

Heap and Partners Decoding digitalisation through innovation

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A heritage valve manufacturer is innovating its processes with QR code technology to drive growth in a global market, supported by Made Smarter.

Heap & Partners (H&P) has invested in a cloud-based software solution which creates an online documentation pack. Accessible via a QR code stamped on each of its products and linked to the cloud, the technology enables customers to track their product through the factory and give them instant access to vital quality assurance and certification at no extra cost.

By eliminating the need for paperwork, the solution saves money and improves sustainability.

For H&P the solution will save time, increase productivity, create two new jobs, and accelerate growth by differentiating it from the global competition.

David Millar, Managing Director, said: “We are an engineering firm with a heritage dating back to the 1860s and have always been an early adopter of technology. Our competition is all over the world so we need to stand out. This innovation helps us achieve this, but it comes with risk. The support of Made Smarter mitigates that risk and has given us the confidence to drive the project forward.”

The Opportunity

The valves that H&P make are used in some of the most dangerous applications on the planet including nuclear power, oil and gas. This means the quality assurance, certification and documentation behind the valve, while vital, can create a substantial file, sometimes 12 inches thick.

After moving its computing to the cloud two years ago, H&P

saw the opportunity to create electronic job files and eliminate the paper-based process.

“While there hasn't been any major technological leaps, the cloud has solved some major challenges,” David explained. “The cloud offered us an opportunity to create a file which is permanent and accessible to anyone on the team remotely. But it also offered a solution to share certain documents with the customer electronically. It suddenly meant we had faster and remote access to files, we could respond quicker to customer requests for copies of certification, which could go missing, and it got rid of a lot of paper.”

But then, after investing in a laser marking machine to stamp vital information on parts, H&P struck upon the idea to go one step further and give customers access to all product documentation.

The Solution

With support from Made Smarter, H&P has developed a bespoke software solution called Valve Cloud.

It works by creating a unique QR code which is burnt onto each part.

As the part is manufactured, the product is tracked through the factory creating a documentation pack which is stored on the cloud.

If a customer then wants to access the file, they use a smart device to scan the QR code on the part which instantly takes them to a web portal where they can download the information required.

Valve Cloud will initially give access to the documentation for a limited number of H&P's simplest products, but once proven will house the more complex products, which can include 100s of components.

The Benefits

For H&P the project will enhance and speed up some aspects of its internal process, increase productivity in some roles, and create two new jobs.

“Initially with just the check valves being put through the system, the time saving will be negligible,” David explained. “However, as more products and more complex documentation packs are added to the system, this saving will grow and should end up saving as much as two days a month.”

It will also support its sustainability credentials. Having achieved carbon neutrality four years ago, H&P is now climate positive.

“Anything that removes paper from us or our customers is a positive,” David said. “We want to encourage our customers not to print documentation and ease them down the road to a more sustainable approach where you make fewer errors, save money and the environment.”

However, the main beneficiary of the solution is H&P's current and prospective customers.



“We want to capitalise on its main selling points, our technology and expertise, to become the go to company in our market,” David said.

“Our vision is to become the easiest company to deal with. To achieve this vision, we recognise that we need to use technology and further embrace digital ways of working to help us grow and to make our customers' lives easier.

There is nothing like this out there, so our hope is that this makes us stand out from the pack.

The Future

Valve Cloud is another step on its roadmap which puts digital transformation at the core of its future vision.

“Our digitalisation hasn't been a blinding flash of light but a gradual process,” David added. “Historically we have been early adopters to technology, it has helped us survive. We had a telephone only seven years after its invention, a computer by 1969, and more recently invested in robotics and 3D printing. We accept that change is inevitable, and we are very conscious that we are competing on a global stage.”