

# New Skills

The pilot proved the success of the PAC framework as a high value-added mechanism

## Sustaining productivity and competitiveness increases through business improvement techniques training.

To enable the UK manufacturing industry to compete globally, its capability and capacity needs to expand through 'smarter' working. Additional evidence gathered in the research phase of SEMTA's Sector Skills Agreement (SSA) endorsed the need to increase productivity and competitiveness, making it one of the priorities identified in the SSA. Business-Improvement Techniques (B-IT) qualifications based on lean manufacturing and related principles were seen as an important tool in meeting this need.

SEMTA had previously worked with the Society of Motor Manufacturers and Traders (SMMT) Industry Forum and West Midlands LSC to develop a productivity and competitiveness (PAC) framework for use in the automotive sector. The framework linked employee training to process and operational changes in increasing productivity and

bringing about sustainable bottom-line benefits through the development of a continuous improvement culture. To test the effectiveness of the model on smaller companies within its wider sector, SEMTA ran a pilot with 14 SMEs from a variety of sub-sectors in the West Midlands.

Trained PAC analysts visited each company to gather data and assess its performance on seven standard measures covering quality, cost and delivery, acknowledged as indicators of competitiveness. From the information collected, they analysed organisational and process needs and individual training needs, enabling plans to be drawn up. The plans identified the focus for intervention from SMMT Industry Forum engineers and indicated where employees needed B-IT VRQ/NVQ training. After process improvement engineers had worked with company management to implement organisational changes and colleges

had delivered skills-based training, PAC analysts revisited the companies to re-assess performance against the key measures.

### Business benefits

Companies completing the pilot programme realised profit increases averaging £93,752 per company initially, with potential further increases identified. Across the 14 companies a total increase in profitability of over £1.3 million is anticipated. Bottom-line benefits have been achieved through:

- Reduced direct labour costs;
- Reduced machine down time;
- Reduced scrap levels;
- Reduced reject levels;
- Increased flexibility;
- Increased production capacity;
- Ability to meet previously unmet market demand.

### Additional benefits include:

- Better management information on products and processes;
- Increased workforce understanding, knowledge and skills through B-IT VRQ/ NVQ training;
- Continuous improvement culture.

The pilot proved the success of the PAC framework as a high value-added mechanism. It demonstrated how workforce training is key to the sustainability of improvements that will boost productivity and competitiveness.

Using B-IT VRQs and NVQs in tandem with inputs at management level was shown to embed 'lean' thinking within the company, leading to positive culture change and sustainable benefits that could not be achieved without a combined approach.

### Boosting skills

In addition to giving members of the engineering workforce the skills to raise

company performance, the pilot has added to the relevant skills base in other quarters. It has trained 15 individuals selected from colleges, training providers and sector bodies as PAC analysts. College staff have also been given the skills necessary to interface with industry in the delivery and assessment of B-IT qualifications.

### Delivery partners

- FE colleges: Dudley College of Technology;
- Sutton Coldfield College;
- Telford College of Arts and Technology;
- Warwickshire College;
- SMMT Industry Forum.

### Funding partners

- DfES;
- LSC.

### Benefits realised by participating companies:

- 100% increase in people productivity;
- 89% improvement in equipment usage;
- 73% reduction in product assembly time;
- 2.6% increase in production capacity for single product;
- 'not right first time' cut to almost 0.

### Future

The success of the West Midlands PAC initiative has proved the case for rolling out the approach in other regions and established a process for doing so. If this were to happen it could have a major impact on the manufacturing sector in terms of improving productivity, enhancing supply chains, up-skilling the workforce and safeguarding employment.

Based on gains achieved in the pilot, engaging with 50 engineering companies per region could yield around £4.7 million increased profitability per region year on year, with the delivery of more than 250 B-IT NVQ Level 2 trained employees. Across the nine English regions this

equates to sustainable profitability gains of around £42 million and 2,400 B-IT NVQ Level 2 trained employees. The PAC approach to B-IT training is seen as a key strategy in delivering the national Train to Gain initiative within the sector.

Initial assessment and selection methods for PAC analysts which the SMMT Industry Forum has developed, along with the standard course to train them for their role, provide a model for increasing the pool of people able to act in this capacity. This work lays the foundations for a quality-controlled national register of competent analysts. The National Skills Academy for Manufacturing will act on the outcomes of the pilot and identify how the PAC framework can be offered within a developing regional and national brokerage system.

### Company comment

"The PAC programme has enabled us to make dramatic improvements in our quality, cost and delivery measures. We've reduced scrap and increased our overall equipment effectiveness so we can produce more of the component that accounts for 65% of our business.

We wanted to see how business improvement techniques worked by experience, rather than an academic exercise, and the experiential learning has worked well. Now we have trained people in different areas of the business who have achieved the B-IT Level 2 NVQ so they have the skills and knowledge to facilitate further improvements.

Activities we've carried out since completing the programme have led to more percentage points improvement and we keep pushing the bar up. Our intention going into the exercise was to keep the impetus going in the business and that's what we're doing."

**Noel O'Donnell**

**Quality Engineer, Valve Train Components**

