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Digitising the factory: bringing consumer products manufacturing into the 21st century



#### Anufacturing industry leaders explore the benefits of digitalisation at a seminar sponsored by Siemens.

British manufacturers are lagging behind their European competitors when it comes to digitalisation – Industry 4.0 and, in particular, factory automation. This is one reason the UK's productivity has languished over the last decade, plummeting after the financial crisis in 2008 and dropping back again in the last half of 2018.

The truth is that manufacturers in the consumer products industry often use old plant, sometimes dating back many decades. And they see little reason to modernise: the risks are seen as too great and the rewards too uncertain.

And yet digitalisation holds out huge promise for manufacturing, with cost savings, increases in quality, and the ability to be far more flexible in output as the UK government's Made Smarter review points out.

So how can UK manufacturing benefit from digital technology? A dozen leaders from the consumer products industry met in central London this month at a breakfast sponsored by Siemens to discuss why we are failing to invest in digital technology – and how this issue can be resolved.

### Why digitalisation?

The primary reason for employing digital technology in a manufacturing environment cited by industry leaders at the meeting was efficiency: to achieve lower costs by cutting waste and adopting lean manufacturing techniques.

Digital technology can help save costs by identifying potential energy savings in the production line, as well as by reducing wastage of raw materials. But it also enables automation – and this is about saving labour costs.

However, delegates stressed that savings from automation shouldn't necessarily be equated to shedding staff. Instead, the aim should be to free workers from routine tasks, better undertaken by a machine, enabling them to add value elsewhere. For instance, in forecasting, quality control and machine maintenance

Another reason for digitalisation is quality. By moving tasks from a person to a machine it is likely that more consistent output can be achieved. Goods can be manufactured more consistently and to more exacting standards. Data transferred by a machine from one place to another will be transferred more accurately, as well as more quickly, than if a human were involved.

Ultimately machines often make better decisions on a production line. Having a machine make most of the decisions means that those decisions will be made rapidly, and based on hard data, rather than opinion.

Digitalisation also enables flexibility. Increasingly, consumers are empowered: they want products personalised for their own needs; they want the latest fashionable

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trends; they want it right now, without having to wait. These demands cause problems for manufacturers that can only be met through better investment in digital technology that allows production runs to be scaled up or down as required.

And at the same time, consumers want sustainability: they want the companies they buy from to be eco-friendly. Matching flexibility with sustainability is difficult, until one thinks of the way that digitalisation can help manufacturers save energy and raw materials.

As part of this sustainability agenda, many consumers also demand to know the provenance of the goods they buy, especially in the food and drinks industry. And digitalisation in the form of blockchain technologies help here. Giving consumers highly localised information about where their products originated gives them a feeling of comfort, so long as you remember that you can overdo this: a picture of the pig from which the bacon was made might be too much information.

#### What is getting in the way?

With so many powerful benefits to digitalisation, it is tempting to ask: "What

is getting in the way?" And there is no one answer.

Sometimes it's cynicism and a reluctance to believe that these benefits really exist. Sometimes it's about risk aversion and a reluctance to believe that there is a positive return on investment to be achieved in the short- to medium-term.

Sometimes it's a perception that there is a requirement for a very large investment, money that simply isn't available for this type of project. Sometimes it's complacency and a feeling that everything is just fine at the moment.

Sometimes it's simple: a lack of knowledge of what might be achieved through the use of existing well tried technologies such as automation, let alone the use of emerging technologies such as artificial intelligence.

All of these reasons really come down to one thing: a lack of confidence in the value of digitalisation, something that with time and education can be overcome.

But there is another, more difficult reason to explain why companies, especially smaller ones, are shying away from digitalisation. And it's because many manufacturers don't feel confident that they have sufficient knowledge to make digitalisation work



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for them. And yet there are some well established guidelines that can be used to make success a great deal more likely.

#### Making it work

Making digitalisation deliver a positive ROI for your organisation is not necessarily difficult. But it does require a robust approach to change management and an appreciation that the practical implications of using any new technology may differ from the theory. For instance, processes that are automated can still rely on paper as part of that process – and paper can get lost; so there will be a need to secure the whole process and not just the digital parts.

If any digitalisation project is to work there should always be a focus on the 'usability' of any systems that are developed. Factory workers have to use systems and if they are difficult to use, then any theoretical savings may be destroyed; and, worse, new risks from, for instance, cyber breaches could appear.

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Digitalisation is something that applies in any part of an organisation. Many manufacturers will start with one or two small pilot projects. And that's good, but the value from these, the learnings of success and failure, need to be shared across the organisation so that future projects benefit.

For any manufacturer, especially smaller ones, digitalisation is a big opportunity but also a commitment. A vision of what might be achieved is needed, as is the determination to explore the opportunities fully. Success with digital innovation can never be guaranteed but with the correct vision, pragmatic planning and strong management, success should be within the grasp of any organisation, whatever their size.

Siemens helps many manufacturers develop a vision for digitalisation. A good place to start if you are looking for inspiration is <u>Siemens'</u> digitalisation portal



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