



How can companies overcome the manufacturing skills gap?

73% OF MANUFACTURING FIRMS HAVE EXPERIENCED DIFFICULTIES RECRUITING SKILLED WORKERS

Britain's economic growth is threatened because one in three mid-sized manufacturing companies are being forced to recruit abroad, according to research by Zurich.

The research revealed the skills shortage means almost eight out of ten businesses with a turnover between £5m to £300m are suffering, or will suffer in the future, because they are unable to source British workers with the skills they need.

Approximately £139bn of Britain's economic output comes from manufacturing and according to Matt Hartigan, Zurich's head of UK corporate insurance, this could decline if no efforts are made to tackle the problem:

"Skills gaps continue to put British manufacturing under huge pressure. Almost all mid-sized businesses share concerns about increased risks because of a shortage of qualified workers, which is clearly hindering overall growth."

This whitepaper analyses how this shortage of appropriate skills has come about and looks at how technology advancements can help manufacturers to attract new entrants to the industry.

Why is there a skills gap?

In recent years, the manufacturing industry has changed beyond all recognition. One of the reasons for the skills gap is the increasing automation of plant operations. These technological innovations demand more skilled workers and also present new career opportunities.

A STEM-based (Science, Technology, Engineering and Maths) education is valuable to anyone entering the world of manufacturing. Today's manufacturing plants are increasingly incorporating high-tech equipment that requires specific knowledge, encompassing design and programming. In this context, STEM skills are a useful asset.

However, Industry Week 2015 has reported that the shortage of applicants with a background in STEM skills is most acute for the manufacturing industry with Deloitte stating this will leave up to 600,000 skilled jobs unfilled each year.

73% of manufacturing firms have experienced difficulties recruiting skilled workers in the past three years, and 72% are concerned about how they are going to meet the demand for skilled workers in the future.

Source: The Manufacturing Institute's EEF Skills Report 2016

According to the report, the number of 'hard-to-fill' vacancies in manufacturing remains at 35%, with two-thirds of companies facing a lack of technical skills across their workforce, and a similar percentage citing a lack of relevant experience.

Incentivising new recruits

The lack of interest shown by young people in the industry may be partly due to a misconception about what a manufacturing job would be like. Many students are unaware of the way technology has transformed this sector in recent years and of the skills required in manufacturing.

The Manufacturing Institute's EEF Skills Report 2016 reveals that a recent public opinion survey on manufacturing found that among 18-24 year-olds, manufacturing ranks last among industries in which they would choose to start their careers.

It's down to manufacturers to try and change the incorrect and outdated perception students have of the manufacturing industry. They need to advertise the fact that they are fully versed with the latest technologies such as ERP and CRM and that manufacturing is an exciting and fast-moving industry, with plenty of opportunities for career development.

Appealing to millennials

In fact, manufacturing is a perfect career choice for millennial workers.

Those aged between 20 to 30 and university-educated may be less experienced but they are comfortable with technology.

This generation grew up with computers and the internet and technology is a natural fit for them.

Innovations such as 3D printing, robotics and nanotechnology will appeal to millennials, and manufacturing is the place to find these technologies in action. Boeing, the airline company, was an early adopter of 3D printing technology, making more than 20,000 3D printed parts for 10

different military and commercial planes.

The company supports additive manufacturing programs at the University of Sheffield and University of Nottingham, where there is research for aerospace and other manufacturing sectors using 3D printing technology.

In food manufacturing, nanotechnology is the next big thing as nano particles deliver a rapid hit of taste, allowing manufacturers to reduce their use of salt and fat. Soda-lo is a new product developed by Tate and Lyle that has enabled salt levels to be reduced by 30% in foods such as bread and pizza. The technology has been developed by Eminate, a wholly owned subsidiary of the University of Nottingham and licenced to Tate and Lyle globally.

Many millennials are unaware of these developments and have never considered a career in manufacturing; therefore, haven't investigated the education, training, and technical skills needed and supported by the industry.

In order to recruit and retain this new generation of workers, manufacturers need to demonstrate that their industry has entered a new era of innovation. Their IT infrastructure and in particular, their software, needs to be up to date and geared for increasingly mobile use.

18-35 year olds are twice as likely to leave a company when they are frustrated with the usability of software.

Source: Mint Jutras: Bridging the Generational Skill Gap.

In a bid to attract talent, companies are investing in more incentives according to the EEF study, with 84% offering competitive salaries and 50% providing training and development opportunities. Nearly 80% said they planned to recruit manufacturing and engineering apprentices in the coming 12 months.

Using technology to bridge the skills gap

Today's manufacturer has moved from the traditional model of simply producing and selling products. Supply chains are now global and customers have higher expectations when it comes to the types of products they buy and how they buy them.

The result of this is that manufacturers are using increasingly sophisticated CRM and ERP software solutions to manage their businesses. The ease-of-use of these solutions is helping to bridge the skills gap as a broad range of employees can use the software. What this does is put relevant information into the hands of those who need it without the need for extensive training.

55% of a company's employees use ERP; 63% use ERP when deployed in the cloud; unlike in the past when only select super users were granted access.

Source: Mint Jutras: Bridging the Generational Skill Gap.

The workforce is also mobile, with 54% of plant supervisors receiving information in real-time through mobile devices. Source: LNS Research 2014.

Increasing investment in this type of technology is helping manufacturing companies to attract millennial workers as well as remain competitive in a highly pressurised marketplace.

Changing the image of the industry

There are several things that manufacturers can do to attract employees who possess the skills so desperately needed by the sector. The first is to invest in technologies such as manufacturing ERP.

This will demonstrate that the company provides the tools needed to connect and manage the entire business, from financial and supply chain management to manufacturing resource planning (MRP), human resources, and operations management.

The next action is to go into schools and colleges to highlight the importance of manufacturing to the UK's economy and showcase the cutting edge technologies it develops and deploys. It's vital to create a desire in young people to study the STEM subjects required to support the manufacturing sector.

Once misconceptions about manufacturing have been rectified and a new image of an industry at the forefront of technology has embedded itself in the minds of potential employees, then the skills gap should start to close.

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