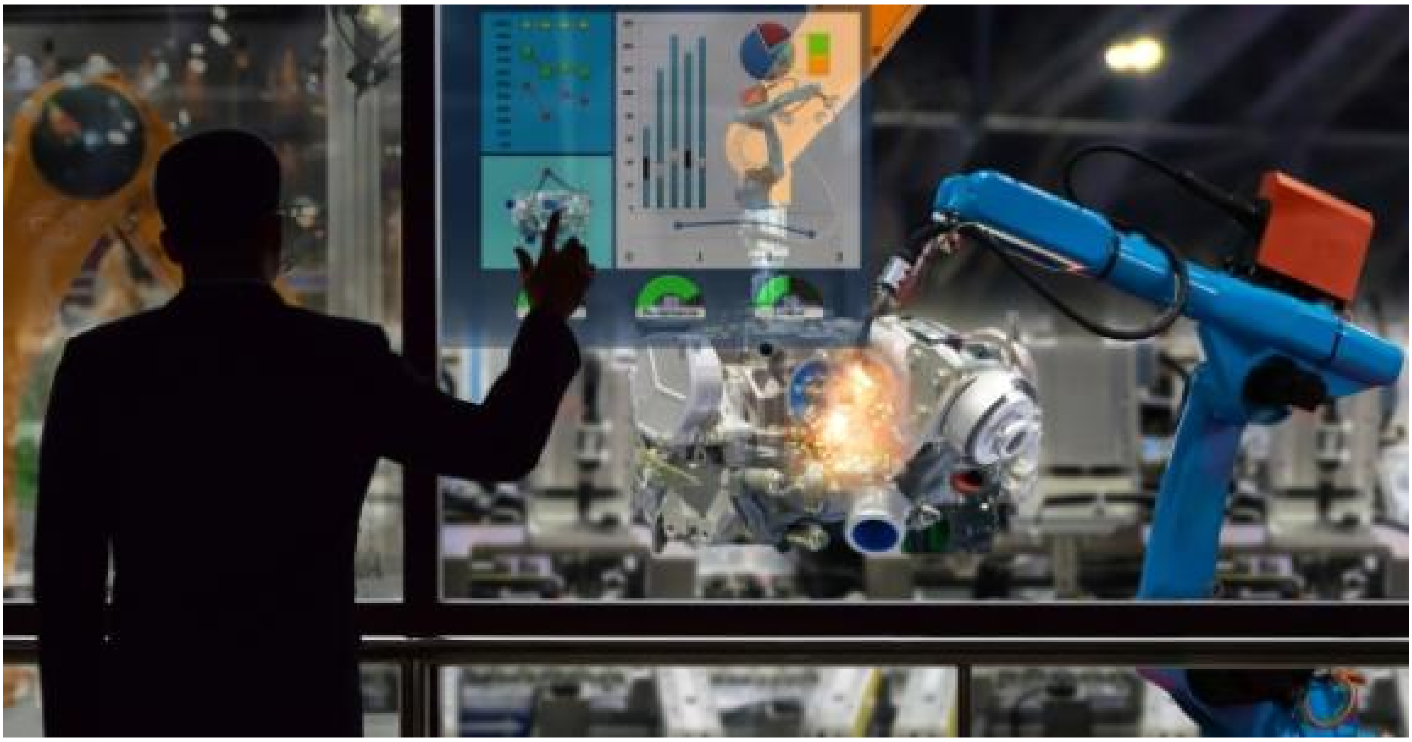

How to make a difference with production digitalisation?

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Digitalisation results in a great leap forward for some production companies, while for others the impact is rather limited. Why is this and how can you avoid disappointment after digitalising operational processes?

There are enormous differences in the impact of digitalisation in individual companies: for some, it may result in substantial progress, while others hardly notice any difference. We have recently seen a presentation by a company explaining how they had set up a 'digital twin' of their production, and how they now know exactly what was going on. When a listener asked them how this had helped them, they admitted that no tangible results had been accomplished as yet. This is proof that digitalisation in itself is not usually enough. In fact, what makes the real difference is the digitalisation method.

Eyes on the prize

Digitalisation is not an end in itself, but a means. This sounds logical, yet we tend to forget this. The best solution to a problem is not always the most sophisticated solution imaginable, but rather the simplest solution that solves the problem. Or as Einstein stated: *"Everything should be made as* *simple as possible, but not simpler."* Simple solutions are not only cheaper, they are usually easier to implement and can more readily adapt to changing needs. To improve work meetings, we often recommend holding “start-of-day meetings” at a whiteboard. On the whiteboard, the status and agreements can be shown by means of simple visuals (e.g. coloured magnets, post-its). People often wonder if a computer screen would not be better suited “in these modern days”. However, computer screens are not the easiest solution here and are usually overkill. In fact, they complicate rather than simplify the work meeting process.

A digitalisation plan can only make a difference if you start off with good objectives which are impossible to achieve without digitalisation. Good digitalisation objectives will also have a significant and tangible impact on business results. Unfortunately, digitalisation plans often lack strong, solid arguments, and tend to resort to hollow phrases, such as:

- *"We want to be able to see where each order is at any time."*
- *"We want to have a better idea of the efficiency of our equipment."*

Both arguments are aimed at gathering information more efficiently, but do not exactly tell us why this would actually improve the business results. Having better information available may strengthen the management's 'illusion of control', but does not necessarily result in a tangible and significant impact. Therefore, make sure to be critical and ask yourself why you need this information, and how you can create added value once you have gathered it.

To make things clear, we will dig into the first ‘weaker’ argument by firing ‘why’ back a couple of times:

1. *Why do you want to be able to see where each order is at any time?*
   Customers often call and want to know quickly when they can expect their order.

2. *Why do customers call so often?*
   Our deliveries are regularly late, and customers are irritated when they can and want to know there and then what is going on.

3. *Why are your deliveries late so often?*
   The orders circulate in the office for a very long time, so we start production too late.

In this example, the need for more data is the result of another problem. It might therefore be better to reduce the turnaround time in the office rather than investing in symptom relief.

A similar objection must be made for the argument of 'visibility of efficiency'. Just because you can visualise the losses, doesn't mean you can effectively make improvements. For example, many companies know all too well that their changeover times are a major loss factor, but only a minority take adequate action. And it is not usually a lack of data that is holding them back. In order to improve, companies mainly need the right leadership, good improvement ideas and time to improve. (Do you have time, but no improvement ideas? No problem, you can find a list of ideas here.) That explains why a Sirris survey among users of manufacturing execution systems (MES) revealed that some companies were deriving great added value from it, while others saw no progress at all. As one respondent noted with disappointment: *"The only difference is that we now have an extra IT consultant for MES."*

Look before you leap

In short, analyse your problems properly, do not just fight the symptoms but make sure you understand how digitalisation can lead to a real impact. Gathering data to have more data is just not enough. Digitalisation to solve a management issue will have little or no tangible impact. Some digital systems even have a dark side, in fact. It allows managers to hide behind their computers, turning them into 'excel managers' far removed from the daily reality on the job. Blind trust in reports without going to see the facts on the ground is an old sore, by the way. Taiichi Ohno, the Einstein of the production world, warned of this earlier: *"Data is of course important in manufacturing, but I place the greatest emphasis on facts."*

Successful digitalisation actually starts by formulating clear objectives which have a significant impact on the operating result. A real impact is only possible if it is tangible for your customers, or if it actually improves the work of your employees.

Examples of good digitalisation targets include:

- *"We want to have a quotation success rate of 50% in a year's time by offering a quotation within the minute."*
- *"We want to increase productivity in assembly by 10% within six months by eliminating the time spent looking up information at the workstation.*

The greatest impact of digitalisation is achieved when customers are noticing the difference and reward you by placing more orders. This is how digitalisation in production can be a true engine for business growth. Operational processes, both order processing and production, can only have an impact on a limited number of order winners. Orders are typically won on the basis of price and delivery time. This is without adding quality to the equation, because that would be an order qualifier rather than an order winner. Adjusted price settings to improve the operating result is easier said than done. After all, the effect on sales figures is uncertain, and the scope for price adjustments is often limited. So the biggest lever that remains is the lead time. Reducing the lead time usually makes a big difference, because customers will notice it on different levels. An organisation with short lead times will not deliver faster, but will typically also respond to quotation requests and implement requested changes more quickly. In the next parts of this article series, we will continue to discuss how digitalisation can contribute to lead time reduction.

Shortening lead times makes it possible to grow as a company and to reduce lots of indirect costs. The quick response manufacturing (QRM) production strategy makes this possible for companies in a high-mix, low-volume environment. From 8 March (in Ghent) and 24 March (in Diepenbeek) we will be organising a next QRM training cycle.

(Source picture: https://nl.dreamstime.com)
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