	2.2	1.7	1.6
Agriculture, hunting, forestry and fishing	1.8	1.8	0.9	0.9
Mining and Quarrying	0.4	0.4	0.2	0.3
Financial intermediation Services Indirectly Measured (FISIM)	-3.5	-3.0	-5	-4.7
<b>All sectors (£m, thousands) =100%</b>	<b>75,086</b>	<b>71,385</b>	<b>823,646</b>	<b>775,507</b>

Source: Annual Business Inquiry, 2004

In comparison to other regions, the South West (with the exception of London and the South East) is an average performer. The areas of the country which perform poorer than the south west are those who have had a greater concentration of 'traditional' manufacturing and have suffered a greater loss of employment due to the globalisation of industry and in particular the movement of some sub-sectors to lower cost economies.

That is not to say that the south west is bucking this trend, but it would appear that it is better positioned to be able retain a high technology based industry. This is largely due to the proliferation of aerospace companies and (to an extent) those who supply into this industry. The aerospace industry is geographically less mobile due to the high levels of skills inherent in the business. However, as countries such as China and India develop their skills base, coupled with their natural cost advantage it is uncertain for how long such inertia will exist for these companies. This is why it is essential that the engineering industry continues to invest and develop skills in order to be in a position to be able to meet the demand of the industry.

**Table 2: Gross Value Added per hour worked, indexed (UK=100) by region 1999-2004**

<b>Government Office Region</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>
London	118.8	116.7	117.5	116.1	117.6	116.6
South East	105.5	107.2	105.2	106.0	106.3	105.4
East Midlands	98.5	96.8	97.1	96.6	94.8	93.9
East of England	101.2	100.8	98.6	97.9	98.6	98.7
West Midlands	94.0	93.8	93.7	94.5	93.5	93.6
<b>South West</b>	<b>95.1</b>	<b>97.0</b>	<b>95.9</b>	<b>96.5</b>	<b>98.1</b>	<b>95.8</b>
Yorkshire & the Humber	91.4	92.2	93.0	94.7	94.1	94.1
North West	92.5	92.5	93.0	94.2	94.0	94.6
North East	93.6	93.9	94.9	98.1	94.9	95.7
<b>England</b>	<b>101.3</b>	<b>101.3</b>	<b>101.2</b>	<b>101.2</b>	<b>101.0</b>	<b>100.8</b>

Source: Employment, Earnings and Productivity Division, ONS in *Regional Competitiveness and State of the Regions, July 2006*.

As a proportion of all full-time employees in the region in employment 17% work in the broad manufacturing sector (Standard Industrial Classification (SIC's) 15-37) which is in line with the national average of 16%.

**Table 3: Full-time employees, south west of England, broad manufacturing sector (SICs 15-37), 2004**

<b>Industry</b>	<b>% full-time employees</b>
Public administration, education & health	24 %
Distribution, hotels and restaurants	21 %
Banking, finance and insurance	19 %
Manufacturing	17 %
Construction	7 %
Transport and communications	6 %
Other services	4 %
Agriculture and fishing	2 %
Energy and water	1 %
<b>Total full-time employees</b>	<b>1,402,367</b>

Source: Annual Business Inquiry, 2004

The distribution of employees working in the engineering sector throughout the region is consistent. Employment in engineering manufacture (SIC 25-35) is highest in Devon and Cornwall with 35,004 full-time employees. The area with the lowest level of employment in the region is Somerset with 18,802. Employment has fallen by 17.5% since 1998. Although this loss of employment in the region is significant the UK as a whole has seen a reduction of nearly 25%. As indicated above, this demonstrates the extent to which the industry in the region has been able to continue to remain relatively competitive and productive in spite of the difficulties faced in comparison to the rest of the UK.

Table 4: Full-time employees, south west of England, engineering sector (SICs 25-35), 2004

Area	Employees
Former Avon	28,704
Bournemouth / Poole / Dorset	22,304
Devon / Cornwall	35,004
Gloucestershire	27,975
Somerset	18,802
Wiltshire / Swindon	23,516
<b>Total</b>	<b>156,303</b>

Source: Annual Business Inquiry, 2004

Table 5: Full-time employees, south west of England, engineering sub-sector and sub-region (SICs 25-35), 2004

Industry Sector	Former Avon	Dorset	Devon & Cornwall	Glos	Somerset	Wiltshire	Total
Rubber & Plastic (+other non-mineral)	14%	12%	16%	15%	18%	18%	24,045
Basic Metals and Metal Products	15%	30%	13%	20%	14%	8%	25,743
Mechanical Equipment	16%	16%	19%	24%	18%	17%	28,773
Aerospace	32%	8%	0%	6%	33%	0%	18,665
Electronics and Communications	9%	14%	16%	11%	7%	23%	21,054
Precision	6%	6%	10%	17%	7%	4%	13,894
Motor Vehicles	6%	4%	3%	6%	1%	27%	12,018
Other Transport	2%	10%	24%	0%	3%	2%	12,111
<b>Total Engineering Manufacture</b>	<b>28,704</b>	<b>22,304</b>	<b>35,004</b>	<b>27,975</b>	<b>18,802</b>	<b>23,516</b>	<b>156,303</b>

Source: Annual Business Inquiry, 2004

The Aerospace sector continues to dominate the sub-regions of Somerset and the former Avon region with 33% and 32% of the employees in engineering employed in this sector respectively.

The 'Other Transport' sector is the most significant contributor in terms of employment in Devon and Cornwall with 24% of employees in the sector. The majority (over 80%) of this 24% is attributable to the marine industry.

Wiltshire is most reliant on two sectors - Motor Vehicles, with major employers such as Honda contributing to this figure; and Electronic and Communications, reflecting the status of the region for high technology industry.

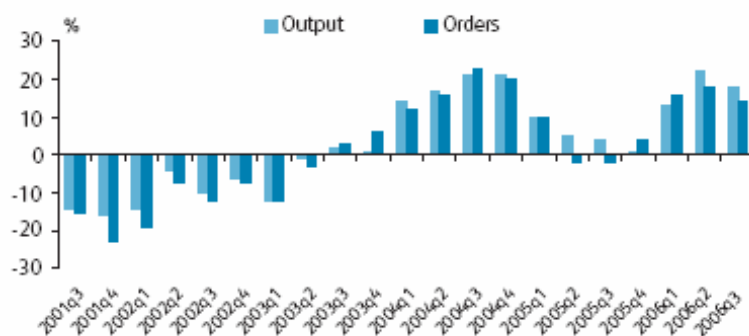
## Recent business trends

### - Fragile revival in the engineering industry

Output and orders in the manufacturing and engineering industry struggled in 2005, but since then a mini revival has taken place. Engineering output was 1.7% higher in the first half of this year compared with a year ago. EEF's Business Trends Survey for the third quarter of 2006 also reported the thirteenth consecutive quarter of positive output balances. The balance of responses on both output and orders has now been in double digits since the beginning of this year.

**Figure 3: Engineering remains in good health**

% balance change in past three months



Source: EEF Business Trends Survey, September 2006

These results suggest the engineering sector is in better health than at the same point last year. Although output and orders balances are slightly down from the previous three months at 18% and 14% respectively, balances are well above average for the past five years. Continued growth in the US market and particularly the improvement in the Eurozone economy since the

turn of the year have contributed to the performance of the sector in 2006. The UK economy has also picked up from a below par performance in 2005, with GDP growth at 0.7% in the third quarter.

## - Employment outlook offers some hope

**Table 6: Key Economic Forecasts**

% change

	2004	2005	2006	2007
GDP	3.3%	1.9%	2.6%	2.7%
Inflation - CPI	1.3%	2.1%	2.2%	1.9%
Inflation - RPI	2.9%	2.8%	2.9%	2.7%
World trade	11%	8.6%	9.2%	6.7%
Base rate (%)	4.6%	4.7%	4.6%	4.5%

Source: OEF

Oxford Economic Forecasting predict that employment in engineering will continue to reduce in 2007 to 1,236,000 employees compared with 1,546,000 in 2002 - a reduction of 20% in four years. In manufacturing the picture is similar with employment in 2007 forecast to be 2,856,000, down from 3,497,000 in 2002, a fall of 18%. However, the pace of job losses is expected to be lower compared with last year. Intentions to scale back production from some plants in the motor vehicles industry are expected to account for a significant proportion of cuts, but strong forecast growth in other transport should keep job cuts to a minimum. The result is that the proportion of jobs lost is expected to be the lowest for five years.

## - Export orders are outpacing domestic order books

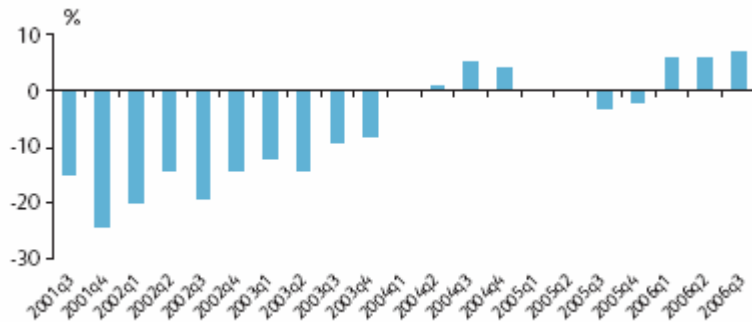
Companies continue to rely on strong growth in export markets to boost output and orders. A recent CBI survey reported the strongest export demand for British goods in 11 years, boosting manufacturing orders for November. Although growth in the US and Japanese markets eased in the three months to June, the Eurozone expanded by 0.9% in the second quarter, the fastest increase for six years. The EEF Business Trends Survey shows balances on export orders have now outpaced domestic orders for almost four years. In the last three months alone, the

balance on UK based orders fell to zero, the lowest for almost a year. The pick up in the UK economy this year has so far failed to raise domestic order books.

## - Pressure on margins fails to deter investment plans

**Figure 4: Investment intentions firm**

% balance of change in investment plans



Source: EEF Business Trends Survey, September 2006

Margins continue to be squeezed due to the price of oil and raw materials, particularly metals, increasing over recent months. However, despite rising costs, most sectors reported an increase in investment plans compared with the previous quarter, suggesting improvements in efficiency and productivity is still a priority.

## - South west output and orders growth rate declines, but recruitment activity increases

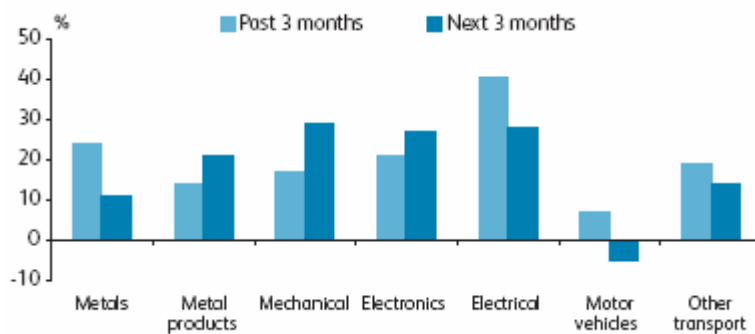
All balances were generally positive across the regions, but the south west and Scotland reported much weaker balances in output and orders than the previous quarter. However, a positive balance of 20% of companies in the south west reported some recruitment activity in the past three months. This was the highest of any region and this trend is predicted to continue at least in the short term. Our survey will analyse this trend in greater detail to explain why recruitment is increasing at a time of comparatively lower output than previous quarters. An important factor, of course, will be the current skills level of employees.

## - Firms remain optimistic for the future

The outlook for manufacturers in the next three months remains positive. Confidence remains high with strong orders demand generally expected to contribute towards continued output growth in all sectors, except motor vehicles. This was the only sector to forecast a negative balance in output and total orders in the next quarter (although this trend is expected to be reversed in 2007).

**Figure 5: Output growth expected to continue**

% balance of change in output



Source: EEF Business Trends Survey, September 2006

The mechanical equipment sector reported the strongest growth in confidence and the metals sector appears to be most pessimistic about future orders in the next three months.

## - Business trends summary

Overall, engineering is expected to expand by 1.9% and manufacturing by 0.9% for 2006, an improvement from 2005 which saw engineering and manufacturing contract by 0.7% and 1.1% respectively. The pace of growth should quicken in 2007 and our projections are for growth of 2.3% and 1.2% for engineering and manufacturing. However, caution remains with regards to the outlook for the industry, as projected levels of growth are still well below the figure forecast for the rest of the economy.

**Table 7: Economic Forecasts**

% change except where stated

	2005	2006	2007
<b>Trading environment</b>			
Exchange rate Euro/£	1.46	1.45	1.44
Exchange rate \$/£	1.82	1.86	1.87
Exports	8.8	20.9	8.3
Imports	6.8	18.3	8.3
Current account (£bn)	-26.6	-30.4	-31.4
<b>Output</b>			
Engineering	-0.7	1.9	2.3
Manufacturing	-1.1	0.9	1.2
Rest of economy	2.4	2.8	2.9
GDP	1.9	2.6	2.7
<b>Costs and prices</b>			
Average earnings	3.8	4.2	4.3
Oil price (\$/barrel)	54.4	66.8	63.4
<b>Employment</b>			
Engineering (000s)	1,316	1,274	1,236
Manufacturing (000s)	3,042	2,947	2,856
Rest of economy (000s)	23,828	24,002	24,295
Unemployment rate (%)	4.8	5.1	5.0

Source: OEF

**Table 8: Sector Forecasts**

	2005	2006	2007
<b>Output (% change)</b>			
Basic metals	-2.4	2.2	4.4
Metal products	0.7	0.9	1.4
Mechanical equipment	3.2	2.4	1.4
Electronics	-4.1	0.5	2.5
Electrical equipment	-5.3	1.7	1.9
Motor vehicles	-1.2	-2.3	2.7
Other transport	0.0	9.0	4.1
Engineering	-0.7	1.9	2.3
Manufacturing	-1.1	0.9	1.2

Table 8 (continued): Sector Forecasts

Employment (% change)	2005	2006	2007
Basic metals	-7.1	-2.3	-5.3
Metal products	-2.2	-2.3	-2.0
Mechanical equipment	-0.7	-2.0	-2.0
Electronics	-4.9	-3.7	-1.9
Electrical equipment	-3.5	-4.8	-3.1
Motor vehicles	-6.9	-6.4	-5.2
Other transport	-2.1	-1.8	-4.7
Engineering	-3.4	-3.2	-3.0
Manufacturing	-3.6	-3.1	-3.1

Source: OEF

# 4

# research methodology

The survey (Appendix) was sent to 1,761 companies of all sizes in the advanced engineering sector in the south west of England in August 2006. All replies received by 30th September 2006 have been included in these results. In total 96 responses were received – a response rate of 6%. To ensure the accuracy and validity of responses all returns were checked manually and any queries were discussed with the respondents.

## Survey design

The survey uses a combination of questions in category, list, ranking and matrix formats to obtain descriptive statistics. The questions focus upon organisational practice. They do not seek to explore attitudes or opinion.

The questions are constructed around the following issues:

### Business priorities and strategy

What are companies trying to achieve at the present time and in the future? What factors are inhibiting the achievement of these objectives?

### Skills in the labour market

To what extent is there a deficient quantity and quality of available candidates in the labour market to fill vacancies? What are the areas of deficient skills where identified?

### Elimination of recruitment difficulties

What difficulties have organisations experienced when recruiting and what procedures have been put in place to tackle such problems?

### Skills of the current workforce

An assessment of the current demand for skills and the development of companies needs in the future.

### Supply of skilled labour by the education system and private training providers

What view do employers have on the quantity and quality of training provision?

### Commitment of the organisation to the training and development of their employees

What proportion of annual turnover do companies spend on training and development? Do companies adopt a strategic approach to training and development, either through a particular training policy or accreditation by Investors in People?

### An evaluation of government intervention

How successfully have government funded organisations interacted with companies in order to meet the demand for skills and advice? Has the information they provided been useful and met the needs of the sector?

## Respondents

### - By company size

Table 9: Respondents by company size

	Responses	%
1-25	35	36.5
26-50	19	19.8
51-100	14	14.6
101-250	15	15.6
251-500	7	7.3
501-1000	2	2.1
1001+	1	1.0
Unknown	3	3.1

## - By sub-region

Table 10: Respondents by sub-region

	Responses	%
Cornwall	6	6.3
Devon	24	25.0
Dorset	16	16.7
Somerset	15	15.6
Wiltshire	5	5.2
Gloucestershire	14	14.6
Bristol	15	15.6
Unknown	1	1.0

# 5

# survey results and analysis

This section of the report presents and analyses the results from the skills audit for 2006.

## Profitability and reducing operating costs are top priorities

Respondents were asked to rank their top three business priorities over the next 12 months. The table below lists the priorities and shows the proportion of companies reporting each factor in their top three and the proportion of companies who ranked each factor as their most important strategic priority.

**Table 11: Top three strategic priorities for companies over the next 12 months**

	Top Priority	Top three priority
Reducing operating costs	21.2 %	67.7 %
Profitability	28.8 %	53.1 %
Enter new markets	16.7 %	51.0 %
Expand UK operations	16.7 %	25.0 %
Improve quality	3.0 %	25.0 %
Increase innovation	6.1 %	21.9 %
Introduce new processes	0.0 %	21.9 %
Expand operations abroad	3.0 %	13.5 %
Outsource non-core activities	0.0 %	7.3 %

Source: EEF Western Regional Skills Audit 2006

Reducing operating costs was the most cited strategic business priority with over two thirds of companies indicating that this was one of their top three priorities. This is a significant reduction from the 2005 annual audit when 82 % of companies highlighted this as a concern. This decrease could be explained by the improved trading conditions reported since the beginning of 2006 as output and orders have continued to expand. The EEF Business Trends

Survey results suggest that output is set to remain stable in the early months of 2007. This has brought an increased level of optimism to the industry and may help to explain why firms are currently less inclined to take cost cutting measures.

However, rising costs continue to have an impact on companies as they try to maintain a competitive position in the UK and overseas. Increasing energy costs and escalation in the price of oil and other raw materials, particularly metals, have resulted in balances on margins remaining consistently negative.<sup>2</sup> Although output volume has increased, profitability and margins are still under sustained pressure and have hit their lowest level since 1992. This may explain why 28.8% of companies in this survey have reported profitability as their top priority in the next 12 months.

Despite the improved trading conditions it is worrying to note that the main priority of companies is, essentially, short-term survival. Companies have not indicated that increasing innovation, improving quality and introducing new processes are high priorities for their business. This indicates a short-termism in strategic planning which could well have significant ramifications on long-term success.

Intentions to innovate have decreased from 2005 and no company employing over 501 employees said that this was one of their top three priorities. Intentions to improve quality have also dropped noticeably, with those companies listing it as a priority falling from 43% to 25% of all respondents.

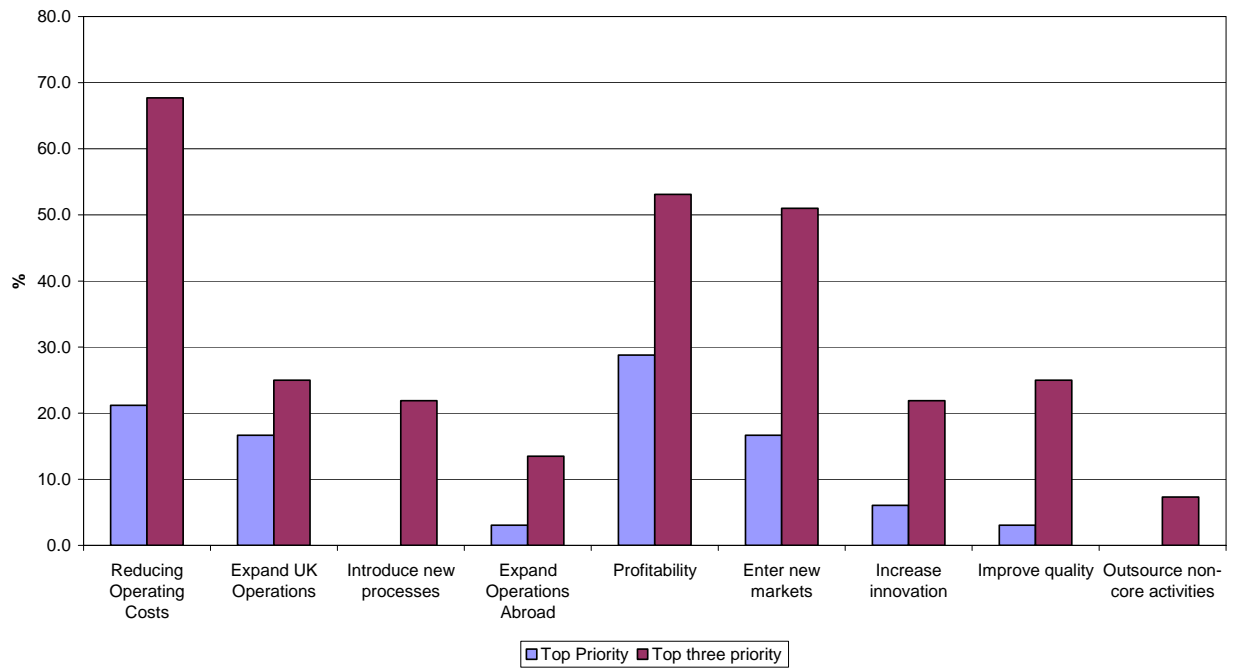
With evidence suggesting that companies have reduced their intentions to improve the quality of products and efficiency in the production line, these results reveal a concern that companies may sacrifice re-investment in training of staff and research and development in favour of easing the depression on profit margins.

Although the proportion of respondents reporting that they planned to expand operations in the UK has decreased by 17%, expansion of operations abroad also fell by 6.5%. Only 13.5% of companies now see this as a current priority. Organisations may still be looking to take advantage of cheap labour in Eastern Europe and Asia but the incidence of this in the south west appears to have eased since 2005.

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<sup>2</sup> EEF Business Trends Survey, September 2006.

Figure 6: Most important strategic priorities over the next 12 months



Source: EEF Western Regional Skills Audit 2006

## Factors inhibiting the achievement of business priorities

Rising costs and problems experienced in attracting talented employees were the two most significant factors which inhibit the growth of engineering companies in the south west of England.

Over two-thirds of companies viewed rising costs as a factor inhibiting their ability to meet strategic priorities, with over two-fifths reporting it to be their highest concern. There was no variation in the impact of rising costs either by company size or location. A recent CBI Industrial Trends Survey suggests this is due to increasing staff costs and higher energy prices.<sup>3</sup> The EEF also estimates that businesses will be paying £11.9bn more in taxation in 2008/9 than was the case in 1996/7, particularly due to increasing business tax burdens in relation to energy.<sup>4</sup>

<sup>3</sup> CBI Industrial Trends Survey, November 2006.

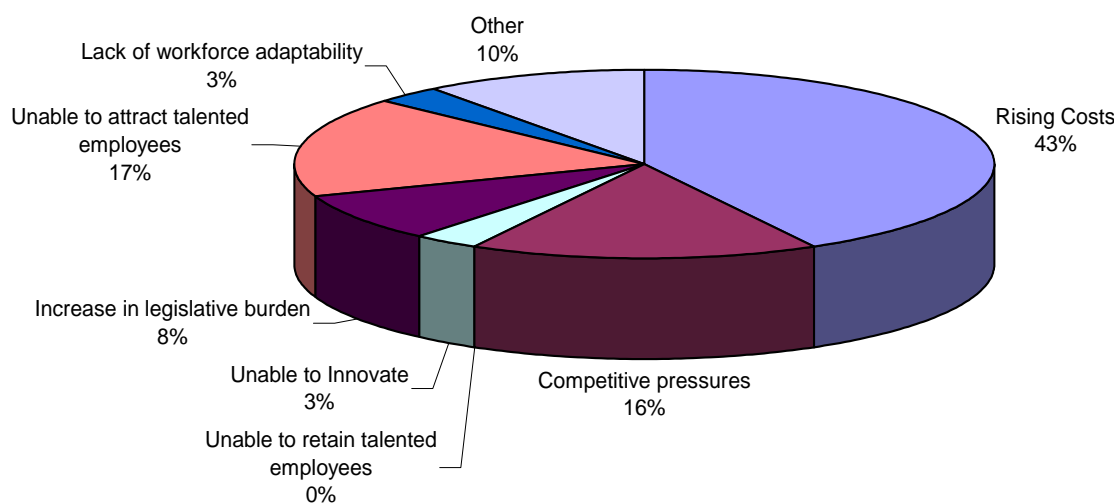
<sup>4</sup> EEF Media Release, 13<sup>th</sup> November 2006.

**Table 12: Factors inhibiting the ability of companies to meet strategic objectives over the next 12 months**

	Number of companies	% of companies	Most important factor (%)
Rising costs	66	68.8	42.7
Unable to attract talented employees	36	37.5	17.7
Competitive pressures	46	47.9	16.7
Other	10	10.4	10.4
Increase in legislative burden	47	49.0	8.3
Unable to innovate	5	5.2	3.1
Lack of workforce adaptability	13	13.5	3.1
Unable to retain talented employees	10	10.4	0.0

Source: EEF Western Regional Skills Audit 2006

**Figure 7: Factors of highest concern that may inhibit the ability to meet strategic priorities**



Source: EEF Western Regional Skills Audit 2006

Although companies had little problem retaining talented employees, attracting them to the company in the first place appeared to be problematic. Regionally, Bristol found it hardest to attract talented employees. Over half of the companies who responded in Bristol cited this as a problem and one quarter said it was their top concern, higher than any other region. The reasons for this difficulty and the extent to which this is attributed to skills shortage in the labour market will be addressed later in this report.

The increase in the legislative burden has also had a significant impact on businesses and this was greater than in 2005. The proportion of companies that cited this as an inhibiting factor increased by 6% to almost half of all respondents. Only companies with 100-250 employees did not rate this as one of their top concerns. The legislative burden appeared to have more of an impact on companies of smaller size (1-100 employees) than it did on larger companies, with 57% identifying it as an inhibiting factor. This will undoubtedly be due to the relative increase in resources required to deal with such legislative difficulties, be that an internal resource or the need for external advice.

In a recent publication the EEF found that dealing with the complexity of employment issues and compliance with new employment legislation was increasing the bureaucratic burden for the UK's manufacturers.<sup>5</sup>

**Table 13: Top five employment issues dealt with by the EEF (January-June 2006)**

Top 5 employment issues – January to June 2006
Disciplinary issues
Redundancy and re-organisation
Contracts of employment
Absence management
Termination of employment
EEF Annual Call Data Audit, 2006

The top five employment issues accounted for nearly 60% of all calls received by the EEF in the first half of 2006. However, the proportion of enquiries regarding discrimination and policies and procedures has also increased significantly in recent months due, in part, to the new age discrimination law which came into effect on October 1st 2006. The cost for companies has therefore increased in two ways – (i) time and money spent ensuring employment law is complied with and (ii) the additional costs that result in failure to do so.

<sup>5</sup> (EEF) Burning Issues, October 2006.

## Current skill levels are insufficient to meet future priorities

A majority of respondents (58%) agreed that the current skills levels of employees were sufficient to meet current priorities.

**Table 14**

<i>The current skill levels are sufficient to meet our current strategic priorities</i>				
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	5	51	31	6

Source: EEF Western Regional Skills Audit 2006

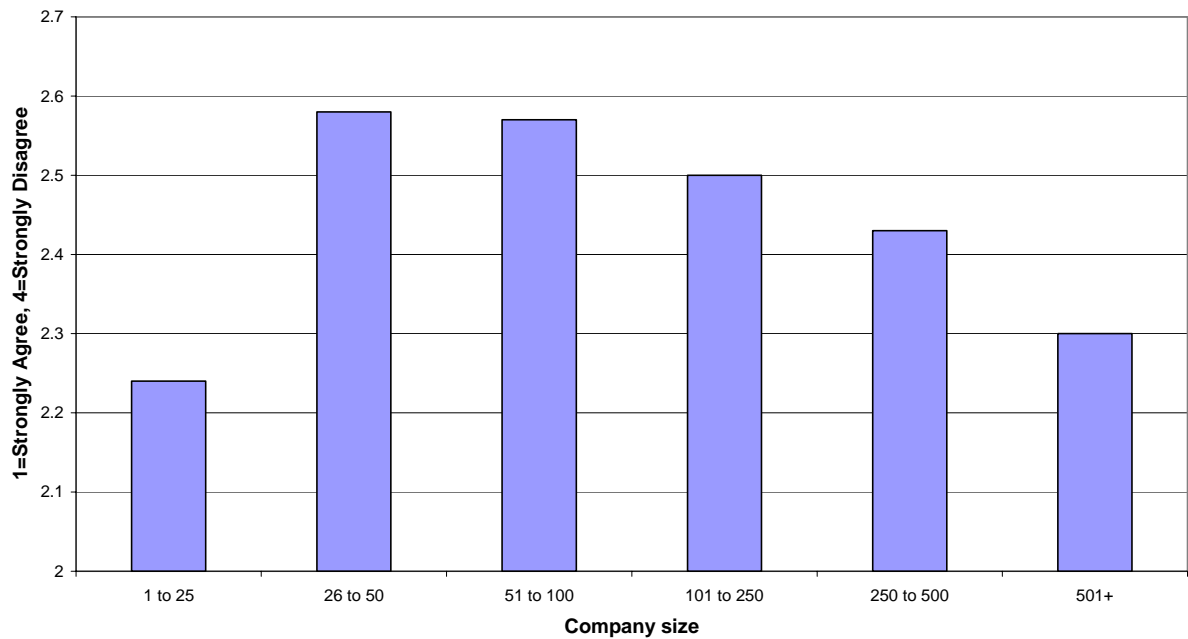
The NESS (2005) presents evidence to support this. The survey found that the south west has one of the lowest proportion of employers reporting a skills gap (5%) and a slightly lower share of all skills gaps than their share of employment (8%).<sup>6</sup>

However, a skills gap is said to exist at an establishment when the employer indicates that staff at the establishment are not fully proficient at their jobs. Our results suggest that 42% of all respondents reported skills gaps within the workplace. Companies with 26-50 employees were most likely to be affected by this, with the impact becoming less as company size increased thereafter.

Even more alarming is that 76% of all companies did not believe their current skills would meet future strategic priorities.

<sup>6</sup> National Employers Skills Survey (NESS) 2005. p.14

**Figure 8: The current skills levels are sufficient to meet our current strategic priorities**



Source: EEF Western Regional Skills Audit 2006.

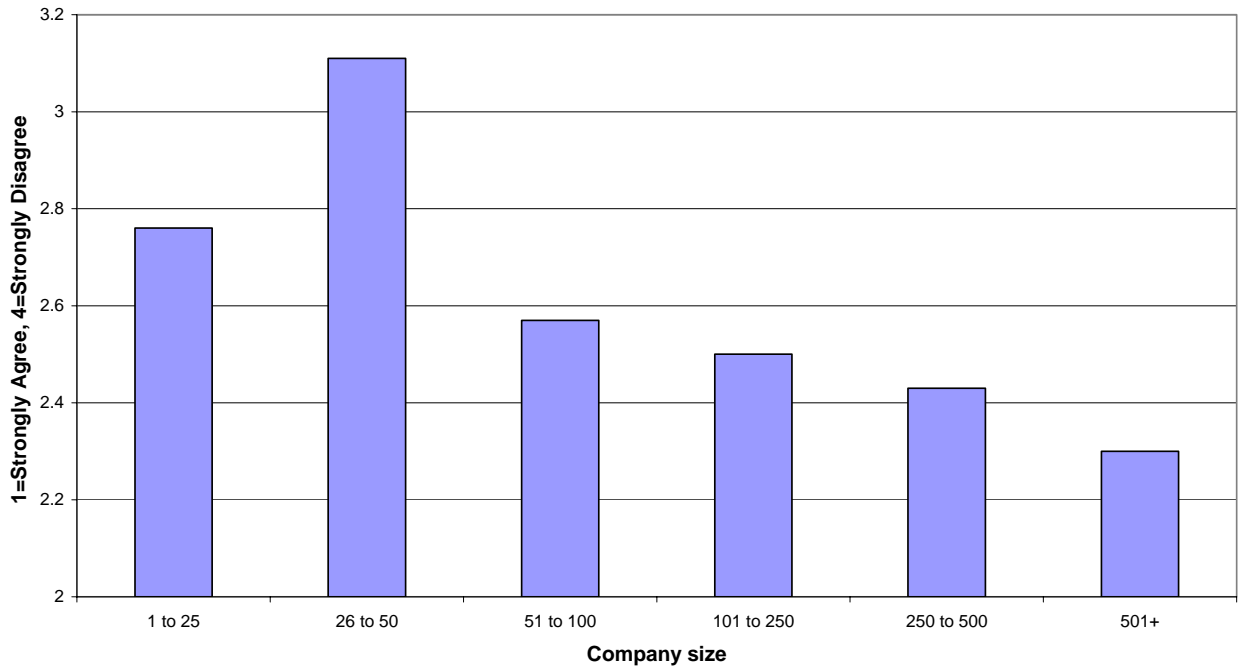
**Table 15**

<i>The current skills levels are sufficient to meet our future strategic priorities</i>				
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	2	18	57	16

Source: EEF Western Regional Skills Audit 2006

Companies with 26-50 employees were most likely to disagree with this statement, suggesting that companies of this size have a disproportionate share of skills gaps. Although the majority of companies can meet the existing demand of customers with current skills, continuing this in the future without adapting is likely to cause significant disruption to the majority of companies. The demand for skills is rising as future strategic priorities evolve.

Figure 9: The current skills levels are sufficient to meet our future strategic priorities



Source: EEF Western Regional Skills Audit 2006.

It is evident that skills gaps are inherent within the minority of companies who responded to this survey. Our results suggest that this could widen in the future unless the current skills of employees are upgraded in order to meet future business priorities. It is therefore necessary to identify the reasons for skills gaps with current staff, focusing on two areas of concern – management and technical skills.

## Leadership and management skills crucial for future success

A recent survey in the south west provides evidence that 10,500 managers in the region have a skills gap, with managerial skills being the most significant problem. The survey also reported that at least 6,500 managers in the region would benefit from skills training.<sup>7</sup>

For the advanced engineering sector, the increasing importance of skilled managers, supervisors and team leaders cannot be emphasised enough. The changing nature of the global market in terms of competition, logistics and customer demands has put additional pressure on organisations to be flexible and be able to adapt. The complexity of supply chains,

<sup>7</sup> National Employers Skills Survey South West 2005 pp. 69-81.

production processes and tailored manufacturing solutions is now even greater, with a balance of 59% of respondents reporting demand for lean manufacturing techniques to increase in the next 12 months.

Reduction in operating costs is the top priority for the majority of firms and this puts greater pressure on managers, supervisors and team leaders to successfully implement new processes aimed at achieving efficiency, quality and innovation within a leaner organisation. This study shows that over half (55%) of companies forecast demand for leadership skills to increase over the next 12 months, whilst 49% of companies forecast demand for commercial awareness skills to increase and 47% forecast increased demand for problem solving skills. These skills will determine the extent to which companies can adapt in new markets and raise future profit margins.

## **Managers and supervisors in small firms need to upskill their communication skills**

The 2005 annual skills audit identified the *“inability of supervisors, team leaders and managers to communicate and interact effectively with their subordinates”* as the most significant skills issue. A year on, the issue is still significant, but results this year do indicate that there is evidence of an improvement. Despite the fact that over four-fifths of companies agreed that communication was a problem, the percentage of companies strongly agreeing with the statement that *‘supervisors, team leaders and managers need to improve their ability to communicate and interact with their subordinates’* decreased from 35% to 27%.

Concern clearly remains with regards to the skills levels of managers and supervisors, which continues to reinforce the notion that workers are often promoted into supervisory positions based on performance and not the ability to effectively utilise people management skills.

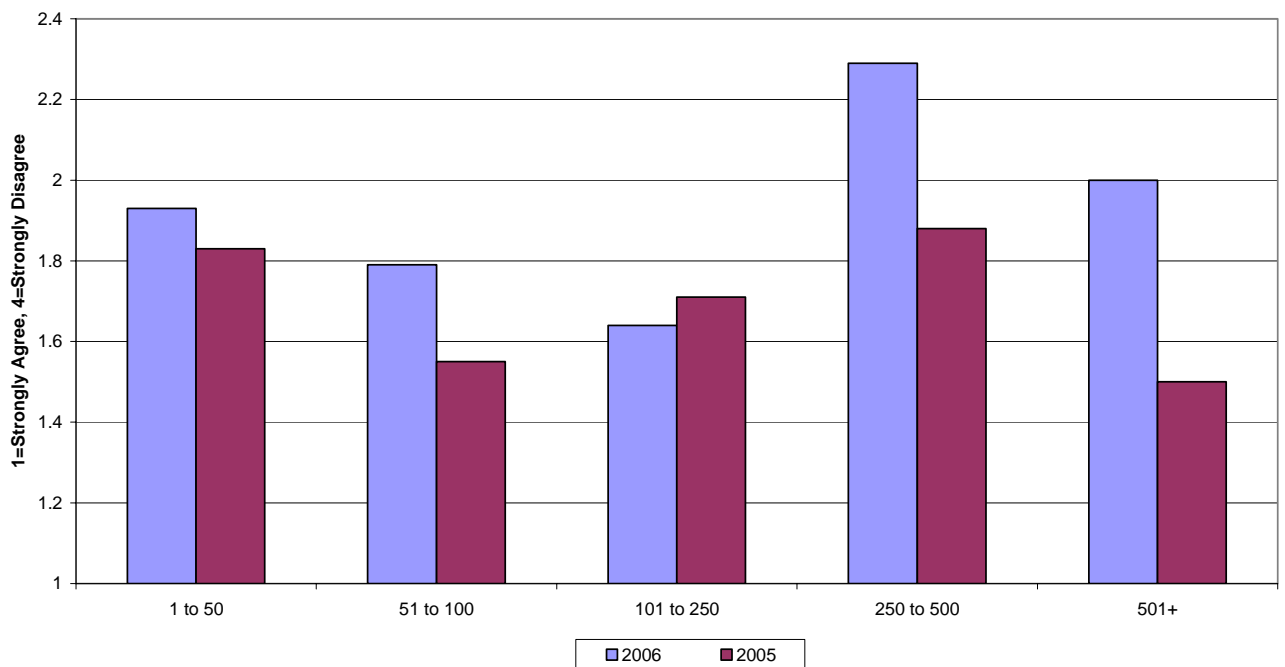
Smaller companies with fewer than 50 employees reported the greatest skills gap in terms of ‘soft’ skills such as communication. Over 64% of the companies who strongly agreed that the upskilling of communication skills was necessary came from companies of this size.

**Table 16**

<i>Supervisors, team leaders and managers need to improve their ability to communicate and interact with their subordinates</i>				
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	25	49	16	0

Source: EEF Western Regional Skills Audit 2006

**Figure 10: Supervisors, team leaders and managers need to improve their ability to communicate and interact with their subordinates**



Source: EEF Western Regional Skills Audit 2006.

In comparison to 2005, lack of communication skills has become more of an issue for companies with 101-250 employees, but encouragingly the problem for other companies has (to an extent) subsided, particularly for larger companies (with over 500 employees). This is encouraging considering that in 2005 60% of the responses from companies of this size strongly agreed with the statement that they too were experiencing communication difficulties.

## An underlying shortage of technical skills

As already identified in the 2005 annual skills audit and the National Employer Skills Survey, the outstanding issue affecting the advanced engineering sector is the shortage of technical skills. Little progress appears to have been made on this fundamental issue. In fact, the NESS reports that the proportion of technical and practical skills sought in connection with skill shortage vacancies had actually increased by 3% from 2003-5.<sup>8</sup> Technical and practical skills now account for 53% of all skills shortage vacancies. This was once again the highest category in the survey and especially so amongst skilled trade occupations and operatives.

The results from this survey fail to raise optimism about the impact that this is having on the sector. Of all participants in this research, 88% agreed that technical staff need to update their technological skills in order to meet current strategic priorities. As a general trend, the larger the organisation, the more of an issue the shortage of technical skills becomes. Regionally however, there is not a significant difference.

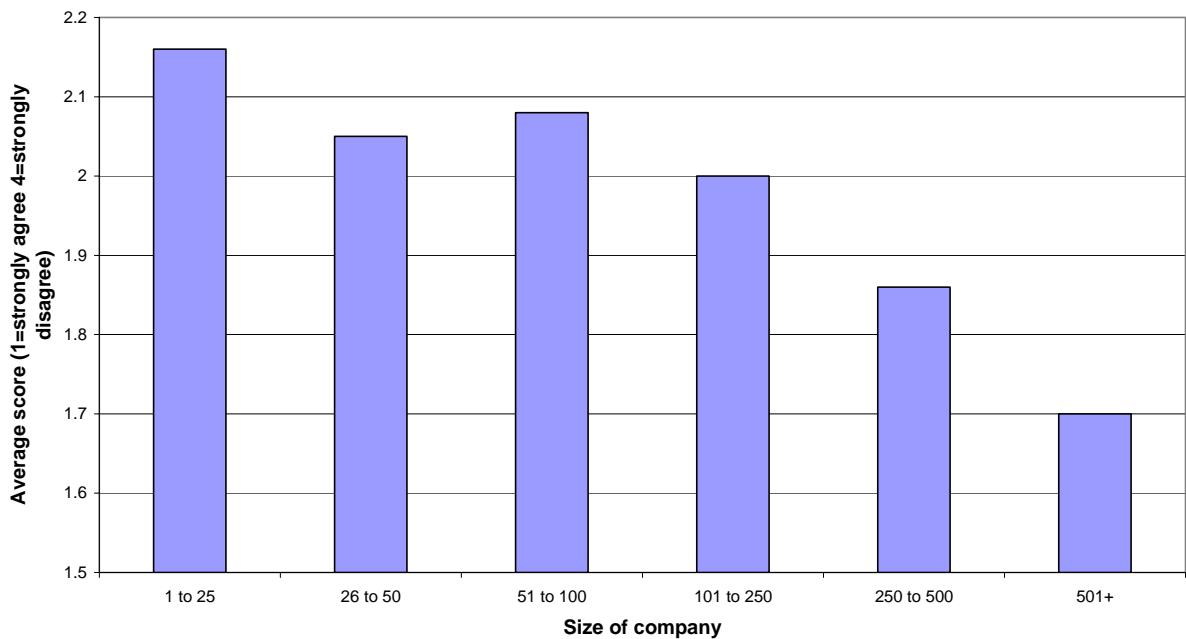
In the advanced engineering sector skills are defining competitive factors, more so than in any other sector of manufacturing. The intentions of the majority of companies to reduce operating costs at the expense of innovation, improvement in quality of product or the introduction of new processes can be partly explained by the skills gaps inherent with technical staff. Companies simply do not have the current technical skills to pursue such long term, but vitally important, objectives.

This is clearly an issue that needs to be addressed, particularly since firms are also intending to enter into new markets in the next 12 months. They risk doing so with a workforce that is not fully equipped to give maximum value and competitive advantage to the organisation.

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<sup>8</sup> NESS 2005 p.72 Table 4.4.

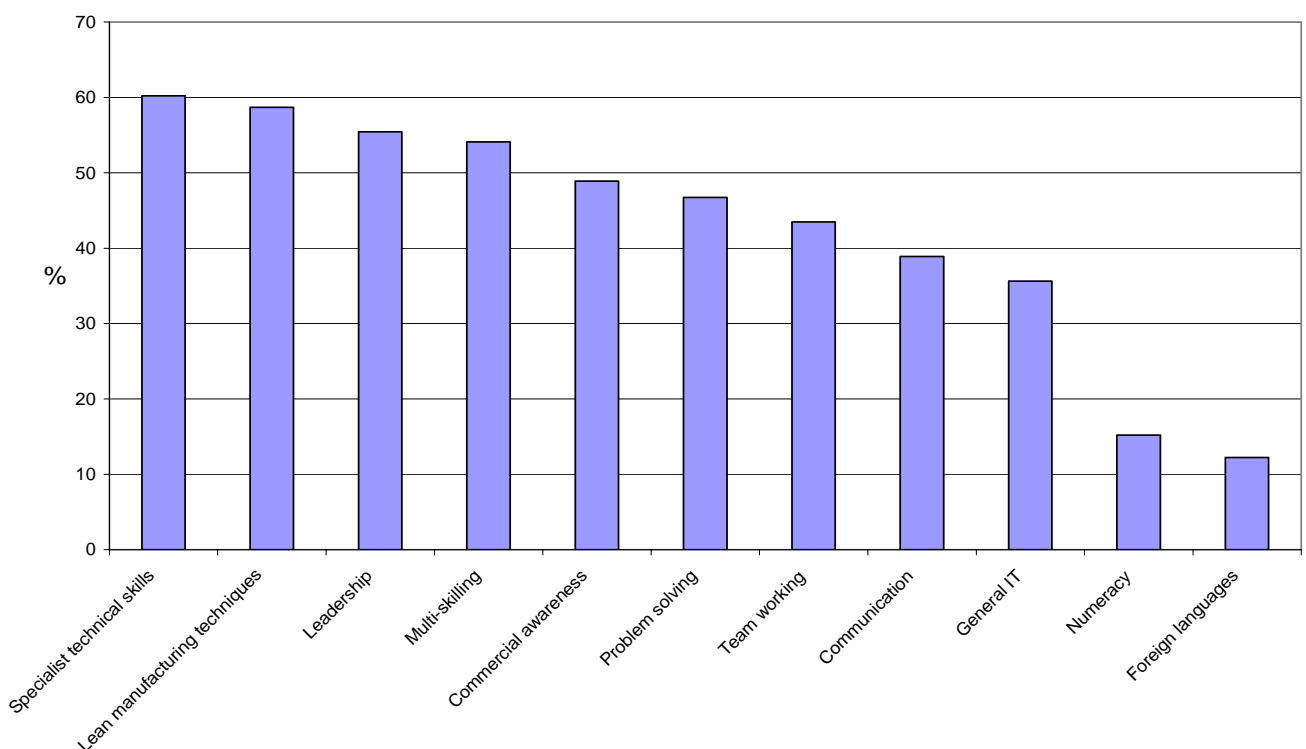
**Figure 11: Technical staff need to improve their technological skills**



Source: EEF Western Regional Skills Audit 2006

Furthermore, the gap between the technical skills that companies currently possess and the skills required to meet future priorities is likely to widen. Demand for specialist technical skills is set to increase even further over the next 12 months, with 3 in every 5 respondents to this survey forecasting that demand would increase. Over half (54%) of respondents also forecast increased demand for multi-skilling.

**Figure 12: Percentage of firms reporting an increased requirement for skills in the next 12 months**



Source: EEF Western Regional Skills Audit 2006

Our results support the conclusions of the Leitch Review Interim Report 2005, which suggests that the nature of employment is continuing to change and not just for the advanced engineering sector. Skills that were once seen as specialist and technical, such as ICT, have increasingly become core requirements for most jobs.<sup>9</sup>

One theory often used to explain the skills gaps of technical staff is the emergence of a global technological shift which has changed the nature of skills required, resulting in new ways of producing goods and services, faster information flows, fragmentation of production chains and new specialisms.<sup>10</sup> This study put this hypothesis to the test by asking companies whether advances in technology have created training requirements which were difficult to meet.

**Table 17**

<i>Advances in technology create training requirements that are difficult to meet</i>				
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	8	38	43	2

Source: EEF Western Regional Skills Audit 2006

Although the majority of respondents agreed with this statement, the evidence is not strong enough to prove or disprove the hypothesis that advances in technology create problems for companies when attempting to train their staff. For the same reasons, time does not appear to be a ‘significant’ factor affecting the training of staff, although the majority of respondents agreed with this statement.

**Table 18**

<i>The business cannot spare the time to undertake the training we would like</i>				
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	9	37	33	12

Source: EEF Western Regional Skills Audit 2006

<sup>9</sup> Leitch Review, December 2005 pp.4-5.

<sup>10</sup> Ibid.

# Skills deficiency has the greatest impact on quality and new product development

A deficient level of skills, whether it is within an organisation, in the labour market, or both, is a major problem for the industry. This study suggests that this deficiency in skills has the greatest impact on quality of product, new product development and customer service delivery.

This raises an interesting point. Research has already identified that the lowest priorities for companies in the future includes improving the quality of product and introducing new processes. It has also established that there are skills gaps in both technical and managerial positions which are likely to expand. This report shows that there may be a link between skills gaps and the reasons for companies listing these factors as their lowest priorities. Do companies have the necessary level of skills to achieve such objectives? Our results suggest companies often do not have the appropriate skills at all levels within a business, and without this the productivity and performance of the organisation will continue to suffer.

## **- Quality of product continues to suffer**

As in the 2005 annual skills audit, the lack of skills continues to have a negative impact on the quality of product produced by companies in the region. This impact was felt by companies of all sizes and regions. However, in a reverse of the 2005 trend, the impact on companies in the south west of the region (Cornwall, Devon, Dorset and Somerset) has appeared to ease off, whilst companies in Bristol and Gloucestershire have suffered more in comparison to one year ago.

## **- The proportion of companies reporting a 'significant impact' from skills has decreased**

Skill levels have the least impact on companies when adapting to changing conditions, introducing new capital equipment and increasing the workload on existing employees. The areas where skills deficiencies are having the greatest impact are in quality control and new product development.

The average score for each factor is shown in Table 19 as is the percentage of companies that identified each factor as having a 'significant impact' (1 = significant impact, 5 = no significant impact).

**Table 19: The impact of existing skills of employees on achieving company objectives**

	<b>Impact of Skills</b>	<b>% Significant impact</b>	<b>Average rating</b>	<b>% Difference from 2005</b>
1	Quality of product	56	2.0	-6
2	New product development	38	2.4	2
3	Customer service delivery	32	2.3	-7
4	Time to market	22	2.6	-2
5	Entering new markets	20	2.9	-1
6	Expansion of operations	20	2.8	1
7	Adapting to changing conditions	16	2.6	-11
8	Introduction of new capital equipment	12	3.0	1
9	Increased workload for existing employees	10	2.7	-16

Source: EEF Western Regional Skills Audit 2006

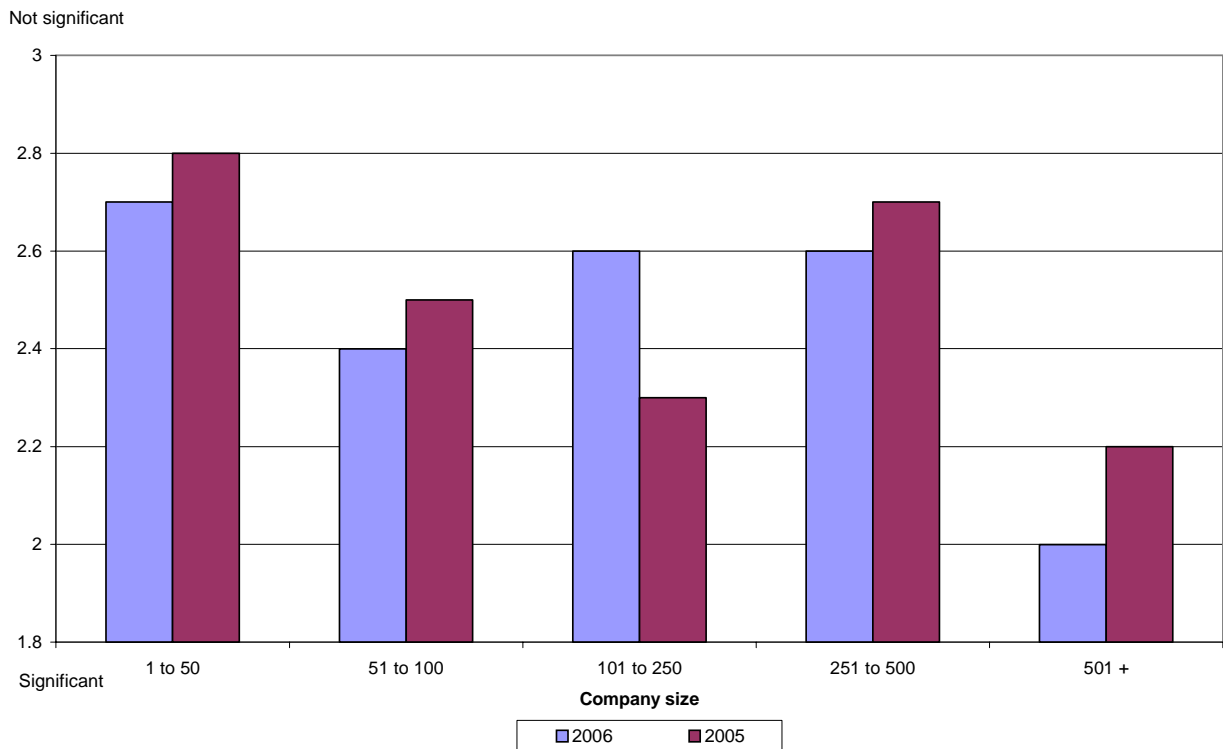
**- ‘Overall significance’ of skills deficiencies on the ability of companies to meet their objectives has increased**

Although there is a negative balance of companies reporting that they are suffering ‘significantly’ from the impact of skills deficiencies, a breakdown by company size reveals that the ‘overall significance’ on the ability of companies to meet their objectives has increased since 2005.

For companies of all sizes (with the exception of those employing between 101-250 employees) the impact of a skills deficiency within the organisation has worsened. Large companies (more than 500 employees) continue to suffer the most, reporting an average significance score of 2.0 in comparison to 2.60 for companies with 251-500 employees and 101-250 employees, 2.4 for companies with 51-100 employees and 2.7 for companies with fewer than 50 employees.

Regionally, companies from Somerset reported the highest average significance in terms of the impact that skills have on achieving objectives.

**Figure 13: Skill levels have the greatest impact on companies with over 500 employees**



Source: EEF Western Regional Skills Audit for 2005 and 2006

## Advanced engineering labour market remains intensively competitive

Evidence so far has shown there to be skills gaps within organisations that affect their ability to be productive and competitive. These gaps are also likely to widen in the future. Are the problems that companies face with skills gaps also exacerbated by skill shortages within the labour market?

The latest Business Trends Survey shows recruitment activity in the three months to September being concentrated in the south west. It is therefore necessary to see if this recruitment activity is an attempt to fill the skills gaps. If there are shortages also present in the labour market, does this have an impact on the ability of firms to retain the talented and skilled employees they already have?

This area of research suggests that the most significant skills issue in this year's annual audit is the shortage of skills in the labour market. Four-fifths of all companies in the survey reported there is a shortage of skills that they require available to them in the labour market. This question brought the strongest opinion of responses in the entire survey.

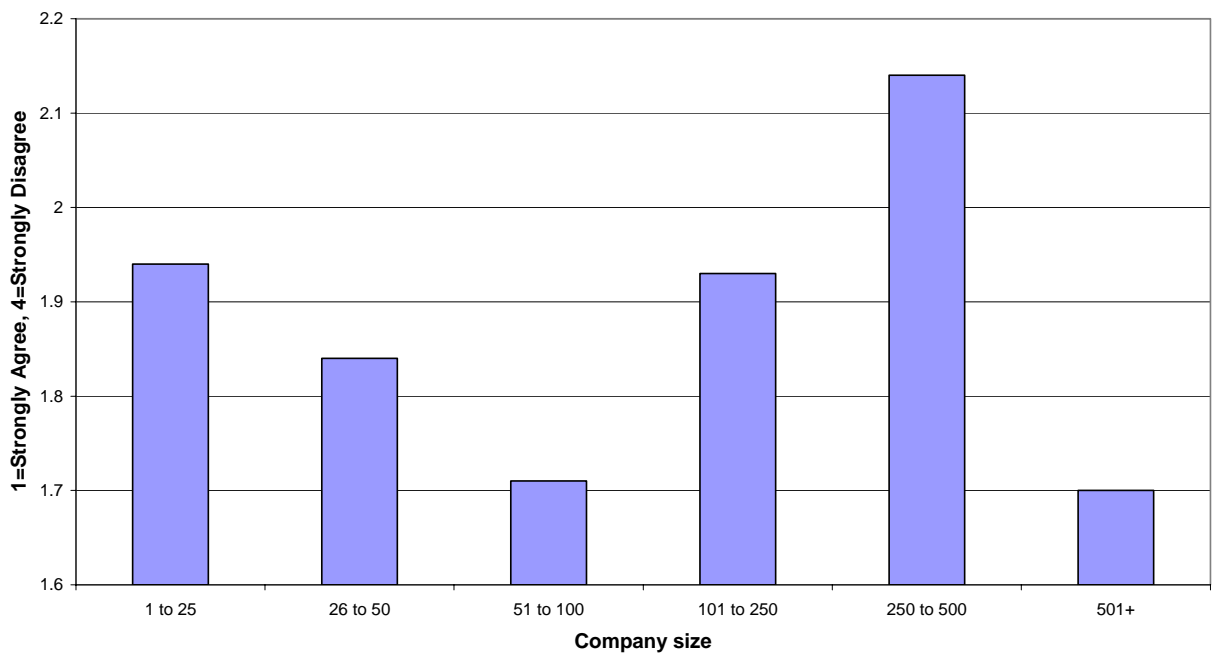
**Table 20**

<i>There is a shortage of the skills we require in the labour market</i>				
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	29	43	18	1

Source: EEF Western Regional Skills Audit 2006

Companies with fewer than 100 employees were most likely to suffer from skills shortages in the labour market. Companies with over 501 employees also suffered problems, but proportionally it was the smaller companies that suffered the most.

**Figure 14: “There is a shortage of skills we require in the labour market”**



Source: EEF Western Regional Skills Audit 2006

**Table 21**

<i>There is intense competition for skilled engineering staff in our region</i>				
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	22	49	18	1

Source: EEF Western Regional Skills Audit 2006

Figures continue to suggest that there is an intensively competitive market for skilled engineering staff, with 78% agreeing with the above statement, a quarter of which agreed strongly. Larger companies reported that they found competition from other employers the greatest. Regionally, small to medium sized companies in Somerset experienced the greatest difficulty in combating competition for skilled workers, whilst companies in Dorset and Wiltshire reported the least competition.

**Table 22**

<i>Our skilled staff often change employer to work for another engineering company which offers them more money</i>				
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	5	28	48	9

Source: EEF Western Regional Skills Audit 2006

Despite the intense competition for skilled engineering staff, ‘poaching’ still does not appear to be a significant problem. Just under two-thirds of companies disagreed with the statement above, indicating that there does not appear to be a significant loss of employees to other employers who are willing to pay a higher salary. This could be largely attributed to the diversified geography of the region, but for companies in Somerset, a slightly different trend was reported.

Somerset was the region most likely to support the statement ‘*Our skilled staff often change employer to work for another engineering company which offers them more money.*’ In terms of regional analysis, this could help explain why Somerset has the most intense competition for skilled engineering staff. Of all companies who responded to this survey from Somerset, 60% agreed that employers often left for other companies which offered them more money, with 20% strongly agreeing. The situation in Somerset is not helped by the latest figures which show it to have the lowest number of engineering employees in the south west, adding to the competition for staff.

However, competition for staff with non-engineering industries does not appear to be having a significant impact on employers. One company did strongly agree with the statement ‘*Our skilled staff often leave the company to work in non-engineering industries*’, but this was an exception to the trend, as four in five of all employers disagreed with this statement.

## Greatest difficulties found in recruiting technical and skilled manual workers

The EEF Business Trends Survey for the third quarter of 2006 highlighted the south west as the region where most recruitment activity had been concentrated in the last three months, which appears set to continue, at least in the short term. This may simply reflect the ambition of companies to grow in numbers, but might also suggest that companies are looking to fill the skills gaps inherent within the organisation. Either way, the supply of a skilled labour force is crucial to meet the demand. Indeed, this may be a catch twenty-two situation, as shortages of labour or skills would force employers to recruit employees who are still below the desired standard.

The National Employers Skills Survey 2005 (NESS) for the south west found that although recruitment difficulty for lower skill jobs has fallen, largely due to net in-migration, problems remain in the advanced engineering sector. Hard to fill vacancies in engineering and manufacturing remain proportionally high.<sup>11</sup> The survey concluded that over half of these hard to fill vacancies were due to skills shortages, where applicants lacked the required skills, experience and qualifications.<sup>12</sup>

For the second consecutive year, this survey corroborates the position reported by the NESS by confirming that employers in the advanced engineering sector in the south west of England have the most difficulty recruiting technical and skilled manual employees. The level of difficulty has also increased since 2005.

In total, over one third of respondents indicated that they had found recruiting technical and skilled manual employees 'very difficult'. In addition, 62% of all companies said they found recruiting technical workers 'difficult' or 'very difficult' and 65% said the same for skilled manual workers. There is not a significant difference between regions or company size, although from 2005, companies in Wiltshire have experienced greater difficulties as well as companies who employ between 251-500 employees.

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<sup>11</sup> NESS South West 2005 pp. 44-6

<sup>12</sup> Ibid.

**Table 23: Difficulty in recruiting in the past 12 months - by occupational group**

Respondents were asked to rate the difficulty experienced when recruiting employees with the necessary levels of skills over the last 12 months, where 1 = very difficult and 5 = very easy.

Occupational Group	Average Score		Difference
	2006	2005	
Managers	2.28	2.38	- 0.10
Professional	2.30	2.38	- 0.08
Technical	2.04	2.22	- 0.18
Skilled Manual	2.09	2.27	- 0.18
Clerical	3.46	3.35	0.11
Graduates	2.95	2.95	0.00
Apprentices	2.68	2.64	0.04
<b>Total</b>	<b>2.52</b>	<b>2.58</b>	<b>-0.06</b>

Source: EEF Western Regional Skills Audit 2006

Difficulty in recruiting is having a significant impact on the ability of companies to meet their strategic objectives. Almost two-fifths of companies reported that being unable to attract talented employees was a factor holding them back and close to one-fifth believed this to be their highest concern.

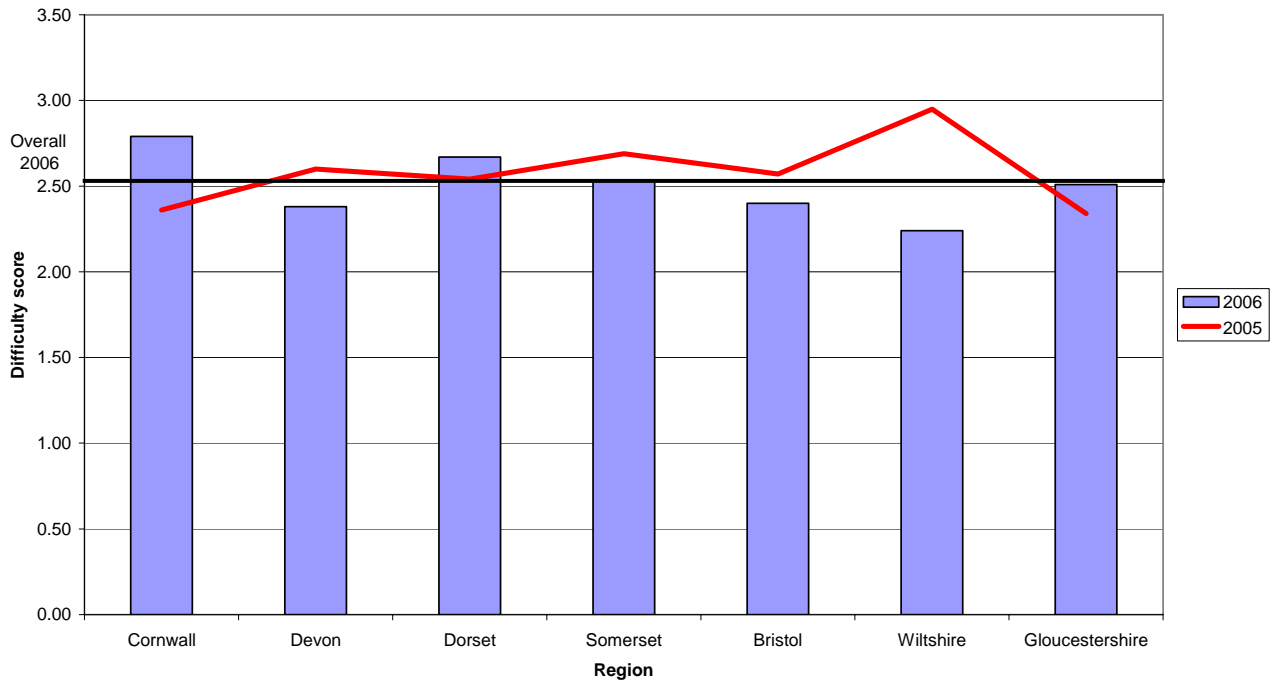
**Table 24: Recruitment difficulty by region**

average score: 1=very difficult, 2=quite difficult, 3=neither difficult nor easy, 4=quite easy, 5 =very easy

Region	Managerial	Professional	Technical	Skilled Manual	Clerical	Graduates	Apprentices	Overall
Cornwall	2.00	2.50	2.20	2.67	3.67	3.40	3.25	2.79
Devon	2.06	2.11	1.90	2.13	3.22	3.00	2.44	2.38
Dorset	2.82	2.83	1.93	1.92	3.75	2.91	2.77	2.67
Somerset	2.21	2.13	2.00	2.13	3.53	2.82	2.93	2.53
Bristol	2.10	2.09	2.22	1.79	3.60	3.00	2.40	2.40
Wiltshire	2.00	2.33	1.60	2.25	3.33	3.00	1.67	2.24
Gloucestershire	2.55	2.33	2.31	2.00	3.18	2.75	2.70	2.51
<b>Overall</b>	<b>2.28</b>	<b>2.30</b>	<b>2.04</b>	<b>2.09</b>	<b>3.46</b>	<b>2.95</b>	<b>2.68</b>	<b>2.52</b>

Source: EEF Western Regional Skills Audit 2006

Figure 15: Recruitment difficulty by region 2005/2006



Source: EEF Western Regional Skills Audit for 2005 and 2006

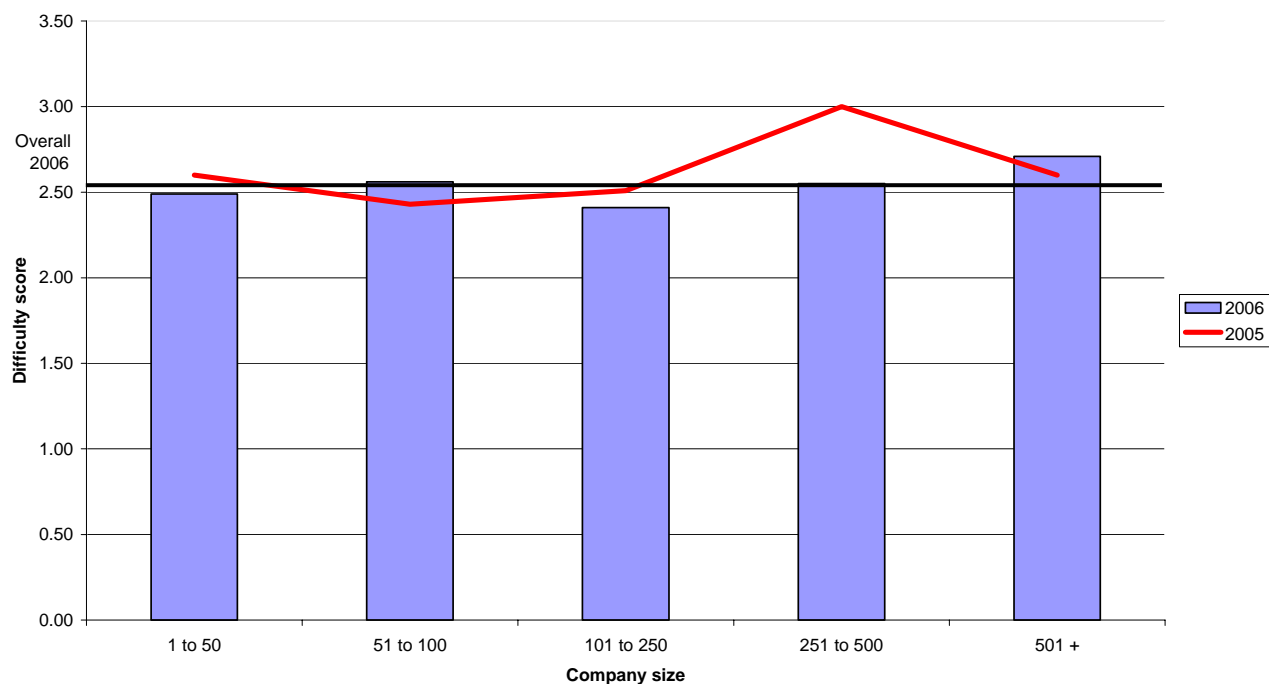
Table 25: Recruitment difficulty by company size

average score: 1=very difficult, 2=quite difficult, 3=neither difficult nor easy, 4=quite easy, 5=very easy

Size of company	Managerial	Professional	Technical	Skilled Manual	Clerical	Graduates	Apprentices	Overall
1 to 50	2.26	2.37	2.17	1.98	3.44	2.96	2.59	2.49
51 to 100	2.50	2.50	2.00	1.93	3.36	2.83	2.85	2.56
101 to 250	2.36	2.07	1.93	2.07	3.31	2.77	2.46	2.41
251 to 500	1.71	1.71	1.43	2.86	3.86	3.29	3.20	2.55
501 +	2.33	2.33	2.00	2.67	4.00	3.00	2.67	2.71
<b>Overall</b>	<b>2.28</b>	<b>2.30</b>	<b>2.04</b>	<b>2.09</b>	<b>3.46</b>	<b>2.95</b>	<b>2.68</b>	<b>2.52</b>

Source: EEF Western Regional Skills Audit 2006

Figure 16: Recruitment difficulty by company size 2005/2006



Source: EEF Western Regional Skills Audit for 2005 and 2006

## Inadequate supply of qualified manual and technical employees in the labour market

The main skills issue facing the region (and across many parts of the UK) is how to respond to demand and supply difficulties for technical and manual employees in the manufacturing industry. As mentioned earlier in this report, the UK has a higher proportion of the workforce with low or no qualifications compared with its main competitors in the US, France and Germany. Recent research has shown the skills deficit relative to other countries to be greatest at Level 2 and to a lesser extent Level 3. Very few formal qualifications are acquired after the age of 30 in the UK and the little growth of skills levels that *has* been seen in the economically active population from 1994-2003 can be largely attributed to growth in the younger age groups.<sup>13</sup> Further research has proven that there are more vacancies than jobs in the technical and operative jobs of the manufacturing industry, an area where Level 2 and 3 skills are most important.<sup>14</sup>

<sup>13</sup> Dr Hillary Steedman, *Research Issues and Priorities* (Sector Skills Development Agency Expert Panel Meeting June 2004) at [www.skillsforbusiness.org.uk](http://www.skillsforbusiness.org.uk)

<sup>14</sup> NESS South West 2005

**Table 26: Reasons for recruitment difficulties**

average score: 1=very difficult, 2=quite difficult, 3=neither difficult nor easy, 4=quite easy, 5=very easy

Reasons cited for recruitment difficulty	Average Score	% Significant	% Insignificant
Poor quality of applicants	2.0	72.7	7.6
Low number of applicants	2.0	72.1	14.7
Lack of relevant work experience	2.1	64.4	11.9
Lack of knowledge	2.4	58.3	16.7
Poor attitude of applicants	2.4	51.7	19.0
Lack of qualifications	2.9	44.4	33.3
Poor opinion of the engineering industry	3.1	38.6	38.6
Level of pay offered	3.1	34.4	41.0
Remote location	3.5	8.5	49.2
Working hours	4.4	7.4	85.2

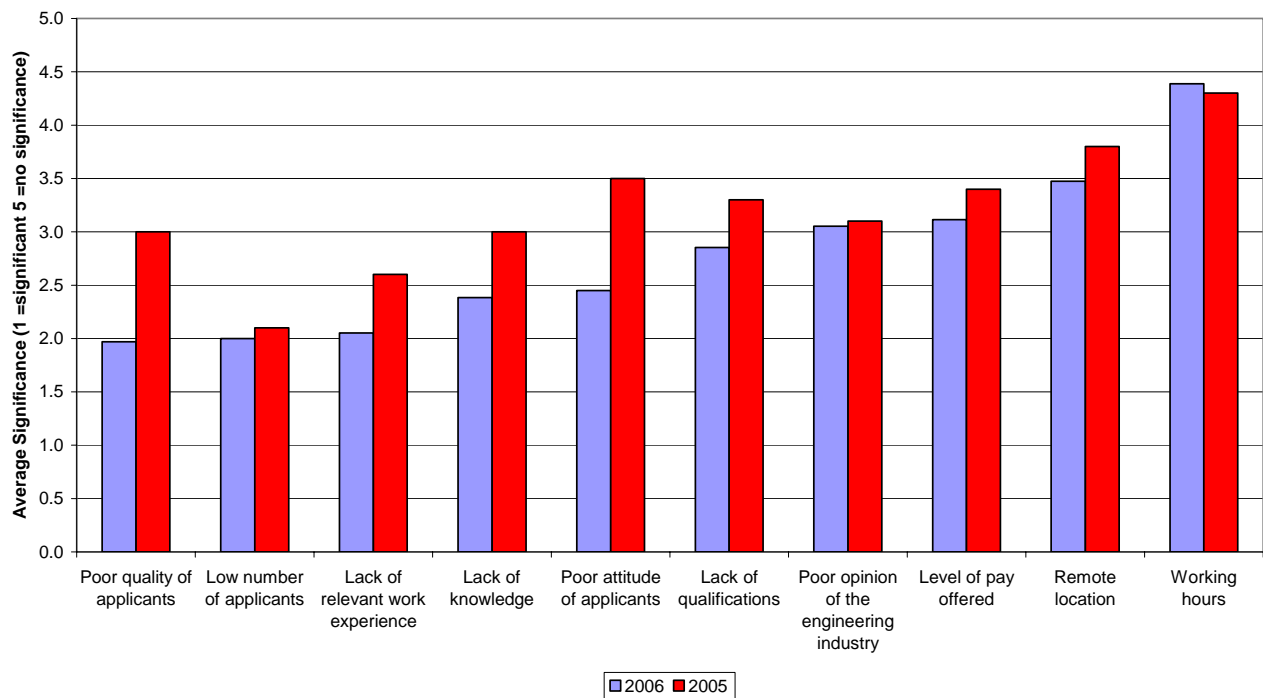
Source: EEF Western Regional Skills Audit 2006

Respondents to the survey indicated that the quality of applicants responding to advertised roles was the most significant factor affecting their ability to recruit skilled staff, whilst the low number of applicants also had an impact. This was most likely for those who had found it ‘very difficult’ when recruiting technical and skilled manual staff with the necessary level of skills. Skills attributes such as levels of knowledge and work related experience were also listed by over half of the respondents as an area which was affecting their ability to recruit.

However, although 44% of respondents identified the lack of qualifications in the workforce as a significant factor affecting their ability to recruit skilled staff; this was not significantly linked to problems in recruiting skilled technical and manual staff. It is difficult to exactly determine the extent to which the lack of quality in applicants is due to lack of qualifications or other attributes. Similarly, were there low numbers of applicants for skilled technical and manual jobs. Were applicants were put off by the qualification requirements needed for these roles, or did they simply decide that they would be better suited elsewhere? A poor opinion of the engineering industry, evidently, does not appear to be a significant factor, with an even split of companies indicating this as ‘significant’ and ‘insignificant’ when recruiting.

The main issue is that recruitment difficulties are persistent in all areas, and, with the exception of working hours, they have become more problematic to companies since 2005. Poor quality of applicants and poor attitude has had the greatest increase in significance a year on from 2005.

**Figure 17: Reasons for recruitment difficulties**



Source: EEF Western Regional Skills Audit for 2005 and 2006

Based on the results from the 2005 and 2006 audit, this evidence could bring into question the importance placed by the government on qualifications and targets for educational establishments. Problems in attracting talented employees and applicants lacking both knowledge and work experience calls for a greater emphasis on such establishments to provide the labour market, and in turn the industry, with a more rounded approach to knowledge and skills, rather than an assumption that an improvement in qualifications is the panacea for the industry.

## Employers respond to recruitment difficulties by training and developing existing staff

The inability of the labour market to supply the required quantity of labour or a suitable quality of labour with relevant work experience, knowledge and qualifications has ensured that companies are continuing to train and develop their existing staff in order to bridge the skills gaps already identified.

The proportion of companies training and developing existing staff has increased marginally by 2% from 2005. Of the total respondents to this survey, 78% indicated that they had trained and developed their existing staff in an effort to bridge the skills gap in their organisation because they had been unable to recruit the necessary skills from the labour market.

**Table 27: Response to skills shortages**

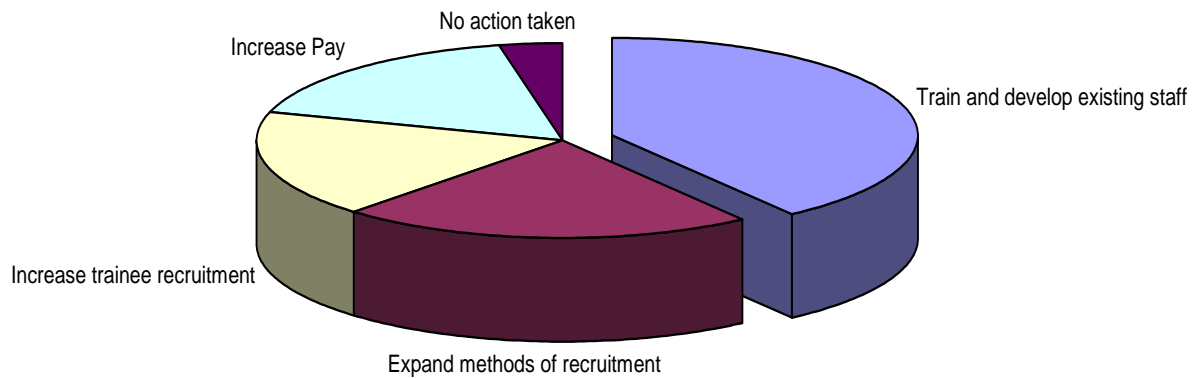
Action taken to address skills shortage	% (2006)	% change from 2005
Train and develop existing staff	78	2
Expand methods of recruitment	43	-1
Increase trainee recruitment	34	-4
Increase pay	33	2
No action taken	6	-2

Source: EEF Western Regional Skills Audit 2006

However, the increasing tendency to train and develop existing staff has resulted in a smaller proportion of respondents focusing on expanding methods of recruitment or increasing trainee recruitment in comparison to 2005. This trend is a short-term solution to a medium/long-term problem.

Such solutions do not help to create a positive image of the labour market to those workers considering a career in the advanced engineering sector. Most importantly, the industry cannot remain self-sufficient forever and it will eventually be forced to search for a fresh, external supply of skilled workers. It is therefore imperative for the survival of the sector that action is taken to ensure the long-term problems of labour supply are addressed.

**Figure 18: Response to skills shortages**



Source: EEF Western Regional Skills Audit 2006

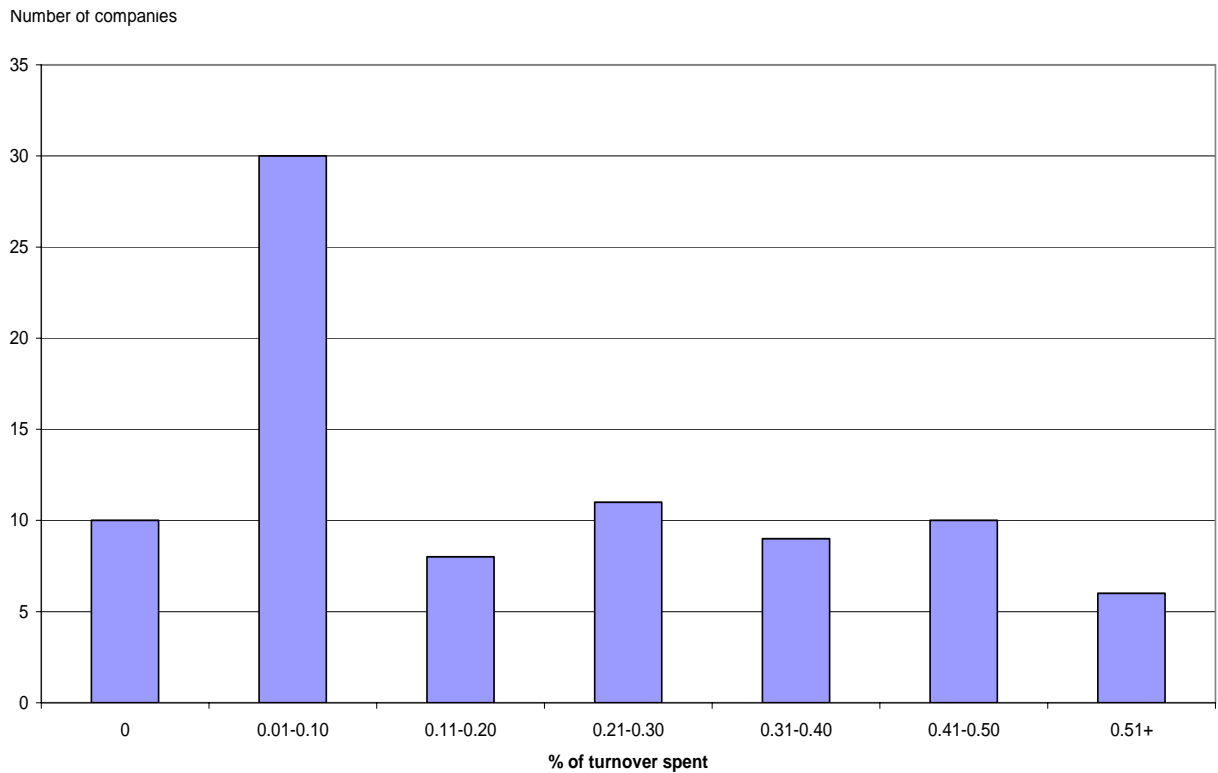
Taking no action as a result of difficulties in recruiting in the labour market is clearly not an option for the vast majority of companies, with only 6% of companies choosing a ‘do nothing’ approach, down from 8% in 2005.

## Majority of companies spend between 0.01% and 0.10% of company turnover on training

The proportion of company turnover spent on training is not a significant factor in whether companies undertake training and development of their staff. The majority of companies spent less than 0.30% of their turnover on training and development.

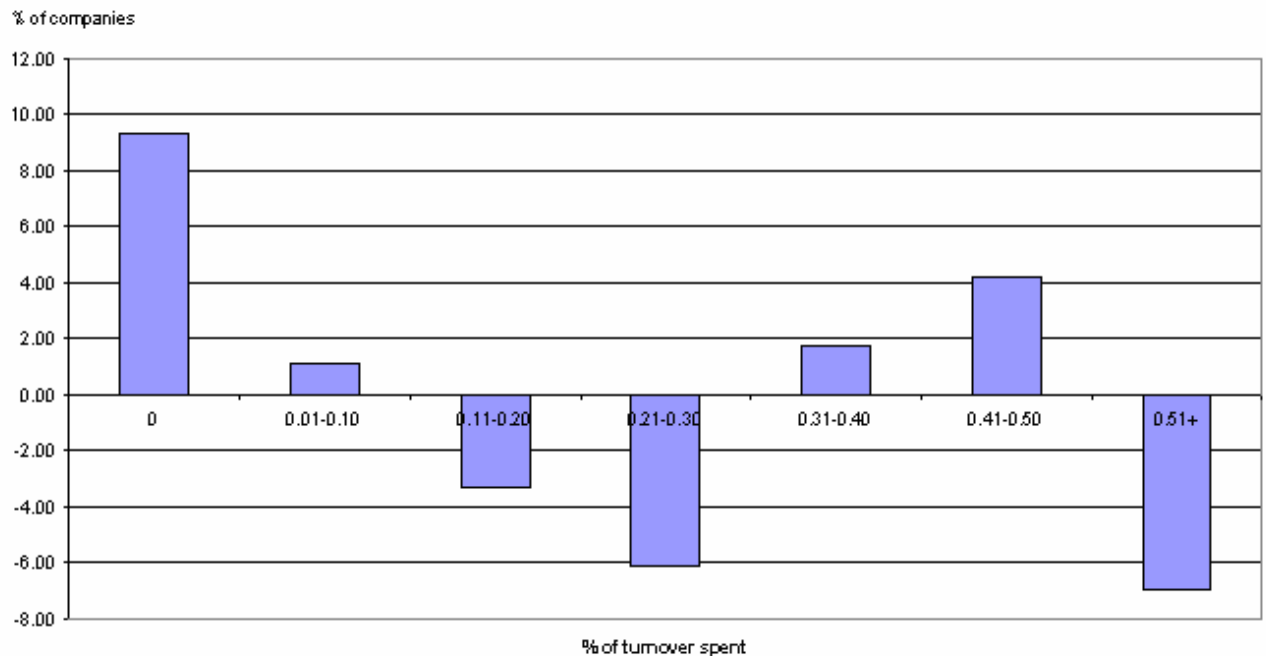
However, the proportion of respondents spending nothing on training has increased by 9% from 2005, whilst the proportion spending between 0.21-0.30% and 0.51%+ of company turnover on training and development has decreased by 6% and 7% respectively. This is an issue of concern; analysis suggests companies are not only cutting back on external recruitment but also on the training spend for their existing staff. Business strategies aimed at reducing operating costs may have taken its toll on training and development, with productivity therefore suffering as a result.

**Figure 19: Proportion of company turnover spent on training**



Source: EEF Western Regional Skills Audit 2006

**Figure 20: Percentage change in companies spending on training on development**



Source: EEF Western Regional Skills Audit 2006

Of the companies that were accredited with the Investors in People standard (IiP), the majority (58%) spent between 0.01-0.10% of turnover on training. Taking a positive view of this, the reason for IiP companies spending less on training could be that they are more able to identify



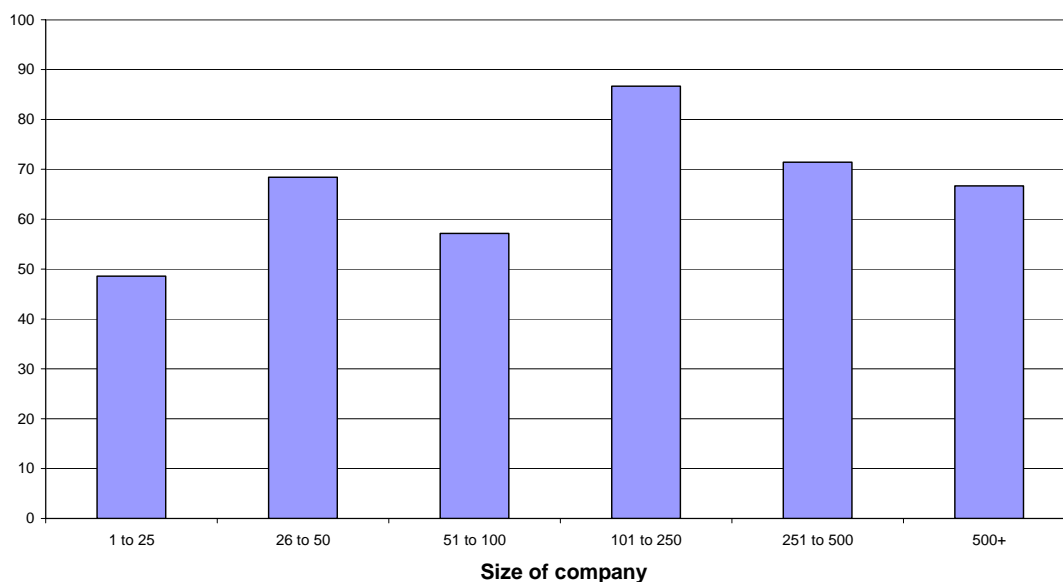
management system can be effectively implemented. It is intended to investigate the impact of this on the industry in the fourth annual audit in 2007.

## Majority approach training in a systematic manner

Despite the fact that only 13% of respondents had the Investors in People mark a further 53% of companies stated that they had a training plan in place. This means that two-thirds of respondents appear to approach training in a systematic way. This corroborates other regional research which has shown that 44% of companies in the south west had a training plan in place.<sup>15</sup> Our results suggest that the sector is therefore performing well in this area in comparison to the overall regional figure.

Medium sized companies (employing between 101-250 employees) were the most likely to have a training plan in place. Companies with fewer than 25 staff were least likely to take an active or structured view of training, supporting the results of the National Employers Skills Survey 2005.<sup>16</sup>

**Figure 22: Percentage of respondents with a training plan (company size)**



Source: EEF Western Regional Skills Audit 2006

Unlike the analysis of companies with IiP accreditation, this suggests that smaller companies, who are less likely to have a human resources facility to rely upon, are also less likely to have a

<sup>15</sup> NESS South West 2005 p.13.

<sup>16</sup> NESS 2005 p. 110

training plan in place. Regionally, there was no significance in the companies that had a training plan in place.

## Technical, skilled manual and managerial employees most likely to receive training

The skills gaps and shortages in relation to technical and skilled manual workers have had a direct impact on company training. Technical and skilled manual employees are more likely to receive training than other occupational groups. Of the total respondents, 92% indicated that they had offered some form of training to skilled manual and technical workers. For managerial employees, 87% had been offered some form of training.

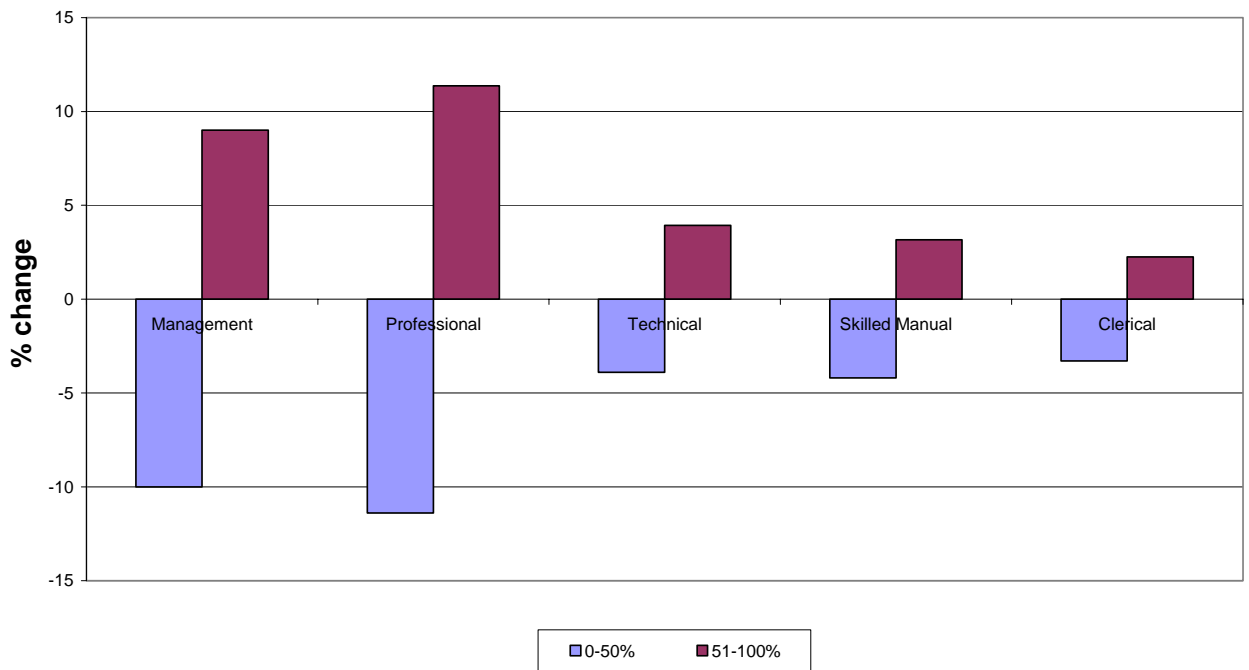
Graduates were least likely to receive training. Almost half of those companies who employed graduates said they offered no training. The reason for this will be analysed later in the report, to determine if universities are providing graduates to companies with the basic skills required, or if training spend is being diverted to other areas of more urgent need, for example, on technical and skilled manual staff.

**Table 28: The proportion of employees who have received training in the past 12 months**

Occupational Group	0-50%	51-100%
Technical	62	38
Skilled Manual	65	35
Management	60	40
Professional	65	35
Clerical	77	23

Source: EEF Western Regional Skills Audit 2006

Figure 23: Differences in the proportion of employees receiving training 2005/2006



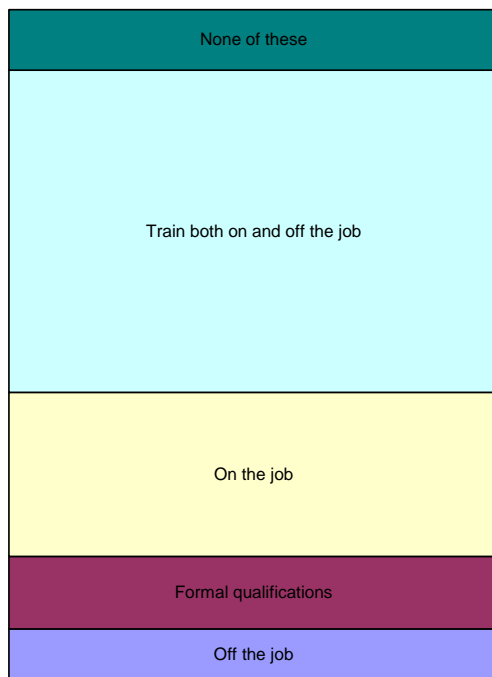
Source: EEF Western Regional Skills Audit 2006

A greater proportion of the workforce received training over the past 12 months (August 2005 to August 2006) than the previous year. In particular, a greater proportion of the management and professional employee groups were likely to receive training, as shown by the graph above.

A mixture of both on and off the job training was the most popular method of training for all job roles, with 60% of technical staff being trained in this way. Only two companies offered training to skilled manual staff with formal qualifications and only seven companies offered this to technical staff. In comparison, 17 companies trained professional staff with the use of formal qualifications.

This analysis of training reflects the shortages in skills identified earlier in the report and encouragingly demonstrates that companies are targeting the training into skills which are required, particularly for skilled manual and technical employees. A possible hypothesis for this increase in the proportion of the workforce trained at all levels from 2005 is that it is a direct result of the increasing difficulty employers experience when attempting to recruit. There is greater emphasis on in-house training and the success of this will determine the extent to which the skills levels of employees can be raised to sufficiently improve processes, efficiency and productivity performance of the business.

**Figure 24: Most popular methods of training used by companies**



Source: EEF Western Regional Skills Audit 2006

## Quality of training provided by training suppliers

The quality of skills delivered into the labour market has already been identified as a problem that is stifling recruitment initiatives for the majority of companies who responded to this survey. Results have also shown companies are increasingly relying upon training and developing existing staff. It is for this reason that the quality of training provided by training establishments is essential to ensure that companies can bridge the skills gap within their organisation.

Local Colleges of Further Education were the preferred link for 44% (the majority) of respondents. However, respondents were critical of the quality of apprentices provided by colleges to them, with over half indicating that the apprentices lacked the basic skills required for their effective assimilation into the workplace and a commercial environment. Regionally, respondents in the Bristol area were most dissatisfied. Only one company from the respondents in Bristol said it had a link with a local college.

**Table 29: Opinions on Colleges of Further Education**

Colleges of Further Education.....	Strongly Agree / Agree	Disagree / Strongly Disagree
.... provide us with the apprentices who have the basic skills we require	42 %	58 %
.... are our preferred option for improving the skills of our employees	44 %	56 %
.... provide a broad range of training courses to meet our training needs	49 %	51 %
.... provide a good return on training spend	52 %	48 %

Source: EEF Western Regional Skills Audit 2006

Since 2005, the percentage of respondents strongly agreeing or agreeing that colleges provided broad training courses and value for money decreased by 11% and 12% respectively. Satisfaction with Colleges of Further Education has therefore decreased. This supports the evidence of other surveys. Recent research conducted by the DFES showed that around one in ten employees were not satisfied with the training provision from this type of provider.<sup>17</sup>

This could be a consequence of poor quality teaching or inappropriate content. An example of this was reported in a recent piece of EEF research. This research discovered that one college was found to offer courses on boat-building. The primary material used in instruction was wood, despite the fact that wood is much less common in modern boat-building compared with other materials, such as fibre glass.<sup>18</sup> Both poor standards of teaching and inappropriate content have an immediate impact as training does not meet business needs, as indicated by the majority of respondents in this area of research. This could potentially discourage employers and individuals from undertaking further training, although our results suggest otherwise with 71% of respondents disagreeing with the statement *'our employees are generally unwilling to attend or undertake further training.'*

It also appears that Colleges of Further Education have greater success engaging larger employers than smaller ones, supporting the evidence from the National Employers Skill Survey for 2005. Respondents were more likely to agree with the statement that *'Further Education Colleges are our preferred option for improving the skills of our employees'* as the size of the

<sup>17</sup> Department for Education and Skills (2006) *Further Education Reform: Raising Skills, Improving Life Chances*.

<sup>18</sup> EEF, *Learning to Change* (2006): Why the UK Skills system must do better p.15.

company increased. Similarly, the majority of companies strongly agreeing that colleges provided apprentices whom lacked basic skills, provided training courses which failed to meet business needs and provided poor return on training spend were companies employing less than 50 employees. The extent to which this is due to larger firms being more likely to have a human resource or training specialist to deal with is unclear. It might also be easier for colleges to manage a relationship and meet the demands of one or two large firms in their area rather than meeting the demands of many medium, small or micro businesses.

Companies were more positive when accessing the quality of graduates provided by universities. Of the total respondents, 31% had a link with a local university. Companies employing between 51-100 employees had the poorest relationship with universities, with only 1 in 14 having an established link. For the 31% who did have a link with a university, the level of satisfaction with engineering graduates and other graduates was higher than that reported when accessing the basic skills of apprentices provided by local colleges. However, since 2005 the percentage of respondents who said they were satisfied with the skills of engineering graduates decreased by 7% to 55% and for other graduates decreased by 9% to 51%. Increasing company size correlated with greater satisfaction, with companies employing between 1-50 employees the least likely to express satisfaction. Regionally opinions did not vary enough to be significant.

**Table 30: Links to educational establishments**

Educational Link	% of respondents
Local junior schools	14.6
Local colleges of further education	43.8
Local secondary schools	27.1
Local universities	31.3
No links	34.4

Source: EEF Western Regional Skills Audit 2006

A worrying statistic from this area of research is that over a third of companies reported having no educational links. Without such links, the long term future of the advanced engineering sector would arguably be less secure. Raising the profile of the sector from a grass roots level and upwards is essential for ensuring a flow of young, talented and skilled individuals into the

labour market. This is needed to continue the replenishment of the labour market and maintain the supply of skilled staff from which companies can recruit to fill their skills gaps.

Companies were generally far more satisfied with the quality of training and the breadth of provision provided by private training providers. Private training providers were preferred to Colleges of Further Education for improving the skills of employees.

**Table 31: Opinions on private training providers**

Private training providers....	Strongly agree / Agree	Disagree / Strongly disagree
...are our preferred option for improving the skills of our employees	45 %	55 %
...provide a broad range of training courses to meet our training needs	70 %	30 %
...provide a good return on training spend	55 %	45 %

Source: EEF Western Regional Skills Audit 2006

Companies in Bristol, who had the greatest dissatisfaction with local colleges, were most likely to express satisfaction towards private training providers. Although it is unclear as to exactly why the companies who responded in Bristol favoured private training providers to Colleges of Further Education, it does illustrate how misdirected course content in local colleges can result in companies looking elsewhere, albeit at a more expensive price. Preference towards private training providers as the option for improving skills of employees increased with company size. Companies employing less than 100 employees were least likely to favour private training providers.

A further issue to consider is that when asked 'we find it difficult to find a provider (of any type) to deliver the training we require', 48% of the total respondents agreed to some extent. Companies employing between 1-50 employees were most likely to agree and all those 'strongly agreeing' employed less than 100 employees. This suggests that smaller sized companies need greater accessibility to training providers who meet their needs in order to carry out the training they require.

## Accessibility of training grants has improved since 2005

In the 2005 annual skills audit, the piecemeal approach to funding was highlighted as an issue that must be addressed. Companies looking to achieve funding for training faced a bureaucratic system in which expert advice was often necessary to guide them through. The results for the 2006 annual audit illustrate that firms appear to have gained greater access to grants.

Three-fifths of companies reported that they had received some form of financial grant towards the cost of training – an encouraging figure. The percentage of small and medium sized enterprises (normally targeted for training funds) not receiving a grant and highlighting that they didn't know to access one has decreased from 54% to 46% of the total respondents. It is anticipated that the work conducted by the Advanced Engineering Skills Project has contributed to some extent to this improvement.

**Table 32: Companies receiving training grants**

Company size	Received training grants (%)	No grant (%)
1 to 250	57	43
250 to 500	43	57
500+	67	33

Source: EEF Western Regional Skills Audit 2006

**Table 33: Companies not receiving grants and not knowing how to access them**

Company size	Do not receive grants and do not know how to access (%)	% Diff from 05
1 to 250	46	-8
250 to 500	25	-8
500+	0	-60

Source: EEF Western Regional Skills Audit 2006

These results indicate that accessibility of grants has improved since 2005. However, as nearly half of all SME's in this research are indicating that they don't know how to access grants, this demonstrates that there is still much work to be done in this area.

Access to these grants is particularly important for those firms who have been unable to compete for the limited numbers of skilled staff in the labour market and have instead turned their attention towards training and development of existing staff. Greater accessibility will help companies to manage training costs, particularly for small and medium sized firms who may not have the financial resources to compete. For example, larger firms may be able to fall back on greater resources to attract the best recruits in the labour market with higher salaries, forcing smaller companies to raise their investment in training of existing staff for which grants can ease the burden.

On the negative side, 43% of the companies in the target group for funding of training reported that they had not received any assistance over the past 12 months. The situation has improved from 2005 but the figure is still too high, especially considering the nature of skills shortages and the responses of the majority of respondents as to how they tackle this, which is through training of their existing staff. Of those who did not receive a grant, 46% still did not know how to, suggesting continued improvements need to be made allowing companies to access better information on why and how to obtain such funding.

EEF's 2006 UK skills system study highlighted the relatively complex funding regime for training in the UK.<sup>19</sup> Recent research shows a substantial separation between policy makers (government) and end-users (employers and individuals).<sup>20</sup> This hierarchical structure means funding for training providers is channelled through the Learning and Skills Councils (which controls the post-16 learning budget) but with government targets in mind. This limits the extent to which market failures in the provision of training can be rectified, as a market led system based upon employer needs is overruled by the regional strategy driven by a national target.

The result is that the education, training and skills landscape remains cluttered and many firms continue to find it difficult to source information about available funding for training and relevant provision in their local area, as shown by the analysis of this research. The fundamental problem for the future is that the current structure does not address the problem for employers of accessing and funding appropriate training to meet business strategies.

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<sup>19</sup> Learning to change: Why the UK skills system must do better

<sup>20</sup> Hodgson A. et al (2005) *A new learning and skills landscape? The LSC within the learning and skills sector.*

# Assessing the impact of government intervention

“The core of our commitment to employers is that we will design and deliver publicly-funded training and qualifications in a way that is directly led by their needs, that meets their skills priorities, and that is straightforward to use”

Department for Education and Skills, White Paper 2005.

Government intervention plays an important role in the UK skills system, informing firms about available training provision and representing the needs of business and individuals to the providers themselves. The government therefore contributes towards the cost of creating a dynamic, flexible and productive workforce by attempting to manage demand and supply for skilled labour.

However, the success of government intervention has been questioned due to the confusing structure of the skills system which has led to duplication of effort across a range of organisations and the introduction of overlapping skills initiatives.

Our analysis focuses on four organisations tasked with providing information and advice on training and skills for companies in the advanced engineering sector:

## 1. The Sector Skills Council for Science, Engineering and Manufacturing Technologies (SEMTA)

SEMTA is one of the twenty-five nationwide Sector Skills Councils (SSC's). It constructs skills agreements with businesses that have an interest in the sector aimed at reducing skills gaps and shortages, improving productivity, improving business performance and improving learning supply.

## 2. South West MAS (Manufacturing Advisory Service)

South West MAS is one of the ten manufacturing advisory services set up by the Department of Trade and Industry. The aim is to help manufacturers improve their productivity by hands on advice and guidance.

### 3. Business Link - Train to Gain

Train to Gain is a government initiative entitling businesses to government sponsored training and a regional skills brokerage service. Formerly known as the Employer Training Programme (ETP), it arranges training for employees to obtain a fully funded NVQ level 2 qualification. The brokerage service, rolled out across the nine regional development agencies, supports firms in accessing training and also provides advice and guidance on assessing skills needs and sourcing training to meet requirements.

### 4. Sector Skills Development Agency (SSDA)

The SSDA covers the 15% of workforce which does not fall under one of the twenty-five SSC's. It is also responsible for funding, monitoring and supporting the network of sector skills councils. The SSDA and SSC network is known together as the Skills for Business Network. Its aim is to boost the productivity and profitability of the UK by identifying and tackling skills shortages and gaps on a sector by sector basis.

Of the four organisations offering training and advice, our results suggest that companies were least aware of the services offered by the Sector Skills Development Agency and SEMTA. Of the companies who responded, over two-fifths had not heard of either of these organisations. This is worrying considering SEMTA and the SSDA form the Skills for Business Network in the advanced engineering sector. A number of companies are therefore unaware of the support that is available to help them deal with their skills problems and training requirements. A review may be necessary to raise awareness and the clarity of the roles of such organisations within the regional and UK skills system.

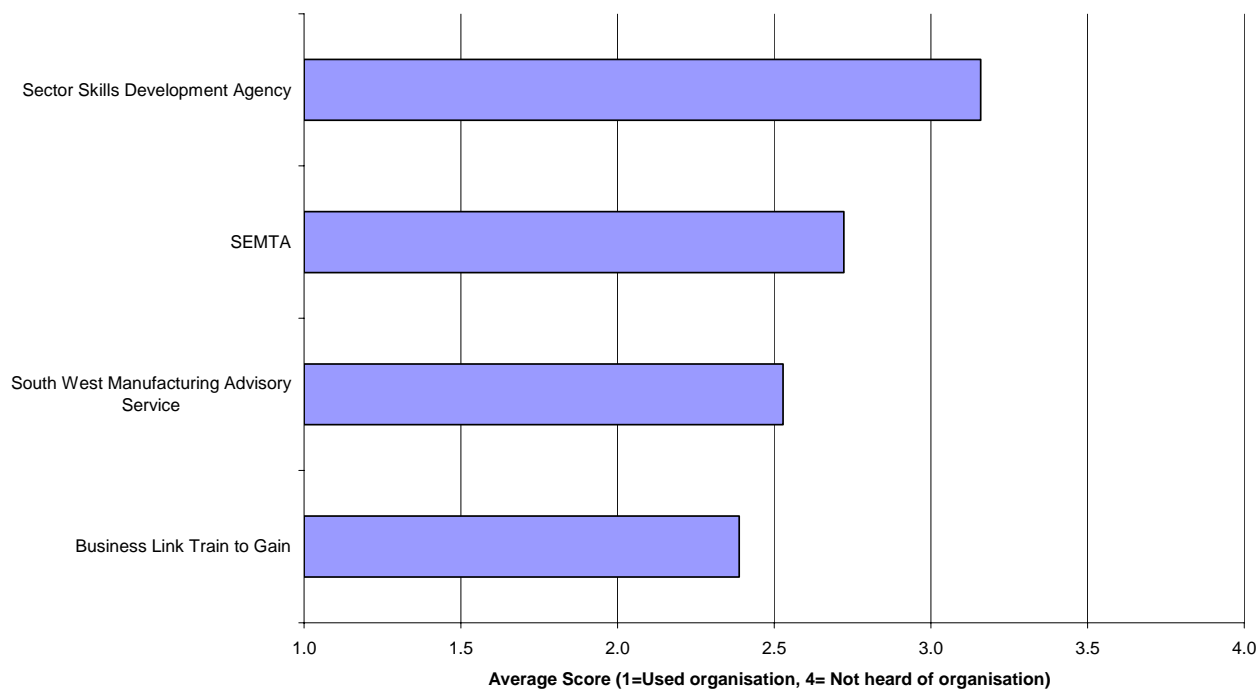
The services offered by Business Link, followed closely by the South West Manufacturing Advisory Service, were the most well recognised organisations among the companies who responded to this survey.

**Figure 25: Companies awareness of external organisations offering information and advice**

Average Score:

1 = Used organisation, 2= Contact with organisation,

3= Heard of organisation, 4= Not heard of organisation



Source: EEF Western Regional Skills Audit 2006

Of those companies who said they had ‘used’ or ‘had contact’ with each organisation, positive feedback was generally received, although the Sector Skills Development Agency again came last in comparison to the other three organisations. For the SSDA, 77% of companies who had contact or used the organisation found it ‘useful’ or ‘very useful’, compared to 94% of the companies who had contact or used the South West Manufacturing Advisory service. In absolute terms, only twenty-two companies had used the SSDA, compared to an average of forty-six companies using the other three organisations.

**Table 34: Company usage of external organisations**

Organisation	Number of companies who said they had ‘used’ or ‘had contact’ with each organisation
Business Link - Train to Gain	48
South West Manufacturing Advisory Service	42
SEMTA	47
Sector Skills Development Agency	22

Source: EEF Western Regional Skills Audit 2006

**Figure 26: Percentage of companies reporting that the quality of advice they received was either 'useful' or 'very useful'**



Our results suggest that the South West MAS is developing into a trusted and well respected brand by achieving high levels of satisfaction with its client base. Only three companies who had used South West MAS did not find the advice given useful. However, like the other three organisations, there is clearly room for improvement.

A number of companies are still completely unaware that such organisations even exist. For these companies, external guidance and advice on training and skills is not filtering down into the organisation. If a proportion of companies remain in the dark with regards to the role and services of external providers, the provision of such services will fail to reflect the real needs of the sector as a whole. By increasing the involvement of companies with government funded organisations it should improve the value of information collected when engaging with employers and influencing external providers. As a result, the provision of training and advice on skills needs from such organisations would be more representative and better equipped to meet the demands of the industry.

# 6

## concluding comments

To conclude, skills gaps remain present for a significant minority of the companies who responded to this survey. Companies are just about able to meet their current objectives with current skills, but there is a major concern that staff will not be proficient to meet future business objectives.

In the next 12 months the majority of respondents intend to reduce operating costs at the expense of innovation, improvement in quality of product and introduction of new processes; objectives which are essential for maintaining long term competitiveness. At the same time, demand for skills is increasing in all areas, with particularly high demand for specialist technical and management skills. Companies need to be able to adapt quickly to the changes in the global market but are prevented from doing so by the lack of skills inherent within the organisation to achieve such ambitions. Instead, skills gaps are likely to widen. Companies entering into new markets in the next 12 months therefore risk doing so with a workforce that is not fully equipped to give maximum value and competitive advantage.

The skills gap problem is made worse by the continued difficulty employer's face when recruiting in the labour market. The advanced engineering labour market remains intensively competitive and 38% of companies were concerned that being unable to attract talented employees would prevent them from achieving their business priorities. The greatest difficulties experienced when recruiting were found when trying to recruit technical and skilled manual staff. The main skills issue facing the region is the imbalance between the level of skills demanded for technical and skilled manual roles and the level of skills supplied. This study reiterates the importance of finding a solution to the problem. The quality of applicants does not meet the required standard and the quantity of applicants is insufficient. In addition, recruitment initiatives for all staff have been stifled as prospective employees often do not have the required knowledge or relevant work experience required.

Companies have responded to the apparent deficiencies in the advanced engineering labour market by increasing the training and development of existing staff. It is encouraging to see that this has been directed into areas most needed, with technical, skilled manual and managerial employees most likely to receive training. Also, although a minority of respondents train with Investors in People accreditation, evidence suggests that two-thirds of companies have a training plan in place and are therefore approaching training in a systematic way.

However, it is less encouraging to see a smaller proportion of respondents focusing on expanding methods of general / trainee recruitment in comparison to 2005. This is not a sensible approach for the future. Firstly it damages the reputation of the job market in the advanced engineering sector and secondly it distracts attention from the main issue; skills shortages exist and companies cannot be self-sufficient forever. The flow of fresh, talented and skilled workers from an external source must be maintained.

Relying upon training and development of existing staff can also be a problem if the training received is not up to scratch. Companies were more likely to favour private training providers over Colleges of Further Education to improve the skills of employees. Levels of dissatisfaction from users of Colleges of Further Education increased from 2005, with companies reporting a broader range of courses to meet training needs and more value for money from private training providers, albeit at a higher price. Accessibility of grants has improved since 2005, but the proportion of respondents not receiving a grant and saying they didn't know how to is still too high. Further improvements need to be made to allow companies to access information on why and how to obtain grants.

Funding is particularly important for companies of smaller size who are often targeted for such grants and whose needs appear to be more of an issue. Respondents employing fewer than 100 employees strongly agreed that they had problems finding a provider to deliver the training they required. Additionally, our results suggest that companies employing between 26-50 employees had a disproportionate share of skills gaps and those employing less than 25 employees were least likely to have a training plan in place. The situation for smaller employers is at a critical level. Skills gaps and skills shortages are present, but unlike larger companies, they are unable to rely on a suitable provider to train and develop their existing staff and the burden of training costs has a greater impact on operations.

The supply of skilled labour remains the key issue in this year's annual audit and many respondents remain unsatisfied with the basic skills of young workers which are, for the second year running, commonly provided by Colleges of Further Education. Further, over a third of companies reported having no educational links. This must be addressed if the profile of a career in the industry is to be raised from a grass roots level upwards; a fundamental element in replenishing the labour market and supplying skilled staff from which companies can recruit from.

Government intervention to manage the demand and supply of skilled labour continues to be welcomed by the industry, but question marks are raised over the real impact of government initiatives. The majority of respondents who came into contact or used sector specific government supported organisations found their advice useful. However, a number of companies are completely unaware of their existence, limiting the extent to which the benefits they bring can be felt throughout the sector as a whole.

To summarise, the UK skills system must continue to move with the times and work harder to reflect the real needs of the industry via the provision of advice, training and guidance which is appropriate and in demand. At a regional level, the south west advanced engineering sector is continuing to suffer from skills shortages in the labour market and this is making it more difficult to find ways of tackling the skills gaps present in individual companies. Provision of support to these companies needs to be more representative of the industry's demands, in which the supply of technical and skilled manual employees is a fundamental problem. Raising the skills profile of the workforce in areas such as this will allow the south west and other regions to develop the world class skills base that the UK needs if it is to compete to its full potential.

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Sir Andrew Foster, *Review of the Future Role of Further Education Colleges* (November 2005)

South West Observatory Skills and Learning Intelligence Module, *National Employer Skills Survey 2005 for the South West of England* (October 2006)

### Further Information:

Business Link Train to gain - [www.traintogain.gov.uk](http://www.traintogain.gov.uk)

Sector Skills Council for Science, Engineering and Manufacturing (SEMTA) - [www.semta.org.uk](http://www.semta.org.uk)

South West Manufacturing Advisory Service (SWMAS) - [www.swmas.co.uk](http://www.swmas.co.uk)

Sector Skills Development Agency - [www.ssda.org.uk](http://www.ssda.org.uk)

Advanced Engineering Skills Project - [www.aesp-western.org.uk](http://www.aesp-western.org.uk)

# appendix

# Survey of skills in advanced engineering in the south west of England

## The Advanced Engineering Skills Project

This is the third annual survey of skills for the advanced engineering sector in the south west of England. The report is intended to provide intelligence to enable local and national government and the educational sector to assess the provision of resources and skills in order that the labour market can supply good quality labour to the industry in the region.

The report is conducted for the Advanced Engineering Skills Project which has been designed for the Aerospace, Automotive, Rail, Medical Engineering, Machine Tools, and Specialist Machinery sector. This dynamic project, which is part funded by the South West Regional Development Agency has been brought together by organisations that have the Advanced Engineering Sector at the heart of their work. It has been designed to deliver a programme that the sector itself has identified as being needed to address its long and short term skills needs. The Private Sector dominated Steering Group has been brought together to ensure that industry drives this forward in the way the sector wants.

**The survey will take approximately 15 minutes to complete and your participation in this important research is imperative to ensure that we can provide authoritative intelligence and represent the industry to the appropriate government and education establishments. If you would like to receive a copy of the 2005 survey report please email [mhuggett@eef-west.org.uk](mailto:mhuggett@eef-west.org.uk)**

Company Name \_\_\_\_\_

Town \_\_\_\_\_

Post Code \_\_\_\_\_

Name of person completing survey \_\_\_\_\_

Contact telephone number \_\_\_\_\_

E-mail address *(to send published report to only)* \_\_\_\_\_

Number of employees on site *(please tick box)*

1 - 25       26-50       51-100       101-250   
251-500       501-1000       1001+

## Business priorities and objectives

**1. Which, if any, of the following are the top three strategic priorities for your company over the next 12 months?** *(please indicate by numbering the top three from the list below with the number 1,2,3 with 1 being the highest priority)*

Reducing operating costs	<input type="checkbox"/>	Enter new markets	<input type="checkbox"/>
Expand UK operations	<input type="checkbox"/>	Increase innovation	<input type="checkbox"/>
Introduce new processes	<input type="checkbox"/>	Improve quality	<input type="checkbox"/>
Expand operations abroad	<input type="checkbox"/>	Outsource non-core activities	<input type="checkbox"/>
Profitability	<input type="checkbox"/>		

**2. Which, if any, of the following factors do you see inhibiting your ability to meet these strategic priorities over the next 12 months** *(please tick all that apply)*

Rising costs	<input type="checkbox"/>	Increase in legislative burden	<input type="checkbox"/>
Competitive pressures	<input type="checkbox"/>	Unable to attract talented employees	<input type="checkbox"/>
Unable to retain talented employees	<input type="checkbox"/>	Lack of workforce adaptability	<input type="checkbox"/>
Management and leadership skills	<input type="checkbox"/>	Other <i>(please specify)</i>	<input type="checkbox"/>
Unable to innovate	<input type="checkbox"/>		

**3. Which of the factors inhibiting your ability to meet strategic priorities is of highest concern (please tick one box only)**

Rising costs	<input type="checkbox"/>	Increase in legislative burden	<input type="checkbox"/>
Competitive pressures	<input type="checkbox"/>	Unable to attract talented employees	<input type="checkbox"/>
Unable to retain talented employees	<input type="checkbox"/>	Lack of workforce adaptability	<input type="checkbox"/>
Unable to innovate	<input type="checkbox"/>	Other (please specify)	<input type="checkbox"/>

**Skill needs of current workforce, labour market and training provision**

**4. Please state whether you agree or disagree with the following statements**

	Strongly agree	Agree	Disagree	Strongly disagree
The current skill levels are sufficient to meet our <b>current</b> strategic priorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The current skill levels are sufficient to meet our <b>future</b> strategic priorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Colleges of Further Education provide us with apprentices who have the basic skills we require	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Universities provide us with <b>engineering</b> graduates who have the basic skills we require	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Universities provide us with other graduates ( <i>exclude engineering graduates</i> ) who have the basic skills we require	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technical staff need to improve and/or update their technological skills to meet current strategic priorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Further Education Colleges provide a broad range of training courses to meet our training needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Further Education Colleges are our preferred option improving the skills of our employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Further Education Colleges provide a good return on training spend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private training providers provide a broad range of training courses to meet our training needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private training providers are our preferred option improving the skills of our employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private training providers provide a good return on training spend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We find it difficult to find a provider (of any type) to deliver the training we require	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supervisors, team leader and managers need to improve their ability to communicate and interact with their subordinates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our employees are generally unwilling to attend or undertake further training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advances in technology create training requirements that are difficult to meet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The business cannot spare the time to undertake the training we would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is a shortage of the skills we require in the labour market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is intense competition for skilled engineering staff in our region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our skilled staff often change employer to work for another engineering company which offers them more money	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our skilled staff often leave the company to work in non-engineering industries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**5. What impact, if any, do the existing skills of your employees have on your ability to meet each of the following (rate the impact between 1 - 5 1=significant impact 5=no significant impact)**

Quality of product	<input type="checkbox"/>	Time to market	<input type="checkbox"/>
New product development	<input type="checkbox"/>	Customer service delivery	<input type="checkbox"/>
Entering new markets	<input type="checkbox"/>	Adapting to changing conditions	<input type="checkbox"/>
Introduction of new capital equipment	<input type="checkbox"/>	Expansion of operations	<input type="checkbox"/>
Increased workload for existing employees	<input type="checkbox"/>	Other (please specify)	<input type="checkbox"/>



**12. (continued)** Approximately, what proportion of your workforce received some form of training over the past 12 months?

	0%	1-25%	26-50%	51-75%	76-99%	100%
Skilled Manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clerical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Apprentices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Graduates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**13.** What type of training does your organisation usually use for the following categories of employee?

	Off the job	Formal qualifications	On the job	Mixture of off the job and on the job	None of these
Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skilled Manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clerical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Apprentices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Graduates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**14.** Does your organisation have any links with the following educational establishments? (please tick all that apply)

Local junior schools	<input type="checkbox"/>	Local secondary schools	<input type="checkbox"/>
Local colleges of further educations	<input type="checkbox"/>	Local universities	<input type="checkbox"/>
No links with any educational establishments	<input type="checkbox"/>		

**15.** We are interested in how companies obtain information and advice on training and skills. Please indicate your knowledge of the following organisations (Please tick one box per line):

	Used the organisation	Had contact with the organisation	Heard of the organisation	Not heard of the organisation
SEMTA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
South West MAS (Manufacturing Advisory Service)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Train to Gain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sector Skills Development Agency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**16.** For those organisations that you have used and had contact with, how would you rate the quality of their advice? (Please tick one box per line)

	Very useful	Somewhat useful	Not at all useful
SEMTA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
South West MAS (Manufacturing Advisory Service)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Train to Gain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sector Skills Development Agency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**17.** Does your organisation have a training plan?

Yes  No

**18.** Does your organisation have Investors in People accreditation?

Yes  No

Please send your completed survey to:

Matthew Huggett, AESP Skills Report, EEF Western, Engineers' House, The Promenade, Clifton Down Bristol BS8 3NB Fax: 0117 973 6010

May we reassure you that all information provided in this survey is provided in the **strictest confidence**. None of the information provided will be used for any other purpose other than the production of a research report on skills in the advanced engineering sector in the south west of England.

Thank you for your assistance.

[www.eef-western.org.uk](http://www.eef-western.org.uk)

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