



Setting industry skills standards



An annual report
for the chemical industry

2011

Foreword



With process industry organisations facing ever greater global challenges, there has never been a greater need for a highly skilled workforce. This Annual Report sets out an overview of our activities on behalf of the chemical industries to support them in securing such skills.

Since we were granted our original licence six years ago, our key strategic driver, working closely with chemical industry employers, has been the need to address the skills shortages and gaps in the sector. We are responding to employer demand for programmes that meet both their immediate and longer term business needs. We know they need them to be flexible, relevant and cost-effective.

To support employers and providers, we're developing employer-endorsed standards and qualifications – including Apprenticeship frameworks and foundation degrees.

Higher level skills remain firmly in view. Our work with HE places an emphasis on the practical – with employers shaping future-focused programmes that are work-based and flexible.

The companies that make up the process sector are at the heart of economic recovery. Our partner, the National Skills Academy for the Process Industries, will continue to ensure high quality work-based learning for these industries, through their accredited provider network.

Chemical industry products provide the building blocks for products that meet society's needs, and are part of a vast span of supply chains. But the critical role played by the industry will only be sustained if a skilled, technical workforce of sufficient strength and range is available to it.

Thanks go to all our partners in the industry, for their continued input to this agenda. To our employer-led Board which directs our longer term strategy; to our Chemical Advisory Council which defines our programmes of work and to all those who take part in our extensive consultations and inform our Labour Market Information.

We look forward to our continued partnership with you, to bring new talent into the sector, to upskill and re-skill the people within the industry and to ensure it has the skills it needs to be competitive, safe and sustainable.

Joanna Woolf,
CEO



Chemical industry strategic skills action plan

The Chemical Industry Strategic Action Plan has been developed with employers. It takes account of the previous work conducted in support of Cogent's Strategic Sector Skills Agreement, as well as the requirements for ensuring skills development from entry level through to higher level skills.

Through the Strategic Action Plan Cogent is developing the products, services and initiatives for the sector, which are then delivered through the National Skills Academy Process Industries.

Working with the industry ensures that the most appropriate qualifications, standards, training programmes and other initiatives are in place and are accessible and meet the real needs of the industry.

Embedding competence

Cogent continues to make sure that the qualifications on the new Qualifications and Credit Framework (QCF) are far more relevant to employers and learners.

The QCF is the new, more user friendly framework for accrediting qualifications. So far we've been involved in the development of over 60 new qualifications which have been accredited to the QCF. Only qualifications on the QCF are eligible for funding.

Cogent is also promoting its 13 brand new qualifications in Resource Efficiency, developed in collaboration with Edexcel. These new awards are generating much interest and cover topics including water, waste, energy and transport.

Chemical Industry Qualifications

QCF

The following qualifications cover technical competencies required to do the job and have been developed to provide evidence of working to the Gold Standard:

- Certificate in Operations and Technical Support in the Process Industries L2
- Diploma in Operations and Technical Support in the Process Industries L3

There are also a series of smaller, more specialist, qualifications, which offer building blocks towards the larger L2 and L3 qualifications:

- Certificate in Chemical and Pharmaceutical Based Process Operations L2/L3
- Certificate in Chemical and Pharmaceutical Based Process Maintenance L2

There are also a series of very specialist, small qualifications, covering very specific training needs:

- Award in Chemical and Pharmaceutical Based Process Support (Clean and Prepare Complex Items of Plant and Equipment) L2
- Award in Chemical and Pharmaceutical Based Process Support (Prepare Process Materials) L2
- Award in Chemical and Pharmaceutical Based Process Support (Sample and Test Materials) L2
- Award in Chemical and Pharmaceutical Based Process Support (Transfer Materials) L2

SVQs

- SVQ L2 in Processing Industries Operations (Process Operations)
- SVQ L3 in Processing Industries Operations (Controlling Process Operations)
- SVQ L4 in Processing Industries Operations (Technical Support)

Training Standards:

We have developed of a suite Training Standards to capture the significant amount of more informal learning which takes place. These are all set out on Cogent's Industry Training Framework (CITF) – a database tool for ensuring every aspect of what we do is kept up-to-date and is recorded in a vast library.

Process Safety Management:

Cogent and the NSA Process Industries are developing a new suite of Process Safety Management (PSM) standards for the sector, the first of which is a standard for Process Safety Leadership for Board and CEO level. These standards are in response to industry demand and to Health and Safety Executive (HSE) recognition that there is a gap in the market around process safety leadership. This project is led by a specialist industry-led Board which includes an expert panel of volunteers with the experience and very specific knowledge of process safety. Representatives from the UK Petroleum Industry Association (UKPIA), the Chemical Industries Association (CIA) and the Institute of Chemical Engineers (IChemE) are supporting the development of the new training standards. A new training course is currently being verified against the PSL Standard.

Guidelines for Competency Management Systems for COMAH sites:

We have developed these new guidelines for the downstream industries. They have been the subject of extensive consultation and designed with input from industry experts who have many years of experience working in refineries.

In the process sector, a good quality, effective competency management system is absolutely critical to ensuring a strong safety performance. The need for organisation-wide processes for both developing and monitoring the competence of staff is paramount within both the sector and its supply chain. These guidelines have been designed to ensure such processes leave no stone unturned, and that competency management is enshrined across the entire workforce. Analogous guidelines for chemical sites are currently being developed.

The benefits of an effective competency management system include:

- improved staff motivation and performance on the job
- an organisational framework for staff development
- reduction of incidents and accidents
- greater efficiency
- a common framework which reduces administration and duplication across the organisation

Qualifications Insight:

Cogent revealed the results of our Qualification Insight survey. The survey showed that the majority of employers surveyed (63%) use vocational qualifications to develop their staff. The majority of training providers (76%) offer vocational qualifications which Cogent is responsible for developing and maintaining.

Online Prospectus:

Cogent launched its new online Qualifications and Standards Prospectus (www.cogent-prospectus.com). This new site allows the user to find out about all the qualifications, Apprenticeships and training standards available across the Cogent science-using sector.





Assuring Skills - Gold Standard

The Gold Standard, Cogent’s Competency Framework for job roles in the process industries, continues to be taken up by a range of companies.

Employers say using the framework means they can be confident employees’ skills are being developed to an industry-endorsed standard. The framework covers a wide range of roles from Level 2 to professional status, across four areas of competence:

- Technical Competence
- Compliance
- Business Improvement
- Functional and Behavioural

The Gold Standard now covers production job roles from operator to professional status, and laboratory job roles, including quality assurance and technician roles.

Current Chemicals Industry Gold Standard job roles

A full list of all the process industry Gold Standards can be found at www.cogent-ssc.com/Gold_Standard/

Process Operator	Level 2
Process Technician	Level 3
1st Line Supervisor	Level 3+

Gold Standard for SMEs: this new project provides Cogent with the means to develop a tailored approach for SMEs. It will provide smaller companies with an online, streamlined way of assessing themselves against the standard and accessing skills solutions to meet their needs.

Process Manufacturing Industry Professional Gold Standard: this newly developed Gold Standard defines operational competence at a professional level, providing clear Continuing Professional Development (CPD) for new entrants, particularly graduates.

Expanding Sector coverage: driven by employer demand, Cogent is bidding to expand the Gold Standard to cover water treatment, explosives, industrial biotechnology and formulation.



“As a business we are always looking to ensure our personnel conduct their role to the highest standards, as such we measure our own training plans against the accepted industry best practises, the advent of the Gold Standard is particularly useful to ensure companies like ourselves work towards an agreed standard that has been developed by the sector for the sector.

We will continue to promote the excellent Gold Standard format and would hope to see the system become the standard benchmark profile used by all companies within our sector.”

The Gold Standard can be used as:

- An industry skills benchmark for world class performance
- An industry route for upskilling and re-skilling
- A tool to ensure investment in training meets business needs
- A route to accredit existing skills and identify gaps
- An indication of the behaviours that are valued, recognised and rewarded
- To underpin recruitment, appraisal and promotion activities

www.cogent-ssc.com/Gold_Standard

Using the Gold Standard: The National Skills Academy Process Industries' Skills Assurance process supports organisations to work towards the Gold Standard.

Skills Assurance benchmarks a company's skills and identifies training gaps using the framework. Undertaking Gold Standard benchmarking shows an organisation's commitment to world class skills. As recognition of this, companies can display their logo on Cogent's website Roll of Honour, use the Gold Standard logo on their stationery and receive a Gold Standard certificate.

www.cogent-ssc.com/Gold_Standard/Show-Your-Commitment/index.php

The screenshot shows the Cogent Gold Standard website. The header includes the Cogent logo and navigation links: Home, About, Publications, Research, Standards & Qualifications, Apprenticeships, Higher Education, Nuclear Dinner, Skills Support, Careers, Skills Match. The main heading is 'The Cogent Gold Standard - show your commitment' with a 'Sign up here' button. Below this is a 'Roll of Honour' section featuring logos for Pentagon, BCL, innospec, semcorp, and HUNTSMAN. A section titled 'Demonstrate commitment to world class skills to employees, customers and suppliers.' includes a 'Welcome: going for the Gold Standard' message and a list of bullet points: 'benchmark your workforce skills to the industry Gold Standard', 'identify skills gaps and opportunities for performance improvement', and 'gain confidence that training is fit-for-purpose'. A signature of Allan Leung, CEO of Pentagon Chemicals, is visible at the bottom of the page.

Progression in Science and Engineering

Work-based foundation degrees:

As part of the Working Higher Initiative Manchester Metropolitan University has developed and launched the Foundation Degree in Chemical Science (FdSc). The FdSc has been designed in collaboration with leading employers so that business improvement, knowledge and skills are quickly applied within the workplace.

Key features of the programmes include:

- Shaped by employers;
- Flexible delivery meaning minimal time away from the workplace;
- Integrates technical and work-based skills with academic knowledge;
- Relevant to business needs; and
- Modules include process safety; business improvement techniques; good manufacturing and laboratory practice; regulation and compliance, environment and sustainability and leadership and management.

The FdSc in Chemical Science is one of a range of Foundation Degrees developed as part of the Working Higher initiative.



Case Study - Going for Gold at Pentagon

Pentagon is a leading UK based chemical manufacturer of organic intermediates for use in the life science, petrochemical, and specialty chemicals markets. Pentagon is firmly committed to a culture of continuous improvement through training and development of its people.

- Pentagon worked with the National Skills Academy to identify areas where Business Improvement Teams could increase skill levels to achieve the Gold Standard.
- Process Operation Gold standards align with the competence framework currently in place at the Chemical Specialties site. The training plan is aligned to the Gold Standard.
- Pentagon's Fine Chemicals business has developed plans to align future training with the Gold Standard.
- The company will also use this opportunity for both Chemical Specialties and Fine Chemicals to work closer together. This has started with Business Improvement Techniques (BIT).

Business Benefits: The acquisition of skills has helped reduce waste and costs at the same time as improving safety and financial performance.

Ronnie Fisher, Specialties General Manager, Pentagon Chemical Specialties says: "the key learning points from this case study are that the best asset a company has is its people. This may be a cliché but it is particularly true; the company has been able to move forward in a difficult economic climate and is now in a much stronger, healthier position because of the actions which have taken place."

Building the Evidence

Cogent's research programme is providing the essential intelligence to inform all Cogent's activities.

The Cogent Skills Oracle: this is now in its second year, and went live in September 2010. This trend tracking survey was sent to 250 employers, including a small proportion of industrial biotechnology employers. The reports are on our website. www.cogent-ssc.com/research

Sector Skills Priorities

Our Sector Skills Audit research supports the following SSC-driven developments:

1. Development of standards and qualifications focused on science-using occupations (80% of the workforce).
2. Standards and qualifications are a priority to address skills gaps in the areas of technical and regulatory compliance.
3. Raising awareness of the general requirement for 120,000 new personnel in science-using occupations by 2017.
4. Industry consultation on analysis of demand for 61,000 new technician, process operative and skilled trade occupations.
5. Products for industry to assure skills standards of its supply chain linked to Passport development with the National Skills Academies.
7. Skills Gaps initiatives opposite HE to improve the employability of STEM graduates and greater interaction between HE and employers- e.g. placements.
8. Initiatives opposite FE and HE to develop accredited CPD provision for the workforce
9. Across the Sector, the public spotlight will remain firmly upon the management of health, safety and the environment, with employers recognising that compliance and competence have never been more important.

Delivering solutions

While Cogent is developing Strategic Skills Action plans, considering future business scenarios and the implications on skills, as well as setting standards and representing the employer voice, the National Skills Academy Process Industries undertakes employer engagement, and commissions and deliver skills solutions, products and services to meet their needs. It does this through its network of quality assured providers.

Value Chain



NSA Process Industries

National Skills Academy Process Industries

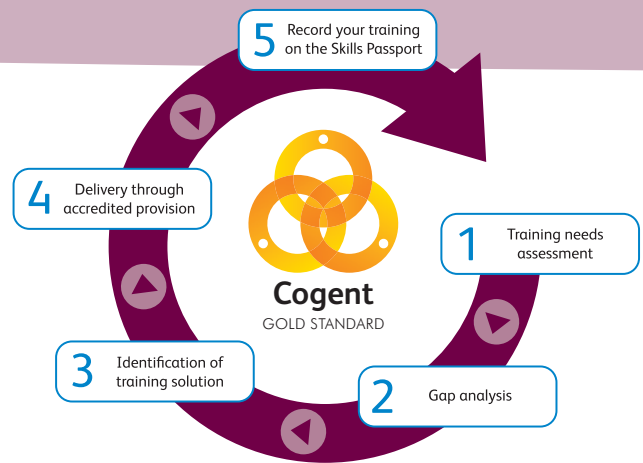
Skills Assurance: the Skills Academy has developed a new, cost effective business solution, providing employers with a full skills audit, identifying gaps and connecting employers with quality assured training providers. Skills Assurance is now one of its best selling products and is helping employers up and down the country to manage the competence of their employees.

Provider network: the Skills Academy has continued to attract new training providers to its network and the number now exceeds thirty. It is not just providers that benefit from the accreditation, employers using the services of an Academy Accredited Training Provider can be confident that the provider understands the needs of the Sector, and that the quality of its service has been given the Academy kite-mark.

Employer matching service: during the past year the Academy increased the number of training providers using its Business Referrals service. The service matches employers' skills needs with quality assured provision, and since its launch it has seen over £3m worth of training business referred to its accredited training provider network.

E-learning: the Academy launched its first e-learning package, making health and safety qualifications affordable and more easily accessible. Two Gold Standard qualifications are currently available; the NEBOSH Award in Health and Safety at Work and the NEBOSH Award in Safety, Health and Environment for the Process Industries.

Specialist network for process safety: in 2010 an industry led Process Safety Board was formed including the CIA and UKPIA to address the issue of Process Safety Management training and competence, following a series of major accidents. In response a new suite of Process Safety Management (PSM) standards is being developed.



Skills Passport: The Skills Passport provides employers and employees with a user-friendly, online record of their accredited and non-accredited training and qualifications, creating a full skills profile of the learner. The Skills Passport allows employers to benchmark skills to the Cogent Gold Standard and identifies skills gaps. It provides an online demonstration of workforce competence.



ASET (Assessment System for Employer Training)

Companies perform significant amounts of in-house training for which employees and employers currently receive no recognition. The Skills Academy offers an assessment scheme for in-house training, ASET, that accredits company training programmes to the Gold Standard.

Tees Valley Apprenticeship Programme:

The Tees Valley Apprenticeship Programme (TVAP), launched in July 2010 marked the start of a two year programme to support Apprentices in the Tees Valley. The programme has already made great progress, with over 220 individual applications having been approved. £1.8m was set aside for the project which will help re-employ Apprentices who have suffered redundancy in the Tees Valley.

Our partners

Employers and stakeholders inform our direction and programme of activity, with the Chemicals Advisory Council playing a key role.

With a number of our partners, collaborative working arrangements in the form of a Memorandum of Understanding (MOU) have been agreed.

Chemicals Advisory Council

Banner Chemicals
The Department for Business,
Innovation and Skills (BIS)
Chemical Industries Association - CIA
Chemistry Innovation
Contract Chemicals (Knowsley) Ltd
ECITB
Huntsman Polyurethanes
Innospec Speciality Chemicals
Lofthouse

Lotte Chemical UK Ltd
Lucite International Ltd
National Skills Academy Process Industries
NEPIC
PAA\WQ-SET
Pentagon Fine Chemicals Ltd
Perstorp Ltd
Polimeri Europa (UK) Ltd
Rockwood Additives Limited
Royal Society of Chemistry

RS Clare & Co Ltd
SABIC UK Petrochemicals
Sembcorp Utilities UK Ltd
Solutia UK Ltd
Solvay Chemicals Ltd
Tata Chemicals Europe
Unite the Union
Victrex Manufacturing Ltd

Cogent is also supported by:



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Steve Westhead, Solutia -
Cogent Board Member



Jenny Clucas, Cogent Strategy Director
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We also work with a number of key forums and are grateful for their contribution and support for our work on skills development across the chemicals sector.

The Chemical Industries Association
The Institution of Chemical Engineers
The Royal Society of Chemistry
Chemical Sciences Scotland
Chemicals Northwest
NEPIC
Yorkshire Chemical Focus
Humber Chemical Focus
Chemistry Innovation KTN

Cogent enquiries:

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National Skills Academy Process Industries

Tel: 0845 607 0140

Email: enquiries@process.nsacademy.co.uk

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www.cogent-ssc.com

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The strategic skills alliance for the Process Industries