MADE SMARTER

AEM

Accessing digital skills and expertise through a Made Smarter Digital Internship

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Ashutosh Purohit,
Made Smarter digital intern

North East Mayoral Strategic Authority

TEES VALLEY

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Based in Sunderland, Advanced Electric Machines (AEM) designs and manufactures electric powertrain technologies for the passenger car, truck, agricultural and aerospace sectors. The company is committed to removing rare earth materials, improving recyclability and protecting the planet.

The Challenge

In a bid to extend its sustainability credentials throughout every part of the business, AEM wanted to expand its carbon emissions reporting to include its employees. Led by George Cram, Senior Process Technician at Advanced Electric Machines, with the support of Mike O'Neill, Chief Operating Officer, the project required a new digital tool that could track, monitor and report on the carbon impact of employees travelling to work every day.

Having completed the Made Smarter programme, AEM were able to employ a fully-funded digital intern to help them develop the new solution and roll it out across the business.

The Solution

George had already started working on building a Manufacturing Execution System (MES) when Made Smarter digital intern Ashutosh Purohit joined the business. "We'd started to look at a new and innovative approach to reporting factory emissions with Power Apps, a Microsoft Application that allows business to design and build custom applications.

"I was learning as I went, but because of other priorities in the business, I wasn't able to spend the dedicated time this project needed. That's where Ash came in. He was able to use his knowledge and expertise to take what we'd already discussed and bring our vision of capturing and reporting employee carbon emissions to life."

Over the course of three months, George and Ash worked together to create a Microsoft Power App that allowed employees to submit data on how they travelled to work. The entries automatically populated Excel files and Power BI was used to visualise the data. This allowed AEM to see the impact of how employees travelled to work on the company's overall carbon emissions.

Ashutosh Purohit, Made Smarter digital intern, said: "What I enjoyed most about the project was the sense of ownership I had. I was given the freedom to try things out. I didn't learn one way to do this project. I learned a hundred ways not to do it. Being allowed to test different approaches lets you find the best solution."

The Benefits

As a result of George and Ash's digital system, AEM were able to build on existing initiatives to support employees to reduce their carbon emissions. They included a cycle to work scheme, electric vehicle scheme and free EV charging for employees.





"The dashboard showed I was generating a lot of carbon emissions by driving to work", said George. "Because of the new cycle to work scheme, I'm able to ride in some days to help reduce my footprint on a month-by-month basis. It's amazing to see the impact that has on the company's overall carbon emissions, and we can see it in black and white thanks to the dashboard Ash and I created."

Because of AEM's electric car scheme, more than 25% of employees now drive to work using EVs, delivering more carbon reductions

Ash continued: "I recognised the impact of the Made Smarter internship when I graduated with my Masters and began looking for full-time work. My placement with AEM gave me relevant experience that helped me stand out from other applicants. I think it's one of the reasons I was successful in securing my role at my current employer. Demonstrating I could work independently and as part of a team was so important."

CASE STUDY



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The Future

AEM is now in conversation to adapt its carbon reporting dashboard so other businesses can benefit from the new technology by getting another candidate via the Made Smarter Digital Intern programme.

George continued, "Mike (Chief Operating Officer at AEM) has had really positive conversations about other companies accessing the product we've created with Ash and Made Smarter. That's been hugely rewarding as it's something we've made together. We've both developed so much because of this project and we're proud to have created something that protects the environment and benefits not just our business, but all our colleagues and the local area."