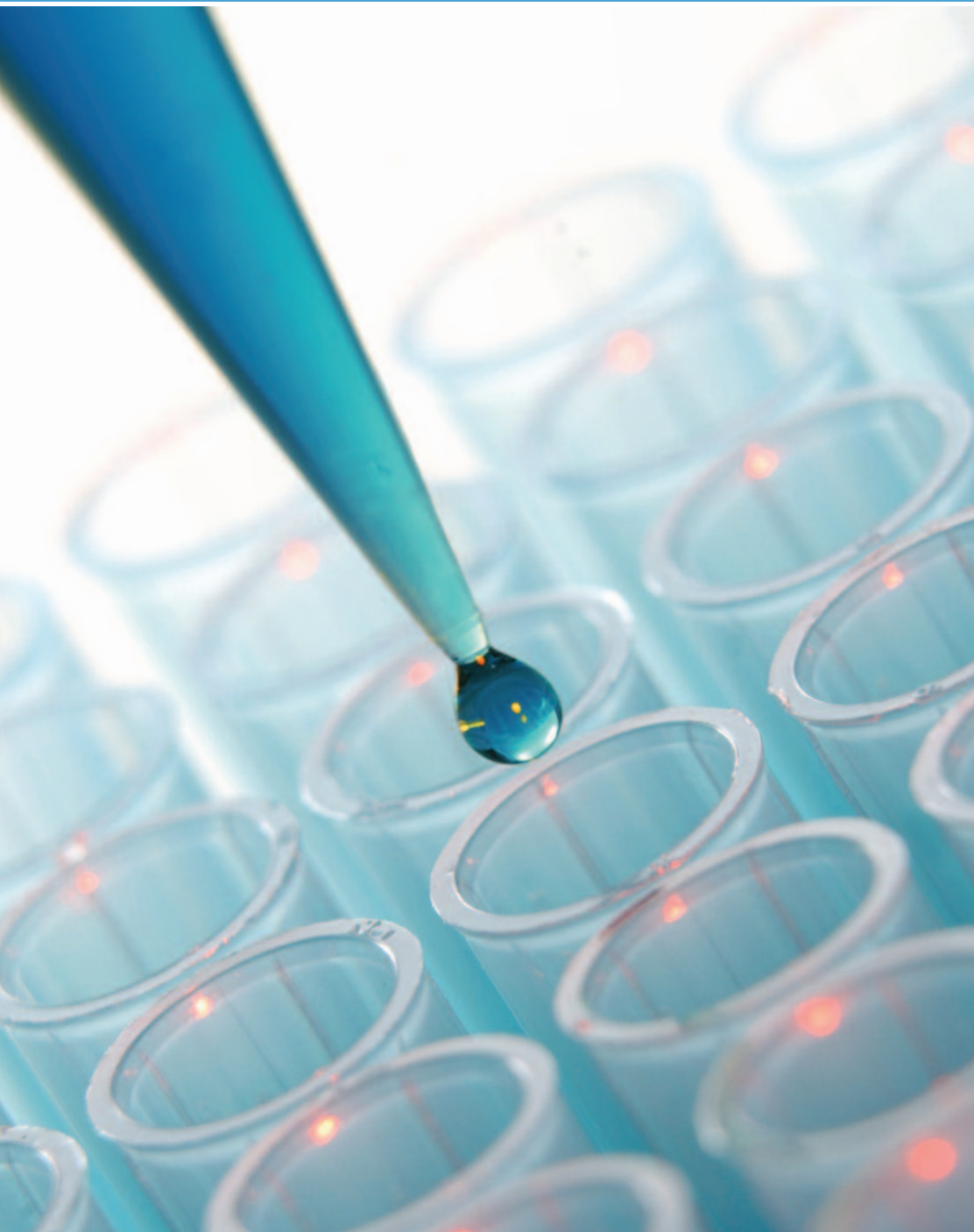


A skills report for the pharmaceuticals industry

PHARMACEUTICALS
INDUSTRY



*Skills for Science
Based Industries*

Foreword



This Skills Report for the pharmaceuticals industry sets out how we are working with pharmaceuticals employers to support workforce skills development – an ongoing process that takes account of a changing landscape and a sustainable future for all.

We are guided by employers: an employer-led Board directs our strategy; our Pharmaceuticals Advisory Council defines our programmes; we run extensive consultations on qualifications and we gather detailed Labour Market Information (LMI).

A significant piece of work has been to make sure that the qualifications on the new Qualifications and Credit and Framework (QCF) are far more relevant to employers and learners.

Our standard-setting remit has seen us continue to deliver a raft of Gold Standard role standards for industry. Where the industry carries out a range of courses around the same subjects, we've produced training standards, with the input of many subject experts.

We're also developing a higher level skills strategy which promotes innovation. Our new employer-led Foundation Degrees will play a critical part in driving up these skills.

The National Skills Academy Process Industries is taking our qualifications and standards and delivering them via the quality assured provision of training and development aimed at technical, associated professional, and management levels.

Thanks must go to all the employers and partners for their vital contribution to the skills agenda.

We look forward to continuing our work with them to bring young people in both through apprenticeships and from university; to upskill and re-skill the current workforce and to ensure this strategic industry has the high level skills it needs.

Joanna Woolf,
CEO



Our objectives

Cogent is the Sector Skills Council (SSC) for the Chemicals, Pharmaceuticals, Nuclear, Oil and Gas, Petroleum and Polymer Industries.

Cogent's Mission is:

To meet the skill needs of the Cogent industries to allow them to compete successfully.

We are doing this through:

- Being the voice of employers on skills
- Designing qualifications
- Attracting young people into the Sector
- Understanding industry skills needs



Our strategic action plan

Cogent and the National Skills Academy Process Industries have joint responsibility for the skills agenda in the pharmaceuticals industry – with Cogent setting the standards and the Academy developing the training solutions.

Both work closely with partner SSC Semta which leads on bioscience and coordinates the broader science agenda. A recent workshop of employers and professional associations confirmed six skills challenges faced by the pharmaceuticals industry:

- risk-based assessment - which is now the focus of the Regulatory Authorities
- careers in the pharmaceutical industry: attraction and retention of employees
- innovation in pharmaceutical operations
- management and leadership in a global industry
- graduates and higher level provision
- STEM education and support for young people

We have seen a growth in attendance at these workshops over the last 12 months, and future sessions will progress activity in these key areas. This includes the need to embrace the trend for outsourced manufacturing and the related skills challenges faced by SMEs in the sector.

In many areas work is already underway through the Cogent Pharmaceuticals Strategic Action Plan. As part of this we are mapping the conclusions and initiatives emanating from a range of collaborative research around pharmaceuticals and bioscience skills. This will determine future skills needs and provision.

The Pharmaceuticals Advisory Council provides strategic advice to the Directors on Cogent's main Board and its Executive. It provides a focus for working hand-in-hand with employers to develop skills solutions.

Cogent's remit is delivered through five "Big Tickets", each one of which has a focused programme of activity.

1

Cogent Industry Skills Standards and Qualifications

Cogent is developing a suite of employer-led qualifications that underpin its competency based Gold Standards. Take-up and completion of Level 3 Cogent Sector qualifications has seen an increase since Cogent's inception:

Cogent Sector S/NVQs	2005	2009	% increase
Level 2	1330	1495	12%
Level 3	275	595	116%

We have delivered

Cogent Industry Training Framework

The Cogent Industry Training Framework (CITF) provides a web-based database of qualifications and training and the associated standards right across the Cogent Sector. It provides the benchmark function for employers for skills gap analysis through the Skills Academy's Skills Passport.

www.cogent-prospectus.com

National Occupational Standards

Cogent continues to work closely with employers to develop high quality and useable National Occupational Standards (NOS) which are the building blocks for vocational qualifications.

Training Standards

We have worked with employers to develop standards for the benchmarking of training across the industry. The development of these important standards has taken place in consultation with many subject experts.

14-19 Diplomas

Cogent has continued to steer the development of the new Engineering Diploma and the Manufacturing and Product Design Diploma. Diplomas are a new qualification for 14-19 year olds which are designed to develop invaluable work related skills.

Higher Education (HE)

Foundation Degrees: Foundation Degrees are degree level qualifications which combine academic study with workplace learning. Cogent's ground-breaking collaborative project Working Higher is developing a Framework for Foundation Degrees in Science and Engineering. It includes the FdSc Chemical Science to be delivered by Manchester Metropolitan University and the FdSc in Lifesciences/Bioscience to be delivered by the University of Kent.

Resource Efficiency

Cogent is currently working to develop a suite of flexible qualifications in Resource Efficiency. This builds on its recent project to develop NOS for Sustainable Business Practice.





We are working to

Agree

We are working with industry to agree the appropriateness of qualifications or common Industry Training Standards, including new training Standards for G*P.

Increase

We will work to increase the Good Manufacturing Practice (GMP) content in industry qualifications.

Develop

We continue to develop a suite of vocational qualifications and training standards for the pharmaceuticals industry aligned with Gold Standards. This includes enhancing Level 3 provision (A level, HNC, HND), which is lacking in pharmaceuticals subjects.

Future Proof

Roll out the Resource Efficiency qualifications to help “future-proof” the sectors’ management of its environmental impact.

Build

We are building safety behavioural and attitudinal training requirements into the industry qualifications.

Progress

We will progress Graduate development through modular MSc provision that builds on Cogent’s leadership in HE.

Design

We will design and identify suitable provision that meets the M&L requirements of the global pharmaceuticals industry.

2

Cogent Skills Benchmarking

Cogent is setting the standard for skills in the Sector and developing the tools to allow companies to assess their performance.

We have delivered

The Cogent Gold Standard

The Gold Standard is a national framework for Continuing Professional Development (CPD) setting out the skills required for world class performance in key job roles in the process industries. Each Gold Standard role sets out the competencies, qualifications and training standards that will provide a route to securing skills across four areas:

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

Current Pharmaceutical Industry Gold Standard job roles

Process Operator	Level 2
Process Operator (Packaging)	Level 2
Process Technician	Level 3
First Line Supervisor	Level 3+
Laboratory Technician (Quality Control)	Level 2
Laboratory Technician (Analytical)	Level 3
Laboratory Technician (R&D) (in development)	Level 3

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

An extract from First Line Supervisor (Pharmaceuticals)

Cogent GOLD STANDARD	The Gold Standard Job Role skills, knowledge and behaviours	Gold Standard Qualifications (Awards, Certificates & Diplomas) & Training Standards
Technical Competence	<ul style="list-style-type: none"> • develop and monitor plans and procedures • allocate personnel to maintain processing • respond to and solve operational problems • adapt plans and procedures • allocate personnel for maintenance • understand science/technology theory and principles • understand how the process is started, shutdown and maintained • understand the operating procedures & how to manage safety critical process operations 	<p>L3 ILM Award in Managing Operations</p> <p>Foundation Degree in Science, Engineering or Technology</p> <p>Industry Training Standard for Pharamaceuticals</p>
Business Improvement	<ul style="list-style-type: none"> • understand the theory, principles and practice associated with business improvement techniques • solve process problems using business improvement techniques • encourage innovation 	L3 NVQ in Business Improvement Techniques
Compliance	<p><i>understanding of...</i></p> <ul style="list-style-type: none"> • application of safety management systems the implications and relevance of company policy • responsibilities for controlling workplace hazards and managing the health and safety of others • making plant safe for maintenance or in emergency shutdown • environmental & sustainability responsibilities • Quality management & the use of a Quality Systems approach to QA, GMP and QC 	<p>IOSH Managing Safely</p> <p>GMP, GDP, GLP</p>
Functional & Behavioural	<ul style="list-style-type: none"> • take responsibility for planning and developing courses of action • exercise autonomy and judgement • develop and implement operational plans • manage diversity & discrimination issues • provide leadership for his/her team • implement change • develop and maintain productive working relationships • allocate and monitor the progress and quality of work • provide learning opportunities for colleagues • manage his/her professional development • put across ideas in clear and concise manner • understand the business environment 	<p>L3 ILM Certificate in First Line Management</p> <p>L3 ILM Award in Business Awareness</p>

Skills Match

This new web tool is now available via the Cogent website. The Cogent Skills Match tool allows the user to check their skills against Cogent Gold Standards. There are two routes through the tool: the individual route where qualifications can be benchmarked against industry standard job roles and the employer route, where a company can check its competence profile against the industry standard and find further information about relevant qualifications and training standards.

www.cogent-skillsmatch.com

Competence Assurance

In a highly regulated industry the ability to demonstrate workforce competence for example, to the regulator, is critical. We have developed a Cogent sector-wide Competence Assurance web tool which provides a self-check on the competence assurance systems in place within a company and benchmarks these against other high-hazard companies.

Skills Passport

The Skills Academy has developed a Skills Passport which provides process industry 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/s.

“Prospective clients must have confidence to enter a contractual agreement with a service provider for contract packaging of pharmaceuticals and clinical trials. The Gold Standard status is an independent validation that Brecon has the people with relevant skills and knowledge.”

Desmond Preece MBE, Systems and Standards Project Manager, Brecon Pharmaceuticals

We are working to

Establish

We are establishing the Gold Standard as the industry standard and reference point for world class skills.

Develop

With industry we will continue to develop the competencies for an agreed range of Gold Standards.

Incorporate

We are incorporating sustainability and innovation into the Gold Standard framework.

Define

We are defining the operational skills required for world class manufacture in 2020 using Cogent's Gold Standard job roles as the template.

3

Cogent Apprenticeships

Apprenticeships provide the vital supply of skilled employees for the future and we are working to ensure sufficient numbers of entrants, with the right skills to meet future needs.

Cogent's work on apprenticeships is reflected in the significant increase in the take-up of sector apprenticeships. Between 2005 and 2009 there has been a 48% increase in registrations on the Cogent apprenticeship framework and a 13% increase in registrations across all main apprenticeship frameworks used within the Cogent industries.

We have delivered

Apprenticeship Expansion Programme

We've engaged with employers and providers to pilot a ground-breaking Learning and Skills Council (now the Skills Funding Agency) match funded Apprenticeship Expansion Programme, which has seen 46 additional apprentices being taken on.

Energy Skills Foundation

Sixteen young people also embarked on the new Energy Skills Foundation Programme at Lowestoft College. This pre-apprentice course is the result of a three year £100k project led by Cogent, ECITB, Skills for Energy and Lowestoft College. The employer-led course is training young people in practical engineering skills and covers the different industries in the sector.

We are working to

Ensure

We are working to ensure that the Cogent Apprenticeship frameworks are meeting the needs of both large and small employers.

Promote

We will promote Apprenticeships for Laboratory Technicians.

Identify

We will identify opportunities to grow apprenticeship numbers in the Cogent sector through initiatives such as the Apprenticeship Expansion Programme or the Joint Investment Programme (JiP).

Evaluate

We will evaluate the opportunities arising from Group Training Associations (GTAs) and Apprenticeship Training Associations (ATAs).



Future Skills

4

Cogent's Future Skills research programme is providing the essential intelligence to inform future skills needs. Reliable Labour Market Intelligence is necessary to develop valued education, training or recruitment which is based on knowledge of the current and future requirements of the industry.

We have delivered

Cogent Skills Oracle

The Cogent Skills Oracle is a unique benchmarking tool. It is using a barometer sample of 200 companies in the Cogent Sector, providing comprehensive coverage across all the Cogent industries and all sizes of organisations.

Headline Findings

- Annual average company turnover in employment is approximately 13%.
- 60% of Pharmaceuticals employers report managers vacancies are 'hard to fill'.
- Annual training budgets average £680 per employee.
- Pharmaceuticals employers were satisfied with the coverage of qualifications across the sector.
- Health, Safety and Environment (HSE) was the most frequently reported training undertaken.
- Pharmaceuticals companies tended to resource externally for specialist training needs, such as, Leadership and Management.
- 88% of pharmaceuticals employers use 'Private Training' providers; 75% use 'FE' providers and 25% use 'HE' providers.
- For private training providers, satisfaction levels were extremely high in all areas.
- The majority of Pharmaceuticals employers (57% and 100% respectively) place a high level of importance on the supply of Apprentices and Graduates to their workforce.
- Pharmaceuticals employers invest in 'Competence Based' (88%) and 'Technical' (75%) training of the existing workforce, with 50% investing in 'Professional/Higher Level' training.
- 71% of Pharmaceuticals employers reported skills gaps among existing employees had 'some impact'.
- 86% of Pharmaceuticals employers report that leadership and management skills needs have increased.
- Employers expected the demand for both professional/higher level (86%) and technical level (71%) skills to increase.

Sector Skills Assessment

Cogent's Sector Skills Assessment also reveals some important considerations around skills in relation to the developing fields of bioscience and biotechnology:

- Targeted Technical Foundation Degrees, Higher Apprentices and Technical Masters in Biotechnology/ Bioscience should be supported.
- The skills mix in the future is likely to be higher, wider and more interdisciplinary.
- In manufacturing, the 'factory of the future' will be more flexible and responsive to technological innovation
- There will be significant skills inflation in the sector; technical occupations will require a higher proportion of graduate skills.
- Acquiring these skills will generate new challenges for employers, especially in those areas that are already "hard-to-fill".

We are working to

Undertake

We will continue to undertake LMI against a range of scenarios reflecting current and future operations.

Analyse

We will analyse our LMI and ensure that this is fed back into the Cogent Pharmaceuticals Industry Strategic Action Plan so that the research informs our actions.

Increase

We will seek to increase the number of pharmaceuticals employers taking part in Skills Oracle, who will each get their own bespoke company report with individual company benchmarking.

5

Cogent Career Pathways

We have delivered

Cogent Career Pathways

Our flagship careers resource, www.cogent-careers.com is the established resource for careers in the Sector. The website provides detailed information, advice and guidance on career progression, jobs, training and salaries in the pharmaceuticals industry.

Cogent focuses at a high level to ensure that the Cogent footprint, including the pharmaceuticals industry, gets visibility within the national and regional Science, Technology, Environment and Maths (STEM) agendas, rather than duplicating initiatives ongoing elsewhere.

The Cogent career pathways site is used by many organisations with a jobs and careers guidance remit, and a recent survey showed that the resource is used by a third of all careers advisors.



We are working to

Develop

We are working with employers to develop Gold Standard roles and use these roles as the core of the pharmaceuticals career pathway.

Update

We will annually update Career Pathways information, to include the role profile details developed within the Gold Standards, job locations, salary information and real life case studies.

Invite

We will invite employers to place company profiles, with a view to linking to vacancies.

Monitor

We will monitor the website use by industry, schools and other stakeholders and evaluate its value with the customer base on a regular basis.

Promote

We will promote industrial placements as a route to 'work ready' graduates.

Conduct

We will conduct Labour Market Intelligence around STEM issues, including the regular surveys of students, teachers and career advisors to ensure that Career Pathways remains current.

The National Skills Academy Process Industries

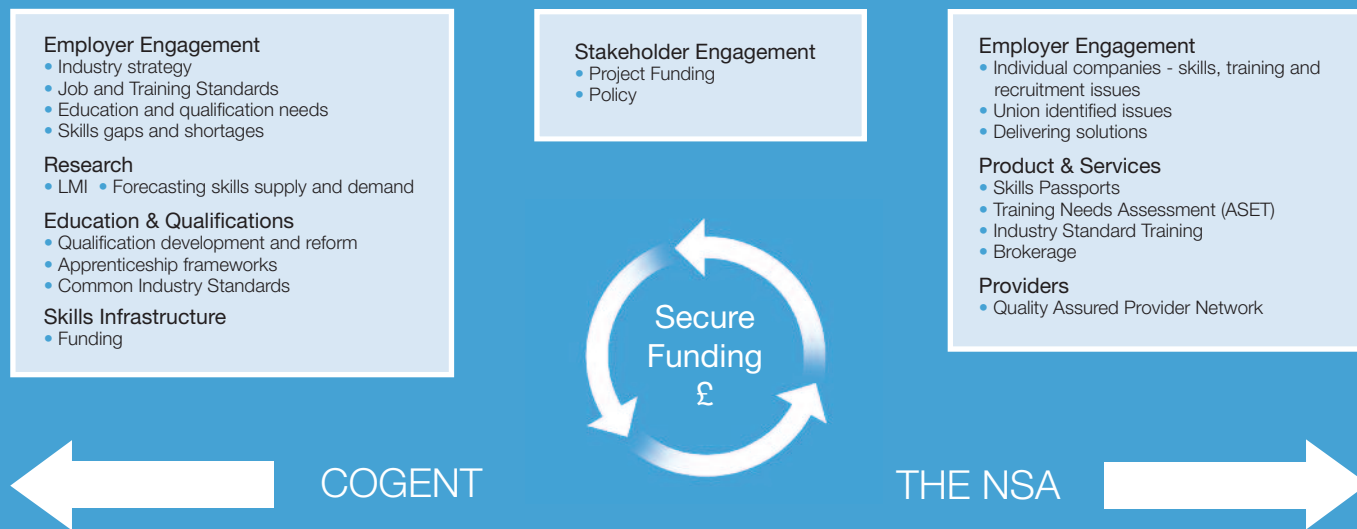
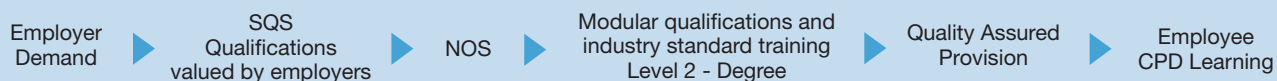
The Skills Academy is transforming vocational training in the process industries.

It is giving employers a unique opportunity to shape training as well delivering products that work right across the Sector, ensuring transferable 21st Century skills.

It has developed a bespoke model that reflects the needs of the employers in the sector. Underpinning all of this is a network of quality-assured providers who provide training and qualifications based on Cogent standards.

As this value chain shows, Cogent is developing strategic skills action plans, undertaking research, developing qualifications, setting standards and representing the employer voice. At the other side National Skills Academies undertake regional employer engagement and deliver skills solutions to meet their needs.

Value Chain for Cogent and Academies



The Skills Academy and the pharmaceuticals industry

The Skills Academy is supporting the pharmaceuticals industry by consulting with the industry and designing and agreeing products and services which are cost-effective and add value to their businesses.

Skills Passport

A key Skills Academy deliverable is its Skills Passport; this provides a transferable record of safety, technical and all other training based on the Gold Standard framework. Credit for in-house training and new training is captured on the Skills Passport providing a unique record for the individual.

ASET (Assessment System for Employer Training)

Companies perform significant amounts of in-house training for which employees and employers currently receive no recognition. The Skill Academy offers an assessment scheme for in-house training, ASET, that accredits company training programmes to the Gold Standard. Through this process employees gain recognition for the training they have undertaken. Employers are able to identify skills gaps and through the Skills Academy find suitable training to bridge the gaps.

New industries, new opportunities

With more traditional manufacturing and assembly operations continuing to move to lower cost in the Far East and Central Europe, the key to the future economic success of the process industries centres around skills and innovation. The Skills Academy is focusing closely on biotechnology and composites. It is actively involved in assessing the type of jobs arising within the bio and composites business environment and crucial training and skills needs associated with these. In addition, Cogent and the Skills Academy are responding to an increasing number of enquiries from around the world, from global process industry enterprises seeking to base their workforce competence strategies on the highly respected Gold Standard.

Pharmaceuticals Advisory Council

Employers and stakeholders play a key role in our delivery, with the PAC guiding our strategy and reviewing our progress.

- The Association of the British Pharmaceuticals Industry (ABPI)
- Aesica
- AstraZeneca
- Avecia Biologics
- Department for Business, Innovation and Skills (BIS)
- Catalent
- Chemical Industries Association (CIA)
- EMCOR
- Fine Organics Ltd
- GlaxoSmithKline
- The Institution of Chemical Engineers (IchemE)
- The Institution of Mechanical Engineers (ImechE)
- Medicines and Healthcare products Regulatory Agency (MHRA)
- Norgine
- National Skills Academy Process Industries
- Office of Life Sciences
- Penn Pharma
- Pfizer
- Seer Pharma
- Semta
- The Organisation for Professionals in Regulatory Affairs (TOPRA)
- The Royal Veterinary College

Cogent is also supported by:

Chris Lewis, Astra Zeneca
Cogent Board member

John McConnell, Aesica Pharmaceuticals Ltd
Cogent Board member

Tim Eyre, Skills Development Manager and
Pharmaceuticals Industry Lead
Cogent SSC
tim.eyre@cogent-ssc.com

Key partners of Cogent and the Skills Academy include:

With a number of our partners, collaborative working arrangements in the form of a Memorandum of Understanding (MOU) have been agreed. We also work closely with other SSCs. For example Semta and Cogent are in a strategic partnership to improve support to employers in their sectors by collaborating on common areas of research, on science and technology skills and qualification development.

The Association of the British Pharmaceutical Industry (ABPI):

The ABPI is the trade association for more than 75 companies in the UK producing prescription medicines. Its member companies research, develop, manufacture and supply more than 80 per cent of the medicines prescribed through the National Health Service (NHS).

BioIndustry Association (BIA):

The trade association for innovative enterprises in the UK's bioscience sector. As the voice of UK bioscience, it is active in representing the sector and its needs to audiences, from governments.

Semta:

Semta is the Sector Skills Council for Science, Engineering and Manufacturing Technologies. Semta supports UK businesses in achieving global competitiveness through investment in skills.

The Chemical Industries Association:

The CIA is the UK's leading trade association for the chemical and chemistry-using industries, representing members both nationally and internationally. The CIA is supporting a sustainable stream of skills, greener processes and products that will help members satisfy their customers' needs now and into the future.

Chemicals Northwest:

Cogent is ensuring that its Sector Skills Agreement, Gold Standard, Skills Academies and Apprenticeship Programmes are firmly on the Chemicals Northwest agenda and is engaging with regional employers to encourage engagement.

NEPIC (North East Process Industries Cluster):

NEPIC comprises a cluster of around 250 employers from base, bulk, speciality, bio, polymers and pharmaceuticals manufacturers. NEPIC has identified a number of key priorities which dovetail with Cogent sector skills priorities.

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