

Semta's response to the call for evidence for the ELC inquiry into the ERP

Background

Semta has read with interest the ERP Document and commends its ambition and direction. In commenting on the potential for the ERP to effectively support the industries in Semta's 'footprint', Semta has used its knowledge of the labour market and future skills demand, as articulated in our publication *Skills and the Future of Engineering in Wales*. This is a Sector Skills Assessment and forms part of Semta's UK-wide skills analysis for engineering. A summary of the key relevant information and issues is included in Annex 1.

In providing a response, Semta has reflected its own responsibility as a SSC, its role within the Welsh Manufacturing Forum (and the emerging WMF Manufacturing Strategy) and its general interest and commitment to the wellbeing of Wales. The strategy advocated by the WMF effectively covers Semta's responsibility, role and interest mentioned above.

This response follows the layout of ERP and reflects the above responsibility, role and interest which from Semta's standpoint are combined within the direction of the Wales Manufacturing Forum Strategy.

1. Introducing Economic Renewal

The vision of the WMF Manufacturing Strategy is to build a sustainable Welsh economy, with a secure and networked manufacturing base driving forward globally-orientated, high value added business in Wales. The underlying international and domestic factors that determine the scope of this vision are ambitious and creative and will call upon new types of skill and knowhow. There is clearly a significant overlap with the vision embraced by ERP. As a measure of the relationship to ERP, these WMF factors will deal with High Performance Companies that embrace Market Excellence, Knowledge Management and Corporate Ethics. The business support advocated by WMF comes within the remit of a 'generic journey' rather than a 'generic plan' offering bespoke solutions to bespoke requirements.

2. Understanding the challenges and opportunities

An intermediate step on this generic journey - or the Journey to Excellence that the WMF Strategy embraces - will be a need to work with a number of international issues. These, which mirror the challenges defined by ERP, for WMF include;

Globalisation; Producing locally, selling remotely.

Sustainable Environment; From the economic driver to the ethical motive.

Technology of the future; Using science to give technologies to resolve business issues.

Innovation; Companies creatively using technologies.

Drive to Higher Value Add; Maintaining the challenge of a sustainable economy.

Employment in Manufacturing Sector; A flexible mobile workforce with multi-layer and multi-functional skills.

3. Investing in high quality and sustainable infrastructure

A feature of the WMF Strategy is the recognition that 21st Century Companies will need to work within 'long value chains'. These chains mean that an individual company must become as sensitive to the worth and wealth of its suppliers and customers as it is in its own needs. The ERP infrastructure investment can enable these long value chains to operate effectively by providing a balance between the physical disposition of business related companies and the data/intelligence sharing that needs to take place. Quite explicitly, WMF will deal with Energy and Efficiency, Markets and Marketing, Business Chains and Business Partnerships along these chains.

4. Making Wales a more attractive place to work

In pursuing long value chains, WMF will pay close attention to the stakeholders that represent a key business resource. The commercial activities that will be developed along these value chains will be driven by the prospects of good business opportunities. These, which by their very nature are the gateways to 21st Century companies, open up the prospect for Wales to become a preferred site for business and societal development.

5. Broadening and deepening the skills base

What has emerged from the work of WMF is that to succeed it is necessary to make a rational case for people development. We know that this is the basis for investment and our challenge is to be able to provide bespoke solutions to bespoke needs. Within the skills base required we know that organisational, operational and people development go hand in hand. Changes in one will necessitate changes in the others. This then becomes a first challenge to be faced by public intervention and support. The generic solution needs to be displaced by the specific activity, the theoretical content needs to be displaced by know-how, the needs analysis of old needs to be replaced by strategic workforce planning. The second challenge for the private actions of employers is to use the outcomes of strategic workforce planning to alert individuals (from school age upwards) and education/development (from primary to mature) to what the underlying skill base is now and will become. As evidenced by Semta's Sector Skills Assessment for Wales, the Sector Skills Councils are ideally placed to provide the labour market information - the summary of this 'demand signal' - which will help the ERP drive activity which is evidence-based and statistically sound. WMF will be able to deal with these matters through partnerships with stakeholders as these are the same stakeholders who underpin this ambition to broaden and deepen the skills base.

We are glad to see the ERP proposes continued support for shared apprenticeship schemes - this innovative approach to the apprenticeship model has enabled small firms to take part in apprenticeships, and invest in the next generation of skilled technicians and craftspeople. Similarly, the work done on Pathway to Apprenticeships and Young Recruits has maintained companies' interest and support for apprenticeships, despite the economic challenges faced. It has led to over 400 young people being trained by colleges across Wales, and has been applauded by employers who were not in a financial position to commit to apprenticeships.

Semta's Sector Priority fund project is aiming to work with education and training providers to design and develop programmes, based on National Occupational Standards, that address employers' new technology skills and productivity needs. Semta and SSC partners Cogent and ProSkills will support the delivery of these programmes to the right person at the right time. Some 500 employees in 80 companies (including 60 SMEs) are set to benefit. The pilot initiative is targeting 20 providers from the private, FE and HE sectors and aims to develop 30 new learning programmes.

These types of initiatives, which emerge from the work of organisations such as Semta and WMF with employers, link the case for people development and the demand signal to activities which meet the needs of companies in a practical way.

The ERP proposes reform of the SSC network – the Sector Skills Council network across the UK is constantly reviewing its impact, and working together on common priorities. Where natural alliances exist, clusters of SSCs have formed (eg around Manufacturing, Engineering, and STEM) and are taking forward joint work. We would hope that the ERP activity will support and encourage this approach. As noted previously, SSCs can increase informed employer demand for training and skills by providing expert guidance on linking learning activity to business strategy and productivity, through its Strategic Workforce Development activity.

We look forward to the new National Science Academy stimulating exciting and innovative teaching, and hope that its activity will encourage more young people to consider careers in STEM occupations and industries. It will be imperative that the National Science Academy covers the whole range of ability and aspiration, and guides young people to the learning routes (academic, vocational and work-based) most suited to their ambitions and abilities.

6. Encouraging innovation

A strong theme in the WMF Strategy is the attention to the potential of high value added manufacture. Such an activity, recognised when seen but more difficult to describe, falls with the scope of high performance companies. These in turn have characteristics that can best be described as Market Excellence, Knowledge Management and Corporate Ethics. These can be achieved through a process of blue sky research to applied research to technology transfer to technology application. Therefore the emphasis placed upon innovation sits right at the heart of the WMF Strategy. Without ignoring the bi-lateral relationships that exist between the four designated research areas, the case can be seen that one outcome of the work in advanced engineering and manufacture is the provision of products, services and facilities to the three other designated research areas.

7. Targeting the business support we offer

The symbiosis between the chosen research areas and the focus given to the selected sectors is evident and ERP gives a light touch description of advanced materials and manufacturing. WMF and Semta would naturally wish to work closely with this relevant sector group to integrate the emerging understanding of this sector, the WMF Manufacturing Strategy, and Semta's ongoing work with employers on their skills requirements. Part of the work of WMF in delivering a suitable action plan, is the role of the stakeholders and these clearly include existing and as yet to be defined WAG/ERP driven initiatives. As an example, the transition of the existing Industry Fora over an agreed period of time would be supported by WMF to become more akin to intelligence based trade associations. Again, the potential transition that any of the existing public initiatives that affect manufacturing face, would be assisted through WMF's emerging strategy. Within these areas, there remains a need to move from a grant culture to one where loans (maybe but not necessarily soft loans) are based upon shared risks and benefits such that public money is returned to the public purse for onward re-use.

8. Continuing engagement and partnership

Stakeholders are seen as a key resource in the scoping and delivery of the WMF Strategy and as can be seen from the above responses, this Strategy has many of the same or similar ambitions and objectives. The challenge will be to harmonise the planned actions of all the relevant stakeholders. The topics that have been considered by WMF as the central basis for the Manufacturing Strategy fall into two broad categories. Those that essentially provide a basis for stabilising the sector – Business Shapers - and those that represent the areas of future excellence – Business Drivers. These are respectively;

Business Shapers

Globalisation; Producing locally, selling remotely.

Sustainable Environment; From the economic driver to the ethical motive.

Technology of the future; Using science to provide technologies that resolve business issues.

Innovation; Companies creatively using technologies.

Drive to Higher Value Add; Maintaining the challenge of a sustainable economy.

Employment in Manufacturing Sector; A flexible mobile workforce with multi-layer and multi-functional skills

Business Drivers

1. **Business Value Chains.** A model built on globally dispersed long supply /customer chains comprising clusters, mutual business interests and outward looking
2. **Skills and knowledge development.** Relevant to value added processes and aimed at the right person with the right skills at the right time driven by Strategic Workforce Planning, multi-layered, multi functional skills delivered just in time
3. **High Value Added Manufacturing.** Driven by the needs of high performance companies achieving market excellence, knowledge management and corporate ethics.
4. **Markets and Marketing.** Covering new markets and marketing and shaped by local manufacture with global distribution where the business interest is driven by particular market sectors or business functions.

Each of these topics is the basis for identifying the key partners with a role to play locally, regionally, nationally and internationally.

9. Delivering for economic revival.

The primary contribution that the WMF Strategy can make to this aspect of the ERP is the provision of evidence for shaping the support to be given to companies recognising that this in essence is support that is given to employees. WMF will ensure that intelligence is used effectively in delivering its own Strategy and is provided to the relevant specialist Research Groups and Priority Sectors in a useable manner.

Concluding Remarks

There is much in common between the ambitions and direction of ERP, Semta and WMF, the primary difference being the scope. ERP is for several sectors and driven by public need, WMF is for manufacturing and driven by private need. The challenge is to ensure that through these selected sectors, the public and private need works together for the benefit of Wales plc. The Welsh Manufacturing Forum has published its Strategy and is currently developing the roll out plan. The starting point for this plan is summarised in the following section.

1. Summary of the Journey to Excellence

The Welsh Manufacturing Forum has a vision to build a sustainable Welsh economy, with a secure and networked manufacturing base driving forward globally-orientated, high value added business in Wales. The Forum, which has identified business drivers that will shape companies performance in the 21st Century, will work with the Manufacturing Sector to pursue 4 interrelated strategic areas; Business Value Chains, Skills & Knowledge, Higher Value Added Manufacture and Markets & Marketing. Of course, manufacturing is not a single homogenous mass and these areas will have a different impact on and be influenced differently by the type of company - companies that range from micro businesses to small medium enterprises (SME) to large businesses with local decision makers or with headquarters outside Wales and variously inward looking, opportunistic, developing and/or achieving excellence. This great variety will challenge Wales plc to absorb the specific needs and actions of individual company and points to the fact that there cannot be a one size fits all action plan. The tactic, therefore, to deliver this vision, is to embark on a journey that enables companies to absorb these strategic areas. Within the Forum, we see this as a Journey to Excellence.

The journey is broken down into 3 broad stages, though there are no clear boundaries between these stages. Some companies will need and want to start at the beginning, some companies will be part way along the road, some companies will already be ahead (and indeed some companies will have a foot in the three stages). The challenge is to enable companies to engage at a point that suits them. For the sake of brevity these three staging posts are 'establishing the sector baseline'; 'stabilising the sector'; 'seeking and setting excellence'. In each case, the intention is to assess, prioritise, plan and implement, conscious that organisational, operational and people development go hand in hand.

Establishing the sector baseline will open the door on sector specific issues and work in this area will help to establish a baseline of achievement; stabilising the sector will expose companies to the universal requirements of globalisation, sustainable environment, technology of the future, innovation, drive to higher added value and employment; seeking and achieving excellence will enable companies to get to grips with priorities in the four strategic themes with continuous improvement using all the characteristics of the four themes.

The Forum has identified stakeholders with a vested interest in supporting companies to get onto and move along this journey. For the discussions that will take place with stakeholders and the sector, the caveats attached to this working paper are that;

1. there cannot be a generic plan; there can be a generic journey.
2. this document is the foundation for discussion; companies know how best to align themselves with the journey.
3. companies are not alone; partnerships will be developed

So, how will this affect Wales plc? Where are the real challenges? What will be the outcome in terms of prosperity? We need to distinguish between the private interests of manufacturing and the public interest of the nation and yet bring them together. The public purse, through its many initiatives, needs to re-focus onto specific support rather than generic directives. The sector needs to be persuaded that it foots the bill. If we assume there are 14,000 employers in manufacturing employing 250,000 staff with 75% are unconverted, 15% are getting to grips with universal requirements, 8% are seeking excellence and 2% are ahead of the games. Assume these percentages reflect numbers

employed at each stage with turnover per employee as £50,000, £60,000, £70,000 and £80,000 respectively – admittedly a very linear relationship. If a fictitious company moves from ‘the baseline through stabilising to seeking and setting excellence’ there is an increase of £500,000 in turnover in the fictitious company which relates directly to Wales plc GDP.

ANNEX 1. The Engineering landscape in Wales

- The Engineering industry in Wales employs 81,900 people in 2,930 establishments.
- 91% of Engineering establishments in Wales employ less than 50 people.
- The largest sectors in terms of employment are metal products, mechanical equipment and electronics.
- There are particular concentrations of employment in the automotive, other transport equipment and metals sectors when compared to the UK.
- The largest numbers of Engineering employees can be found in Flintshire, Neath Port Talbot, Newport, Rhondda Cynon Taff, Caerphilly and Bridgend.
- Only 1% of the Engineering workforce in Wales is aged 16-19 compared with 5% in all sectors in Wales and the UK. The respective figure for Engineering in the UK is 2%.
- Although employment projections indicate that a net decline in employment is likely in all Engineering sectors, significant numbers of staff will be needed in all these sectors in order to replace those who leave their jobs because of retirement or other reasons.
- The projections point to a net requirement of about 12,000 employees (1,700 per annum) within the Engineering industry in Wales over the period 2010-2016 to replace those leaving.
- The largest positive net requirements for labour are expected to be for process, plant and machine operatives (4,700 people), managerial occupations (1,700 people) and skilled trades (craft) occupations (1,500 people).
- Total turnover for the Engineering sector in Wales was over £16 billion in 2007, 18% of the total turnover for all sectors of the economy in Wales. The Engineering sector in Wales has a turnover per employee of £200,000 which is significantly higher than the all sectors figure for Wales of just under £76,000 per employee.
- Analysis of Gross Value Added (GVA) indicates that the Engineering industry accounts for 13.9% of total GVA within Wales. The average GVA per employee for the Engineering industry in Wales was £46,200 in 2007, significantly higher than the figure of £22,700 for all sectors of the economy in Wales.

Engineering skills in Wales

The Engineering industry is likely to face major skill challenges as the nature of work alters rapidly and global competition intensifies. Engineering employers in Wales felt that skills were most likely to change in the future due to the ***introduction of new technologies or equipment, development of new products and services, new legislative or regulatory requirements and the introduction of new working practices.***

29% of Engineering establishments in Wales felt that they had not experienced skill change over the last 2-3 years and did not anticipate such change over the next 2-3 years. Considering the various business drivers identified that will impact on skills it is unlikely that an Engineering employer would see no change in skills requirement over a six year period. This indicates that a significant number of Engineering employers have insufficient understanding of ***strategic workforce development*** and the importance of skills in improving productivity and competitiveness.

A lower proportion of those working in the Engineering industry (28%) have attained NVQ Level 4 and above compared to the average for all sectors in both Wales and the UK (33% each). 11% of the Engineering workforce in Wales has no qualifications, slightly higher than the average for all sectors in Wales (10%).

19% of Engineering establishments in Wales had hard-to-fill vacancies over the period Mar 2006 to Mar 2007 (17% for UK Engineering). It is estimated that hard-to-fill vacancies cost the Welsh economy as much as £31 million in lost GVA in 2007. With the recent economic downturn, the current number of hard-to-fill vacancies will have decreased. The main reasons cited for hard-to-fill vacancies were a lack of applicants with required qualifications and skills and a lack of applicants with required work experience.

Employers in Wales expected skills gaps for professionals to have the most significant effect on their business. The main skills cited as lacking in employees were technical and engineering skills at all levels (72% of those Engineering establishments in Wales reporting skills gaps).

The three main technical skills gaps for the Engineering sector in Wales were computer aided design (CAD), CNC machine operations, tool making and electrical engineering.

The generic skills gaps highlighted were key or core personal skills (10%), IT/computer skills (7%) management skills (7%), and marketing or selling skills (2%).

Together with changes in skill requirements, qualifications demanded by employers are likely to change, with an increasing requirement for intermediate and higher level qualifications.

What does this mean for engineering in Wales?

The Sector Skills Assessment identifies a number of recommendations for action in relation to the Engineering industry in Wales, including the need to:

- **Upskill those with no qualifications**, estimated at about 9,600 people in 2008, particularly in the process, plant and machine operative (4,300 people) and skilled trades (craft) (3,200 people) occupations.
- **Improve management and leadership skills**, with a particular focus on the 4,800 managers (38%) with qualifications below Level 4 or 5. It was identified that 29% of Engineering employers in Wales appeared to have insufficient understanding of strategic workforce development and the importance of skills in improving productivity and competitiveness.
- **Tackle gender imbalances**. Only 17% of the Engineering workforce in Wales is female (about 15,000 people), lower than the figure of 20% for UK Engineering.
- **Tackle issues relating to an ageing workforce**. The main challenge is in encouraging more of those aged 16-24 into Engineering, particularly into the automotive and metals sectors. The current number of people aged 16-24 would need to increase by 6,300 people for the Engineering industry in Wales to have a comparable number of young people to that of all sectors in Wales.
- **Address specific weaknesses in FE college provision in Wales**. For FE Colleges in Wales, service provision in terms of relevance of content, delivery of knowledge, delivery of practical skills – training staff, delivery of practical skills – facilities/ technology and response of trainees had the lowest satisfaction levels amongst Engineering employers when compared to five other types of training provider. Only the location of FE provision had an above average rating for Engineering employers in Wales.

All these activities are linked to the observation noted previously, that ***Strategic Workforce Development*** must play a role in raising demand from employers for these

new and higher level skills. Semta has worked across the UK to develop tools to help companies analyse their skills requirements in a strategic way, which links to the business plan and gives a sound return on investment.