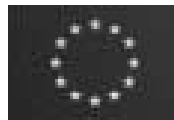


HIGH ROAD TO WORK ORGANISATION

CASE STUDY

BGB Engineering



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Abstract

This electro-mechanical engineering company has been selected for the Hi-Res project as it demonstrates good practice in a family-run business which has adapted both its products and its processes to become more competitive in a tough economic environment. It has undergone an entire culture change in the move to adopt empowered teamworking and has encouraged a process of continuous improvement. One of its main success factors has also been the introduction of a profit sharing scheme for all employees.

HI-RES Case Study: BGB Engineering

Sector

Engineering

Key Words

Teamwork; Flexibility; Continuous Improvement; Profit Share

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1. Background Information

This privately owned family business, currently employing 36 people, was established in 1976 and is based in Grantham in Lincolnshire, UK. The company designs and manufactures a range of slip ring and carbon brushgear units for wind powered generators, rotating doors and a variety of other end-uses. Turnover is currently £1.8m, which is forecast to increase to £2.5m in 2002. The export business grew significantly in the 1990s and now accounts for 75% of total turnover, 70% of which is to Denmark.

The company's strengths are its complete flexibility, for example, teams are able to repair individual units which have been damaged during use or re-design and manufacture them if they are unable to repair it. They are financially independent, allowing for investment in training, product development, process development and profit sharing. They have the manufacturing expertise which allows them to develop new products and remain competitive. The multi-skilled trained staff give the company the flexibility it needs to meet customer demands and a full in-house technical support service is offered.

2. Drivers for Change

The decision to change was sparked off by the sudden and unexpected ill-health of the managing director. This was the point where he decided it was either 'make or break' for the business - he'd either have to sell it or turn it around to make it profitable and competitive again. He opted for the latter. Having been inspired at a Europe-Japan conference and read literature on transposing Japanese principles into British industry, he decided to begin applying and adapting some of the principles he thought best suited his company. Competition was becoming fiercer and mass production was no longer an option. Instead the company needed to focus on specialising in niche markets and identifying new ones which could build on the existing skills, plant and machinery.

3. Characteristics and Process of Change

Members of staff received training at a local college and were offered advice and support from their local Business Link (Lincolnshire), which was considered to be invaluable. The following change programme was undertaken during 1996. With hindsight, this was too quick!

Principle Applied	Date
Kaizen	March 1996
Teamworking	April 1996
Empowerment	May 1996
Cellular Working	October 1996
Kanban	November 1996

The shopfloor was re-organised into production cells, each of which has a team leader. The teams mainly specialise in certain product types or processes, but team members are sufficiently multi-skilled to work on other teams when production dictates. This is done very amicably as the company has successfully fostered a culture of trust and motivation.

One of the major motivational factors is the profit sharing scheme. A system has been devised which offers all employees a percentage of the profit, depending on its value - as more profit is made, so the percentage given increases. This has had a significant impact on the motivation for employees to co-operate and develop with the company.

As part of the continuous improvement principle, a suggestion scheme was established in which operators were paid a £10 bonus for any suggestion which was implemented. This ultimately was abandoned as it became complicated and removed the focus from why improvements were being sought. Having a more global view of the company's performance through the profit sharing scheme has had a far more significant result.

A kanban system of raw materials control is in place, in which there is a level at which individual components must not fall below before new stock is ordered. The components are bar-coded and organised into trays at the end of each team. The bar coding links up with the stock ordering system in the offices, making it easier to manage.

A great deal of time has also been spent on encouraging people to take a step back and look at their jobs differently, brainstorming ideas for improvement. Employees have been trained to use process flow charts which highlight savings which can be made through reducing non value-added operations, delays and transportation. When added together, these small changes have made a significant impact on cost reduction.

Teams have a 10 minute meeting every morning which is extremely focused and addresses any problems or production issues before they start work. This aids the smooth running of production.

The principles of continuous improvement have been instilled throughout the company, with the technical designer learning to use the most up-to-date CAD system to design the products. The aim is to ultimately link the design specification with the job specification directly on the shopfloor through a computer terminal.

4. Obstacles to Change

There were some 'casualties' in the change process - people who were unwilling to try out the new ideas. The philosophy adopted for this was that if they didn't change, everyone would be out of a job, so it was a necessary process. The managing director had full commitment to the project and needed his workforce to have the same.

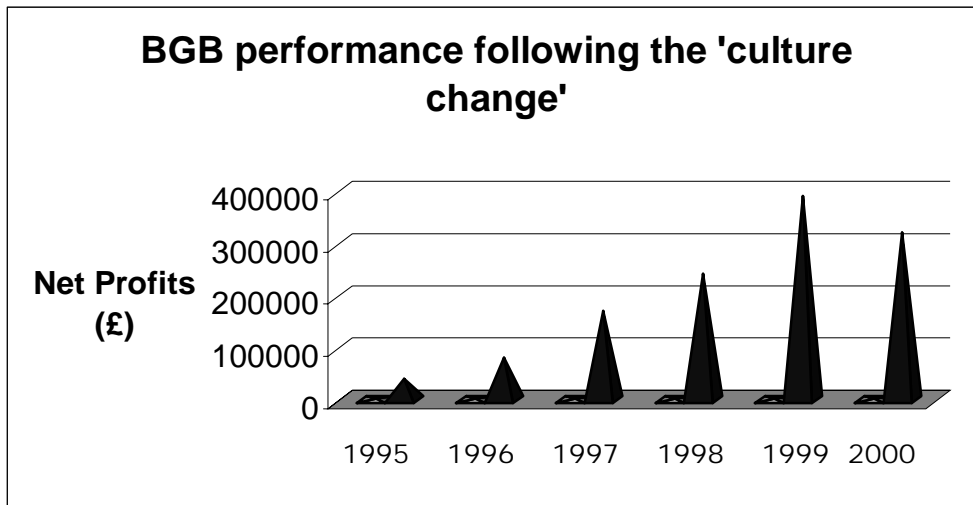
5. Risk Analysis

The fact that the change programme was undertaken so quickly had an effect on the workforce - the employees spoken to really felt the strain. However, they are now really positive about the changes which have been made and are well aware that their flexibility has secured the future of the company.

6. Benefits of Change

The survival of a small company in such a volatile market is the main benefit of the change process. In addition, the workforce now feel that they are a part of the company and take a real and genuine interest in its success. Now the seeds have been sown, the concept of continuous improvement has become part of the every-day culture of the

business, which is a difficult thing to achieve. In terms of the bottom-line profits, the positive effects of the changes that have been made are reflected in the figures below.



Conclusions

No-one in the company considers the process to have ended. It was emphasised by a number of employees that now success has been achieved they cannot relax - there is a need to keep looking for new ideas - to reduce costs, to out-do competition, to make the working environment more pleasant. What was obvious from the visit was the old cliché that the employees were "working smarter, not harder". There was a buzz about the factory because they were working *efficiently* and were engrossed in achieving positive results which would benefit everyone.

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