



# Case Study

## Swindon and Wiltshire Institute of Technology

Education is an exciting place to be at the moment, especially when you can learn all about the latest technologies, such as advanced additive manufacturing.

When Mark3D UK met with Darran Marks back in the summer of 2021 he had a dream of delivering something special to New College Swindon, its students, and the local employers who used it for training their staff.

New College Swindon is one of 21 Educational Collaborations, consisting of FE and HE Institutions in the UK to have been given the go ahead from the Department of Education to launch an Institute of Technology. Opening its doors in September 2022 the IoT offers a wide range of courses in Engineering and Construction, Digital and Computing, Science and Health, Creative Media and Business Management.

Though technically a town, Swindon was also included on a list of 5 'Fast Growth Cities' by Centre for Cities in 2019.



‘Inspiring the Next Generation  
of Digital visionaries with  
Metal Printing’



‘Industrial composite prints  
with inspection reporting’



‘Production ready parts as  
strong as Aluminium’

## Choosing the right technology

### Engineering Printers for Engineering Students

Today’s 3D printing market is measured in £billions and is one of the fastest growing sectors of industry today, so how do you choose the right technology from a market with hundreds of vendors offering thousands of products?

The answer is to look at the end use requirements of the users, and that’s exactly what Darran Marks did when he was faced with choosing the right technology for Swindon and Wiltshire IoT.

“I wanted a technology supplier who could provide both polymer and metal printers, and whose target market sector is engineering. After we concluded our research we also added ‘composite’ prints, automated part inspection and role based permissions to the wish list.

Darran and the team also spoke with their customers, the local engineering community, who send their employees to be trained. Their feedback confirmed the requirements specifications were accurate and represented their needs well.

In fact a number of the companies were already pushing ahead with their additive strategy and had purchased printers themselves, which further strengthened the project.

## Partners are Important

**Choosing the right partner to supply your equipment and provide the correct level of support is important.**

To satisfy himself that the range of Markforged equipment could meet the requirements set out, and it’s UK supplier Mark3D could provide a robust and knowledgeable support offering, Darran decided to visit a customer reference site to understand the product range further and talk to an ‘end-user’ in person.

“You can tell a lot about a potential supplier by meeting them at one of their existing customers, it’s important to speak with people who are using the equipment in a production environment. Mark3D invited us to spend the day with them to get to know them, at one of their bigger customers, which was invaluable”.

The partnership Darran described is something Mark3D have been involved with before and they were able to demonstrate how they had supported other such initiatives, with activities including train the trainer, ongoing technical support, technical briefings, project planning and helping develop a long-term education plan to meet the goals and objectives of the IoT.

# Considerations

## Integrating the Equipment in to the IoT

Naturally IoT's are users of a varied range of equipment, so ease of use is an important factor. A lot of effort went in to choosing equipment that could be used by anyone attending the IoT, there could be a varied range of skills for a multitude of different applications.

Importantly all Markforged equipment uses the same software to prepare and print files, which is called 'Eiger'. MarkForged placed a lot of emphasis on 'useability' when developing it.

Once a short training course has been given users can use the full suite of equipment without further learning – whether it's metal printing or polymers. This familiarity across the product range was important to Darran and his team from the outset.

"Whether it's a regular plastic print, one containing continuous carbon fibre filament, or an exotic metal print the loading process and the user interface are all very similar, this helps our lecturers and students get to grips with the machines very quickly" says Darran.

## What's Happening Now?

### From launch to 'modus operandi'

The ultimate aim of the team working in the IoT is to seamlessly introduce a new technology, such as additive, in to the existing engineering curriculum, as an integrated process in the overall manufacturing ecosystem. This is an important step that will benefit the local businesses who use the centre.

"Whilst it's possible to teach someone how to use a 3D printer relatively quickly it's equally important to keep them up to date with the new techniques being developed, supplementary material releases and newly developing industry challenges" says Darran. "Mark3D are involved with this subject every working day, and have demonstrated clearly they are the right partner for this area of our work".

In addition to this Ian Weston, Mark3D MD adds "Mark3D believe that ongoing education and training on additive will be the key to success over the coming years. These will be delivered through regular site visits and staff training sessions, as well as event and project participation".

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If you would like to visit the Swindon and Wiltshire IoT Darran Marks or a member of his team may be reached on 01793 611470 or you can call Mark3D UK on 0121 222 5510 to arrange a visit.

