

Recreating history with technology of the future

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The concept of virtual reality has been heavily used in Hollywood sci-fi blockbusters for decades, but few people have actually experienced it first-hand.

This is about to change thanks to an innovative technology developed by a Newcastle University start-up, Chronicles VR that will allow people to experience museums in a unique way.

Launched by partners Dominic Deane and Rachel Derbyshire, Chronicles VR is bringing [virtual reality](#) (VR) into museums by allowing people to explore historic artefacts in their original context. The duo create 3D models of objects in museums, which allow visitors to experience entire scenes from the past by wearing the Facebook-owned Oculus Rift 3D headset.

A virtual reality journey in history

In a scene that Chronicles VR recreated for the Great North Museum: Hancock, visitors can walk into a Greek villa and explore the virtual artefacts, the real versions of which can be found in the museum.

Dominic, 21, said: "When you walk into a museum, the artefacts are described only by short text. That's really interesting, but I don't know anything about the object apart from where it was found and how old it is. But when you put a headset on to view the 3D models we create, you experience where that object was found and where it existed.

"If you put the object in its original context, it becomes interesting because you can see how it was used. You can make a connection."

Rachel, 26, added: "We wanted to introduce VR to the classical and culture sectors, because we think there's a massive potential in that. 3D headsets were designed with games in mind, which is fine, but it's not their only use. This technology can be used in so many other ways.

"We think that VR technology is the future. We think this is how people can be educated and interact with things in a more meaningful way and

in a more interesting way, and our goal is to show that this is possible."

Dr Sarah Glynn, Manager of the Great North Museum: Hancock said:
"We are always looking at new ways to engage our visitors and bring items of the collection to life and Chronicles VR is a unique concept that offers a new experience within the museum.



"We are delighted to support Dominic and Rachel's work and look forward to seeing the reaction of our visitors to Chronicles VR."

Andrew Parkin, Specialist Collections Advisor at the Great North

Museum: Hancock added: "I think that virtual reality in museums has great potential and can revolutionise the way we experience and interact with artefacts."

The VR creation process starts with Rachel using a camera rig to photograph the object from every possible angle. She then uses the photos to create a 3D model, which is turned into a texture map to recreate the object. After optimisation, the model is ready to be placed into its own tailored virtual world and be saved for future archives or projects.

Rachel, a Fine Art masters student oversees tech, design and art aspect of the business, while Dominic, a third year Classics student, handles the research.

Support for entrepreneurs

The partners met while being mentored by business start-up experts at Rise Up, the Newcastle University Careers Service support programme for student and graduate entrepreneurs. Having a similar idea, but bringing a different set of skills into the venture has helped the duo turn their vision into a viable enterprise in a short period of time.

The entrepreneurial duo received support and funding from Rise Up, while Gateshead Council provided additional funding and a work space at the Northern Design Centre.

Dominic said: "The support from Rise Up has been invaluable. The entrepreneurship experts helped start our collaboration by merging our ideas into a solid business plan. Rise Up also provided funding to get our initial 3D sets, which led to first proof of concept.



"The help from Gateshead Council was instrumental. It allowed us to focus exclusively on creating the 3D models and presenting our idea to clients."

Jackie Wade is the Rise Up Business Adviser to Dominic and Rachel. She said: "Rachel and Dominic have shown true entrepreneurial vision in bringing their business venture to this exciting point. They were open to exploring a new and exciting partnership which allowed a real collaboration and meeting of minds, talents and skills."

"I have been incredibly impressed at their ability to overcome huge

barriers to entry in terms of gaining access to key decision makers and networking effectively within this challenging industry. They have persisted with their ideas and are now starting to reap the rewards by gaining access to some fantastic opportunities across the UK and internationally.

"I am excited for them for the future of their business, as they have a clear vision of what next and the drive and determination to see it through."



Marissa Brindley of Gateshead Council's Business Development Team is working with Chronicles VR. She said: "From the point of receiving their application and then meeting with both Dominic and Rachel, we could see that Chronicles VR was an ideal candidate to participate in Gateshead Council's first start-up programme.

"The start-up programme provided an opportunity to support talented individuals to develop their business ideas and establish early-stage technology companies. We could clearly see the potential in Chronicles VR and we look forward to working with them more closely as part of the VRTGO Labs project".

In addition to creating customised 3D collection for museums, Rachel and Dominic are exploring the potential application of VR in the Heritage and Educational services.





Provided by Newcastle University

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