

Pressing save on the metaverse and the future of tangible experiences

By [Manfred Berger](#)

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There are significant discussions taking place around augmented reality (AR), virtual reality (VR) in the tech space, and the metaverse as well as the potential for these technologies in the future. Innovation in this space will drive the creation of huge amounts of data going forward as the cost continues to fall and the implementation rises.



Source: [Unsplash](#)

To create realistic 3D experiences, high-quality interactive visuals, sound and other user-centric elements can all be incorporated. One challenge this poses is where and how this vast amount of complex data will be stored and how the storage industry is enabling innovation of these transformational technologies.

Entertainment

In the entertainment space, VR headsets are being used in gaming to allow 3D simulations with extremely high-quality graphics to give a realistic experience. Through these devices, senses can be stimulated to a much higher degree and gamers can enjoy a more thrilling, immersive experience than they would on a screen alone.

This could allow golf enthusiasts to play a round with their idols, or sci-fi fans to have realistic adventures with heroes previously only seen on a television set or handheld device.

A major project which has drawn global attention is the current ABBA Voyage show, which has recreated the band in their heyday in 1979 as digital characters for live performances. The characters were constructed based on performance capture techniques using the band as they are now with 160 cameras recording them over five weeks.

These recordings captured every mannerism and emotion with the goal of recreating the band with extreme detail. The experience also gives a new generation the opportunity to see ABBA as they were in their 20s. Going forward, entertainment venues will look for more opportunities to use these kinds of technologies.

As these performances are in a purpose-built arena, all aspects of hardware and data storage have been developed with this performance in mind. However, as these kind of shows become more common and explore this technology, storage solutions will have to be portable, while having enough capacity to allow for tours and different venues.

Business

In business, AR and VR can be used in a very practical sense, such as in training. In pilot training, VR headsets are now being deployed to simulate various conditions without potential risk, partly replacing time otherwise spent in very expensive, actual physical flight simulators.

The interactive nature of these experiences have been reported to increase retention in learning by almost 400%. This leads to more efficient training and reduced training time. As flight crews must memorise dozens of procedures, rules, and checklists, immersive training through VR is becoming commonplace in flight schools.



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In formerly office-based environments, there has been a shift to hybrid or remote working, as well as an increase in fully remote companies. Although this has allowed for greater flexibility, management are looking for ways to maintain a sense of togetherness and company culture. In response to this, some innovative companies have even created digital office environments for employees to interact and form closer relationships.

Although this is still in its early stages, in the future companies are likely to leverage these technologies more to boost teamwork as hybrid and remote working becomes commonplace. By 2030, it was forecast that 23 million jobs will be enhanced by AR and VR. To facilitate the wider adoption of these working practices, cost-effective storage solutions must be made available to workers to contain these virtual environments.

Retail

In the retail space, companies are looking to innovate around immersive shopping experiences which allow shoppers to feel more connected and introduce the concept of 'try before they buy' from their own homes.

The lack of travelling involved also allows for customers to spend more time and feel more engaged with a brand's content. Some brands are even putting on virtual events to communicate their story and even offer unique deals.



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Online creators have also begun to sell NFTs (non-fungible tokens) which are online assets marked via blockchain to signify ownership. These digital tokens can be tied to 2D creations, such as tweets but can also be tied to 3D creations like property and digital land which is viewable and experienced through AR or VR.

These digital pieces can go for huge sums of money, with one piece alone being sold for a record \$91.8m.

Looking to the future

Despite significant advances in the sector, the real-life implementation and use cases of AR and VR are not yet widespread and have some challenges to overcome. These include the stimulation of senses beyond vision and sound as found in large-scale simulators or dedicated gaming seats.

As a relatively new and complex technology, VR headsets remain prohibitively expensive to most people. However, this cost is likely to be reduced as the technology comes more into the mainstream and is increasingly being mass-produced.

There are also limitations with the usability of these devices as there are a limited number of brands which have invested in these technologies. But as usage grows, the development of features, games and functions will follow suit.



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The programming requirements for VR mean that often they require large storage elements to enable interactive experiences. This is because they must incorporate huge amounts of data to function at such a high level. By innovating around high-capacity storage solutions, VR adoption is projected to vastly increase across home and business environments.

Although for now VR headsets and usage of AR are relatively rare, by 2027, 100 million people are expected to use AR and VR, meaning the useability, size, and affordability of these items will improve as the market evolves.

There is no question that the future of this technology will impact people and business in a significant way, altering how we experience work, life and how we play. And data storage has a massive role to play in the advancement of this technology, one ABBA hologram concert at a time.

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