Engineering and Machinery Alliance

Agricultural Engineers Association
British Automation and Robot Association
British Paper Machinery Suppliers Association
British Plastics Federation
British Turned Part Manufacturers Association
Confederation of British Metalforming
Gauge and Toolmakers Association
Manufacturing Technologies Association
Polymer Machinery Manufacturers and Distributors Association
Printing Industry Confederation
Processing and Packaging Machinery Association
UK Industrial Vision Association

7 September 2012

Richard Review of Apprenticeships
2nd Floor SPUR 1
Department for Business, Innovation and Skills
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London SW1H 0ET

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Dear Sir/Madam

Engineering and Machinery Alliance
Submission for the Richard Apprenticeships Review

Please find attached the submission from the Engineering and Machinery Alliance on behalf of its 12 trade associations representing 1,700 mechanical engineering companies.

Yours faithfully

Rupert Hodges

Rupert Hodges
Alliance Secretary

cc Member associations
Brian Greenwood/Ivan Youd BIS

EAMA Submission to the Richard Review on Apprenticeships

Summary

- The Engineering and Machinery Alliance is an umbrella body representing approximately 24% of the mechanical engineering sector, which is highly SME and export oriented, so that skills particularly at craft and technical level are crucial to the UK sector's international competitiveness. (1-4)
- The sector is also characterised by rapid technological change internationally and relatively few companies offering apprenticeships. Training amongst SMEs is driven by job requirements because their resources are more restricted than for mid caps and OEMs. (5-12 and 17)
- Nonetheless apprenticeships are valued by the sector whatever the company's size, although SMEs' experience recruiting youngsters from school has not been encouraging given their very limited grasp of STEM subjects and their poor communication skills. (13-15)
- Some firms have observed a regular six-fold return on investment in training. (16)
- Different sectors and sizes of company have different requirements and resources to bear. Mechanical engineering companies are tackling the skills shortage through skills training and direct recruitment. One association in the Alliance has helped broker a co-operative arrangement between an SME supplier and their OEM customer. (18-25)
- Government's primary responsibility is to ensure that young people come onto the job market with a proper set of basic skills (the three Rs). Various administrations over the last 20 years have introduced policies that haven't been helpful to SMEs in that regard. (26-28)
- Credible sectoral skills ROI assessment model for companies to use as part of their investment/recruitment decision-making process would be helpful. (29)
- EAMA also prefers approaches that encourage stronger delivery and supply chain co-operation with some constraints that discourage OEMs from poaching SMEs' apprentices, while also incentivising SME owner-managers building their firms. (30-35)
- Many SMEs don't know what's available in terms of training support or what outcomes to realistically expect. There's a big communication task to be undertaken. Sector trade associations can help in that – possibly even in some quite fundamental ways. (36-39)

Introduction

1. Formed in November 2001, the Engineering and Machinery Alliance comprises 12 independent trade associations representing 1,700 firms, overwhelmingly mechanical engineering SMEs with 60,000 employees and combined sales of some £8.5 billion.

2. Typically, these supply 'enabling technologies' to other sectors (e.g. automotive, aerospace, medical, power, printing and food industries) in the form of machinery or packages combining services and products.

3. Our member firms, like the mechanical engineering sector as a whole, are 60-70% export. According to ONS's Monthly Review of External Trade Statistics the sector exported £39 billion in 2011 (compared to road vehicles £27 billion) and is one of only two manufacturing sectors that regularly run surpluses for the UK balance of trade i.e. in 2011 mechanical engineering (£5.7 billion) and chemicals (£4.2 billion).

4. The challenge is to grow mechanical's positive balance each year instead of letting it continue to hover in the £3-5 billion range and that requires skilled people able to better the overseas competition who are plying the same export markets, introducing new technologies (e.g. mechatronics).

5. So the sector's skills needs are varied and changing rapidly in response to technological development, which in Business-to-Business sectors is far ahead of changes in the consumer sectors (e.g. additive manufacturing)

6. Our submission draws on member association skills strategies, the EAMA-wide skills survey in 2008 updated in June this year and sector skills council (Semta) data (2010).

7. The sector in 2008 (source ONS 2010):

248,000	13,930	£38.4 billion	£53,000
employees in sector	sector companies	sector turnover	GVA per employee

8. So the sector's employees, primarily based in England (86%) produce 50% more added value than the average UK employee (£35,500). But 36% of the workforce is aged over 45.

9. The sector's recruitment needs 2010-2016 (source Semta 2009)

45,400	7,300	28,000	9,300
total sector recruitment	engineers and scientists	other occupations	managers

10. 93% of sector firms employ fewer than 50 people accounting for 40% of employees (i.e. 7% of firms employ 60% of employees).

11. In 2010 Semta said 9% of sector establishments in England had staff undertaking apprenticeships. In EAMA's 2008 skills survey 37% of companies said they were running apprenticeships or other structured training. Half of these were apprenticeships receiving some government support. Half were entirely company financed programmes.

12. Main typical occupations (source Labour Force Survey 2009):
    29% skilled trades (craft) 20% managers/senior managers 15% process, plan, machine operatives
    10% professionals 9% associate professionals (technicians)

In view of the foregoing we will limit most of our comments to apprenticeships in the sector and the structured framework that typically gives 3+ years training to attain a craft or technician qualification.

Review's questions -- principles

- *What should the aims and objectives of apprenticeships be?*
- *Who should apprenticeships be for?*
- *What outcomes should apprenticeships aim to deliver – for individuals, for employers, and for the wider economy?*

13. The main aim must be to develop and sustain a skilled workforce that is able to compete internationally. But given the diversity in the sector and the speed of technological change it needs to be structured very flexibly. Some areas are currently poorly served, for example agricultural engineering.

14. Prospective apprentices must be able to demonstrate some relevant competences (e.g. some facility in STEM subjects) and the commitment that comes with a positive work ethic. Age shouldn't be a factor.

15. For employees, an apprenticeship enables them to develop and demonstrate their mastery of certain tasks/job and enhance their career prospects. For the employer, a successful apprentice improves productivity and helps the business move forward taking on new or additional work/contracts, with a knock-on impact on the economy.

16. There seems to be an accepted view among many firms committed to training that money spent on skills brings a six-fold return through improved efficiencies and additional business. Although this is potentially a key dynamic, it isn't clear where and how such results have been derived, tested and documented. Of course, one set of data isn't going to apply uniformly across all sizes of company and sectors and sub-sectors. But if it exists it should be brought to light and used to show what can realistically be achieved in a relevant way.

17. We must also take into account the different employer requirements between the well formed and structured approach that can be expected in an OEM or mid cap company and a firm employing

50 of less, where it is most likely that running the firm's training programme is part of a broader set of responsibilities and the desired outcome from the employer's point of view is much more task oriented than qualification based.

Review's questions -- content

- *What should the defining features of a high quality apprenticeship be? What should a high quality apprenticeship involve or contain?*
- *Should this differ for different sectors, types of learners or types of employers?*
- *How can we ensure the training offered really reflects employers' needs?*
- *What role should qualifications play in an apprenticeship, and how can we ensure these qualifications are fit for purpose?*

18. Broadly a high quality apprenticeship in our sector will require three years training to deliver a range of high level skills that meet employers' demands in technical areas. For employees it will give them access to new employment opportunities providing them with valuable professional skills. Entry level completion will be at Level 3, with progression running up to NVQ Levels 4/5 and/or a BTEC Higher National Certificate or Foundation Degree (part-time).

19. Different sectors have different requirements. That's why so many in the engineering sector believe government's promotion of apprenticeships in general with lower standards of rigour applied in one sector compared with another is in danger of devaluing those apprenticeships that require a greater commitment from the individual because they take that much longer to complete.

20. The same applies to different size companies when it comes to the number of firms running structured training programmes, including apprenticeships. Number of companies running an apprenticeship (source EAMA Skills Survey 2008)

37%	28%	50%	83%
all respondents average	small firms average	medium size company average	large company average

21. Just because they don't run an apprenticeship doesn't mean the company is steadfastly set against the idea of apprenticeships let alone training. It's the commitment to training that's important. It's the precursor to taking on apprentices.

22. In the same EAMA survey, 76% of respondents thought they were better off arranging training themselves rather than relying on third parties. Only 17% of companies agreed that NVQs met their needs. As one small firm put it, "*The level of skill required in our (sub) sector is far in excess of what the training providers can cope with*." Greater specialisation makes it harder for the training providers to keep up with advancing technology and also leads to fewer applicants for multiplying and increasingly complex sets of courses which then become uneconomic, because there isn't the necessary critical mass demand.

23. One of our associations has brokered a training trial between a (small) machinery supplier and an OEM food manufacturer for an apprentice to spend part of their apprenticeship at the OEM. If successful, it's easy to imagine that wider application of this approach will have many advantages in anchoring supply chain efficiencies and pertinent technology development.

24. The skills shortage is seen as an immediate problem. In 2008 and again in EAMA's June update firms said that 'skills' is the second most important issue they face. When it comes to their future success, only finding new customers is rated more important. So the focus is on solving today's problems (32% employ foreign workers, including 83% of large companies). EAMA's Monthly Business Monitor continues to record a positive recruitment balance (in July of 29%) because firms are looking for the skills they need now, rather than waiting to train. This is a practical question of ensuring that the company has the skills it needs. They are less concerned about qualifications.

25. A supply chain approach, linking the interests of OEMs with those of the SME suppliers will help overcome this on condition the OEMs commit not to poach the SMEs' skilled workers (as happens all too often now). Conditions could cover a set period or alternatively offering a 'football club' transfer fee as compensation for the investment the SME has made in developing the individual's skills.

Review's questions -- delivery

- *What should government's role be with regard to apprenticeships?*
- *What should employers' role be?*
- *Who should pay for what?*

26. While welcoming government's drive to improve the UK's performance on apprenticeships and the introduction of University Technical Colleges, the sector has some strongly held views (EAMA survey 2008). However misplaced they may seem to the authorities, successive governments have:
    - overseen the demise of supported apprenticeships
    - introduced myriad changes in the past that delivered little
    - relied on systems that were unduly complex
    - allowed educational standards to slip in the key engineering disciplines
    - and now most recently downgraded the engineering diploma from 5 GCSEs to 1

27. So before talking about apprenticeships, engineering companies and particularly SMEs want government to improve the standards of attainment amongst youngsters leaving school. Employers are struck by their poor performance in STEM subjects and all too often poor work ethic and communications skills. Outcomes in secondary education are clearly a government responsibility and some feel that companies are being asked to make up for the education authorities' failures over the years – offering an engineering company £1,500 to take on a NEET youngster just underlines how little the authorities understand about how long it takes to train mechanical engineering skills.

28. Round the industry some talk of re-introducing the 1960s' engineering training levy which the Engineering Industry Training Board had the authority to impose on companies over a certain size. However EAMA feels that such an approach runs against the grain of light touch regulation the industry wants to see, let alone perversely also actually increasing taxation.

29. Much better would be for government to lead a credible, sectorally based skills ROI assessment model that companies would be able to examine and 'play with' online as part of their decision-making process, incorporating their entitlements (if any).

30. Engineering training delivery at colleges varies across the country. A college that happens to be close to several large mechanical engineering companies is going to provide good quality training to a high quality group of apprentices. An isolated requirement for similar training in a strongly rural economy is going to find it much more difficult to reach the same standards across a broad set of skills. There's a general responsibility to audit and benchmark effectiveness if the college is to receive public funds. (But also see 31).

31. Companies recognise that an apprentice reflects an investment from which they hope to make a return. However there are practical disincentives that apply to SMEs when making that investment decision. The risk of non-completion for whatever reason is greater for an SME than a larger company which can effectively plan for a certain proportion of its intake not completing. If your intake is one then such planning is impossible. If the apprentice doesn't complete (for example if they turn out to be unsuitable, move away for family reasons or are poached) then the whole of your investment has to be written off. For this reason we would support moves to more fully reflect the whole cost in the support that an SME receives. Examples on higher apprenticeships would be to pass 100% of the government funding to the employer for the further education courses or to provide a training related tax credit paid above the line to incentivise continued training through a downturn. Demand would then help drive effectiveness in delivery because the employer would decide where to obtain the training from.

Review's questions -- delivering value for money and boosting access

- *How can we ensure value for money for government investment in apprenticeships?*
- *How can we boost employer and learner demand for apprenticeships?*
- *How can we ensure that learners of all abilities get fair access to apprenticeships?*

32. We would prefer to see a solution that works with market forces and encourages all parties to reap the benefits of good, relevant training, including apprenticeships.

33. Large companies and mid caps are better resourced and are more likely to run apprenticeships (although there's always room for improvement).

34. Thus the 'problems' of training and developing apprenticeships tend to reside in the smaller companies, the SMEs that characterise the mechanical engineering sector. They have fewer resources to devote to apprenticeships and shouldn't have apprenticeship frameworks thrust on them, because "it's good for the country", unless the country is prepared to pay. Big companies and the mid caps have specialist in-house expertise to take advantage of all government may offer e.g. applying for Regional Growth Fund support.

35. For SMEs in our sector, EAMA would prefer to see a sectoral framework (as per paragraphs 23 and 25 above) harnessed to an overall scheme that exploits some well established case studies showing that investment in 'training' brings a six-fold return (paragraph 16) and an ROI assessment model that enables an SME owner-manager to link that return to the firm's training or development needs/plans.

36. There's a huge communications gap to fill. Less than a third of respondents to the EAMA survey believed they have a good understanding of the training support that's available. More than nine in ten firms said they wanted simple, direct information about training. Typical small company comments were: *"Educate us the company to educate our people" "Make us aware of what is available without referring us to a high charge consultant".* One of our associations summarises the problem in their strategy document published last month this way: "*Employers are not sufficiently aware of the training provision, what it means, where it is available and what skills those undertaking the courses will be able to demonstrate when entering the industry*."

37. In an SME dominated sector like mechanical engineering, trade associations are well placed to help 'adapt' information so that it is truly sector relevant and jargon-free, which is important in the skills field because it is rife and perpetuated by consultants of all types. Associations can:
    - act as a direct channel of communication to firms
    - provide valuable feedback
    - provide advice on their members' requirements
    - identify firms that are going to make the most of new skills and training development opportunities
    - help co-ordinate training links in supply chains

38. Many trade associations already hold some information from an employer's perspective about certain colleges' quality of training (e.g. relevance, technical capacity, delivery). But they need a lot more to advise their members where to go not solely for specific courses but for the effectiveness of their training. As currently structured, that additional information would have to be based on properly shared audits and benchmarks.

39. Under certain circumstances they are also well placed, but lack the financial resources to:
    - co-ordinate activities with schools
    - take on a supportive role vis-à-vis schools, developing support materials for use in the classroom
    - provide opportunities through their members for young people to have an early experience of what modern manufacturing involves and the different types of jobs that there are in those sorts of businesses.