



# Pearson



## Case study: MTC

### The customer

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The Manufacturing Technology Centre (MTC) is part of the High Value Manufacturing Catapult, which is supported by Innovate UK.

The MTC has been established to prove innovative manufacturing processes and technologies in an agile environment in partnership with industry, academia and other institutions.

It houses some of the most advanced manufacturing equipment in the world, creating a high quality environment for the development and demonstration of new technologies on an industrial scale. This provides a unique opportunity for manufacturers to develop new and innovative processes and technologies.

The areas of MTC's expertise are relevant to both large and small companies and are applicable across varied industry sectors. The MTC's members include global manufacturing companies from multiple sectors. The MTC was founded collaboratively by the University of Birmingham, University of Nottingham, Loughborough University and TWI Ltd.

### The challenge

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The UK manufacturing sector has a requirement to redress the high-level skills gaps inhibiting the high-value manufacturing (HVM) sector and to develop the people needed to deliver the technologies of the future.

The MTC is one of seven UK Catapult centres - a network of world-leading centres designed to transform the country's capability for innovation in specific areas and help drive future economic growth.

They are a series of sites where the very best of the UK's businesses, scientists and engineers work side by side on late-stage research and development - transforming high potential ideas into new products and services to generate economic growth.

The challenge was to find the most effective solution to educate and train learners to equipped them with the skills needed to help British manufacturing stay globally competitive.

### The solution

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The purpose-built Lloyds Bank Advanced Manufacturing Training Centre (AMTC) - based on the Manufacturing Technology Centre (MTC) campus at Ansty Park near Coventry - was specially built to provide premium training for the next generation of engineers and technicians.

Offering opportunities to learn with leading experts and prominent academic partners in manufacturing and engineering, AMTC apprentices - around 40 new apprentices each year - will gain a solid foundation in engineering skills and confidence in areas that underpin high value manufacturing, focusing on three core disciplines:

- **Intelligent automation technology; including robots, drives and sensor technology**
- **Computer Aided Engineering (CAE) including computer aided design (CAD) and advanced 3D printing**
- **Metrology - measurement and inspection of materials, products, coordinate measurement machines (CMM) including 3D scanning**

This is backed up by training in project management, team working, and health and safety, which culminates in professional registration with the IMechE as EngTech.

On completion of the programme, AMTC apprentices will gain the following formal qualifications:

- **Level 3 Technical Qualification in Engineering**
- **Level 2 PEO Units minimum of 3 (Practical Units)**
- **Level 3 NVQ in Mechanical Manufacturing Engineering**
- **Functional Skills in Numeracy / Literacy / ICT**
- **Personnel Learning and Thinking Skills (PLTS)**
- **Employee Rights and Responsibilities (ERR)**



Apprentices are employed throughout the programme, which also includes work-related project training and the opportunity to test and develop their skills in placements with MTC patrons and member companies, including some of the UK's major global manufacturers.

By the third year of their training, the apprentices will have developed the skills to be business-ready employees, with the ability to make an immediate difference as employees of local companies.

After completing the programme and subject to academic achievement, apprentices have the option to progress to degree level education, providing a springboard to an exciting career in a thriving sector.

"Our training courses develop skills that are needed by industry, so there are great opportunities for our apprentices to move into secure, well-paid jobs with excellent career prospects," said AMTC managing director, Paul Rowlett.

MTC works with Pearson's advanced technical certificates and BTEC Level 3 extended diplomas in its current Apprenticeship programme. It is also collaborating with Pearson and other awarding organisations as part of the Trailblazer group of employers which is redrafting existing Apprenticeship standards to create a new common set of competence based and knowledge based Apprenticeship standards

## The outcomes

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The MTC was recently named as one of the top 100 apprenticeship employers in the country, winning praise for its success in tackling the current skills shortage and developing a new generation of engineers with its flagship apprentice programme.

Some 22% of MTC employees are currently apprentices, graduates or on sponsored (YINI) placements, which has qualified the centre for membership of the 5% Club. This demonstrates its commitment to ensuring that at least 5% of its workforce are enrolled on formalised apprentice, sponsored student, or graduate development schemes.

Apprentices at the centre are also gaining accolades for their work. From revamping mini cars for an 'Italian Job' race through Europe, to a project to design a habitation module for manufacturing on the Moon; AMTC's apprentice engineers are showcasing their skills in fun tasks that demonstrate just how diverse, creative and rewarding engineering can be.

Kerry Smith is in her second year of the Level 3 Advanced Apprenticeship in Engineering. Having moved from retail and deciding university wasn't for her, she's had plenty of insight into the diversity of engineering. She is currently working on the 'Manufacturing on the Moon' competition.

"You gain so much more by doing an apprenticeship than just by studying," said Kerry. "You get hands-on experience that you need for a successful career in engineering and you're able to develop a lot quicker because you're learning the practical skills needed by this industry.

"The facilities at the centre enable us to work with the latest technology and equipment and we get great support and expert advice from the many specialist engineers and industry professionals based here," she said. "This helps us expand our own knowledge and confidence.

"It also helps that you get paid throughout your training and studies, rather than starting your career with a huge student loan!"