Engineering

Workforce Development Action Plan 2002-2005

Introduction

This action plan has been developed with our partner organisations and follows initial research and consultation with employers in the sector. This action plan is one of 12 sector action plans and four generic issue action plans.

Sussex Learning and Skills Council is focused on delivering its **overarching objectives** for Sussex employers, people and communities, namely:

- A step change in the number of level 3 qualifications obtained by the under 30 year old population
- A step change in the reduction of adults who lack basic skills in literacy and numeracy
- A step change in the skills of the workforce and the ways in which employers access training

This action plan is an important tool in achieving these objectives.

"Learning brings major benefits to everyone in the community and has been proven to provide the basis for a successful economy." Henry Ball, Executive Director, Sussex LSC

The research findings and outcome of the consultation with employers are set out on pages 2 and 3. A detailed action plan is outlined on page 4.

The Strategy

As set out in our Local Strategic Plan 2002-2005, the **demand for learning** needs to be considered in three ways:

- Economic Demand – the current and projected employer skills needs
- Individual Demand – the projected number of learners, their choices, goals and aspirations

- Community Demand – promote social inclusion and support local regeneration activities

This action plan has been developed on these **three drivers of demand**.

The Sector

Working with:

- Basic precious and non-ferrous metals
- Casting of metals
- Metal products
- Mechanical equipment
- Office machinery and computers
- Electrical machinery
- Radio, television, communication equipment
- Medical, precision, optical instruments, watches and clocks
- Motor vehicles
- Aircraft and spacecraft

- Engineering employs 33,480 people in Sussex, accounting for 5% of employment
- Adur and Arun have the greatest proportion of employment taken up by engineering (10% each)
- Employment is greatest in electronics (29% of sector) and metal products (26%). These account for larger shares of the sector than nationally (19% and 22% respectively)
- Engineering is a male-dominated industry. Three quarters (77%) of employees are men
- There was a decline in engineering employment of 20% between 1986 and 1990 in Sussex
- A fall of 17% is forecast nationally in engineering employment by 2009
- However, the electrical equipment and electronics sectors are forecast to grow. Sussex already has a higher than average proportion of these sectors, which is likely to lead to further growth

> Occupations & Qualifications

- Operators and assemblers account for a third of employment while craft occupations account for 19%
- There has been a trend for higher-level occupations in the sector which is expected to continue
- Engineering professionals are expected to increase in number
- The largest reductions in numbers are expected in skilled trades
- However, even in declining craft occupations losses will be compensated for by replacement demand
- Over half of employees are qualified to at least an intermediate level (53%), with graduate employment at 11% in 1998
- The number employed with no qualifications higher than GCSE grade D has decreased from 35% in 1988 to 18% in 1998
- The overall decline in engineering employment does not mean there will be fewer job opportunities in the sector
- Some of the largest demands will be for managers, professionals, skilled metal and electrical trades, process plant and machine operatives, drivers and clerical/secretarial support roles

>Training Supply

Further Education

- Colleges across the county provide a wide range of engineering training courses, most commonly BTEC National and First Diplomas

Higher Education

The Universities of Brighton and Sussex have large engineering departments. They work with local employers to address their specific needs.

Other provision

- Almost two thirds of establishments nationally fund or arrange on- or off-the-job training for their employees and just over a third employ apprentices or recognised trainees
- Over half of establishments reporting skills gaps provide both types of training. This suggests that employers are trying to reduce skill deficiencies
- Over half of employers (55%) report barriers to training, the most commonly cited being an inability to let staff have the necessary time off
- Very few reported being unable to find the right training
- 3,399 people studied a range of engineering occupations in 2000/01 in Sussex
- 13% have not completed their course
- Most students are male and white
- Around 60% are aged 20 or under
- Around half were studying level 3-4 qualifications
- One in ten students studying engineering-related subjects in Sussex is resident outside the county

> Main Skills Issues

- The greatest skills gaps are reported (in order of importance) in craft, operators and assemblers, technicians, professionals and managers
- There is little information on the nature of these skills gaps but practical skills are always at the top of lists reported by EMTA (Engineering Manufacture NTO) surveys
- The small size of many employers means that they are less likely to provide training or have the resources and networks to access information and funding
- There are no more hard-to-fill vacancies in engineering than in other sectors but the fact that one-sixth of employers report problems in this area remains a serious concern. The occupations with most hard-to-fill vacancies are craft, professional, technical/scientific and managers
- The rapid rate of change in more technologically advanced parts of engineering, which are well represented in Sussex, means that in addition to initial training there is likely to be a demand for specialist short courses
- Higher levels of skills are needed in the electronics sector, particularly in technician and professional occupations
- There needs to be co-ordination between training providers rather than competition to ensure that needs overall are met and that similar types of provision are not competing with each other
- While there is a need for highly skilled and highly qualified people in the sector, there are also many jobs at less skilled levels. The skill and training needs of these occupations are as important as those of graduates
- New engineering NVQs need to be more occupationally specific than at present to encourage take-up by employers and candidates
- Foundation degrees need a well-structured work component, in order to create a wider awareness and appeal to more employers
- A qualification is needed for work-related trainers to raise standards
- There is a need for more information on the training and financial assistance available to employers

> Key Issues and Priorities

- The level of recruitment activity in engineering is closely related to the economic cycle. The exchange rate has been a particular issue in recent years; defence and other investment spending also impact on the sector
- There was a further weakening in engineering output in the final months of 2001, spread across all engineering sectors. Companies continue to be pessimistic about the future, as new orders decline and cutbacks in employment and investment plans accelerate
- However, the importance of the electronics sector in Sussex is likely to insulate the area from some of the worst of the economic cutbacks. Forecasts in 2000 predict that the growth in electronics would be the driver of recovery in engineering
- There is a great need to attract more people into the industry. Possible improvements may include:
  1. The introduction of a vocational engineering GCSE which might attract more young people to the profession and provide a progression route into Modern Apprenticeships
  2. A greater availability of engineering Saturday clubs for children to introduce more young people to engineering. Employers are particularly in favour of this idea
  3. An increase in the number of employer champions visiting schools to engage the interest of young people
  4. Greater promotion of Modern Apprenticeships to attract young people and employers. Some employers, however, feel that MAs have a lack of 'underpinning knowledge' and that the units covered do not provide enough breadth. The introduction of a technical certificate is aiming to address some of these issues
- Initiatives to attract more young women and ethnic minorities into the industry are important, as they offer a relatively untapped source of labour for the sector

DAVE McHUGH (1)

> Contact Us

We welcome your views and reactions to this action plan. We are especially looking for information about:

- Skills gaps and skills needs
- Hard to fill vacancies
- Future trends and challenges facing your industry

Call the Learning Pays Hotline
0845 000 0026

Sussex Learning and Skills Council
Princes House, 53 Queens Road,
Brighton, BN1 3XB
Fax: 01273 783535
Email: sussexinfo@lsc.gov.uk
Website: www.lsc.gov.uk/sussex

Learning+Skills Council
Sussex

Objective	Actions	Timescale	Working With...
Creating a demand-led system	Establish an employer network to disseminate the benefits of training for SMEs	Start March 2003	EMTA
	Support the work of Entry 2 Employment to promote activities led by employers	Start March 2003	EMTA
	Promote short, bespoke employer-led courses to upskill entrants to employment and existing employers	Start September 2003	EMTA
	Identify employer champions	By March 2003	
	Develop Training Framework brief to raise awareness in schools and FE Colleges	By December 2003	Consultants
	Establish Sussex progression routes for learners to level 4 in FE Colleges	July 2003	
	Promote the sector through school/FE Colleges linked events and target activity to under-represented groups such as ethnic minorities and females	July 2003	
Improving supply and capacity	Establish engineering Training Frameworks	By July 2003	EMTA
	Identify what is being offered and establish what provision employers want	By July 2003	Consultants
	Develop flexible employer-led delivery models	By September 2003	
	Seek to develop networks and brokerage for employers and providers		
	Refocus funding on Sussex Virtual College for course delivery in employer premises	By December 2004	EMTA, SEEDA
	Establish flexible training packages for employers	Ongoing	Consultants