



The more hurdles you can remove, the shorter the time to complete the task and the better the productivity.

What does industrial engineering embrace?

The industrial engineer is someone with vision: 20/20, tunnel and peripheral, night vision and 3D.

Is there a popular misconception that an industrial engineer is just some kind of work measurement person? Industrial engineering can cover the whole range of activities and functions within a business or organisation – even stretching to include activities and functions outside the business, eg procured parts

or outsourced services, and those after the business, eg delivered parts, products or service. It's always concerned with the right place, the right format and within the agreed timescale. Industrial engineering should have an impact on all aspects from the design of a product, process or service right through to the delivery.

The effective performance of all these functions is what drives productivity at acceptable costs. Far too often, performance is seen as the responsibility of the person who adds value to a product, to an operation, eg in packing or processing, but in most cases their performance is dependent on other activities in the business. Experienced

industrial engineers, directed and supported by senior management, know that robust and appropriate measures should point towards the causes of waste, excess cost or poor performance. They also know that the regular review of these causes should identify where action can be taken to remove some of the problems or hurdles. Industrial

engineering deals with cause, not just effect.

Some recent examples

We have some recent examples of the power of industrial engineering in an assortment of businesses. One of Europe's largest manufacturers of domestic and commercial products, from small to highly complex and bespoke, have involved us in auditing some of the targets they have within their business in various locations. There are constantly cost variances and they recently asked us to determine the parameters for a financial incentive scheme in one particular area of the business that was considered to be under-performing. A process was continually taking more than the estimated 12.5 hours – in fact it was regularly more like 20 hours!

One of our experienced industrial engineers started to examine the circumstances and lo and behold, uncovered several issues. No wonder the team was behind and not fully utilised. All too often parts were missing, or they were the wrong ones, or they didn't fit properly. The industrial engineer could soon account for the extra 7.5 hours and it wasn't the fault of the assembly team under scrutiny. This was a prime example of how poor performance is down to the departments preparing or organising the work, rather than the individual workers. Having been under pressure to

react to new conditions which market changes had created, the Group Financial Controller was now able to address the problems – without the need for an incentive scheme.

Suitably accurate measurement is very important to industrial engineers; they need realistic and relevant facts on which to base their decisions and with which to challenge decisions.

In a smallish company, our Industrial Engineer was able to address issues of layout, office processes, line balancing and value engineering. Invited to address the objective of how best to increase sales and capacity and reduce labour costs, industrial engineering soon identified a major issue that was having a huge impact throughout the business. Walking round the shop floor the industrial engineer noticed a huge area being used to store thousands of parts and components, despite manufacturing space being at an absolute premium. By suggesting more flexible designs of the components to enable interchangeability for many applications, industrial engineering saved the company a considerable amount of space, money, time, cost, delay and confusion.

Industrial engineering isn't about mountains of time studies; rather it contributes to every area of a business so that everything comes together at the right time and cost, so that businesses become more effective and

efficient.

Interestingly, the Wikipedia definition is "industrial engineering is a branch of engineering which deals with the optimisation of complex processes or systems. It is concerned with the development, improvement, implementation and evaluation of integrated systems of people, money, knowledge, information, equipment, energy, materials, analysis and synthesis, as well as the mathematical, physical and social sciences, together with the principles and methods of engineering design to specify, predict, and evaluate the results to be obtained from such systems or processes." Surely that lengthy explanation simply means that industrial engineering impacts the resources of any organisation and it will affect productivity. Add to this the independence and common sense of an industrial engineer and management have a pretty powerful service at their disposal. Over the last 35 years, as the UK's largest supplier of industrial engineering, we can guarantee that it certainly will impact and affect an organisation and improve productivity in ways some management haven't even dreamed of!

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