

OPINION PIECE

Does Gen Z hold the key to solving the UK's productivity puzzle?

Digitally native and open to technological progress, Gen Z could be the secret weapon the manufacturing sector needs to harness the power of automation. But it is incumbent on the industry to make sure the younger generation is turned on to careers in engineering and robotics. Here, we reveal the steps FANUC UK is taking to capture the attention of these bright young minds in a bid to secure the future of UK manufacturing...

Despite our reputation as a strong manufacturing nation, productivity has long been the Achilles' heel of the UK's economy. Although we are now the eighth largest manufacturing nation, international comparisons show that the USA and Germany produce about one-sixth more than the UK per hour worked¹. Looking beyond the economy-wide picture, whilst productivity is an issue for all industries, it is an ongoing struggle for our manufacturing sector. Productivity levels have essentially flatlined since the pandemic, with ONS data revealing that in the first quarter of 2023, manufacturing actually made a negative contribution to productivity growth².

Automate to accelerate

It is therefore no coincidence that the UK also lags behind other industrialised nations in its uptake of automation. According to the International Federation of Robotics' 2023 report, robot density in the UK manufacturing industry was 98 robots per 10,000 employees in 2022, placing us 25th in the world robot density rankings and the only G7 country to sit outside the top 20.

With a clear correlation between investment in automation and higher productivity rates, the obvious way for the UK manufacturing sector to break this vicious cycle is by automating to lift performance. One of the key obstacles to increased uptake of automation is the well-publicised industry skills shortage, which is being exacerbated by an ageing workforce. According to ONS data³, almost one fifth of all workers in the UK manufacturing industry is aged 55 or over. Ultimately, the industry needs to attract a new influx of people who can design, build, install, operate, programme, maintain, fix and advance robots and other automation technologies, and successfully integrate them into manufacturing facilities across the country.

Why Gen Z?

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https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/bulletins/international comparisons of productivity final estimates/2021

²

https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/articles/ukproductivityintroducti on/januarytomarch2023

https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/adhocs/12467employmentbyageindustryandoccupationuk20102015and2019

Fortunately, a solution is staring the industry in the face in the form of Gen Z; the generation of digital natives born between the late 1990s and early 2010s. The high-level skills that UK manufacturing firms need to remain competitive are changing, and Gen Zs are perfectly placed to bridge that gap. This is a group of people that is plugged in. They have grown up with the internet and have used smartphones ever since they became old enough to own one. Lacking any fear of technology, they want to work smarter, not harder.

Another trait of Gen Z is their ability to adapt quickly. They are learners by nature because the technology they interact with is changing all the time. For employers, having a workforce that is ready to embrace new technology can be incredibly valuable.

Changing perceptions

So, what can manufacturing companies – already struggling with skilled and unskilled labour shortages and facing competition for younger staff from tech and finance firms – do to ensure this cohort is switched onto a career in automation and engineering?

23-year old Hara Konstantelia is a Technical Sales Support Engineer at FANUC UK. She believes one of the problems is that automation, as a career path and industry, is not really represented in the world that Gen Zs inhabit. "You don't often see robotics in movies, on social media or on TikTok, which is where young people hang out and learn about the outside world," she says. Hara agrees that this can potentially fuel outdated perceptions of manufacturing as an 'oil and rag' industry, mainly because young people "don't know what it involves". The reality is of course quite different – today's engineers are just as likely to need coding and programming skills as well as more traditional expertise typically seen in the industry such as welding.

Encouraging healthy competition

To help dispel these myths and showcase the reality of a career in automation, FANUC UK is at the forefront of a number of initiatives to develop a new pipeline of Gen Z talent. One of these is the WorldSkills UK Industrial Robotics competition, a trail-blazing industryeducation initiative. Working in teams of two, participants (aged 16+) are taught how to programme and operate real-life robots, before putting their skills to the test. The finalists for this year's UK competition have recently been announced after the qualifying stage in June. Five teams have made it through to the Industrial Robotics National Final, which will take place between 14-16 November 2023 at FANUC's UK headquarters in Coventry as part of its Open House event.

"As a company, we are really keen to engage with young people and enthuse them about robotics engineering as a career choice. The WorldSkills UK Industrial Robotics competition is all about making robotics accessible, relevant and appealing to young people," says Oliver Selby, Head of UK Sales at FANUC UK.

Hara competed in the WorldSkills UK Industrial Robotics competition in 2019, and this year was involved with the judging. "Having seen both sides, I believe it's a great way of getting young people into robotics engineering by showing them what projects involve and what programming is. It teaches industry-level skills that are a really useful preparation for a career in automation."

The making of a modern apprentice

Hara's own route into the industry was through an apprenticeship with the Manufacturing Technology Centre (MTC), which led to a work placement and, ultimately, a job, at FANUC. An apprenticeship provided the perfect mix of theory and practical application and gave Hara the opportunity to immerse herself in the industry. "You can't really know what a job in the automation industry involves until you do it. I think learning on the job is one of the best things you can do," she adds.

This view is echoed by current FANUC UK apprentice, Jack Leonard. "My particular role is centered around the installation and setup of robotics systems, but there are also lots of digital-focused tasks, from programming the robots, to electrical controls work, to design and robot simulation software," he says. "As soon as I saw the role at FANUC, I knew that's what I wanted to do. I liked the sound of learning both theory and practical skills, and being an apprentice boosts your early career. By the time others finish their academic courses, I'll have years of work experience, as well as qualifications. It's hard to get that kind of experience so early in your career without an apprenticeship."

Prioritising practical experience

It is clear then that one of the ways to attract Gen Z into the industry lies in providing practical training opportunities in real-life engineering settings. Historically, this is an area that has been woefully neglected – particularly in the provision of post-GCSE technical education. Here, FANUC is making a real difference by supporting automation education at lower foundation level.

The company's Training Academy at its Coventry HQ has recently achieved independent validation, which allows FANUC UK to offer accredited courses that can feed into mainstream education. Students will gain valuable hands-on experience in areas such as operating, programming, troubleshooting and integrating robots whilst securing credits towards their qualifications.

This summer also saw the company host its first ever Work Experience Week, which aimed to give young people aged 16-18 a practical insight into the world of automation. And at FANUC's Open House event this November, there will be a strong educational focus, further underlining the company's commitment to nurturing a strong talent pipeline for the years ahead.

"We firmly believe that this type of close, mutually beneficial cooperation between industry and education is precisely the direct intervention we need to attract younger people to manufacturing," says Oliver. "There is a great opportunity for the robotics and advanced manufacturing sector to change the perception of manufacturing. Embracing automation, and the development of an engaged and empowered Gen Z workforce is a key part of this puzzle."

To reserve your place at the 2023 FANUC UK Open House event, 14-16 November at FANUC UK's Coventry HQ, register at <u>https://ukopenhouse.fanuc.eu/</u>

NOTES FOR EDITORS

Images and Captions

Image 1

23-year old Hara Konstantelia, Technical Sales Support Engineer at FANUC UK believes one of the problems is that automation, as a career path and industry, is not really represented in the world that Gen Zs inhabit.



Image 2

FANUC UK apprentice Jack Leonard is involved in the installation and setup of robotics systems and thinks apprenticeships give invaluable experience as well as qualifications.



Image 3

One of the ways to attract Gen Z into the industry lies in providing practical training opportunities in real-life engineering settings.



Image 4

This summer saw the company host its first-ever Work Experience Week, which aimed to give young people aged 16-18 a practical insight into the world of automation.



Image 5

Pictured are last year's finalists of the WorldSkills UK Industrial Robotics competition, a trailblazing industry-education initiative. Five teams have made it through to the 2023 Industrial Robotics National Final at FANUC's UK headquarters in Coventry as part of its Open House event.



About FANUC

The FANUC Corporation is one of the worldwide leaders in factory automation for CNC control systems, robots and production machinery (ROBODRILL, ROBOCUT and ROBOSHOT). Since 1956, FANUC is the pioneer in the development of numerically controlled machines in the automation industry. With 271 FANUC locations worldwide and more than 8,000 employees, FANUC offers a dense network in sales, technical support, research & development, logistics and customer service.

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