

HS2 pioneers augmented reality for rail super hub of the future

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The pioneering project sees HS2 Ltd partner with high-tech S.M.E., PAULEY; the National College for High Speed Rail; and Inventya. Together they will work with Old Oak Common station designers, specialist engineers WSP, to develop augmented reality (AR) training for the station's future staff.

HS2 Ltd's Stations Director, Mike Luddy, said: "From its earliest days Old Oak Common will be one of the UK's busiest and best-connected stations. Serving both HS2 and the Elizabeth line (Crossrail) it is designed to handle around 275,000 passengers every day. To accommodate that number of people in a pleasant, safe and efficient environment, it's crucial that staff know the station's workings in detail.

"The challenge is that Old Oak Common station hasn't been built yet. So to train the station's entirely new workforce with the skills and knowledge they will need we must innovate.

"Through this project, which is supported by Innovate UK and the DfT, we're harnessing the power of digital technology to build Old Oak Common in augmented reality."

Future staff entering an augmented reality world will be trained in delivering a great customer experience, station maintenance and safety so they can develop the skills to efficiently manage the station before ever setting foot in it.

The AR training will have spin-off benefits for developing Old Oak Common station itself. Trainees can provide feedback to its designers on their experience of running the super hub, so plans can be honed before it is built and help avoid making later and costly changes to the building itself.

PAULEY's founder and managing director, Philip Pauley, said: "We're only starting to harness the power of augmented reality. Few people really get what it is and what it can do. The way you might want to think about it is like that famous Star Wars scene where R2-D2 projects a 3D image of Princess Leia. That's what AR is, except for now it's with the addition of a high tech visor through which to see it.

“The technology we’re bringing to HS2 enables the wearer to see Old Oak Common station in minute detail. It unlocks huge opportunities to explore, test and refine a digital replica of the station years before the passengers arrive.”

WSP Technical Director John Harding, said: “This technology will enable us to future proof Old Oak Common station design. In future it can be used at other stations not just for training but for all staff following a refurbishment or upgrade.”

National College for High Speed Rail’s CEO, Clair Mowbray, said: “The National College for High Speed Rail is delighted to be part of this collaborative project, which will support the development of training programmes for train station staff using the latest interactive technologies.”

Inventya Project Manager, Andrew Kent, said: “Through the use of immersive technology, their research is set to improve the user experience of future train travellers, and we’re excited to be part of the journey.”

Image: HS2 and DfT