



# Cogent Sector Skills Agreement West Midlands

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Innovation

Competence

Productivity

Sustainability



*Improving* business performance through *skills* development

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## 1. Introduction

Sector Skills Agreements (SSA) are being produced for every sector supported by a Sector Skills Council, including Cogent which covers the chemical, pharmaceutical, nuclear, oil and gas, petroleum and polymers industries. The aim of these agreements is to secure for each sector the range and level of skills necessary to achieve productivity at internationally competitive levels. In partnership with employers, the Government and others, Cogent will use the Sector Skills Agreement as a framework for delivery of the skilled workforce which employers in the sector want. The Agreement will:

- lead to better planned and more integrated delivery of skills training;
- help to produce credible, cost effective, quality assured and better-tailored training provision;
- help to target public funding more efficiently;
- encourage employers to invest more in developing their workforce.

The SSA has employed a series of research activities starting with a desktop review of existing research to help target the following primary research in areas of weakness of existing information.

### Desktop Research


A review of Labour Market Intelligence (LMI) sources ensured duplication of existing research was minimised. The SSA draws from existing data, research reports and intelligence

sources in the investigation of productivity, current and future employment demand, skills needs and training provision.

### Primary Research

Four strands of primary research for the SSA were employed to augment the LMI identified through the research review:

- **Answers on a postcard to 4 key questions** – flyer distribution to employers providing detail about SSA and an opportunity to engage in process by answering questions about key business, management, people development challenges and measures of productivity.
- **Detailed employment, skills and training needs analysis** – consultation interviews with sector employers seeking more detailed information on short – medium term demand for employment by occupations, skills required (detail around technical, management & leadership), and impacts upon training needs.
- **Supporting employment, skills and training needs analysis** – online consultation to support employer engagement and enable wider sector input to the detailed analysis of employer skills & training needs. Further details are in the appendices of the Cogent Skills Needs Assessment.

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- **Employer skills surveys** - these research projects, requested by industry to be undertaken by Cogent, have fed into the process.

Cogent's UK SSA has been developed through a five stage process, to reflect both statistical evidence from national sources, and direct discussions with employers and stakeholders. It builds on the previously published documents:

- **Skills Need Assessment (whole sector)**
  - Plus summaries for each industry
- **Assessment of Current Provision (whole sector)**
  - Plus summaries for each industry
- **Gap Analysis by Industry**
- **Issues and Proposed Interventions**
  - Plus summaries for each industry

These documents are available from the Cogent corporate website and have also been published on the Sector Skills Development Agency website:

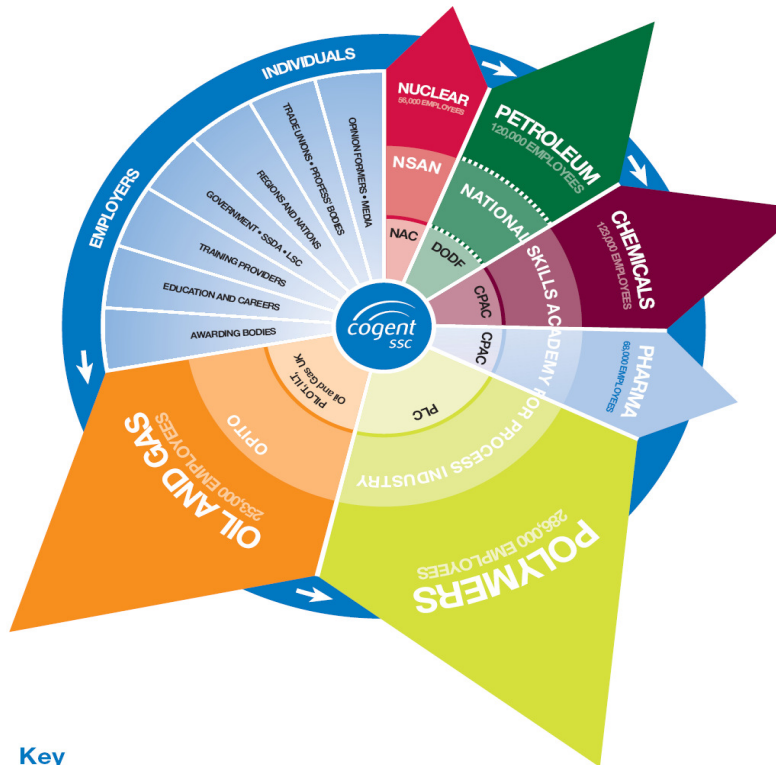
<http://www.cogent-ssc.com>  
<http://www.ssda.org.uk>

The West Midlands Sector Skills Agreement for the chemical, pharmaceutical, nuclear, oil and gas, petroleum and polymers industries provides an overview of their size, shape and future needs. It draws on all previously published SSA documentation and provides a brief summary of the work to date.

This document also provides a regional cut of Cogent's original SSA data, thereby providing a snapshot of the sector in the region. It draws on other regionally sourced research documents and will be supported by the production of Cogent's regional fact-sheet for the West Midlands in early 2008. This fact-sheet will supplement the regional SSA report through the publication of additional and current LMI.

During 2008, Cogent will consult with key stakeholders on the development of a regional action plan, to be designed and agreed with industry and partner organisations. Details of individual national agreements are held centrally, and can be provided on request. The scope of consultation throughout the SSA process was very broad, including representatives from the four nations, education and training providers, employee representatives, and of course, employers.

## 1.1 Cogent partners, stakeholders and industry relationships



### Key

- PLC Polymer Leadership Council
- OPITO Subsidiary of Cogent SSC. Delivering skills solutions to the oil and gas industry
- PILOT Joint Govt/employer/trades union oil and gas industry task force
- ILT Industry Leadership Team
- OGU Oil and Gas UK
- NSAN National Skills Academy for Nuclear
- NAC Nuclear Advisory Council
- DODF Downstream Oil Distribution Forum
- CPAC Chemicals and Pharmaceuticals Advisory Council





## 2. Context

The Sector Skills Agreement for the chemical, pharmaceutical, nuclear, oil and gas, petroleum and polymer industries in the West Midlands identifies the skills needs, an assessment of current provision to meet these needs, and the gaps in provision to meet current and future needs. The report shows what needs to be done by employers, providers and other stakeholders to address the gaps in the West Midlands region.

The industries referred to in this report provide direct employment for approximately 41,400 people, structured around some 1,950 businesses in the West Midlands. The Cogent sector contributes £1.4bn to the region's GVA (excluding oil, gas and nuclear) while employing approximately 1.6% of the region's workforce.

The nuclear industry is not readily identifiable from national sources, such as the SIC (Standard Industrial Classification) system, with only reprocessing activities represented. To address this, Cogent has completed a series of research studies in collaboration with the wider industry including reprocessing, decommissioning, deterrent systems (MoD) and support services - leading to the identification of an employment base of approximately 56,000 in the UK. However, it must be noted that there is very little nuclear activity in the West Midlands region.

The oil and gas industry is defined as the extraction of crude petroleum and natural gas along with the service activities incidental to oil and gas extraction, excluding surveying. The UK oil and gas industry contributes over £21bn GVA to the UK

economy each year<sup>1</sup> and is ranked eleventh globally in terms of crude oil production<sup>2</sup>. The industry has an employment base of 253,000, including direct supply chain employment, across approximately 500 employers nationally.

The definition of the Petroleum industry is based on processing of petroleum products through to point of sale of petrol. It has elements of impact on the footprint of a number of other SSCs, such as Skills for Logistics (fuel transportation) and Skillsmart (retail sale at forecourts). Cogent's focus is on the processing and handling of petroleum products, with skills related to driving and actual retail skills being catered for by the appropriate SSC. With this in mind, it is estimated that there are approximately 700 employees involved in the manufacture of refined petroleum products in the West Midlands region.


The chemical and polymer industry definitions are based on the manufacture and processing of chemical and polymer products and include sign-making. These industries are characterised by SMEs and form the largest employment base in the West Midlands employing 8,200 and 21,000 respectively. Whilst small, the pharmaceuticals industry accounts for approximately 1,200 employees in the region.

Productivity improvements in Cogent industries have the potential to greatly enhance the balance of payments, given that 92% of chemical and pharmaceutical production serves non-UK markets, and currently delivers a trade surplus of £4.5 billion (2004 figures).

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<sup>1</sup> Annual Business Inquiry 2005 – data released Nov 2006, ONS

<sup>2</sup> Oil and Gas UK <http://www.oilandgas.org.uk/index.cfm>



Each of the Cogent industries has a presence in the West Midlands, and makes a substantial contribution to all parts of the UK. In many cases, its location is of strategic importance to other industries, either as a crucial part of the supply chain, or as an end user of materials. This can sometimes be neglected in terms of recognition, where the primary industry (e.g. automotive manufacture) is deemed significant, whereas the integral supply chain (such as polymers) is not.

This report will discuss sector-wide issues and demonstrate how these issues affect the West Midland economy and labour market. An initial discussion of key policy initiatives will be followed by detailed industry analysis. Where possible specific comment regarding West Midland employment will be made, however, due to limitation of national data and sample size this may not always be possible.

## **2.1 Social and economic policy context**

The following section summarises the key policies operating within the West Midlands region which have a direct impact on Cogent employers.

### **The West Midlands policy context**

It is important to recognise the wider social and political context in which the Cogent sector is positioned in the West Midlands. There are a number of significant policy documents that need reference. The documents explored in this section establish the wider context of key policy frameworks and initiatives within the region.

Advantage West Midlands, the Regional Development Agency (RDA) aims to ensure that the West Midlands is recognised as a world class region in which to invest, work, learn, visit and live and the most successful in creating wealth to benefit its people. The RDA is responsible for implementing the following objectives through its Regional Economic Strategy (RES):


- Developing a diverse and dynamic business base
- Promoting a learning and skilful region
- Creating the conditions for growth
- Regenerating communities
- Providing a powerful voice for the region.

Through its Manufacturing Strategy, Advantage West Midlands provides specific business support to the manufacturing base in the region. The RDA aims to ensure that low value-added sectors modernise, move up the value chain and diversify into high-technology based activities.

These strategies provide the main policy drivers which have substantial and direct impact on the Cogent sector in the West Midlands. Further policies for sector and skills development are highlighted below.

## **2.2 Policies for sector development in the West Midlands**

Advantage West Midlands, the Regional Development Agency, has identified ten key sectors for priority action in the region. These include automotive, aerospace, rail, medical technologies, building technologies, food and drink, leisure and tourism, high-value consumer products, ICT and business and professional services. Advantage West Midlands has also made significant investment in the manufacturing cluster,



thereby recognising the strategic importance of this sector within the regional economy.

Cogent's priority sectors for the West Midlands include the chemical and polymer industries (including sign-making) and therefore directly link into the RDA priority of manufacturing. It should also be noted that whilst not all Cogent industries directly fit into the RDA list, they continue to be of strategic importance to priority sectors such as automotive, aerospace and high-value consumer products, as a crucial part of the supply chain.

### **2.3 Policies for skills development in the West Midlands**

In addition to the strategies listed above, there are several documents which are particularly important to skills development in the West Midlands.

The RDA aims to create a highly skilled, innovative and adaptable workforce, to support the growth of high value jobs and wealth-creating businesses. Through the RES, the RDA will work towards five key objectives:

- Tackling the basic skills gap
- Developing workforce skills
- Improving leadership and management skills
- Developing an enterprise and entrepreneurial culture
- Expanding higher level skills.

In addition to the RES, skills development is further supported by the West Midlands Regional Skills Partnership (RSP) which aims to improve basic employability skills for

adults and young people along with ensuring that employers invest in skills development for their workforce.


Following the publication of the National Learning and Skills Council Annual Statement of Priorities for 2007-2008 which sets out key national priorities and targets, the West Midlands Learning and Skills Council has published its Regional Commissioning Plan 2007-2008. The plan identifies four priorities for action in the region:

- Increase level 2 attainment at age 19
- Reduce the number of young people not in employment, education or training
- Increase basic skills and level 2 attainment among adults
- Develop and deliver an Integrated Employment and Skills system
- Increase level 3 skills attainment and develop high level skills within the workforce to meet the regional productivity challenge
- Shift the mix and balance of provision to better meet employer need.

The key policies detailed above are mapped to Cogent's SSA solutions in section 5 of this report to show synergy between Cogent and regional partner strategic objectives.

### **2.4 The Skills Base in the West Midlands**

There are several key issues currently affecting the skills base in the West Midlands. The LSC Regional Strategic Analysis for the West Midlands shows consistent under-achievement in the level of skills attainment. Despite recent improvements, the



region continues to lag behind other English regions at all levels of skills attainment.

Focusing on attainment at level 2 by age 19, the West Midlands has shown the most positive trend of all regions. However, the region, at just below 67%, lags behind the national average of 70%, according to LSC figures.

A key contribution to level 2 attainment at age 19 is the proportion of 15 year olds achieving five or more GCSEs at grades A to C. The West Midlands region fails to meet the national average in this respect with only 40% of pupils in the region achieving five or more GCSEs at grades A to C in 2005. This compares unfavourably with the national average of 44%<sup>3</sup>.

Adult attainment at level 2 shows only 65% of the regional workforce to be qualified to level 2, the poorest performing region in England. This picture varies across the region with Shropshire as the best performing and the Black Country as the worst performing authority. More positively, the gap between the West Midlands and England average has narrowed and level 2 attainment beyond age 19 has increased at a higher rate than the national average. Basic skills achievements have also been substantial over the last year with the region exceeding its Skills for Life target one year early<sup>4</sup>. Despite this progress, the West Midlands has the highest rate of adults with no qualifications or below level 2.

LSC figures show that the West Midlands, at 43%, is below the national average of 46%, for attainment of level 3 qualifications

at age 19. Again, the Black Country performs poorly in this respect. Among adults in the West Midlands 45% of the workforce are qualified to at least level 3<sup>5</sup>. Although an increase of 1 percentage point on the 2004 figure recorded in the Labour Force Survey, as with Level 2 achievement, the West Midlands is the poorest performing region in England<sup>6</sup>.

The proportion of the regional workforce with skill deficiencies has reduced significantly from 14% in 2003 to 5% in 2005 and is now the third lowest in the country<sup>7</sup>. However, significant problems remain within certain sectors and occupations, inhibiting the potential for growth and development. Whilst the proportion of companies identifying gaps in specific technical skills has risen sharply there are also growing problems with gaps in generic or transferable skills such as problem solving, customer handling, team working and management.

Management and leadership skill deficiencies are well above the national average in a range of sectors, which is having a negative impact on employers' ability to effectively deploy the skills of the workforce and on innovation.

Many companies are struggling to address their skill needs via the recruitment of skilled and experienced people from the labour market. The region has the highest proportion of 'hard to fill' vacancies due to skill shortages in the country. Skill shortage problems are particularly acute in engineering where skilled manual staff are in short supply. Issues relating the manufacturing and engineering sectors include:

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<sup>3</sup> LSC Regional Strategic Analysis for the West Midlands (2006)


<sup>4</sup> LSC Regional Strategic Analysis for the West Midlands (2006)

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<sup>5</sup> Annual Population Survey (2005)

<sup>6</sup> LSC Regional Strategic Analysis for the West Midlands (2006)

<sup>7</sup> National Employer Skills Survey (2005)

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- A lower proportion of manufacturing companies arrange training for staff in the West Midlands than in any other region
  - Over 40% of the workforce do not hold a level 2 qualification and only 40% of the workforce hold a level 3 qualification
  - There is a potential upskilling requirement for more than 89,000 people in the region
  - Upskilling issues facing the existing workforce are a priority for technicians, operators and crafts people.

Where employers do engage their workforce in training, company size is a key determinant of the likelihood to train. Managers are the most likely occupational group to have received off-the-job training. Provision of on-the-job training is most likely to occur among the lower skilled occupational groups, reflecting the national trend.

In conclusion, there continues to be a high proportion of employers who fail to respond to skills needs within their companies, or where employers do not perceive their workforce are in need of skills improvement. A more detailed analysis of Cogent sector-specific skills issues is outlined in the next section of this report.

### 3. Size and shape of the sector

#### 3.1 Size and shape of the sector in the West Midlands

The West Midlands accounts for 7% of Cogent sector employment. Across the whole economy the West Midlands represents 9% of total employment, as such the Cogent sector is shown to have a lower concentration of employment in the region. Within the region employment is focused upon the chemical and polymer industries which play a large role as part of the primary supply chain to key regional sectors, particularly automotive. There is a significant cluster of polymer processing employers in the region with a focus around Shropshire and the Black Country. It should be noted that the polymer industry in the West Midlands also includes those sign-making companies situated in the region.

As part of the original SSA process a series of employer consultation interviews were undertaken in the chemical, polymer and petroleum industries with 27 interviews completed across the Midlands. When asked about the predominant market for their products: 7% reported a local market; 11% regional and; 41% each to national and international markets. In terms of market drivers employers in the Midlands were the most likely to report that the market for their products was price dependent. There is a move towards producing premium quality products and services and of those interviewed the majority saw themselves as innovators, leading the way in developing new products and services.

Employers reported that while they measure their own productivity the majority do not benchmark themselves against others in the sector. Those employers in the Midlands were the least likely to participate in benchmarking activities across

the sector however they were the most likely to be recognised as an Investor in People.

The structure of employment by company size is shown in table 1 below with 41,400 people employed across 1,950, companies. For the Cogent sector, the West Midlands has one of the highest concentrations of micro-company employers (after London and the South East) at 70% compared to an average of 68% for the sector across Great Britain.

Table 1: Cogent employers in West Midlands by employer size-band

Employers by Size-band						
	1-10 Employees	11-49 Employees	50-199 Employees	200+ Employees	% of Total Employers	Total Employers
Cogent – WM	70%	21%	7%	2%	10%	1,950
Cogent – GB	68%	23%	7%	2%	100%	19,000
Regional Economy	82%	14%	3%	1%	100%	190,600

Source: Annual Business Inquiry (2004) ONS Crown Copyright

#### Workforce Profile

Comparing the age profile of the sector workforce against the overall regional workforce shows a higher proportion of Cogent sector employees aged 45 or over (sector 40% and economy 38%). Fewer sector employees are in the 16-24 age group (12% compared to 15%) showing that the sector has an age bias towards the older age groups compared to the overall regional profile.

The gender breakdown of the regional workforce for the sector and the UK sector shows that there is a greater proportion of male employees in the region than nationally. It is estimated

that 78-79% of the regional Cogent sector workforce is male compared to 74% for the UK sector.

Over the period quarter 4, 2003 to quarter 2, 2005 figures show a variation in the sector's ethnicity profile with results ranging from 92 – 94% of the workforce being white. For the sector at a UK level 94% of the workforce is white meaning the region's workforce is broadly in line with this. Likewise the sector at a regional level is broadly in line with the overall regional workforce where 92% of the workforce is white. Further breakdown of non-white ethnic groups is not possible owing to the low sample size for the region by sector.

The qualification profile below in table 2 categorises the workforce: for the sector in the West Midlands; for the UK sector and; for the overall West Midlands workforce, by the highest level of qualification achieved. The table shows that the qualifications held by the sectors workforce in the region are lower than the UK sector and the region's overall workforce. This is supported by the findings of the Cogent research with employers who have highlighted that basic skills training is a priority for them.

Table 2: Qualification level of workforce in West Midlands

Qualification level of workforce			
	VQ3 and above	VQ2	VQ1 and below
Cogent – UK	52%	27%	20%
Cogent – West Midlands	48%	*	*
Economy – West Midlands	49%	30%	21%

\*Data suppressed

Source: Labour Force Survey (q1 2005 – q2 2005)


### Regional Skill Issues

In the 2005 National Employer Skills Survey 14% of Cogent sector employers in the West Midlands reported having vacancies, this was lower than the England average of 17%. Of these vacancies, 6% of employers stated that some vacancies were hard-to-fill. Probed further for the reasons for this only 3% identified that it was skills related. The proportion of employers in the region reporting experiencing skill shortages is slightly lower than the proportion across England (4%). A reported 23% of all vacancies are hard-to-fill however and employer feedback indicates vacancies within all occupational categories, with level 2 and 3 job functions the most difficult to fill, for example, process and machine operatives, skilled trades and customer services.

When asked whether the incumbent workforce had the skills, qualifications and experience required to be fully effective in their job roles, 20% of employers reported there was a skills gap within their workforce. This is in line with the England average for the sector. Skills gaps in the region affect on average 8% of the workforce compared to 7% across England<sup>8</sup>.

Further discussions about skills gaps during employer consultation interviews in the Midlands covered cross sector skills and found that employers across the region were the most likely to report having staff with literacy and numeracy skills difficulties. Seven out of the twenty-seven employers interviewed stated that between 10-40% of their employees experience basic skills difficulties. In the most case numeracy was of greater concern.

<sup>8</sup> National Employer Skills Survey (2005)



One of the means by which employers can tackle the issue of skills gaps is through training. Overall, 60% of employers in the region provided or funded training for their staff over the previous 12 months. This is the lowest proportion across all English regions for the sector<sup>9</sup>. However, in those companies who do provide training, on average 68% of staff participate. In contrast, when asked during previous research whether there were any barriers to providing training only 22% of employers said they experienced no barriers, this is a lower proportion than for the sector across England (26%). Of those stating there were barriers, the most frequently mentioned barrier is a lack of funding for training (55% of regional employers compared to only 34% for England). Twice the number of employers in the region than nationally cited the lack of suitable courses as a barrier to training. Interestingly, one of the most pressing barriers for many other regions, a lack of time and cover for training, was not considered a priority issue in the West Midlands<sup>10</sup>.

#### Future skills needs and employment patterns

In the West Midlands employment levels are forecast to decline by an estimated 4,000 employees by 2014. A slight decline is forecast between 2004 and 2009 and a slightly larger decline of 3,000 employees between 2009 and 2014. This decline is comparable with other regions.

The fall in regional sector employment represents a fall in traditional employment. This in turn, is not entirely off set by the expansion in other areas of employment such as the expansion of strategic industries like nuclear. The decommissioning of nuclear plants may have a significant

impact on the Cogent workforce, along with the decline in bulk chemical production and the overall decline in the UK manufacturing base.

The gender split within the West Midlands is projected to remain stable which is different to the majority of other regions who are forecast to see a rise in the proportion of female employment. The figures indicate that there will be no significant shift in the gender proportions in the next ten years. However, the region as a whole acknowledges the need to increase the recruitment of female and ethnic minority employees to offset demographic trends.

In terms of the occupational structure of the region, management occupations are projected to remain stable over the next ten years. The most notable change will occur among the lower level occupational groups. Operatives and elementary level occupations are forecast to decline from a 39% share of employment to 33%.


The total requirement in the region is comparable with other regions. However the replacement demand which includes retirements is slightly higher at an estimated 15,000 employees over the next ten years. The most significant issue regarding the replacement demand is the projected need for operatives over the next 10 years which is forecast to be approximately 4,000 employees.

#### Action Plan arising from the Sector Skills Agreement

As outlined above, the SSA development process raised a number of issues of concern to employers. These issues were derived directly from interviews and group meetings, and existing available research. These were then represented to the wider employer population to test their veracity. This was

<sup>9</sup> National Employer Skills Survey (2005)

<sup>10</sup> National Employer Skills Survey (2003)



coupled with outline action plans to address specific issues. The resulting endorsements then led to the further development and testing of action plans with both employers and stakeholders, and the development of the SSA. The emergent actions are detailed in section 4 of this report.

### 3.2 Drivers of change

An analysis of the external factors affecting the sector identifies five key factors driving change. The following section investigates these factors in relation to the Cogent sector in more detail.

#### Legislative

Over recent years the changes in Health, Safety & Environment related directives from Europe and regulations and legislation in the UK has placed significant requirement for additional processes and monitoring upon employers. This is particularly an issue for smaller employers large enough to be subject to these provisions but with the need to make significant investment in time and resources in meeting them. While industry recognise the requirement and welcomes better regulation, there is concern about the: volume; administrative burden and; potentially conflicting or repetitious aims of Health, Safety & Environment regulation coming from the EU and various UK government departments. This has serious implications for the competitiveness of the UK sector in terms of costs, investment and innovation. The main directives and legislation include:

- REACH (Registration, Evaluation and Authorisation of Chemicals)
- COMAH (Control of Major Accidents and Hazards) and the application such regulations

- The UK Greenhouse Gas Emissions Trading Scheme, established in 2002, and is applicable to chemical manufacture and processing.

#### Economic


Chemicals and pharmaceuticals are among the most globalised manufacturing industries. This ever increasingly complex business environment has led to a worldwide distribution of a multicultural workforce and there is continued consolidation among companies on a global level. Companies will invest wherever, when and if it makes economic sense.

In the UK the Pharmaceutical Price Regulation Scheme (PPRS) ensures the NHS has access to good quality branded medicines at reasonable prices, and promotes a healthy, competitive pharmaceutical industry.

Within the oil and gas industry, the UK Continental Shelf (UKCS) faces significant challenges as the province matures. In future its ability to compete will depend critically on rapid and continual improvement in performance. This in turn will depend on greater collaboration to ensure this performance can be delivered with the resources available. The UK still has substantial recoverable reserves of oil and gas potentially exceeding the amount already produced. However, many existing large fields are now past their peak production level and discoveries of oil and gas are smaller than those found in the elephant fields of the late 1960 and 1970s, creating other associated technical challenges.

#### Social

Many chemical based products are essential to how modern society operates. However, public perception continues to deteriorate. The primary reason is thought to be the perceived



impact of chemical products on health and environment. Impact of public perception and industry reputation has led to consumer opinion driving new product development. Increasing importance is being placed upon high technology products that have little or no harm on either individuals' health or the environment.

There is increasing demand for "healthcare" and therapies products. The public drives this demand in the pursuit of healthier lifestyles. Product development and innovation to meet demand drives change in the UK industry. The pharmaceutical industry interfaces with the public via both the full-cost "healthcare" products and the more readily identified prescribed medication products.

#### Technology

The report 'Trends and Research Priorities for the Chemical Industry – Looking to the Future' (which makes explicit reference to both chemical and pharmaceutical industries), provides market information and intelligence on research and development needs and issues. The primary science and technology research priorities can be placed into the broad headings:

- Pacing Technologies e.g. Bioscience, Catalysis, Combinatorial Technologies, Nanotechnology and Process Intensification
- Key Technologies e.g. Computational Technology, Environmental Technology, New Materials Research, Measurement Sciences, Formulation and Separation Sciences
- Platform/Base Technologies e.g. each division of chemistry and chemical engineering and their interface with additional disciplines (for example, materials and

biotechnology). This is an area of significant growth. The report highlights high-growth areas (e.g. pharmaceuticals and high value added chemicals) which should be given future support. In addition, there will be increasing importance placed on speciality or 'effect' chemicals.


#### Environmental

Industry has made a commitment to performance improvement through the International Responsible Care programme. A membership prerequisite of the Chemical Industries Association is a self assessment against the responsible care criteria enabling consistent measurements. Environment related measures and targets are:

- Improve energy efficiency and reduce emissions. The industry has a climate change agreement to reduce energy consumption by 35% between 1990 and 2010 thereby reducing CO2 emissions
- Reduction in waste disposal. The industry is working to increase the level of recycling and reduce use of land fill disposal. This includes process R&D to reduce waste and reprocessing of waste
- Reduction in water usage. Target to reduce use by 20% by 2010.

#### **3.3 Implications for skills and employment**

Given the factors of global competition, advancing technology, changing working practices etc; workplace activities, skills and working practices are changing at a pace. Managers and leaders require the skills to be able to cope with change and lead their organisations through it. This ongoing process of change also drives the requirement for the overall workforce to



increase their skills levels. Leaders and managers across the industry have a role to play in encouraging and supporting workforce development associated with change and motivating their teams.

Future scenarios point to a continuation of the current trend away from bulk manufacture, towards higher added value, or speciality chemicals – that is, those sold on quality and effect. This will drive a need to invest in research and development and, in turn, higher level skills development, in order to maintain a competitive advantage.

Whilst the employment base is not expected to rise, there remains a significant demand for workforce to replace leavers (either retirements, transfers from UK sector to international operations, transfer to other UK domestic operations in different industries etc.) at all occupational levels. There will also have to be a step change in the skills levels of employees, to reflect the advances in technology and product lines. Greater emphasis for employability is being placed upon 'softer skills'. In the face of stringent Environment, Health & Safety requirements, the drive to reduce costs through more efficient and less wasteful operations and the push for higher quality outputs, employers are recognising that behavioural aspects of the job role are extremely important. The ability to work effectively as a member of a team, using initiative in problem solving skills and fault diagnosis are highly valued by employers.

Skills gaps are a greater issue for employers in the sector than skill shortages. However, shortages of suitably skilled applicants serves to exacerbate the gaps where non-proficient personnel are recruited. Cogent employers reported that less than a quarter of their recent recruits had all or most of the

skills they required and over one third had none or few of the skills required and would need significant development<sup>11</sup>. Induction training and setting clear training and development plans is becoming increasingly important for the sector.

### **3.4 Assessment of current provision**

The industries covered by the Cogent footprint have access to a wealth of education and training provision, from National Vocational Qualifications, through to Honours and Masters Degrees.


What the industries do not have, however, is a clearly defined pathway though the range of sector-specific and generic qualifications, to enable them to plan progression as both employers and employees. The sheer number of opportunities in some areas, such as higher education provision in Chemistry is not reflected in the potential articulation routes, such as NVQs, HNC, HND or foundation degrees.

This has led to a lack of engagement between employers and providers, with the employer view of need not being clearly articulated (or uniformly expressed) to the providers. In turn, providers have addressed course content by expanding choices to reflect the perceived need of learners, with little input from industry.

There are, in contrast, a number of examples of successful co-operative developments between industry and provider, which has benefited all parties, not least the learners, who have entered or enhanced their role within industry by having the most appropriate range of skills and knowledge.

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<sup>11</sup> National Employer Skills Survey (2004)



The key issues emerging from the assessment of provision fall into four broad categories: attracting people with the right skills, meeting the needs of current employees (upskilling and progression), sources of information on access and quality of provision, and issues related to decline in student numbers.

These issues will be addressed through the development of Cogent's Sector Qualifications Strategy (SQS), a key supporting pillar of the Sector Skills Agreement. The SQS will set out Cogent's approach to rationalising sector qualifications, working in conjunction with QCA and approved awarding bodies to ensure that current and future provision meets the needs of sector employers.

The SQS seeks to incorporate the following principles within its vision:

- The Cogent Gold Standard
- Useable National Occupational Standards
- Fit for purpose, modular training
- Recognition of other learning
- Credit accumulation and transfer
- Sector-wide skills
- Innovative assessment and delivery methods
- Securing high quality provision through National Skills Academies (NSAs)
- Information, advice and guidance
- Appropriate funding systems.

In delivering the SQS, Cogent will develop detailed action plans by early 2008, which will incorporate a regional dimension to qualification reform across the UK. The NSAs will


also go some way to improving provision in the Cogent sector through the development of regional centres of provision for the nuclear and process industries.

### **3.5 Provision – issues affecting the Cogent industries**

The Cogent sector depends on entry level qualifications related to Science, Engineering and Technology, as well as English, Maths etc. In general, the number of students choosing to study these subjects beyond compulsory levels is in decline. This is affecting the recruitment pool available to enter employment at operator level, and into apprenticeships.

The numbers moving into apprenticeships specific to Cogent are relatively small when compared to other sectors – for example only around 70 to 80 candidates per year pass through the chemical framework. The anticipated employer demand for current and future process and maintenance employees to be skilled to levels 2 and 3 provides a potential audience for these qualifications.

Although achievement of a level 2 qualification e.g. 5 GCSEs at grades A to C, is broadly acknowledged as an entry requirement to the sector, employers have reported that attainment of this still leaves applicants lacking for some of the skills expected of those who enter the industry. There has been a particular decline in the number of applicants with practical or 'hands on' skills, which are highly valued by employers. This may have been due to health and safety regulations limiting the scope of provision. There is a need for some form of vocational element to be built into school level qualifications.



In response to national policy the new Diplomas in Engineering and Manufacturing will provide significant pockets of new provision for young people and potential new entrants to the Cogent sector, focusing on applied and work-related learning.

The range of opportunities available within some areas of education is narrow, with the decline in HNC and HND offerings being most noted by employers. Only a limited number of foundation degrees have been developed to fill this emerging gap in England, leading to an overall need to develop or redevelop qualifications reflecting industry needs.

The opposite picture has emerged for undergraduate opportunities in chemistry and related subjects (around 400 Bachelors degrees throughout the U.K.). A trend towards joint honours degrees has led to confusion among employers as to graduate skills and knowledge, with relevance to industry. There is no common industry standard of chemistry-related content recognised across the spectrum. The increase in the number of offerings has not been matched by an expansion in student numbers – fewer students (in relation to overall student numbers) are studying an expanded number of courses.

However, the same is not true of provision for *specialist* areas and a range of specialist industry-specific courses are provided by a number of CoVEs, private, work-based training providers and approved centres. Across the Midlands there are approximately six approved providers covering the Cogent sector (including the sign-making industry) and approximately twelve approved providers offering specialist polymer courses nationally.


There is a need to establish a common understanding on employer expectations, and to reflect this in vocational elements of further and higher education provision.

A range of vocational qualifications has been designed in conjunction with industry, based on National Occupational Standards. Uptake of these in some cases has been extremely low (less than 10 candidates per year), raising questions concerning employer buy-in. This is supported by West Midlands LSC data which suggests that only 400 enrolments were registered for vocational qualifications in the Cogent sector during the period 2003 to 2006. In the longer term, this will affect Cogent's ability to update and refresh the related standards, and to ensure that the qualifications remain in the national frameworks.

The alternative accessible qualifications (such as HNCs) are reported to be valued by industry, however this is not reflected in uptake (for example, entry to HNCs in Chemical, Process and Energy Engineering has declined from an already low level of 15 per annum in 2002/03 to 10 in 2004/05).

Foundation degrees, which can be a factor in decline of HNC and HND numbers, have not been accessed as a method of up-skilling employees – only three industry-specific foundation degrees have been developed, with entry numbers similar to those of the HNCs and HNDs. The foundation degrees delivered out with industry (i.e. in colleges, with work-related element such as Fd Sc Chemistry) have higher entry rates, but also have high attrition levels.

Employer engagement in the design and delivery of foundation degrees presents an opportunity to have in place qualifications reflecting the reported need to up-skill employees to meet



advances in technology. This is equally true of vocational qualifications, and the standards on which they are based.

Development and progression within the industries is also achieved through employers accessing private training provision. Employers value this type of provision because of the flexibility in delivery methods and their ability to tailor courses to suit their exact needs. However, there are large number of providers and courses on offer for each of the industries. This can make the selection of appropriate training difficult as there are currently no quality standards attached to this type of provision. There is also no system currently in place that standardises achievement of a private training course across the sector, in terms of the ability and competence of the employee following completion.

Further details and an in depth analysis of current provision is available in our stage 2 SSA report, An Assessment of Current Provision in the Cogent Sector.

### **3.6 Identified gaps – meeting future needs**

Through the SSA process, Cogent has identified a series of gaps affecting the sector. To meet future challenges and future needs, a number of issues will need to be addressed, relating to all occupations in the workforce. A breakdown of identified gaps by industry is provided below.

Chemicals (including manufacturing of pharmaceuticals):

- There is an insufficient intake of apprentices throughout the industry to meet replacement demand
- There are no clear routes and pathways for continuing development and no recognised standard across the sector

- There is no common approach to demonstration of competence of the directly employed workforce
- There are no common standards applied to recognise skills and knowledge of the contractor workforce.

Nuclear:


- Apprentices need to be expanded in both content and number to reflect need
- Skills related to project management are insufficient to meet employer need
- There is no common approach to demonstration of competence of the directly employed workforce
- There is no existing contractor passport scheme accepted by industry
- Careers in the industry are not understood and the industry does not attract a broad spectrum of applications for careers in the industry.

Petroleum:

- There is no defined programme for the upskilling of those currently employed in operator/technician roles
- There is no common approach to demonstration of competence of the directly employed workforce
- Careers in the industry are not understood and the industry does not attract a broad spectrum of applications for careers in the industry.

Polymers:


- Careers in the industry are not understood and the industry does not attract a broad spectrum of applications for careers in the industry
- There is no defined programme for the upskilling of those currently employed in operator/technician roles

- 
- Business management improvement is key to the business transition and growth of the sector but there is no recognised provision directed at the polymers industry.

#### Oil and Gas:

- Contractors report no issue with attraction but there is an issue with the technical skills of those people trying to enter the industry
- There is no singular industry scheme for upskilling workers from other industries yet there are many successful examples of company specific schemes
- There is a clear need for a comprehensive industry wide supervisory and leadership training and development programme
- The global nature of the industry means that skilled workers frequently move out of the UK basin and transfer to international operators. This creates a constant backfill challenge.

Addressing these gaps would enable the industries to achieve their aims of expanding the customer base and product portfolio, enhancing international competitiveness, improving business and manufacturing processes (e.g. lean manufacturing) and developing domestic strengths into commercial opportunities – developing business acumen skill and links between research spin out companies and industry. Cogent has now developed a suit of proposals to address these gaps, which are set out in the next section of this report.



## 4. Action Plans - filling the gaps

### The Big Ticket Items

The extensive research carried out throughout the Sector Skills Agreement development process raised a number of issues of concern to employers – these issues were derived directly from interviews and group meetings, and existing available research. These were then represented to the wider employer population to test both their veracity and overall importance. This was coupled with outline action plans to address specific issues. Each of the issues has been categorised under one of four main headings:

- Innovation and business improvement techniques
- Change and project management
- Health and safety
- Management and leadership.

The SSA has also confirmed that with an ageing workforce demand for new recruits during the next ten years will be high, and employers will need to look beyond the traditional pool of candidates to find the talented people they need. The following Big Ticket items have been developed in conjunction with Cogent sector employers and have received the approval of our four strategic councils:

- Chemicals and Pharmaceuticals Advisory Council
- Polymer Leadership Council
- Nuclear Advisory Council
- Downstream Oil Distribution Forum


### 4.1 Cogent Career Pathways

Cogent has developed a one-stop-shop web based careers information advice and guidance centre which holds information on career progression, jobs and training. We have defined the career pathways and key roles, as well as the skills standard for each of the roles. We will identify the provision to achieve the standards as well as the providers capable of delivering this training. The Careers Pathway model was presented to Shropshire-based careers professional in March 2007. Cogent Careers Pathways can be accessed through: <http://www.cogent-careers.com/>

In addition to the Cogent Career Pathway proposal, the Offshore Petroleum Industry Training Organisation (OPITO) will carry out actions specific to the oil and gas industry. The oil and gas industry portal [www.oilandgas4u.com](http://www.oilandgas4u.com) (designed and maintained by OPITO) includes a degree match facility linking degrees to job roles and an online testing tool which links existing skills sets to job roles and employers currently recruiting. The Opportunities page of the portal is aimed at all ages.

### 4.2 Cogent Apprentices

Cogent has developed an apprenticeship framework to meet the needs of the operating companies in our sector, with the flexibility to meet the specific needs of individual industries. The framework addresses the unique process operations and process management in our high hazard industries and is



therefore differentiated from other available frameworks. The framework has been devised as a programme-led model.

The framework was developed in consultation with employers in the West Midlands along with the regional provider network. The framework has been submitted to and approved by the Apprenticeship Approval Group. We are now in the process of developing appropriate regional and industry approaches to increase the supply of future technicians to our industries through this new framework. The provision of apprenticeships needs to be increased in order to meet the Leitch ambition and therefore the Apprentice programme remains one of Cogent's priority solutions for the West Midlands.

In addition to the Cogent Apprentice framework proposal, OPITO has developed the oil and gas industry Upstream Modern Apprentice Scheme and framework. This scheme and framework is managed on behalf of employers by OPITO and continues to effectively deliver the skills, knowledge and understanding needed in the offshore workplace. The scheme is in its sixth year and has approximately 750 registered trainees. Industry investment in the scheme exceeds £100m. Completion rates are high (96%), making the scheme an exemplar in the UK when measured against other Apprenticeship schemes.

#### **4.3 Competence Assurance**

It is clear that companies manage competence in a variety of ways with varying degrees of success. In response to this Cogent has developed a universal competence assurance framework which will enable companies to assess their management of risk, benchmark competence standards and promote best practice. The tool has been tested with a


regional cluster of employers. The Competence Assurance benchmarking tool can be accessed at: <http://www.cogent-competence.com/>

In addition to the Cogent Competence Assurance proposal and specific to the oil and gas industry, OPITO will maintain and continually develop its existing Competence Management System (CMS) guidelines and approval system. The OPITO approval system enables employers to independently assess their training systems, processes and procedures against a framework of good practice as agreed by industry. OPITO undertakes these assessments on behalf of employers. Used extensively in the UK, it is also widely implemented globally in line with the global nature of the oil and gas industry

#### **4.4 Cogent Industry Passports**

The skills base of the contractor workforce was identified as a concern through the SSA. We will introduce contractor passport schemes for the industries within the sector as required. The National Skills Academy for Nuclear will develop the first Passport with a focus on the nuclear industry, where a particular need has been expressed. We will build on what already exists by developing industry specific material such as Nuclear Site Induction. This programme will share the Upskill IT Platform.

In addition to the Cogent Passport proposal and specific to the oil and gas Industry, OPITO will continue to manage the VANTAGE Passport Scheme on behalf of the oil and gas industry. This is a comprehensive passport system which has been in operation for five years and receives significant investment from employers (in excess of £7m). The scheme is applied to every UK offshore oil and gas worker and is also



used extensively across the globe in various operating regions.

#### **4.5 Upskill**

This focuses on addressing the skills gaps identified through the SSA. Through the careers pathways project, we are developing the skills standard for the key roles. Upskill will then provide the mechanism to take individuals from their current skill level to the industry standard, via a modular approach. This will require the accreditation of existing skills and then the modular accreditation of new skills as they arise. A new platform will be developed to enable progression and CPD. Cogent recently issued an invitation to tender to develop this platform and is currently considering five responses.

On a regional level, Cogent is currently undertaking pilot activity with Skills Brokers in the West Midlands to support the regional development of the Upskill programme. Over the next two years Cogent estimates that between 300 and 400 sector employees will undertake training and gain qualifications through the Train to Gain initiative. This work is being led by the Manufacturing Alliance of SSCs, of which Cogent is a member. Cogent will continue to promote and take direct intervention with partners to encourage sector employers to participate in and benefit from Train to Gain. We will also work with partners to align regional sector provision with the outcomes of the SSA and Skill Balance Sheet work.

In addition to the Cogent Upskill proposal and specific to the oil and gas Industry, OPITO will continue with its Workforce

Capacity and Capability analysis to ensure it understands the key issues and takes collaborative action to address them e.g. The industry will continue to develop and promote the industry Skilled Entrant Scheme under its Accelerated Technician Transfer - Re Engineer programme.

Of the above five actions, three have strategic importance for the Cogent sector in the region and are being put forward as priorities for the action planning phase. A short survey of 19 employers (covering over 3,100 employees) located across the Midlands was undertaken by Cogent during 2007. An analysis of responses has identified Upskill, Apprenticeships and Career Pathways as priorities for Cogent in the West Midlands.

Furthermore, Cogent will continue to work with the National Skills Academy for Process Industries (NSAPI) to ensure that the regional action plan is aligned to the NSAPI Business Plan. Cogent will continue to support NSAPI on the development of the Academy's delivery network and the development of regional solutions to regional skills needs across the West Midlands.

## 5. Reaching Agreement in the West Midlands

The table below illustrates the proposed strategic actions being developed by Cogent. The table also provides evidence of employer commitment to these actions and shows how the actions relate to the strategic policies and priorities of the key stakeholders in the West Midlands.

Cogent Big Ticket Items	Proposed Activities	Evidence of Employer Commitment (UK-wide)	Stakeholder	Mapping to Policies and Priorities
<b>Cogent Career Pathways</b>				
<p>A web-based 'one-stop-shop' for careers in Cogent sector industries aimed at young people and career changers alike. It will develop future careers information system that will give clear information about the range of career opportunities available in Cogent sector industries and the requisite entry qualifications required. Diversity and equal opportunities issues will also be positively addressed</p>	<ul style="list-style-type: none"> <li>Carry out a review of what is currently in place</li> <li>Develop an interactive web-based resource</li> <li>Populate resource with what is currently in place to recognise qualifications most valued by industry</li> <li>Development of a career route map and qualification requirements</li> <li>Design and develop a progression framework populated with accredited qualifications</li> <li>Roll out the tailored BIT training and qualifications to promote best practice</li> <li>Development and setting of benchmark for job roles (i.e. Gold Standard)</li> </ul>	<p>Pathways is a number one priority for both Nuclear and Chemical employers:</p> <ul style="list-style-type: none"> <li>89.6% <b>Nuclear</b> employers support this proposal.</li> <li>85.7% of <b>Chemical and Pharmaceutical</b> employers support this proposal</li> </ul> <p>68.8% of <b>Polymers</b> support the proposal with a significant 96.9% of employers supporting the need for more clear information.</p> <ul style="list-style-type: none"> <li>Linpac Plastics "A clear career pathway will help attract more young people into the polymer sector)</li> </ul> <p>Although a lower priority for <b>Petroleum</b> employers 64.3% employers are still in support of the Cogent Career Pathways project.</p>	Regional Development Agency	<p><b>RES 2004-2010</b></p> <ul style="list-style-type: none"> <li>Promote diversity initiatives to employers and communities to improve access to employment opportunities for all – including disadvantaged groups</li> <li>Raise awareness of and aspiration to high value employment opportunities via the development of specific advice, guidance and labour market information – focusing on action to raise aspirations and engagement in training</li> </ul>
			Regional Skills Partnership	<p><b>Regional Skills Action Plan 2006</b></p> <ul style="list-style-type: none"> <li>Provide easy-to-digest information to learners and careers advisers on the changing needs of the labour market – enabling students, people in and out of work to make informed career and training choices</li> </ul>
			Learning and Skills Council	<p><b>Regional Commissioning Plan 2007-8</b></p> <ul style="list-style-type: none"> <li>Developing and delivering an Integrated Employment and Skills System</li> </ul>
			JobCentre Plus	<p><b>JobCentre Plus Vision 2003-7</b></p> <ul style="list-style-type: none"> <li>Improve understanding of employer needs, increasing our ability to match jobs and people</li> <li>Develop new and improved partnerships to share knowledge and deliver comprehensive recruitment solutions</li> <li>Deliver improved services to employers, making most of new technology and strategic partnerships to offer a wide choice of how recruitment needs are met</li> </ul>



Cogent Apprentices				
<p>A Cogent apprenticeship framework setting a clear and understood standard for our industries with an appropriate balance of generic and industry specific skills. Develop a programme led apprenticeship alongside existing employer-led schemes</p>	<ul style="list-style-type: none"> <li>Develop a programme led apprenticeship model and develop pathways from this into industry led apprenticeships</li> <li>Develop a model for adult entry to frameworks</li> </ul>	<p><b>Petroleum</b> employers ranked Apprenticeships as the 2<sup>nd</sup> highest priority. 92.9% of Petroleum employers support the action.</p> <p><b>Polymer</b> employers also ranked Apprenticeships as the 2<sup>nd</sup> highest priority with 68.8% of employers supporting the action.</p> <ul style="list-style-type: none"> <li>Geberit – ‘We need Apprenticeship programmes that are directly relevant to the polymer industry’</li> </ul> <p><b>Nuclear and Petroleum</b> employers ranked the proposal 3<sup>rd</sup>. 77.1% and 69.1% of employers supporting the idea respectively.</p> <ul style="list-style-type: none"> <li>British Energy asked Cogent to review its apprenticeship schemes with the aim of developing a unified apprentice scheme, responding to international nuclear power training standards. That could become the kernel of a nuclear power apprenticeship.</li> </ul> <p>Employer Financial commitment to the NSAPI is substantial.</p>	<p>Regional Development Agency</p>	<p><b><u>RES 2004-2010</u></b></p> <ul style="list-style-type: none"> <li>Developing workforce skills through increased access to apprenticeships, improving the skills levels of both young people and adults</li> <li>Promoting ambition and enthusiasm through new and more creative approaches to learning and skills development</li> <li>Improve employment access routes, including mature apprenticeships – responding to identified gaps and issues</li> </ul>
			<p>Regional Skills Partnership</p>	<p><b><u>Regional Skills Action Plan 2006</u></b></p> <ul style="list-style-type: none"> <li>Work with employers to ensure they can attract and retain people with higher level skills</li> <li>Ensure that training provision responds to employers needs</li> <li>Increase opportunities for people to improve skills in the workplace</li> </ul>
			<p>Learning and Skills Council</p>	<p><b><u>Regional Commissioning Plan 2007-8</u></b></p> <ul style="list-style-type: none"> <li>Closing the gap on the national benchmark for adults qualified to level 2 and improve success rate of level 2 qualifications</li> <li>Develop high level skills within the workforce to meet the regional productivity challenge</li> <li>Shifting the mix and balance of provision to better meet the needs of employers</li> <li>Maintain provision for apprenticeships in the Manufacturing and Engineering sector</li> <li>Level 2 provision to reflect specific demand for qualifications by sectors within Manufacturing and Engineering, for example polymer technicians in the Cogent sector</li> </ul>



Competence Assurance : <i>making it safe</i>				
<p>A competence assurance framework that enables companies to assess their systems and procedures against an industry standard and to assess and understand their level of competence. This will be approved by HSE and industry as <b>the</b> standard. The product will be available at different levels with a web-based initial assessment, with potential company specific follow-up and assessment against the standard with accreditation/certification. The competence assurance framework will be developed for Cogent's process industries in the first instance</p>	<ul style="list-style-type: none"> <li>Develop a common template model for use by all. The template will be web-based to allow easy self-assessment. There will also be provision of individual follow-up evaluation</li> <li>There will be an extension of the model of health&amp; safety induction for tanker drivers standard, to all other staff involved in distribution of petroleum/hazardous goods.</li> </ul>	<p>Competence assurance is particularly relevant for the <b>Petroleum</b> and <b>Chemicals</b> industry and support a common competence assurance framework is high with 57.1% and 72.7% of employers respectively supporting the action.</p> <p>Competence assurance is also important within the <b>Nuclear</b> industry and is gaining employer commitment:            'The NDA is gaining adherence to a single job role categorisation for the whole of their 20+ sites, employing directly and indirectly some 12000 people, expected to rise to 18000 within 10 years. This will lead to common job role descriptions, a CF and common training requirements.'</p>	Regional Development Agency	<p><b><u>RES 2004-2010</u></b></p> <ul style="list-style-type: none"> <li>Improving enterprise performance by improving the competitiveness of the existing enterprise base</li> <li>Ensuring that existing enterprises access the skills, finance , technology and support required to increase their productivity and competitiveness</li> </ul>
			Regional Skills Partnership	<p><b><u>Regional Skills Action Plan 2006</u></b></p> <ul style="list-style-type: none"> <li>Provide employers with comprehensive business and skills support focused on their needs</li> </ul>



<b>Passports</b>				
<p>An industry standard passport scheme rolled out across the industry, owned and managed by Cogent. The passport will address the transient contractor workforce and induction level industry specific skills.</p>	<ul style="list-style-type: none"> <li>Development of a passport system acceptable to employers covering common induction and areas of commonality</li> <li>Establishment of a platform to monitor and maintain, with roll out of system to pilot group prior to full implementation</li> </ul>	<p>The action is highly supported by employers in the <b>Nuclear</b> industry with 85.4% committing to the development of a passport scheme for the mobile workforce:</p> <ul style="list-style-type: none"> <li>'At least 3 of the six major nuclear employers are working on multisite passports for nuclear induction. The NDA, which employs 2 out of the 3 under contract, is very keen to see a cross-industry scheme. Those 3 employers themselves have said that they will cooperate on an industry wide scheme.'</li> </ul> <p><b>Chemicals</b> employers have demonstrated substantial commitment to the Passports project with 58.9% showing their support.</p> <p>The <b>Petroleum</b> industry is also in support of a Passport scheme with half of the employers supporting the action.</p>	<p>Regional Development Agency</p>	<p><b>RES 2004-2010</b></p> <ul style="list-style-type: none"> <li>Improving enterprise performance by improving the competitiveness of the existing enterprise base</li> <li>Ensuring that existing enterprises access the skills, finance, technology and support required to increase their productivity and competitiveness</li> </ul>



Upskill				
<p>A clearly defined product and methodology that allows existing employees' skills to be easily recognised, and skills gaps to be addressed, in order to allow accreditation against national standards. The scheme will be managed nationally by Cogent and offered to our employers providing a simple route and access to funding for achievement of N/SVQ's or equivalent qualifications. This should include level 2, 3 and 4 with simple and well defined progression routes to promote and encourage upskilling and continuous learning.</p>	<p>Develop an APL model for entry qualifications matching "similar" relevant qualifications.</p> <p>Development of an industry approved and supported technician programme leading to an accredited qualification</p> <p>Development of a modular route leading to a foundation degree</p>	<p>An Upskill programme is important for all industries and has gained strong support from employers across the Cogent footprint:</p> <p><b>Polymer</b> employers believe this is the number 1 priority in their industry with 81.3% employers showing their support:</p> <ul style="list-style-type: none"> <li>• Polypipe - "This is the No1 important item for our industry" Ian Tanser Group Operations Director</li> <li>• "We just cannot get skilled technicians in this area, so have to up-skill our own people" Jim Fletcher Managing Director Marshall Tufflex</li> <li>• "Skilled and qualified technicians are the key to making a continuous improvement programme live and be sustainable" Chris Horton Group Operations Director Linpac Plastics.</li> </ul> <p><b>Petroleum</b> employers are committed to the upskilling action especially with regards to the technological advances within the industry (78.6% of employers)</p> <p><b>Nuclear and Chemical and Pharmaceutical</b> employers have demonstrated huge commitment to the upskill agenda. 81.3% and 80.4% respectively supporting the action.</p> <ul style="list-style-type: none"> <li>• Endorsement from the regional employer Executive Forum</li> </ul>	<p>Regional Development Agency</p>	<p><b><u>RES 2004-2010</u></b></p> <ul style="list-style-type: none"> <li>• Developing workforce skills</li> <li>• Promoting ambition and enthusiasm through new and more creative approaches to learning and skills development</li> <li>• Expanding higher level skills</li> <li>• Encouraging the development and delivery of Foundation Degrees – as a route to higher qualifications for the workforce</li> </ul>
	<p>Regional Skills Partnership</p>	<p><b><u>Regional Skills Action Plan 2006</u></b></p> <ul style="list-style-type: none"> <li>• Work with employers to ensure they can attract and retain people with higher level skills</li> <li>• Ensure that training provision responds to employers needs</li> <li>• Increase opportunities for people to improve skills in the workplace</li> <li>• Increase the capacity and quality of training providers to deliver the skills employers needs</li> </ul>		
	<p>Learning and Skills Council</p>	<p><b><u>Regional Commissioning Plan 2007-8</u></b></p> <ul style="list-style-type: none"> <li>• Increase provision for higher level skills in the area of skills for technicians, technical staff and supervisory staff</li> <li>• Encourage and enable progression from level 2 to 3 and from level 3 to 4 in all sectors</li> </ul>		



		and Networks within the <b>Polymer</b> industry. Primary outcome from the regional SNA and specific actions feature in the Forum/Network plans going forward.		
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Cross –Cutting Themes				
<i>Management &amp; Leadership</i>	Development of bespoke modular action learning based on industry best practice, utilising regionally clustered groups of employers, creating via these clusters an innovation culture through excellence in management and leadership		Regional Development Agency	<u><b>RES 2004-2010</b></u> <ul style="list-style-type: none"> <li>• Improve leadership and management skills and develop networks where action learning and mentoring can underpin skills development</li> <li>• Increase the number of managers with business management training and qualifications</li> <li>• Increase the participation of managers in nationally recognised skills development programmes leading to improved products and services</li> </ul>
			Regional Skills Partnership	<u><b>Regional Skills Action Plan 2006</b></u> <ul style="list-style-type: none"> <li>• Enable employers to develop the leadership and management skills they need to produce higher value-added products and services</li> </ul>
			Learning and Skills Council	<u><b>Regional Commissioning Plan 2007-8</b></u> <ul style="list-style-type: none"> <li>• Encourage recruitment of learners of BIT through engagement with employers in the Manufacturing and Engineering sector</li> <li>• Develop adequate provider capability and capacity for the delivery of BIT at levels 2 and 3 through Train 2 Gain</li> <li>• Increase provision for higher level skills in the area of management and leadership</li> </ul>
<i>Innovation</i>	Development of sector specific centres of excellence linking material research, design and process technology		Regional Development Agency	<u><b>RES 2004-2010</b></u> <ul style="list-style-type: none"> <li>• Develop an enterprise culture and improve links between education institutions and business</li> <li>• Developing a knowledge economy to support a strong, demand-led innovation system that encourages change and reduces barriers to innovation</li> </ul>



			Regional Skills Partnership	<b><u>Regional Skills Action Plan 2006</u></b> <ul style="list-style-type: none"><li>• Enable employers to develop the entrepreneurial skills they need to produce higher value-added products and services</li></ul>
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### The way forward

Cogent is developing an action plan for the West Midlands with key partners such as the LSC and will continue to work with regional employers, providers and stakeholders to progress our Big Ticket items. The action plan will provide a coordinated approach to delivery for partners working towards agreed priorities. Cogent will also utilise the RSP as a means to drive the SSA forward in the region. Cogent looks forward to continuing to work with partners in the West Midlands to ensure the SSA action plan is driven forward to meet the key skills challenges facing our employers in the region.

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## 6. Appendix

### COGENT SIC CODES

Division (2digit)	Class (4 digit)	Description
11		<b>Extraction of Crude Petroleum and Natural Gas; Service Activities Incidental to Oil and Gas Extraction Excluding Surveying</b>
	11.10	Extraction of crude petroleum and natural gas
	11.20	Service activities incidental to oil and gas extraction excluding surveying
23		<b>Manufacture of Coke, Refined Petroleum Products and Nuclear Fuel</b>
	23.10	Manufacture of coke oven products
	23.20	Manufacture of refined petroleum products
	23.30	Processing of nuclear fuel
24		<b>Manufacture of Chemicals and Chemical Products</b>
		<b>Manufacture of basic chemicals</b>
	24.11	Manufacture of industrial gases
	24.12	Manufacture of dyes and pigments
	24.13	Manufacture of other inorganic basic chemicals
	24.14	Manufacture of other organic basic chemicals
	24.15	Manufacture of fertilisers and nitrogen compounds
	24.16	Manufacture of plastics in primary forms
	24.17	Manufacture of synthetic rubber in primary forms
		<b>Manufacture of pesticides and other agro-chemical products</b>
	24.20	Manufacture of pesticides and other agro-chemical products
		<b>Manufacture of pharmaceuticals, medicinal chemicals and botanical products</b>
	24.41	Manufacture of basic pharmaceutical products
	24.42	Manufacture of pharmaceutical preparations
		<b>Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations</b>
	24.51	Manufacture of soap and detergents, cleaning and polishing preparations
	24.52	Manufacture of perfumes and toilet preparations
		<b>Manufacture of other chemical products</b>
	24.61	Manufacture of explosives
	24.62	Manufacture of glues and gelatine
	24.63	Manufacture of essential oils
	24.65	Manufacture of prepared unrecorded media
	24.66	Manufacture of other chemical products not elsewhere classified
25		<b>Manufacture of Rubber and Plastic Products</b>
		<b>Manufacture of rubber products</b>
	25.13	Manufacture of other rubber products
		<b>Manufacture of plastic products</b>
	25.21	Manufacture of plastic plates, sheets, tubes and profiles
	25.22	Manufacture of plastic packing goods
	25.23	Manufacture of builders ware of plastic
	25.24	Manufacture of other plastic products
50		<b>Sale, Maintenance And Repair Of Motor Vehicles And Motorcycles; Retail Sale Of Automotive Fuel</b>
	50.50	Retail sale of automotive fuel

**Provision within the Cogent sector**

**Source: Cogent Draft Sector Qualification Strategy, examples of provision within the Cogent sector**

Type	Level		Title
	NQF/FHEQ	SCQF	
GCSE	1 or 2	N/A	Science Maths
Standard Grade	N/A	Access 3/ Level 4/Level 5	Science Maths Technological Studies
NVQ/SVQ	1	4	Processing Operation: Hydrocarbons Chemical, Pharmaceutical and Petro-Chemical Manufacture Polymer Processing and Related Operations
VRQ	1	N/A	Certificate in Laboratory Technical Skills
NQ Units	N/A	1-5	Introduction to Quality Polymer Processes Introduction to oilfield production Safe working practices in hazardous environments Operational Procedures: Basic Processing Repairing and Maintaining Plant and Equipment
NVQ/SVQ	2	5	Process Engineering Maintenance Chemical, Pharmaceutical and Petro-Chemical Manufacture Safety Services Oil and Gas Extraction Well Services Bulk Liquid Warehousing Nuclear Technology Decommissioning
VRQ	2	N/A	Certificate in Process Technology Certificate in Self-Adhesive Signmaking Certificate in Petrol Forecourt Safety
National Course	N/A	5	Technological Studies
Apprenticeship	2	N/A	Process Operations Process Engineering Maintenance Laboratory Operations Signmaking Polymer Processing
NVQ/SVQ	3		Process Engineering Maintenance Chemical, Pharmaceutical and Petro-Chemical Manufacture Refinery Field Operations Polymer Processing and Related Operations Business Improvement Techniques
VRQ	3	N/A	BTEC National Cert/Diploma in Polymer Processing and Materials Technology Certificate in Signmaking Certificate in Process Technology
Advanced Apprenticeship	3	N/A	Process Operations Process Engineering Maintenance

Type	Level		Title
	NQF/FHEQ	SCQF	
			Laboratory Operations Refinery Field Operation Signmaking Polymer Processing
Modern Apprenticeship	N/A	6	Oil and Gas Technician Process Operations Process Engineering Maintenance Laboratory Operations Refinery Field Operation Signmaking Polymer Processing
National Course	N/A	Level 6	Technological Studies
Scottish Group Award	N/A	Level 6	Engineering: Industrial Plant Support
National Course	N/A	Level 7	Technological Studies
Higher National Certificate	4	N/A	Chemical Process Engineering Polymer Technology Applied Chemistry
Higher National Diploma	5	N/A	Polymer Science and Engineering Chemical Engineering Pharmaceutical Chemistry
Higher National Certificate	N/A	7	Petroleum Engineering Nuclear Decommissioning Process Control
Higher National Diploma	N/A	8	Chemical and Process Technology Polymer Technology Petroleum Engineering
Foundation Degree	4-5	N/A	Chemical Technology Nuclear Decommissioning Polymer Technology
Bachelor's Degree	I/H	9/10	Chemistry Polymer Technology Mechanical and Offshore Engineering Petroleum Engineering
Master's Degree	M	11	Chemistry Chemical Engineering Polymer Science and Engineering
Doctorate	D	12	Chemistry

## A sample of non-framework provision in England and Wales

Course Title	
Chemical	
	Chemical Application Engineering Project Management Process Contracts Chemistry for Chemical Engineers Organic Synthesis Chemical Reactions
Nuclear	
	Radiation Safety practice Basic Radiological Protection Nuclear Engineering Atomic Structure Neutron Kinetics Reactor Technology
Petroleum	
	Petroleum Engineering Petrochemical Engineering Petroleum Economics Liquefied Petroleum Gas Gasoline Technology Fundamentals of Petroleum Refining
Polymers	
	Polymers Injection Moulding Advanced Plastics Product Design Polymer Technology (Introduction) Rubber Compound Design Mould Tool Maintenance Introduction to Polymer Nanotechnology

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