



The Richard Review – delivering the vision

A DISCUSSION PAPER

May 2013

INTRODUCTION

The best apprenticeships in England compare favourably with those in countries with world-leading vocational education and training systems. The Richard Review provides a compelling vision for how to build on this success, and we strongly agree with much of the spirit and content of the Review. We are also encouraged by the Government's endorsement of a majority of the recommendations and its desire to redefine apprenticeships in accordance with what we interpret to be two broad aims:

- that employers should be placed at the heart of the design and delivery of apprenticeships; and
- that all apprenticeships should provide broad, occupational competence.

We endorse these aims but it is important to recognise that employers *on their own* cannot, and should not be expected to, design and deliver apprenticeships that provide the broad occupational competence the Government wants from apprenticeships. To achieve this, employers will need to be supported by professional bodies and other interested parties. As guardians of occupations and professional standards, professional bodies can ensure that apprenticeships are both relevant to employers *and* provide the occupational competence that typifies the best apprenticeships in England and other countries.

In this paper we reflect on how professional bodies, and the professional standards and registration schemes they oversee, can help to overcome some of the problems identified by the Richard Review. We also suggest what steps the Government must take over the coming months to ensure its plans can be implemented successfully.

In the past, attempts to impose uniformity across the system may have improved the worst apprenticeships but they have also weakened some of the best. What is required to master an occupation differs from one occupation to the next and for this reason apprenticeships in different occupations cannot – unlike A-levels for example – be meaningfully compared to one another. The Government must therefore resist any attempts to create a 'tidy' system that seemingly enables comparisons across the full range of apprenticeships: such comparisons would be meaningless and attempts to enforce them would likely prevent many apprenticeships from meeting their occupational purpose.

HISTORICAL CONTEXT

A key principle of the Richard Review is to return the apprenticeship model to its founding principle – a contract between the apprentice and the employer.

This was a primary feature of the first, craft-based apprenticeships in the UK. Completion of an apprenticeship was marked by the creation of a masterwork, which proved to the Guild – the then guardians of the occupation – that the apprentice had mastered the occupation. Each apprentice was employed and trained by a Master. The costs to the Master of training the apprentice were offset by the contribution the apprentice made to the Master's business. The apprentice chose professional training in lieu of full wages in the knowledge that, once their work was recognised by the Guild, they could command the going rate for their occupation.

The 19th Century saw the outmoded Guilds dismantled and the rise of the professional bodies (such as the Institution of Mechanical Engineers, Institution of Civil Engineers, Royal Society of Chemistry, etc), the modern guardians of professional standards.

Today, the certification of an apprenticeship should perform a similar function to the masterwork by demonstrating the apprentice has achieved the required level of occupational competence. Certification should provide currency in the labour market, acting as a signal and an assurance to other employers that an individual has the required level of competence. For those in occupations whose primary customers are the general public, such as electricians, it should also serve to verify their competence to the wider public.

However the Richard Review showed that this is no longer the case – apprenticeship certification in today's economy does not hold the same level of recognition that was accorded to it in the past.

CURRENT ISSUES WITH APPRENTICESHIPS

The Richard Review found that large numbers of apprenticeships have lost their association with the stretch and rigour of occupational competence, and that many only train people for narrow job-focused roles that are specific to the individual employer. This drift away from occupational competence has happened for two main reasons:

1. *A lack of occupational identity in apprenticeship frameworks*

The way apprenticeship frameworks have evolved in England has seriously weakened the links between apprenticeships and occupations. For example, the current Food and Drink Apprenticeship now leads to the following rather diverse industry specific roles: Specialist Butcher; Dairy Operative; Specialist Miller; Specialist Confectioner; Specialist Cake Decorator; and Brewing Operations Manager. It also leads to more generic roles such as: Specialist Operative; Team Leader; and Technical Manager.

Often an apprenticeship framework will contain many different pathways through the apprenticeship. Within each pathway are a number of qualification combinations, and within each qualification there are a large number of optional units. For example, the main qualification in the Food and Drink Apprenticeship framework has seven different pathways and these pathways are constructed from 120 different units that are classified as covering either occupational knowledge, occupational

skills or underpinning knowledge. This has created a lack of clarity about what completing an apprenticeship actually means, which can make it harder for employers to engage with the apprenticeship system.

2. *An assessment process not focused on competence*

The link between apprenticeship and occupation is further weakened by an assessment process that breaks competence down into the achievement of a large number of discrete and highly specified activities. As a consequence, much of the time apprentices spend training is focused on ensuring they can perform isolated skills, rather than on developing broader occupational competence.

Below we explore how, in the context of the Richard Review's recommendations, it would be possible to address these two issues, and improve the quality of apprenticeships by making professional registration an intrinsic part of apprenticeships. Throughout we use examples from science and engineering, but these could just as easily be applied to other occupations with existing forms of self-regulation, such as accounting technicians.

DELIVERING THE VISION OF STRONGER OCCUPATIONAL IDENTITY

An important aim of the Richard Review is to revitalise apprenticeships by strengthening their links to occupations. The Review proposes that 'occupational standards' should be developed for each occupation, and that there should be just one apprenticeship qualification per occupation. The assessment process should verify that the apprentice meets the occupational standards and therefore has mastery of the occupation.

We endorse this approach and believe the following steps should be taken by government to deliver this vision and ensure a successful transition from the current arrangements:

1. Identify and publish a definitive list of occupations which apprenticeships can lead to.
2. Develop high-level criteria which every set of 'occupational standards' must meet.
3. Establish expert groups comprising employers, professional bodies, Sector Skills Councils and others to devise the occupational standards (drawing on existing standards where these exist) and to set assessment requirements.

We describe each one of these steps in more detail below.

1. *Identify and define the occupations*

The starting point for the implementation of the new system should be the development of a definitive list of occupations that apprenticeships can lead to. To our knowledge, neither the Richard Review nor the Government have yet settled on how best to classify occupations.

We suggest that using the existing Standard Occupational Classification (SOC) codes, which are approved and used by the Office for National Statistics, would be the most sensible approach. Not only do SOC codes already exist, but this would also help to join apprenticeships up to the data sets that are used for labour market information and will underpin the UKCES 'LMI for All' project. This would make it possible to tell a young person considering an apprenticeship as, for example, an Aircraft Maintenance Technician, how

many jobs there are, where the jobs are located, and the average salary they could expect in such an occupation.

Using labour market information it should be possible to identify occupations where there is significant potential for apprenticeship training, in other words, significant numbers employed now and in the future and at a level which means that job roles are only open to qualified applicants. It is likely that a majority of apprenticeship numbers will be found under SOC codes 3, 4, 5 and 6, which, at their current most granular (4-digit) level, identify around 170 occupations. However, we know that some of the current SOC codes are not sufficiently granular to capture all occupations, and so we are pleased that the UKCES is already exploring how to develop a new level of granularity (5-digit) for SOC codes. Our preliminary work suggests that this new granularity will identify between 300 and 400 occupations that would be suited to apprenticeship training. This would, coincidentally, be comparable to the system used in Germany, where apprenticeships are offered in 348 occupations.

2. *Develop criteria which the occupational standards must meet*

Before the occupational standards can be developed the Government must develop criteria that the new standards should meet. In addition to the statements already identified by Government in its response to the Richard Review, we believe the criteria should also include a requirement that the standards:

- lead to mastery of the occupation;
- lead to professional registration where it exists; and
- lead to licence to practise where it exists.

A note on the term 'occupational standards'

Discussions we have had with professional bodies, employers, providers and others about the Richard Review have shown that using the term 'occupational standards' in this context is often problematic, as it is too easily confused with both 'National Occupational Standards' and 'professional standards'.

We suggest the Government should consider an alternative term such as 'occupational requirements' to avoid any confusion and to signal a break with the past.

3. *Establish expert groups to set occupational standards and assessment requirements*

Employers, as the Government has made clear, must be heavily involved in the standard setting process. However it is critical that, in line with the Government's criteria for the standards, professional bodies, Sector Skills Councils and other social partners have equal influence upon the process. These groups would then be able to develop occupational standards based on a shared understanding of competence, rather than the minutiae of the current National Occupational Standards. We describe in the next section how professional registration should be central to the development of occupational standards.

In many cases we anticipate that existing apprenticeship frameworks will meet the newly drafted occupational standards, but some work might be required to make the link between an apprenticeship and the occupation more explicit. Other frameworks, where the pathways

are less clearly linked to occupations, and where there is no natural link to a set of professional standards, are likely to need considerably more work to ensure that they provide sufficient rigour.

We believe the groups that develop the occupational standards must also set the criteria for the assessment process. In the relevant occupations, passing the final apprenticeship assessment should provide an apprentice with the opportunity to be awarded automatically with professional registered status. We discuss assessment of occupational competence later in this paper.

The groups should also consider whether it is possible to evolve existing qualifications in order to meet the new requirements. The starting point should be to identify which units within a qualification need to be made mandatory in order to meet the standards; assessment criteria can then be developed which ensure the qualifications contain an element of synoptic assessment.

For many occupations, a set of standards is likely to exist in some form that could provide a useful reference/starting point for the groups responsible for developing standards. In Appendix 1 we give two such examples that could be used for the civil engineering standards. The first is from the UK Office for National Statistics' occupational classification system (SOC codes) and the second is from the USA's equivalent (O*NET).

THE ROLE OF PROFESSIONAL REGISTRATION

The membership of any professional body comprises individuals working in businesses of all sizes (from sole traders to multi-nationals), at all levels (from trainee to Board member), drawn from right across the relevant industry. Thus the professional bodies can genuinely claim to understand the full range of skills needs required by an occupation, from the perspective of practitioners, their managers and business leaders. The lack of involvement of professional bodies in the past has diminished the rigour and breadth of previous attempts at occupational standard-setting. Professional bodies are guardians of occupations, and professional registration provides a mechanism for ensuring that vocational education is employment-focussed and high quality. The professional standards used for registration are set and updated by the profession itself and strongly focused on the needs of employers.

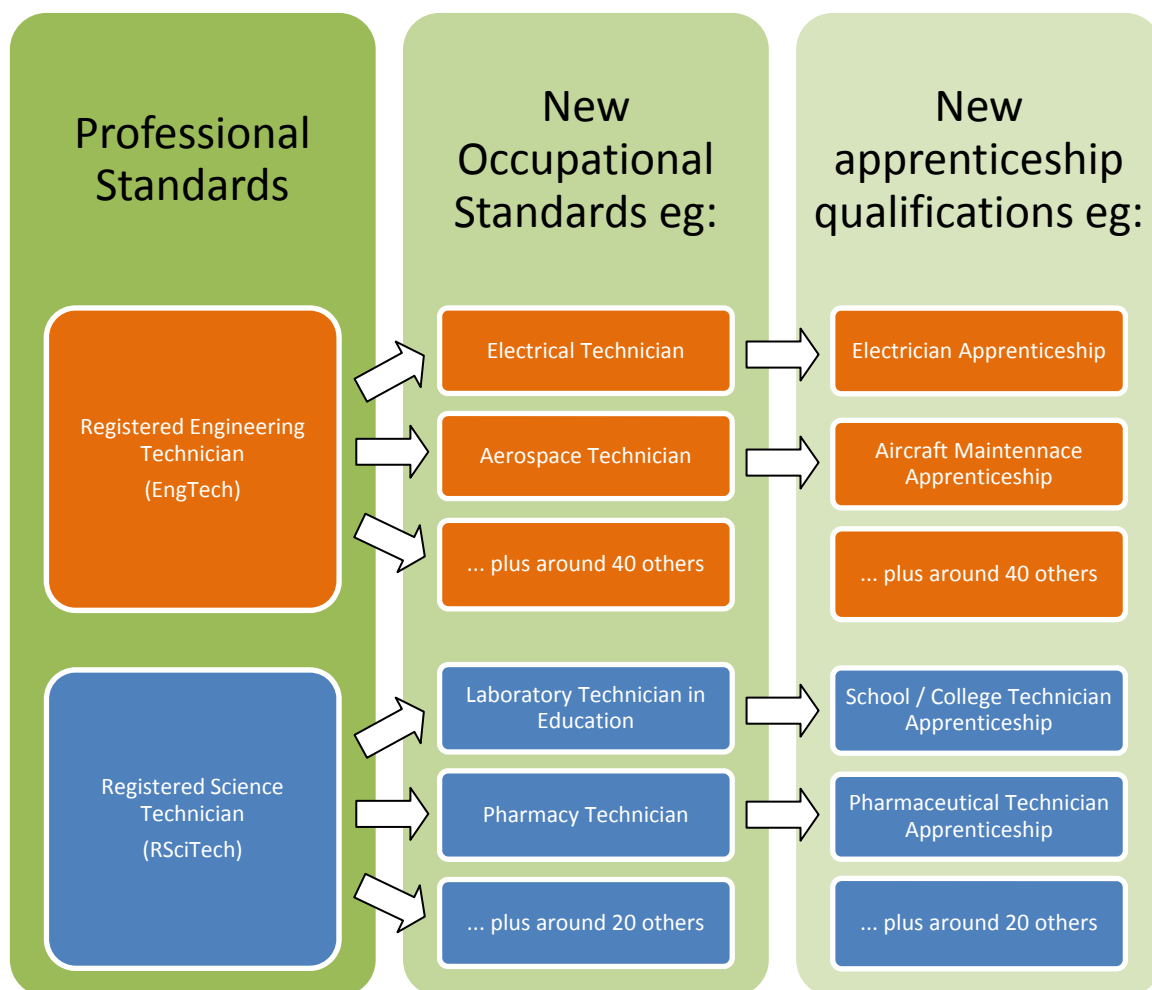
Schemes of voluntary registration have numerous benefits to both employers and the individual. They help employers to: identify competent individuals in the labour market; develop the skills of their workforce; and independently assure the competence of their employees. For individuals, registration can: improve employment prospects in the UK and abroad; provide a vocational ladder in to the professions from technician level through to Chartered status; and bring status and recognition through the awarding of a post-nominal.

Indeed, the business model is built on the value registration has with both employers and individuals. Administering the registers is only financially viable for professional bodies if enough individuals choose to register and pay their registration fees. And individuals will only choose to register and pay their fees if being registered is valued by employers and provides better employment opportunities and wage premiums. This is the same dual purpose that the Government wants to achieve with apprenticeships – a training model that is focused on the needs of employers whilst also providing individuals with the occupational

competence that will help them to transfer their skills to other employers/sectors later in their careers.

Crucially, rather than allowing a vast number of standards to develop, the science, engineering and technology (SET) professional bodies have worked together to identify and agree a single set of standards for each discipline. For example, in science there are a set of professional standards for a 'Registered Science Technician' that are awarded by the professional bodies in science (acting under licence from the Science Council). However, 'science technician' is not an occupation per se. The precise skills and knowledge required of a science technician will vary depending on the sector and context in which they work – and it is this variation that determines the occupation, for example: School Laboratory Technician; Food Technician; or Medical Technician. Whilst these are all distinct occupations and should have their own *occupational* standards, they are all able to apply to the relevant professional body for Registered Science Technician status (ie they all meet the same *professional* standards).

Under the Richard Review's recommendations, the Science Council's Registered Science Technician standards could (and should) become a major part of each of the relevant occupational standards. We have illustrated below how the relationship between professional standards, occupational standards and apprenticeship qualifications, as envisaged by the Richard Review, could work effectively.



Note that the example in the above diagram uses just a few apprenticeships to illustrate how the new system could work. In practice, we expect that the professional standards in science and engineering will be relevant to all the new occupational standards (and their related apprenticeships) within science and engineering.

Registration at the centre of the apprenticeship system

It is important to note that professional bodies in engineering have already put in place a process that enables them to approve apprenticeships within the current system. However, this is not an efficient process – very often the professional body needs additional evidence from each employer to make sure the training does in practice meet their professional standards. Because the professional body was not involved in the design of the apprenticeship from the outset, the certification of the apprenticeship is not enough to assure them that every completing apprentice meets their standards and can therefore be registered.

If, as we and the Richard Review propose, professional bodies were involved from the outset, as part of the groups that develop the new occupational standards, these inefficiencies would be removed. The occupational standards could be designed to ensure that all aspects of the professional registration process were covered as part of the apprenticeship training and assessment process. In short, registration would become an intrinsic part of apprenticeships.

We know of one example where this happens already – the technician apprenticeship consortium in consulting engineering (see box below).

The Technician Apprenticeship Consortium

The Technician Apprenticeship Consortium is a group of the UK's largest consulting engineering firms that have joined forces to develop and administrate an apprenticeship programme for their technician workforce.

The nature of consultancy engineering means the firms in the Consortium need an apprenticeship framework that equips their apprentices with a broad occupational competence, which can then be applied to the many different engineering contexts in which consultancy firms practice. Working closely with the Institution of Civil Engineers (ICE) and the Sector Skills Council ConstructionSkills, the Consortium has been able to develop an apprenticeship framework that meets their needs, and collectively they now employ around 200 apprentices.

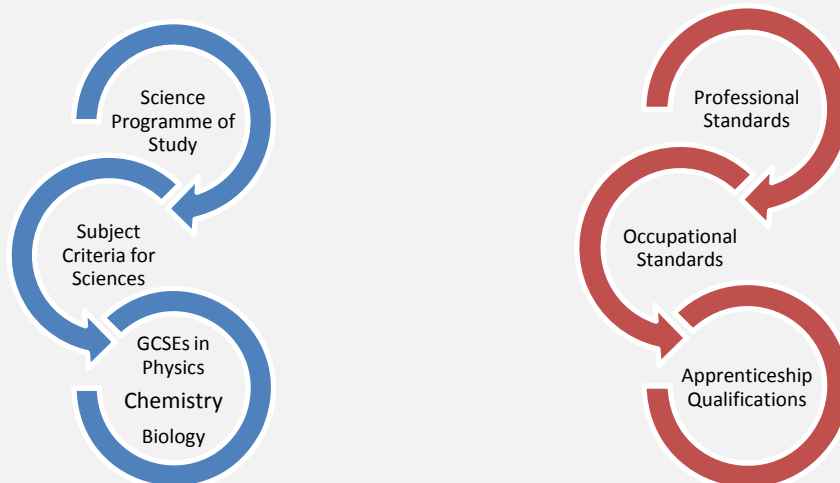
Critically, because the relevant professional body – the ICE – was involved in the development of the framework from the outset, the apprentices' training meets all the professional standards required for registration. Whereas other engineering apprenticeships may fall short of the professional standards in some areas – such as evidence of professional commitment – these have been written in to the Consortium's apprenticeship occupational qualification as discrete units. As a consequence, when the apprentices complete their training they will not only have the broad occupational competence that is so important for the economy and their careers, but also all the attributes they need should they wish to demonstrate their competence by becoming a registered Engineering Technician with the ICE (and thus earning the right to use the post-nominal letters 'EngTech', just as someone completing an engineering degree may use 'BEng'.)

It is important to emphasise that we are not suggesting every completing apprentice should be required to become professionally registered as part of their apprenticeship. Registration will not be for everyone, and it does require certain commitments that some people may not wish to sign up to, such as becoming a member of a professional body (which involves paying a membership fee).

What we do believe, however, is that, given the rigour and occupational breadth the standards for registration assure, it is essential that a publicly-funded apprenticeship system – the purpose of which is to train people for an occupation – should, as a matter of course, lead all apprentices up to the point of registration. If it does not the system will be failing to provide apprentices with the transferable occupational competence (in addition to the more job specific skills) that is critical for the individual’s career progression and the wider UK economy.

A note on qualification development

Perhaps a helpful analogy for the development of an apprenticeship qualification can be seen in the way that GCSE qualifications are derived from the National Curriculum. The diagram below illustrates how the systems are analogous:



As recommended by the recent CAVTL report we suggest that the apprenticeship qualifications should take a core and tailored approach. The mandatory core of any apprenticeship qualification should enable the apprentice to meet the occupational standards (and, by extension, the professional standards) for that apprenticeship. However, we recognise that many employers will want their apprentices to undertake specialised training for their particular context and therefore there needs to be some ability to add optional elements to the mandatory core of an apprenticeship.

ASSESSING OCCUPATIONAL COMPETENCE

As we note above, the occupational qualifications within English apprenticeships tend to require continuous assessment of specific, atomised activities, a process driven by the way many of the National Occupational Standards (on which apprenticeships are based) are written. This contrasts markedly with the competence statements from the professional standards developed by the Engineering Council and Science Council for registered technicians.¹

Assessment of the Engineering and Science Councils' competence statements is based on an individual's ability to apply their knowledge and understanding in a work context. This holistic, outcome-focussed approach to assessment provides a stark contrast with the equivalent NOS statements, which are likely to require individuals to provide evidence of their achievement of each statement in isolation. The large number of NOS statements turns the process into a 'box-ticking' exercise, rather than an assessment of whether or not a candidate is competent at identifying and solving problems in line with the requirements of their occupation.

In most cases the assessment of whether or not an individual meets professional standards is carried out by a process of professional review. This involves peers (who are volunteers) evaluating the evidence submitted by a candidate, including the qualifications achieved and work experience, against the standard's competence statements.

We believe the groups that develop the occupational standards must also set the criteria for the assessment process. This will ensure that in the relevant occupations, passing the final apprenticeship assessment provides an apprentice with the opportunity to be awarded automatically with professional registered status.

End-point assessment

The Richard Review, in recognition of the problems with the current assessment process, recommended a single assessment at the end of the apprenticeship. Whilst we agree that final assessment should play a significant part in the process, in practice it will be difficult to develop a single assessment that captures the full breadth of the underpinning knowledge that an apprentice will need to acquire in order to master their occupation.

We believe an apprentice should demonstrate, to their employer, that they have acquired the broad range of knowledge and skills they need before they are entered for a final assessment. The final assessment could then test the candidates' ability to put their knowledge and skills to use in solving real life problems, such as machining to a given blueprint, fault-finding in an electrical circuit, carrying out various chemical tests to determine the chemical composition of an unknown substance, or assessing how serious a fault in an aircraft's structure is and then designing and implementing the appropriate solution.

The current Electrotechnical Apprenticeship illustrates how this approach could be taken (see box below):

¹ See Appendix 1 of 'An Introduction to Technician Registration' for a list of the Engineering Council's competence statements for EngTech:
<http://www.gatsby.org.uk/~media/Files/Education/Intro%20to%20technicians%20Mar13.ashx>

Electrotechnical Apprenticeship

The main qualification in the Electrotechnical apprenticeship is the Level 3 NVQ Diploma in Electrotechnical Services. All 18 units of the diploma are mandatory and there is a final competence test known as the AM2. Before apprentices can take the final test they have to demonstrate a level of knowledge and competence across earlier units in the NVQ.

The AM2 is a three-day industry recognised trade test, consisting of practical assessment with a short online component, taken over 16 hours in total. The test comprises of a series of timed tasks in specially equipped booths containing typical electrical installation wiring systems. The exercises include an online assessment of applied knowledge, risk assessment and safe isolation, composite installation, inspection and testing of the composite installation and safe isolation of test unit plus fault location.

Gatsby has been supporting a group comprising the professional body, Sector Skills Council, trade union and trade bodies to explore competence in the context of electricians. We plan to support further work by this group to assess what would need to be done to the apprenticeship to make it 'Richard compliant'. The group would be pleased to engage with the Richard Review Implementation Team as it develops this work.

We do not believe that it will always be possible to carry out the final assessment in the workplace. SMEs in particular would struggle to find the 'down time' needed to carry out the testing, and it would also be difficult to assure the standardisation of the assessment if it were carried out in every one of the many different places that apprentices work. Instead, our suggestion is that learning providers (eg larger Colleges, Group Training Associations, etc) could be approved by awarding bodies to carry out the final test, creating a network of national 'approved testing centres' to assure the quality and consistency of final assessment.

Furthermore, we believe it will still be valuable for some apprentices to acquire certification during their apprenticeship. Currently most apprenticeship frameworks contain stand-alone qualifications within them. Some of these qualifications, such as the Level 3 BTEC Diploma, score UCAS points and help former apprentices progress on to HE courses. The proposal from the Richard Review is for one single qualification per occupation, but it is likely that, in the short term at least, these new apprenticeship qualifications will not be well-understood by universities and may therefore inadvertently restrict progression for former apprentices. Furthermore, for those people who do not fully complete an apprenticeship (which for some in engineering may be a 4-year, full-time commitment), certification of a stand-alone qualification within the apprenticeship ensures at least some recognition of the knowledge gained.

Finally on assessment, we do not believe the final test should be graded, since it is testing occupational competence. However, grading the knowledge-based qualifications that might be taken as part of the apprenticeship could be valuable, as this would be a more useful form of certification for those who later wish to progress to HE.

CONCLUSION

The Government has two underlying principles behind its desire to redefine apprenticeships:

- that employers should be placed at the heart of the system's design and delivery; and
- that the system should be refocused towards providing apprentices with broad occupational competence.

Both are highly important aims that we endorse, but we are clear that employers – or employer bodies – cannot and should not be expected to design and deliver on their own a system that provides apprentices with broad occupational competence. While this point is not explicitly acknowledged by the Richard Review and the Government's response, both have recognised and promoted the importance of professional bodies as part of their vision. Indeed, the reforms they propose provide an excellent opportunity for professional standards to become the driving force behind apprenticeships, particularly in science, engineering and technology (SET). The government must now actively support the SET community – professional bodies, licensing bodies and employer bodies such as Sector Skills Councils – to work together to turn this vision into practice.

In particular, professional bodies – as guardians of the occupations within their profession – must have the opportunity to play a major role in the groups that set the occupational standards. Employer bodies, as we have seen in the past, need help to ensure that occupational standards do not become compromised by conflicting employer interests – it is critical that the standards are relevant to employers *and* provide broad, transferable occupational competence. Not only will this help to ensure that all provision becomes as good and as highly-regarded as England's best apprenticeships, but it will also make apprenticeships synonymous with the professions and professional registration.

Gatsby intends to continue to develop its thinking and work in this area and would welcome the opportunity to be involved in the Government's on-going implementation of the Richard Review recommendations and development of the apprenticeship system.

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Appendix 1:

Using existing sources to help develop occupational standards – the example of civil engineering technicians

1: Using Occupational Descriptors from the ONS SOC codes system

SOC 3114: BUILDING AND CIVIL ENGINEERING TECHNICIANS

Building and civil engineering technicians perform a variety of miscellaneous technical support functions to assist civil and building engineers.

TYPICAL ENTRY ROUTES AND ASSOCIATED QUALIFICATIONS

Entrants usually possess a relevant BTEC/SQA award or an Advanced GNVQ/GSVQ Level III. The status of engineering technician is obtained after a period of further training at work and upon gaining the membership of a professional engineering institution.

TASKS

- sets up apparatus and equipment and undertakes field and laboratory tests of soil and work materials;
- performs calculations and collects, records and interprets data;
- sets out construction site, supervises excavations and marks out position of building work to be undertaken;
- inspects construction materials and supervises work of contractors to ensure compliance with specifications and arranges remedial work as necessary.

2: Using Occupational Descriptors from the USA O*NET system

17-3022.00 - CIVIL ENGINEERING TECHNICIANS

Apply theory and principles of civil engineering in planning, designing, and overseeing construction and maintenance of structures and facilities under the direction of engineering staff or physical scientists.

TASKS

- Draft detailed dimensional drawings and design layouts for projects and to ensure conformance to specifications.
- Calculate dimensions, square footage, profile and component specifications, and material quantities using calculator or computer.
- Read and review project blueprints and structural specifications to determine dimensions of structure or system and material requirements.
- Confer with supervisor to determine project details such as plan preparation, acceptance testing, and evaluation of field conditions.
- Inspect project site and evaluate contractor work to detect design malfunctions and ensure conformance to design specifications and applicable codes.
- Develop plans and estimate costs for installation of systems, utilization of facilities, or construction of structures.
- Prepare reports and document project activities and data.

- Respond to public suggestions and complaints.
- Report maintenance problems occurring at project site to supervisor and negotiate changes to resolve system conflicts.
- Evaluate facility to determine suitability for occupancy and square footage availability.

In addition to the tasks above O*NET also identifies lists of:

- tools and technology used in the occupation, e.g . theodolites and CAD software;
 - knowledge required, e.g. Knowledge of materials, methods, and the tools involved in the construction or repair of houses
 - skills, e.g. using mathematics to solve problems.
 - abilities, e.g. Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment
-