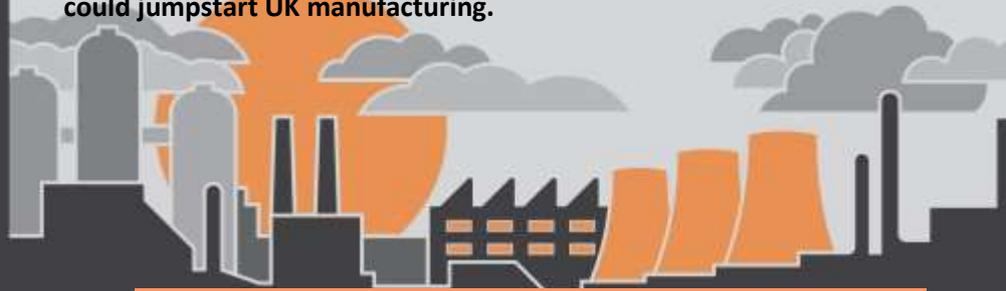


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DID YOU KNOW?

At the centre of Industry 4.0 are 'smart factories', which blend together modern technologies such as cyber-physical systems, the 'Internet of Things' and the 'Internet of Services' to streamline manufacturing processes. Keep reading to learn how smart factories could jumpstart UK manufacturing.

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Welcome to Industry 4.0

As a global society, we are in the midst of the fourth industrial revolution, Industry 4.0. The revolution was brought about, in part, by the high quality and accessibility of information technology, which is using computers and telecommunications equipment to store, retrieve, transmit and manipulate data. Manufacturers have been able to integrate this technology throughout their companies—from supply chains to shipping lanes—in order to streamline their manufacturing processes. At the centre of this revolution is the 'smart factory'.

Smart factories have been integrated with modern digital systems, which can monitor physical and mechanical processes and are capable of making timely, effective decisions should a situation arise. For example, in some of Siemens' manufacturing processes, production information is loaded onto microchips that are installed on each item. As these items travel down the production line, they communicate with the production equipment to request the required operation process.

However, this gradual yet seemingly unstoppable rise of automation in traditional manufacturing processes does not necessarily mean that current employees will become obsolete. But, in order to effectively adapt to these modern processes, traditional employees will need to be educated to specialise in mechatronics—a broad multidisciplinary field of engineering—and information technology.

Regardless of the conceivably substantial cost of developing a smart factory, the potential benefits are significant—with some industry experts predicting annual savings in the millions. However, despite the potential for positive industry growth, 60 per cent of UK manufacturing managers have not heard of smart factories or Industry 4.0.

As the UK manufacturing industry is currently teetering close to contracting, it could benefit from applying modern techniques and processes—or it may fall behind. The United States and Germany have already begun developing smart factories and are predicting substantial returns for their investments. In order to remain competitive and boost vital growth, the UK manufacturing industry must resist the urge to continue conducting business in the same way it has for decades and embrace the potential that Industry 4.0 offers.



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UK Manufacturing Close to Contracting

The health of the UK manufacturing industry is predicted to maintain its steady decline throughout 2016. Currently, the sector's growth continues to hover just above contraction. Adding to the sector's precarious position are new figures from the Office for National Statistics showing that in November 2015, UK industrial production fell the most it has in almost three years, due to warmer-than-usual weather reducing energy demand.

Low global demand for British-made goods coupled with the robust strength of the sterling are the two principal causes of this prolonged, weak economic environment.

But, not all threats to the industry are external. In a survey from industry trade body EEF, one-third of manufacturing firms cited rising business costs such as wage growth, an increased pension burden and the apprenticeship levy as substantial risks to potential growth.

Naturally, this has shaken the confidence of many manufacturing firms as 44 per cent have stated that their companies are currently facing more potential losses than benefits. In fact, 31 per cent of firms have made cost-cutting across the board a critical priority. A repercussion from this necessary reduction in operations is that firms will be limited in their ability to effectively invest in modern processes, equipment and training.

However, amidst the current troubled state of the industry, some firms have been able to remain optimistic—with 55 per cent stating that they expect to see a boost in productivity. Yet, in order for that possibility to become a reality, difficult decisions must be made. While the government has recognised and commented upon the overall poor health of the industry, some industry insiders allege that the government should introduce more formal schemes to help revitalise the industry. Until then, firms should focus on slimming down their production and streamlining their processes.

UK Drug Manufacturing Poised for Growth in 2016

The UK pharmaceutical manufacturing industry's 2015 product output saw an increase of 1 per cent over the previous year. And, according to industry trade body EEF, this trend of positive growth is expected to continue throughout 2016. However, this growth stands in stark contrast against the rest of the manufacturing industry, which saw a decline of 0.1 per cent in its product output during 2015.

Lower production costs combined with a tradition of robust R&D investment has helped insulate the pharmaceutical manufacturing industry from experiencing the same debilitating recession that is currently affecting the rest of the industry. These characteristics are supported by the industry's commitment to maintaining its product output in order to ensure that Britons are able to receive the effective care that they may need.

The inherent attributes of the pharmaceutical industry, which allowed it to grow in 2015, are expected to continue to help nurture it throughout 2016.

Industry 4.0 Manufacturing Process



Source: ZDNet