

## Forth Engineering Immersed in digitalisation

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A Cumbrian engineering firm, supported by Made Smarter, is using immersive technologies to drive global growth and innovation.

### The Opportunity

Forth Engineering, based in Flimby, are dedicated to engineering excellence and specialise in manufacturing bespoke robotics that can be used in harsh environments for nuclear, oil and gas, marine, and renewables sectors. They work closely with industry leaders in a wide range of sectors to help them deliver cutting-edge and ground-breaking solutions to complex problems.

### The Solution

With the support of Made Smarter, Forth is investing in a hardware and software solution which will allow a client to step into a virtual room and interrogate a 3D model of their asset.

They are adapting office space to create a mixed reality studio to enable customer demonstrations.

3D data of assets will be converted into a model using 3D visualisation software. This will allow the asset to be viewed within virtual/mixed reality environments in a true to life scale.

Forth will use a leading Extended reality (XR) headset to project a clear and precise visual representation of the asset into a room at their facility. Meanwhile, mixed reality smart glasses are

sent to the customer to access a virtual face to face meeting or inspection scenario from the safety and comfort of their own office. What is more, the smart glasses will create a hologram of the customer in the studio where they can interact and interrogate the asset, which can be animated and exploded into parts.

Mark explained: “We are creating a platform where two fantastic technologies meet. By taking the best of the headset’s ability to project a high intensity AR image and the smart glasses’ ability to import a hologram of a person, we can show clients their assets in staggering precision.

“We hope that more customers will come to us with dreams of realising their prototype dreams through the use of mixed and virtual reality.

“We also hope to be able to open up the scope of work to clients from around the world and include them on engineering decisions from wherever they are whilst feeling like they are interacting with us and the project in person.”

### The Benefits

The use of digitalisation, immersion, and presentation technologies will mean that Forth’s customers will now be able to interrogate a digital model of their assets from

anywhere in the world; opening up new markets and increasing services offered to customers.

The project will be at the forefront of immersive technology and will also help to upskill staff, reduce cost and travel, and create a safe inspection environment.

*This groundbreaking technology will allow Forth to deliver innovative and novel solutions to complex problems globally. Moreover, the team of thirty-eight full time employees believe the value-added service will give it a competitive advantage as it is forecast to increase GVA by at least £500,000 over the next three years and in the process create five new, highly skilled jobs.*

### The Future

Forth believes this service will raise its profile in the global, harsh environment market and support its growth strategy to double turnover by £2m each year and help to upskill the team, secure jobs and increase job satisfaction.



Mark Telford, Managing Director is proud of the transformations taking place, stating: “Our engineering solutions are giving customers new and accurate insights into the state of their assets, without risking their workforce, and ultimately saving them a considerable amount of money.

“The application of immersive technology will be a value-added service, offering our customers something no one else is.

“We hope that we can create a place of technological brilliance

for the whole community around us, not just our customers.”

“Made Smarter has enabled fuller and faster adoption of the new technologies and training, accelerating implementation by years.”

# FORTH