

## Lean Production at Perkin Elmer

A visit was organised to look at the production methods used by a local business – Perkin Elmer.

### The company

PerkinElmer is a global technology leader focused in two core businesses: life and analytical sciences and optoelectronics. The organisation operates in more than 125 countries. PerkinElmer's site in Llantrisant employs 87 people in the manufacture of diagnostics testing equipment as part of the life and analytical sciences division. It is accredited by Investors in People and ISO 9001.



Perkin Elmer makes use of Lean Production techniques to improve the efficiency of their company by cutting down on wastes. The techniques they use include:

Lean production is a production process based on a range of waste-saving measures inspired by Japanese manufacturing companies.

The techniques used by Perkin Elmer include:

**Cell Production** – This is the splitting of a continuous flow production line into self-contained clusters. Each unit produces a completely finished article, or a significant element of it. Perkin Elmer makes use of this by having cells in which a whole product is made. All the components are brought to the cell so the one worker does not have to move far. The product being built was placed in the centre of the cell so that components could be added easily to it and the actual product did not have to be moved around (time waste) . This allowed the worker to build more efficiently as all the parts he required were within close proximity. It also made it easier for the worker to work by himself rather than having several people being involved in the production of the one product.

**Teamworking** – This involves the use of teams such as production cells or independent work groups. These teams are given greater responsibility so that the workers can take critical decisions and solve problems. This is closely linked to several motivation theories, such as Maslow's 'Social Needs' part of the pyramid. Perkin Elmer has regular team meetings where employees can suggest ideas for improvements (Kaizen). This helps Perkin Elmer because its workforce will have the best ideas for improving efficiency as they are the ones involved in the production process. They also make use of production cells of teams for certain products and parts of their business e.g. they have a cell that deals with the packaging and delivery of products.

**Just-in-Time** – A Japanese philosophy that organises operations so that items if stock arrive just at the time they are needed for production or sale. This cuts down on the need for storing stock. Perkin Elmer employs an outside company to manage their stores of screws and nuts which were constantly required for production. The outside company would replenish the stores that were running down and keep everything organised. This allows Perkin Elmer to concentrate just on the production, safe in the knowledge that all the small components are there when required. Each production cell has a board outside their work area on which they write the components that need replenishing and the ones that will need replenishing soon.

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These parts can then be ordered and will be required as soon as they arrive, so the storage of stock is cut down. This system requires excellent communication and relies on the suppliers delivering on time.

**Product Waste** – Perkin Elmer ensure they do not 'over produce' by having weekly and daily production targets set by the sales team. This ensures they only produce what is required.

They also have tight quality assurance measures to ensure stock, and money, is not wasted. Each product made is put through tests and is used in the way that the customer will use it e.g. if a company says they will be using the product to test polystyrene, Perkin Elmer will test that product with a sample of polystyrene. This ensures the customer will be satisfied and will not send the product back, as reworks will cost a lot of money and time.

### **Benefits of lean production**

Lean Production allows Perkin Elmer to:

- Increases productivity as better methods of production are identified by staff so products can be made faster and with less waste.
- Have a more motivated workforce as they are encouraged to give their ideas and work independently. This improves the chance of them giving valuable ideas and will encourage them to work at a faster rate.
- Reduce wastes and stock storage costs, which improves both their cash flow and overall profits, as products are produced for less.
- Offer a higher quality service, as products are more likely to be delivered on time, to the customer's specifications and at a reduced cost.

Some firms will still prefer to hold large quantities of stock and benefit from buying in bulk, if their demand is predictable and they have the space to do so.



1<sup>st</sup> February 2007