

Food for thought?

There are many statistics on the size of specific markets, depending on who has created them and for what reason, but recent figures on the food and drink industry make interesting reading.

"The food and drink sector has been the most resilient and stable of all manufacturing industries throughout the recession"

It is reported that the food and drink manufacturing industry in the UK generates a turnover of almost £77 billion and that over £12 billion worth of food and non-alcoholic drinks are exported annually. Exports of these products to non-EU markets grew by 7.2% in the first half of 2012. This sector is the largest within the UK manufacturing industry, accounting for 16% of the total and employs up to 400,000 people.

These are sizeable figures to swallow but production in this sector has been the most resilient and stable of all manufacturing industries throughout the recession with the industry consistently producing at levels over 10% higher than the manufacturing average. (Sources available.)

Businesses in the food and drink manufacturing have always been conscious of their levels of productivity. Now, more than ever, there is constant focus on costs by improving performance, productivity and processes, using industrial engineering expertise and applying lean principles.

Their reasons for involving productivity specialists are many and varied and include the need to

- Minimise changeover times and bottlenecks;
- React to fluctuating demand with shorter response times;
- Increase throughput with accurate manning levels;
- Create better flow and balance;

- Respond with more agility to packaging changes and configurations;
 - Minimise transport costs.
- And all to ensure products get in front of the consumer – on time.

The heart of the matter

Manufacturers of all sizes always want to identify and remove any wasted or unnecessary effort, delays, decisions, processes, costs, paperwork. At the heart of it all is process improvement using accurate time data. Accurate time data can help to provide the answer to most things productivity related.

You only have to look at the number of promotional offers in any supermarket in response to consumer demand. But have you ever stopped to consider what are the implications of these offers on the industry? Manufacturers can only respond to the creation of these offers by becoming increasingly effective and that means keeping their processes and equipment flowing. The 'two for one' offer creates more product volume, so more product to create, to package, to pick, to transport, to handle, to display.

Productivity and process improvement initiatives, lean principles, SMED, industrial engineering techniques are all called upon more and more to address the needs of the food and drink market. Here are some examples.

Unnecessary investment

A major food manufacturer needed accurate data to assess whether they could derive sufficient benefit from an investment of £850,000 to install a new conveyor system. A number of variations to the packaging had been introduced to respond to different retail spaces available in supermarkets, filling stations etc. The need to increase capacity and throughput to meet demand had resulted in their engineers constantly increasing the speed of the conveyor system, thereby putting undue pressure on the bearings and rollers in the switching mechanism.

Taking into account new calculations on the capacity of the conveyor and new specialist input to identify the best utilisation of the current equipment, specialist productivity analysis came into its own. Using accurate and consistent time measures and models, together with other industrial engineering techniques they were able to prove there was no need for further investment and the conveyor could be slowed to ease engineering stresses.



"Have you ever stopped to consider the implications of promotional offers on the industry?"

Production methods

A food processing and packaging plant saw an 18% reduction in labour costs by implementing recommended improvements to their batch production methods. Opportunities to reduce waste, address material shortages and create better product flow were also identified.

Product variations

There were problems at a bottling plant with line capacity and how to cope with the increased variation of caps and labels as well as bottle size, type and contents. Specialist investigation identified an array of causes of downtime and the need to more closely specify the

variation of line speed to cope with equipment sensitivity. To accommodate regular changes in the types of product, bottle, or cap, much quicker changeovers were effected – and significant material costs saved by slightly moderating filling volumes still within acceptable tolerances.

Variances

An increasingly large range of plant and packaging variants with smaller batch sizes was causing significant labour variances. The overall picture was clearly adverse, but there was inadequate information for targets and costs for each specific product, so it wasn't evident which products were causing the variance. Building

time data and a better batch monitoring procedure highlighted the problem areas. Actions and decisions impacted on charge costs, increasing minimum batch sizes and in two very significant cases, reducing customer charges for some large batches. The result – a more competitive offering and increased business for the manufacturer.

Food and drink manufacturers are increasingly turning to specialists in structuring and applying time standards because this very specialist expertise can make a huge improvement to how lean and streamlined their business actually is. And that is at the heart of this and every business sector.

