

# KEEPING IT REAL



## VIRTUAL AND AUGMENTED REALITY CAN HELP PEOPLE TO UNDERSTAND THE COMPLICATIONS OF A PROJECT IN A CONCRETE WAY

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As every geographer knows, the world isn't flat. Our spatial reality is three-dimensional, not two-dimensional, and that's what we humans have evolved to understand. While we've also learnt to understand more abstract concepts, such as geospatial reference systems (see page 24), there's nothing quite like experience the physical reality of something to understand it, be it an object we can hold in our hands or a building we can see.

Technologists have known this for a long time and almost for as long as there have been personal computers, they've been looking at ways to make the abstract realities inside computers more like the physical world. That's been easier said than done, though, and there have been many false starts along the way – as well many partial successes. Even systems that have been technologically advanced enough to give us virtual or augmented reality have lacked something else – typically affordability but also the ability to easily put it into users' hands.

However, we're not at the point where not only is it possible to create usable, believable VR and AR for the likes of Pokemon Go and other more trivial applications, we can use it for geospatial work, too. And in this issue, we look at a few implementations

around the world where the virtual world is creating real benefits for businesses.

On page 36, Rick Harrison looks at the benefits of VR in city planning. Many city planners – or at least those who approve city planning applications – aren't geospatial experts. A dry and dusty plan might work for those with the right training, but a 3D model that can be walked around and explored can truly give people an insight into what a completed development will be like. Rick also highlights that although recent advances in technology and affordability have helped to make VR a reality in such applications, there are still computational considerations that only a trained operator can overcome, for the systems to be effective.

Meanwhile, on page 38, Jodie Hartnell finds out how a Norwegian design firm has been using augmented reality to see what designs will look in practice on-site. The technology is already paying dividends in one project, which revealed numerous real-world issues, as well as a simple inescapable fact – a planned bridge was simply too big for the space available.

However, AR needn't always be for business and the future. On page 32, we look at how it's being used to recreate an almost forgotten past.

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