Supporting Manufacturing in the Heart of the South West

EXECUTIVE SUMMARY

The Employment and Skills Partnership and the
Heart of the South West Local Enterprise Partnership

November 2011

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1. Background

This Executive Summary has been written to kick-start a discussion about how the Heart of the South West Local Enterprise Partnership (HoSW LEP) can support manufacturing in Devon and Somerset. This discussion will start with a workshop on 14 November. The full document can be found here[1].

2. Local Enterprise Partnerships

Local Enterprise Partnerships (LEPs) have been created *'to provide the clear vision and strategic leadership to drive sustainable private sector-led growth and job creation in their area*.'[2]

Although LEPs do not control significant 'pots' of government funding, they have an important role in establishing priorities, promoting collaboration and ensuring that public sector resources are focused on agreed goals. They also have a role in developing and championing bids to economic development 'challenge funds', which will be channelled to areas that make the most convincing case for investment.

In March 2011, ministers approved the creation of the HoSW LEP, covering the county/unitary authority areas of Plymouth, Torbay, Devon and Somerset. The LEP's aspiration is to *'create new jobs, raise productivity levels and increase our* average *wages'*. Although the HoSW LEP's prospectus does not name manufacturing as a priority *per se*, it identifies the marine, defence, aerospace, advanced engineering and low carbon industries as being critical to the area. It also emphasises the importance of growing jobs in high productivity, knowledge-intensive industries. '*Ensuring that the workforce is equipped with the skills that businesses need'* is picked up as an essential step towards this.

3. Manufacturing in the Heart of the South West LEP area

Over a period of just 20 years, manufacturing's contribution to UK GDP has fallen steadily, from 22% in 1989 to just over 11% in 2009. This trend has been more pronounced in the UK than in other leading industrialised nations, due to: production moving overseas; falling prices; and the outsourcing of many support activities such as logistics, distribution and security.

In 2010, manufacturing employment in the HoSW LEP area had fallen by 33%, to 67% of its 1998 level, representing a loss of around 35,000 jobs. Across England as a whole, the decline was even larger, at 40%.

Despite this decline, the sector remains vitally important, particularly in the HoSW LEP area, where it accounts for a larger than average share of both employment and Gross Value Added (GVA). The latest data shows manufacturing employing 67,200 people locally (10.2%

[1] Full hyperlink: www.swslim.org.uk/Research/Database/searchresults_detail_page.asp?ResearchID=2666
[2] Local Growth White Paper, HM Government, October 2010, p. 13.

of the total, compared with 8.8% nationally) and contributing £3.1 billion to the local economy (12.8% of the total, compared with 11% nationally).

Across the LEP, 4.2% of manufacturing employment was in high-technology sectors, a relatively low concentration compared with the national average (5.3%). However, there is a relatively high concentration of 'medium high-tech' employment locally (33.8%) compared with that seen nationally (28.4%).The low concentration of high-tech manufacturing may be one reason why average manufacturing productivity within the HoSW LEP area (£40,200 per full-time employee in 2009) is below the national average (£53,100).

A particular concern, however, is the extent of the decline in high-tech manufacturing in the LEP area. The official data suggests that between 1998 and 2010, employment in high-tech manufacturing declined by almost 80% - a loss of 10,000 jobs[3].

The occupational structure of the sector has also changed over time, with job losses in lower and unskilled jobs and a shift towards higher-level, knowledge-intensive employment. This change has resulted in an increasing proportion of the workforce holding higher-level qualifications over the last five years; although the sector also still has a higher than average proportion of people with the lowest levels of qualifications or with none at all.

4. Skills shortages and skills gaps

According to the National Employer Skills Survey 2009 (NESS 2009), the proportion of manufacturing jobs that were vacant because employers could not find applicants with appropriate skills was very low – around two per 1,000 jobs. This may be partly due to the fact that the survey took place during the recession, a period of considerable labour market 'slack'.

A more worrying finding is the fact that manufacturing employers considered around 10% of their workforce to have 'skills gaps', i.e. not to be fully proficient in their current job. The impact of skills gaps on manufacturers can be considerable, creating: an increase in the workload for others (reported by 51% of employers); increased operating costs (37%); difficulties meeting quality standards (24%) and difficulties introducing new working practices (23%).

The skills most frequently cited as missing were technical, practical and job-specific skills, although 'generic skills' such as team-working, oral and written communication were also frequently mentioned.

It is, however, interesting to note that 70% of employers identified that their skills gaps arose from a lack of experience or were due to staff having been recently recruited. This suggests that recruitment, induction and initial vocational training are areas in which employers would welcome support.

[3] The worst of the impact has been in electronics-related activities, with the biggest individual fall in 2002, affecting Torbay in particular. This is likely to be related to the closure of Nortel, one of the area's major employers.

Despite the extent and potential cost of skills gaps, the NESS 2009 found that manufacturers had a lower than average expectation that their staff would need to acquire new skills and knowledge, compared with employers in other sectors.

Perhaps unsurprisingly, manufacturers' product market strategies had a significant influence here, with 73% of organisations operating a 'very high quality' product market strategy anticipating a need to train, compared with 55% of those operating a 'very low quality' strategy.

Overall, however, the manufacturing sector has a lower than average propensity to train, with a lower than average proportion of staff trained in the last year, and a lower per capita expenditure on training compared with all sectors. One area where the sector performs well, however, is the provision of Apprenticeships, which are offered by 7.6% of manufacturing employers.

Managers were identified as the occupational group where the need to upskill was greatest. This is a concern, given how critical management skills are to the success of almost any enterprise. Indeed, researchers have argued that in some manufacturing companies there remain situations where *"cheap labour and a shortage of capital to invest in automation sees workers taking items off one belt and placing them on an adjacent conveyor system all day long*". Training individuals in these roles is unlikely to impact on the profitability, growth or survival of an employer, unless accompanied by a review of *"work organisation, job design, how employment relationships are managed and conditions are achieved whereby employee motivation, commitment*[4]*, and discretionary effort are maximised'*[5]. These are clearly management issues, which may require considerable skill and / or training to get right. This makes this apparent deficit particularly worrying.

5. Future trends

Looking forwards, research by BERR[6] (now BIS) argues that manufacturing will be driven by five major dynamics, the most significant of which will be continued growth in the extent and complexity of **global value chains**. Allied to this, firms will focus on product differentiation and investment in: new **technology**; **intangibles**, such as design, branding and Research and Development; and in **people and skills**. In addition, the report also identifies new opportunities and challenges as being created by the growth of the **low carbon economy**.

[4] The European Working Conditions Survey finds that of 27 EU countries there are only 5 in which more workers say their jobs is 'monotonous and boring' than in the UK. These countries are Estonia, Greece, Bulgaria, Czech Republic and Spain.
[5] Keep, E, Mayhew, K & Payne, J. *From Skills revolution to productivity miracle – not as easy as it sounds?* Oxford Review of Economic Policy, Vol. 22, No. 4, 2006, cited in Neild, B, Training and business survival during recession, SLIM, Nov 2008. Available at http://www.swslim.org.uk/documents/comments/03.12.08_recession.pdf
[6] BERR (2008) **Five Dynamics of Change in Global Manufacturing** - Supporting Analysis for 'Manufacturing Strategy: New Challenges, New Opportunities, BERR Economics Paper no. 2, September 2008, http://www.bis.gov.uk/files/file47663.pdf BERR was the Department for Business, Enterprise and Regulatory Reform, now BIS, the Department for Business, Innovation and Skills.

Research by manufacturing Sector Skills Councils (SSCs) asserts that these factors will create an ever increasing demand for higher-level skills, particularly among engineers, technicians and managers, while HM Treasury's Growth Plan points to:

- a continuing shortfall in the supply of technicians and engineers;
- a lack of information about specialist help and advice; and
- a poor image of modern manufacturing that can deter young people from pursuing careers in the sector.

6. Manufacturing Support

6.1 National

It is probably fair to say, with hindsight, that manufacturing was rather neglected at the start of this century. The idea of industrial policy - intervening in the market to promote technological change, capital investment or to protect or grow certain 'strategic' industries - was anathema to Mrs Thatcher's Conservatives and continued to be left on the sidelines by 'new' Labour. From 1997 to 2007, the economy grew and financial services boomed. Then, in late 2008, we experienced the financial crisis, a rethink and a call for a 'new activism' in industrial policy.

The rationale for this 'new activism' was spelt out in April 2009 in *New Industry, New Jobs*[7], which made the case for supporting a series of high-tech sectors that could play a key role in the recovery. The focus was not and could not[8] be about protecting domestic businesses or industries from competition. It was, and remains, on rebalancing the economy through exploiting the nation's science base, helping companies to turn innovations and new technologies into jobs and on growing high-tech industries.

Plan for Growth[9] sets out the reforms the Coalition Government is putting in place to achieve this. These are broad, ranging from the tax system, to access to finance, trade support and localising choice about the use of previously-developed land. They are described in more detail in the main report. However, some key national policies that have particular relevance to manufacturing include:

- Establishing 24 University Technical Colleges for students aged 14 to 19, sponsored by leading UK companies and universities, matching curricula to local economic needs, providing high-quality work placements and access to specialist facilities within University and business partners.
- Investing £200 million in manufacturing Technology and Innovation Centres,focused on bridging the gap between universities and business and allowing businesses to access equipment that would otherwise be out of reach.

[7] *New Industry, New Jobs*, HM Government, April 2009
[8] Due to EU State Aid regulations.
[9] Plan for Growth accompanied the March 2011 budget. Published by BIS/HM Treasury it is available from http://cdn.hm-treasury.gov.uk/2011budget_growth.pdf

- Providing £45 million to create nine university-based Centres for Innovative Manufacturing by 2012, covering areas such as biological pharmaceuticals, composite technologies, and intelligent automation.
- Enhanced funding for the Manufacturing Advisory Service.
- Investing in Advanced Level and Higher Apprenticeships.
- Promoting the acquisition of Science, Technology, Engineering and Mathematics (STEM) skills through activities such as: improving training for careers professionals; increasing the number of industry-school visits; improving STEM teaching; and strengthening STEM promotion activities.

6.2 Local

A number of initiatives, focused at the local level, are also worthy of particular note.

The Regional Growth Fund, a £1.4 billion challenge fund operating across England, was set up to support private or public/private initiatives that create growth and sustainable employment. It is particularly focused on areas affected by public sector spending cuts. To date, there have been two rounds of bids. In Round 1, £2.8 billion was allocated to 46 projects (out of 468 applications), one of which was located in the LEP area - a £1.2 million award for an energy centre at South Devon College. In Round 2, 492 bids have been submitted asking for £3.3 billion. These are being scrutinised by central government, with the expectation that successful bidders will be informed 'in the autumn'. It is probable that there will be a small residual sum for a third round of bids.

In Budget 2011, Government announced the creation of 21 Enterprise Zones, featuring:

- business rate discounts, worth up to £275,000 per business over five years;
- the retention of business rates by the local area, to support further economic development and the growth of the zone;
- a 'radically simplified' planning process; and
- a commitment to ensure access to superfast broadband throughout the zone.

The HoSW LEP was quick to respond, submitting two of the 29 bids[10]. Regrettably, neither of these bids was approved. The Government has no plans to establish further zones, but is stressing that, tax reliefs aside, many of the powers to create 'zones' exist at the local level.

[10] These were for:

1. *Energised, Advanced, Inspired* - Plymouth's Enterprise Zone focused on renewables and advanced manufacturing within the Marine Energy Park.
2. *Heart of the South West Low Carbon Energy Enterprise Zone* – across four sites, focused on creating business clusters around: nuclear power in Somerset; solar photo-votaics at the RGF funded Energy Centre at South Devon College; and offshore wind generation in North Devon related to the Atlantic Array.

7. Skills Provision

7.1 Further Education Colleges and Private Training Providers

The HoSW LEP area is home to 11 Further Education Colleges and numerous private sector training providers. These organisations have an important role in supporting both individual manufacturing enterprises and the strategic development of the sector as a whole.

Partnerships between colleges and businesses confer significant benefits on both parties. They provide training that is immediately relevant to business operations and needs while also supported by a wider underpinning knowledge and mapping to national standards and frameworks. These partnerships often extend well beyond sector-specific or technical skills, taking a 'whole organisation approach' and creating progression routes for a wide range of staff.

These organisations also have a strategic role, investing in and securing funding to deliver skills in strategically important areas. These areas can be geographical, such as Exeter College's investment in a new Devon and Exeter Technology Academy close to the Exeter Science Park and Skypark. Or, they can be sector-focused, such as Plymouth College's partnership with power and automation multi-national ABB, focused on refurbishing a £4 million Energy Centre and equipping it for training on the very latest low carbon technologies.

In 2009/10, Colleges and training providers in the LEP area recorded 4,180 learner 'Starts'[11] related to Process and Manufacturing industries and 2,920 Starts on courses related to Science, Engineering and Manufacturing Technologies.

Although large and diverse, it is notable that of the 50,000 engineering-related qualifications delivered across England in 2008/9, 32,200 (64%) were NVQs in Business-Improvement Techniques and a further 13,360 (27%) were NVQs in Performing Manufacturing Operations[12]. It is also notable that, in 2008/09, 94% of learners undertaking General Engineering-related learning were male.

7.2 Apprenticeships

The Coalition Government is committed to expanding Apprenticeships, particularly for 16 to 18 year olds. Within this policy, the desire to support UK manufacturing is often cited as a driver for growing the number of Advanced (technician level) Apprenticeships and degree-equivalent Higher Level Apprenticeships.

Under Apprenticeships, the Government pays for 50% of the training costs for people aged 19 and over and 100% of the training costs for 16 to 18 year olds. Employers are responsible for 'co-funding' the remaining training costs as well as fully funding Apprentice wages, of at least £2.50 per hour.

[11] Note that 'starts' relate to someone starting an course or a unit (if not part of a wider course). One individual may record more than one 'start' in a year. Thus this does not equate to people trained.
[12] SEMTA, Sector Skills Assessment, December 2010.

The HoSW LEP wishes to work with employers in the area, to make the most of the current opportunity to expand Apprenticeship numbers.

7.3 Higher Education

The two universities within the LEP area (Exeter and Plymouth) are both strongly committed to supporting manufacturing businesses. In terms of STEM subjects, the two universities provide around 30% of all provision in the South West - over 20,000 students in total. This equates to around half of all Plymouth's students and around 40% of Exeter's students studying STEM subjects in 2009/10. While this proportion has remained fairly constant in Plymouth in recent years, the STEM agenda appears to have increased in importance in Exeter, rising from just 26% in 2002/03 up to its current level of 40.1%.

The two universities also demonstrate a continuing support for the manufacturing sector within their corporate strategies.

Plymouth University aims to become *'the enterprise university, truly business-engaging and delivering outstanding economic, social and cultural benefits'.* Through its 'Enterprise Solutions' initiative, the University offers help to businesses in areas as diverse as entrepreneurship, research, funding, knowledge transfer, recruitment, skills and training.

A new world-class, £19 million marine facility for Plymouth will also be completed in 2012, providing state-of-the-art research facilities to be used in partnership with business.

The University of Exeter is investing a total of £230 million in science, medicine and engineering through its Science Strategy, focused around five themes: Climate change and sustainable futures; Systems biology; Extra-solar planets; Functional materials; and Translational medicine, personalised healthcare and public health. It has just launched a £2.6 million Centre for Additive Layer Manufacturing (CALM) to help businesses, particularly SMEs, to harness the potential of ‘3D printing’ whereby complex parts and complete products are built up one layer at a time. Exeter is also a key partner in the Exeter Science Park, whose tenants will have access to research support and students under a range of placement, knowledge transfer and internship programmes.