

MADE SMARTER

Heritage and digital technology proving a winning combination

A leading designer and manufacturer of luxury bathroom fittings and accessories which was founded over 200 years ago is continuing to embrace digital technology after receiving support from Made Smarter West Midlands.

Samuel Heath and Sons plc manufactures the finest pieces of solid brassware from its premises at Grade II listed Leopold Street in Birmingham where it remains today.

The 130-strong business has evolved towards using the latest production methods combined with the skills of its staff to design and manufacture high-end taps, showers, bathroom accessories and door and window furniture for customers all over the world.

Samuel Heath has a UK showroom at the Design Centre, Chelsea Harbour in London and customer services teams based in Birmingham and across the UK and the USA.

Martin Harrison, who has been Manufacturing Director for the last seven years, wanted to improve the availability of live data from the vast range of machines throughout its factory.

"When we started this process, we were looking at the best ways to get digital advice to solve our problems using digital tools because consultants can be expensive and they don't always fully understand your business," he said.

"But working in collaboration with Made Smarter and WMG meant we were dealing with people who really take the time to understand, which means we have introduced a digital system that will meet our requirements now and in the future."

The Challenge

Martin had previously worked with WMG, one of the strategic partners of Made Smarter West Midlands, on another project.

"We were involved with WMG a few years ago where they produced a digital roadmap for us which identified a number of areas to work on," he said.

"Our infrastructure needed changing, so we introduced WiFi and upgraded some of our software to enable us to digitise a lot of our systems.

"We have many machines and we implemented things like bar coding but we were still not collecting live data from our CNC machines.

"The danger there is that if we don't get full productivity information straight away, we don't know if we are using the machines to their full capacity as well as maintaining the right quality levels.

"The data was not in real-time and we wanted more live data to give us an indication where we could make improvements.

"We also wanted to build on the digitisation of the planning system which we knew was the next step."

WMG mentioned the Made Smarter West Midlands programme to Martin, who contacted its Digital Transformation Specialist

Martyn Mangan, who at the time was covering Birmingham and now focuses on Worcestershire. Martyn said: "Samuel Heath was one of the first companies we helped with their digital systems since they were involved in the pilot programme for Made Smarter West Midlands.

"They were already ahead of the game in integrating digital systems but we brought in WMG to carry out an audit of all their systems.

"Samuel Heath recognised they had a need to improve productivity through the outputs of the machines which we were able to help with, and it is helping them to be more competitive in their sector."

The Solution

Martyn helped Martin complete the application form to apply for a £20,000 grant from Made Smarter West Midlands, which the business match-funded, to buy a software system to develop direct links to its machines to access data and input this information into their Enterprise Resource Planning (ERP) system.

Martin said: "When we started this, we thought we could buy an off-the-shelf system from one of the major manufacturers which would have been a lot easier!

"But we have three or four different manufacturers of our machines as well as legacy machinery so we needed a system which would cover them all.

"With advice from WMG and Made Smarter, we bought a Manufacturing Operations Management (MOM) system which links to our ERP system.

"Sometimes you can buy individual software and that links to specific machine types, but we wanted to link the system to lots of different machines so we had to work with the providers to develop that technology. We have now been able to integrate the MOM system with different machine types."

Onur Eren, Principal Engineer at WMG, University of Warwick, said: "We started by running an in-depth diagnostic workshop, evaluating both the business maturity and digital readiness levels. This allowed us to align their business objectives with digital initiatives across short, medium, and long-term goals. From there, we worked closely with Samuel Heath to shape a robust digital strategy and developed a clear, actionable Digital Transformation Roadmap.

"Samuel Heath's top priority was crystal clear — they wanted to boost the utilisation and traceability of the machines on their factory floor. Our role became pivotal as we guided them through the process, offering impartial, technology-agnostic advice to help them find the most suitable solution."

The Benefits

A trial period where the new system is running parallel with the current system is now underway and Martin is confident the machines will soon be fully integrated.

"We produce tens of thousands of parts each year and our range is quite wide to cope with customer demand," he said. "We have moved away from being purely a make-to-stock business to being more focused on make-to-order because the market has changed and demands a lot more variety in finishes and combination of components.

"When we started this project, we were looking at how best we could get some help with understanding more about our machines and our business needs and help with our digital tools.

"We can now focus on where the problems are by analysing the machines and if a machine has had more downtime than expected, we can focus on maintenance or whether it is due to slow set-up times and what we can do to speed that up.

"It will also help with the way we carry out inspections and previously it was hard to get a handle on whether we could speed up certain processes to increase productivity and what was causing the downtime. This will lead to us being more efficient by having live data and analysing downtime trends."

The Future

Samuel Heath plans to further digitise the business once the machines are all fully integrated.

Martin explained: "We want to introduce dashboard TV screens near each machine so that we can read the live information. If there is a problem, we will be able to see immediately and resolve it quickly.

"We understand more now about digitisation and having a fully integrated system will make the next stage of taking the business forward easier.

"Once we have all the machines linked up, it will be easier to have the next set of machines rolled out and digitally talking to each other.

"The next step will be to look at the machines where we can add sensors and roll out the planning module of the software to digitally plan in real-time.

"We do a lot of manufacturing at the moment using spreadsheets & printouts with someone interpreting those but it will be good to have tablets to put the data on and make it more visual with screens in each area.

"We hope within the next three-to-six months that all the machines will be linked up and following that, we will look at the planning side of our manufacturing."



From the left, Onur Eren (WMG), Martin Harrison (Samuel Heath and Sons) and Martyn Mangan (Made Smarter West Midlands)

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CASE STUDY