

A new reality on tap for Yorkshire Water

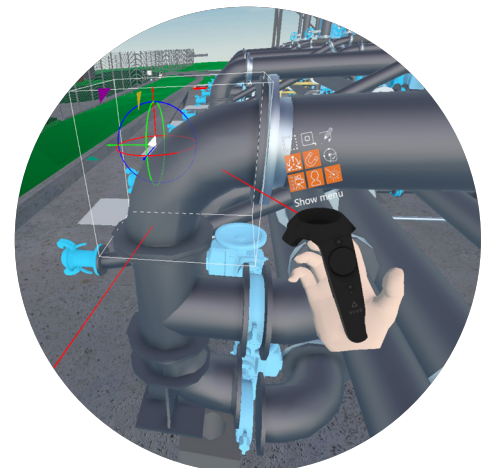


Engineers at Yorkshire Water are turning to virtual reality technology developed by The University of Sheffield to help design and visualise new treatment works which could help save the company £1m in design costs by 2020.

The University's Advanced Manufacturing Research Centre (AMRC) has developed virtual reality headsets that allows Yorkshire Water engineers to bring to life plans for new treatment works and other equipment. The technology is similar to that used by immersive game designers but with a manufacturing focus.

The cutting-edge technology is seen as a viable alternative to traditional modelling packages such as CAD as it allows for powerful interaction with conceptual design models.

So far, it has saved Yorkshire Water £180,000 by not having to build real-life prototypes and instead enter a virtual reality world which engineers can walk around and check design plans.



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The AMRC’s mission is to help companies based in the UK introduce innovative technologies and the virtual reality technology has already helped the likes of Boeing and Mercedes-Benz.

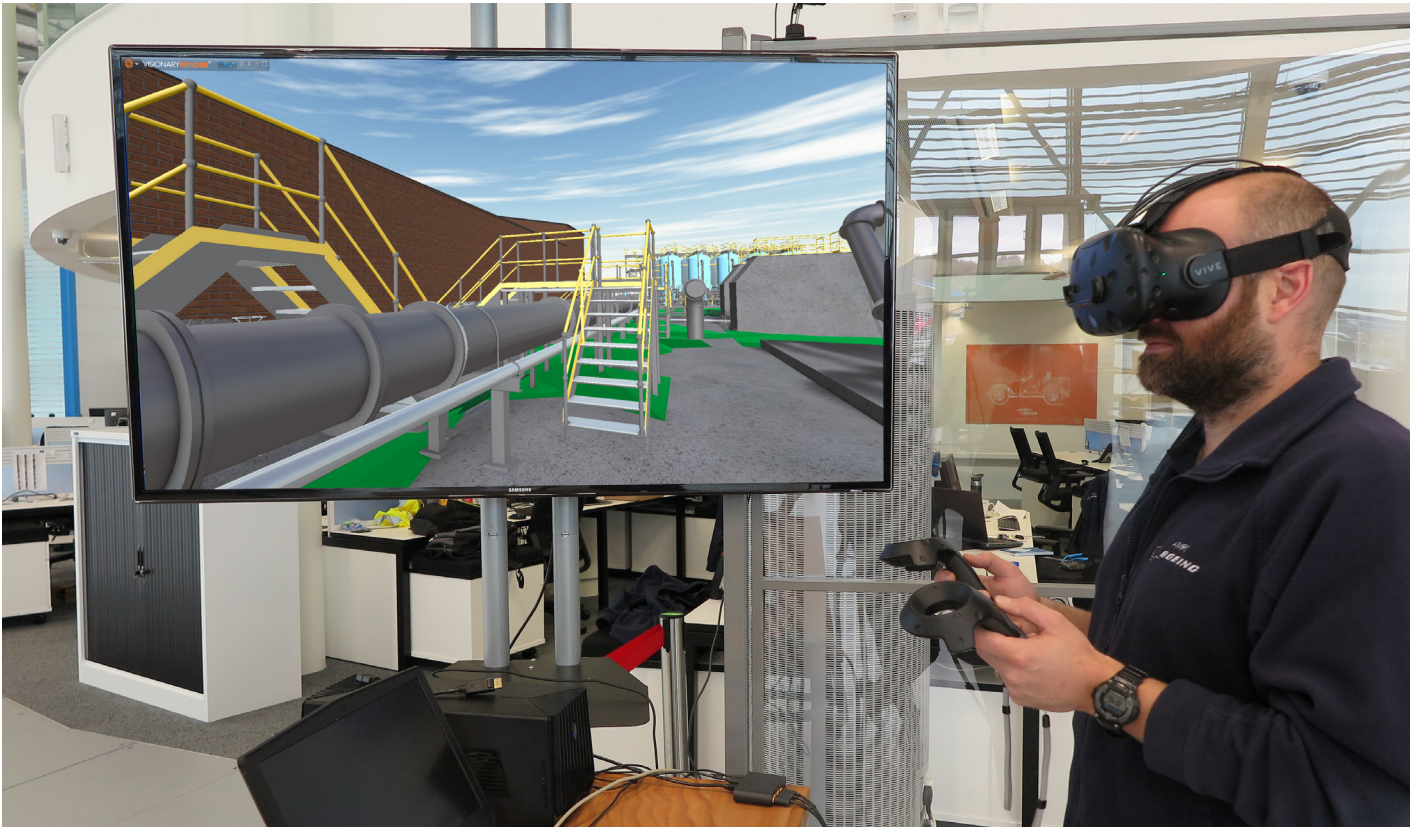
For Yorkshire Water, the technology will allow the firm to manufacture more equipment off-site that has been rigorously tested in a virtual environment, helping to improve construction accuracy and reducing on-site health and safety risks.

Mike Lewis, Technical Lead at the Advanced Manufacturing Research Centre, said: “At the end of this project, Yorkshire Water will have the equipment and the skills to be able to do this themselves. From there, we could work with them on more advanced systems, pulling in real-time data from sites that improve productivity and maintenance regimes. We could also develop augmented reality training systems, including health and safety, that take the same assets and use them to upskill the Yorkshire Water workforce of the future.”

A detailed virtual reality model has already been made of Yorkshire Water’s Irton water treatment works in Scarborough which is in the process of having a £17.5m upgrade. The virtual design has enabled engineers to check that everything fits where it is supposed to fit before it goes on site to ensure that operators and maintenance engineers have a site that is simple to run.

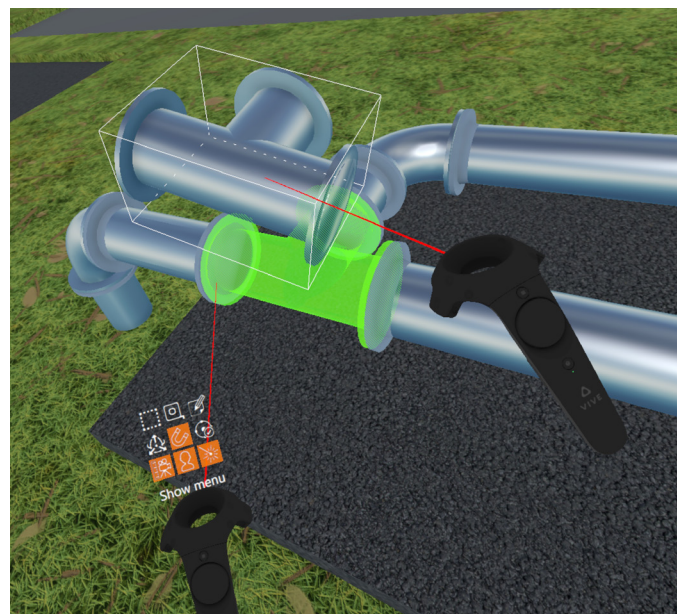


The VR model of Irton water treatment works.



Nevil Muncaster of Yorkshire Water added: “What we now have is an immersive experience that enables us to check all the interfaces; to check that everything fits where it is supposed to fit before it goes on site; to ensure that safety and efficiency are fully integrated into the design, to give our operators and maintenance engineers a plant that is easy to run. It is a step change in how we design our new engineering projects and has the potential to generate significant cost savings.”

Less reliance on expensive physical prototypes will also help the firm lower its carbon footprint by keeping design in the virtual, rather than the real world.



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