

How Microsoft's HoloLens is bringing AR to the forefront of industry

 By [Etienne de Villiers](#)

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Earlier this year, tech juggernaut Microsoft began shipping the developer's version of its HoloLens AR headset. A device that has been in development for years, the HoloLens is the first ever fully untethered, holographic computer – which enables users to interact with high definition holograms in the real world.



For developers worldwide, and indeed, for individuals and businesses, the Microsoft HoloLens has the potential to transform the way we work and interact with our physical environments. While the cost of the device (\$3,000) remains prohibitive to the average consumer, it is already being embraced within certain industries and sectors.

Contextual wizardry

Arguably, the HoloLens is the first device that is demonstrating the real power of Augmented Reality (AR) and its potential applications in both business, and in the longer term, our day-to-day life. One of the most compelling elements of this technology is its ability to use the context you are in, and then overlay information around or onto that physical context. So, while Virtual Reality (VR) takes you into an entirely new context, the HoloLens uses AR to enrich and enhance your own, current context.

Imagine, for example, you are in your garden and you spot an unfamiliar plant. Using the HoloLens, the idea is that by simply looking at the plant and asking the question about what it is, the answer will pop up onto the screen – overlaid onto your view of the plant. From here, you can ask other questions such as, will it work in my garden? How do I care for it?

For AR developers, the key will be to ensure that this contextual ability is seamlessly integrated into the HoloLens, so that it becomes a natural extension of our world and our work.

Untethered, unlimited

While [AR](#) and [VR](#) have been around for many years, it is the 'untethered' element of the HoloLens that makes it so exciting and transformative for developers. Because it is a headset the user's hands are freed, and in combination with excellent hand tracking technology, it opens up the opportunity for entirely new experiences that are far more interactive and

immersive. And unlike AR applications on a smartphone, which use the smartphone's camera as its 'eyes', the HoloLens's see-through display allows the user's own eyes – and therefore own, real world context – to shape and guide the experience. No longer are you limited by your device's camera view – it is your own, real world view that is providing the context.

This ability, and the resulting immersion in both the real and virtual world, has massive ramifications for businesses and professionals. Picture a paramedic rushing to an accident, and encountering a very serious and complex emergency scene. Using the HoloLens, this paramedic can connect – via Skype – to specialists located back at the hospital, who will then be able to 'see' what the paramedic is seeing. They can then guide the paramedic, step by step, by overlaying digital information and guidelines onto his immediate view of the physical scene in front of him.

Businesses on the AR bandwagon

Although many of these scenarios remain purely hypothetical at this early stage, some companies are already leveraging the HoloLens within their operations. One such company is the engineering giant thyssenkrupp, which is using the technology within its elevator business. The company has pioneered the use of the Microsoft HoloLens amongst its army of service technicians.

Using the device, the technicians are able to visualise and identify problems with elevators ahead of a job. Prior to tackling any task, a technician can view a detailed, 3D image of the elevator, and then zoom into any part – offering endless training opportunities as well. These technicians then arrive at the actual site better prepared than ever before.

In addition, they have remote, hands-free access to technical and expert information when on site, with the HoloLens able

to trigger a remote call to a subject matter expert. According to the company, the device saves huge amounts of time, stress and effort. A job that normally takes one to two hours, now takes less than 20 minutes, reports one company spokesperson.

A universe of opportunity

As many who are close to this technology have asserted, we are only scratching the surface of what AR, and devices such as the HoloLens, can truly offer. The early adopters, for now, will be those industries and sectors that rely on sophisticated and expensive technology, and who can afford the high costs associated with research and development.

Indeed, we are already seeing the aviation, engineering and medical spheres embracing the HoloLens and finding ways to harness its game-changing capabilities. For local businesses and industry leaders, it is well worth keeping an eye on this fast evolving technology and planning for ways to leverage its immense potential.

ABOUT ETIENNE DE VILLIERS

Etienne de Villiers is the lead programmer at Fuzzy Logic. Etienne has been creating interactive experiences for over 15 years and has worked at some of the top multimedia and game development companies in South Africa and the UK. As the lead programmer at Fuzzy Logic, he has helped grow the company from small beginnings five years ago to one of the leading mobile development companies in SA. He has a passion for technology that helps people connect with the real world.

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