



How much is that virtual doggie in the virtual window?

Virtual and augmented reality –
a guide for Australian retailers

Retail trends 2016/17: Vol 2.



Introduction

Queues for sold out headsets, crowds using smartphones to chase imaginary creatures around Australia's historic landmarks, the Rio Olympics broadcast in 360 degrees – virtual reality (VR) has definitely arrived and the commercial potential of augmented reality (AR) is finally getting noticed.

With gamers and Pokémon collectors being the earliest adopters, you could be forgiven for thinking VR and AR are all about giving us an escape route from the real world.

But as technology improves and barriers to adoption – like price, availability and internet speed – disappear, the use cases for these technologies change completely.

Far from taking people out of their real life situations, these technologies are being used to give us the real world, but on steroids. Whether you are trying to choose a sofa for your living room, working on innovative rehabilitation techniques for patients, or designing a new store for your customers; VR and AR, and combinations of both, are increasingly set to play a major role in your choices.

While we're still at the beginning of this journey into virtual worlds, this technology is being used by early adopter retailers around the world. Many retailers today have experimented with immersive technology in some way, shape or form to satisfy the increasing consumer demand for novel and emotionally engaging experiences.

Within the context of these early explorations, augmented and virtual reality have emerged as mediums that provide new ways to implement a range of business solutions.

To add to our growing and diverse customer consulting practice at Deloitte, and especially to enhance our brand and spatial experience work, we recently expanded our capability to offer VR and AR technology to our clients.

The objective of this guide is to share the learnings from our own journey into this new area with you and help you mitigate some of the risk factors often associated with working across new mediums and cutting-edge technologies.

Our intention for this guide to VR, AR and immersive technology is that it removes some of the uncertainty for retailers around this new and evolving technology.

We will outline what retailers need to know before taking the plunge, which mediums and technologies have gained traction in the market, and what VR and AR could deliver for your business, brand and customers.



Worldwide revenues for the virtual and augmented reality (VR/AR) market will grow from US\$5.2 billion in 2016 to more than US\$162 billion in 2020. This represents a compound annual growth rate of 181.3% over the 2015-2020 forecast period.¹

Explaining the technology and how it works

We'll discuss virtual reality and augmented reality together throughout this guide. Both technologies have become a part of what we have called the AR/VR ecosystem.

Reality and virtuality exist along a spectrum that ranges from adding small cues to real world experiences (augmented reality) to expansive virtual worlds that allow customers to be fully immersed in an entirely fictional world (virtual reality). Tactile-digitally convergent experiences along this spectrum are often referred to as 'mixed reality'.

This combination of cognitive medium, technology, and customers as creators and consumers of alternative realities provides a range of interesting applications useful in a business setting.

AR/VR ecosystem

SPATIAL REAL WORLD



Activation

Customers notice new, fresh approaches to brand marketing

Interaction

Customers interact with fixed, purposefully placed installations

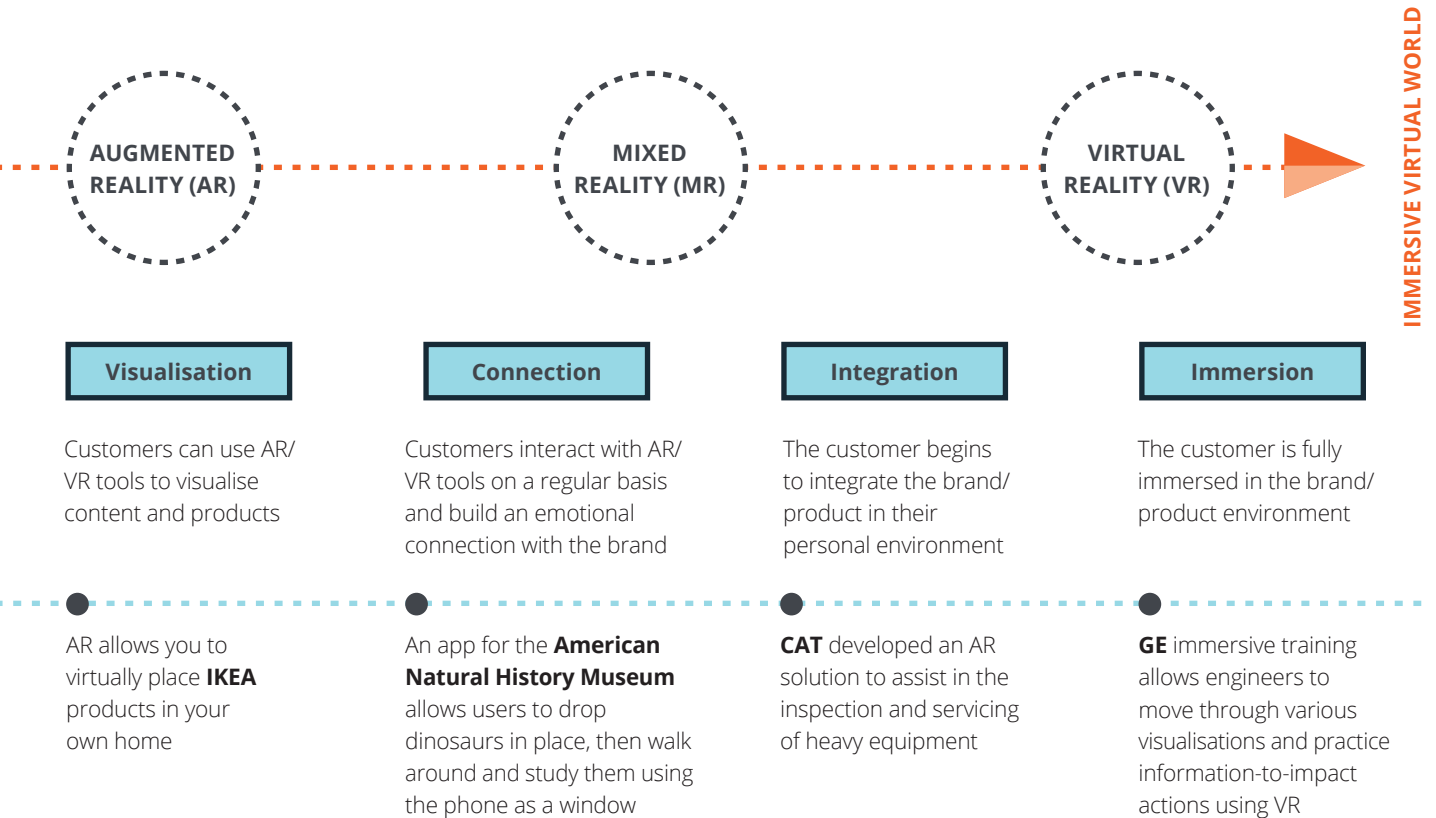
EXAMPLES

VIVID Sydney

light shows on the ornate facade of the Customs House

Topshop's

interactive window display allowed customers to view their latest catwalk show as if they were part of the event





Virtual Reality (VR):

- Offers a digital recreation of a real life setting
- Replicates an environment, real or imagined, and simulates a user's physical presence and environment to allow for user interaction and sensory experiences
- It's the most immersive experience – the real world is blocked out so users can only see the virtual world and virtual objects and are unaware of the environment around them
- VR requires the user (or provider) to have specialist equipment to experience it. This can range from cheap options like Google Cardboard, to the more expensive end of the scale, like headsets from Samsung Gear, Oculus Rift and HTC Vive
- The focus on VR activity is on experiences and emotional engagement.

Deloitte predicted that in 2016, VR would have its first billion dollar year. All estimates have well surpassed that with VR moving centre stage. VR is already huge in China and expected to grow. Experts estimate there was US\$860 million in VR investment in China this year alone, and we can expect as much as US\$8 billion to US\$10 billion by 2020.²

“Though it may be several years before mixed reality’s ultimate endgame materialises, the time to begin exploring this dynamic new world – and the digital assets it comprises – is now.”³

Tech Trends 2017, by Deloitte University Press, explores the growing enterprise potential of mixed reality.



Augmented Reality (AR):

- Is a view of a physical, real world environment whose elements are augmented by computer-generated items (data, graphics, video, sound). The real world is not blocked out, users can see the real world as well as virtual objects
- Interaction with virtual objects is limited
- AR delivers virtual elements as an overlay to the real world
- AR can be experienced through existing devices (our phones, cameras, laptops, through apps, Snapchat spectacles, etc)
- AR is more commonly used for product trial and utility.

Mixed Reality (MR):

- Refers to the combination of virtual environments and real environments
- Uses a combination of both AR and VR technology to do this
- The technology uses depth and spatial sensors to anchor interactive 3D digital elements into a user’s environment
- The user can navigate around virtual objects much easier. They will adjust for size as the user approaches them, for example
- MR requires advanced sensors for spatial awareness and gesture recognition
- It has a nascent but growing solutions ecosystem.

The rise of immersive technologies

The integration of immersive technology is about to become the new gold standard for omni-channel retail and brand experiences.

Immersive technology refers to technology that blurs the line between the physical and digital world, thereby creating a sense of immersion and emotional connection with the overall experience.

At their best, immersive technologies allow us to create fully immersive, perceptually-real environments that stimulate our senses – creating deeper brand associations in the mind of consumers.

This type of experience resides at the highest end of the Reality-Virtuality spectrum (see page 5).

Today, these technologies have become affordable and accessible enough to allow a broad range of artists, developers, content creators and consumers to take the paint brush in their own hands and create unique expressions of their surroundings.





ANZ's Breakpoint installation is a prime example of a company experimenting with virtual reality technology to create a memorable and rewarding experience around their brand.

Building on their mobile payments marketing campaign, 'Keep Moving', and their tradition of creating exciting brand experiences at the Australian Open, ANZ teamed up with Deloitte Digital to deliver an immersive virtual tennis experience at the 2017 event.

The digital installation, 'ANZ Breakpoint', centred around three projected game booths on large-format screens, providing a virtual experience where players could hit flying balls with their tennis racquet and unlock achievements.

"Using a number of projection mapped surfaces, speakers and motion sensors, it immersed players into an alternate reality, providing an exhilarating experience for players and spectators waiting their turn," said Daniel Cheong-See, National Creative Director for the Deloitte Digital practice.

The installation was a hit, generating strong media interest, and had attendees waiting in line for up to 45 minutes for their turn. Participants were encouraged to share photos and videos on social media to show friends and contacts their experience at the installation, generating significant exposure for ANZ.⁴



Why now? The forces enabling the new wave of AR/VR experience:

- **Accessibility:** The cost of acquisition and development of both hardware and software used to access AR and VR has become absolutely minor. Mobile device computing power and battery life is at an all-time high. Google developed a DIY entry-level cardboard set for experiencing VR mobile apps that can be easily recreated all around the world. Unity, the most popular AR/VR development tool, is free to access for aspiring, non-commercial AR/VR developers and designers.
- **Platform support:** While Unity provides an open source developer platform and strong learning support for aspiring community members, YouTube recently launched its 360 video channel and is providing free camera equipment to some content creators.
- **Internet of Things ecosystem:** The connected ecosystem, beacons and network data enable us to track the customer journey across channels and open the door to taking AR/VR into a multi-layered consumer environment. This will allow retailers to provide contextual information at moments that matter.

- **Robotics:** While mobile devices are still the go-to device for AR/VR immersion, new forms of hardware enable tactile, multi-sensory experiences at home or allow remote workers to command machinery in high risk environments.

Why did Deloitte invest in VR? Partner Robbie Robertson from our Spatial and Brand Experience team explains our decision:

"We were increasingly being asked by our clients to make it easier for them to understand what the physical spaces we were designing for them would look like. I remember one client who said "I just want to be able to stand in the space and look around". So that's what we did.

"VR and AR enable us to build models of the spaces we are designing for our clients to explore – thereby painting a powerful picture of what's possible. Our clients have been blown away. Having a VR model of a new proposal can bring everyone across the business into the decision making process; operations, security, brand, retail design and customer experience."

8 out of 10 top tech companies have already invested in AR and VR. These include Apple, Google, Microsoft, Facebook, Samsung and IBM.⁵

How retailers can use VR/AR for customer experiences and business solutions

As a retailer, you may be saying, "Yes, I understand what these technologies are and how they work, however I just don't see them working for me."

Stay with us. We think we'll be able to make a case that will interest most retailers in the possibilities for these technologies.

First, let's bust some myths.



MYTH 1

VR is only for gamers

Reality check: Adoption of these technologies is rapidly spreading and evolving across a variety of B2B and B2C sectors including real estate, health, manufacturing, training and education, media and of course, retail. We might not be seeing this yet to a wide extent in Australia, but it's happening.

While VR is still a niche technology used mostly by enthusiasts, many observers expect this to change quickly. The number of active VR users is forecast to reach a staggering 171 million by 2018.⁶

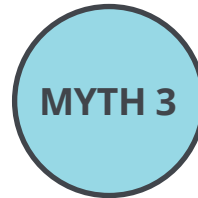


MYTH 2

It's all fine as a marketing gimmick, but no use for my business beyond that

Reality check: VR and AR are definitely not just the next gimmick for gamers and marketers – they are poised to move from marketing tool to integral part of a customer experience journey. While the current wave of AR/VR experiences has focused on mainly experiential, marketing and gaming applications, we are seeing more sophisticated use cases emerging across a variety of sectors and customer sectors; from using VR for therapeutic purposes in nursing homes to education, health and safety uses.

75% of the world's most valuable brands have created some form of virtual or augmented reality experience for customers or employees, or are themselves innovating and developing these technologies.⁷



MYTH 3

My customers have no interest in these distractions – they just want seamless, non-siloed experience across all of my channels. That's my biggest priority

Reality check: VR and AR have applications in several business solutions that can alleviate these pain points for your customers. The technology can be used in effective ways to provide your organisation with a single view of its customers, essential for improving customer experience.

We all know the future of retail is connected, immersive and personalised. This technology is going to become a central part of what 'good service' means for your customers. Next generation immersive technologies have the potential to provide the platform, content and data solutions the sector is currently missing, to close the gap between e-commerce and brick-and-mortar and create a bird's eye view of customer activity across channels.

66% of customers are interested in buying items via VR. 63% of consumers said they are expecting VR to change the way they shop.⁸

VR/AR in retail

This technology is still in its very early stages, but it is becoming better, more affordable, more ubiquitous, and customers are increasingly interested in it.

While the initial success has been with immersive brand experiences, continued growth has moved from 'view only' (e.g. trying out a VR headset in a shopping mall) to 'interactive' (see our Audi and Zerolight example on page 23), where better and more technology has meant increased touchpoints. Future growth will integrate other parts of the customer lifecycle with existing data tools to unlock new possibilities.

Smart retailers are looking to where their customers are looking, in an effort to provide the best possible experience for them.

We know the omni-channel customer journey begins a long time before customers enter the store and extends way beyond the purchase experience. While the decision to purchase a product is often made before the customer even enters the store, the moments of truth within the customer journey are becoming more frequent, subtle and often go undiscovered by marketers, retailers and sales staff alike. Immersive technologies have the potential to transform these 'blind spots' into meaningful interactions, targeted conversations and data-driven decision making. In particular AR/VR can tap into:

- **Acquisition:** Experiential immersive brand experiences, product trials, customised offers, in-store navigation, product history, brand differentiation
- **Conversion:** Remote expert consultations, immersive virtual stores experiences, personalised experiences, in-store engagement
- **Retention:** AR/VR support, behavioural nudges and special offers, remote expert advice.

As AR/VR technology rapidly improves, analysts predict the retail industry may be one of the biggest beneficiaries.⁹ Brands are seeking to use VR and AR both for direct sales opportunities and to enrich the consumer's experience of the brand.

Technology is dramatically changing the retail landscape, but one thing remains the same: retail is about providing high-quality, engaging experiences for customers: Human customers. Retailers can experiment with new technology, while still maximising the long-standing priority of connecting with customers.¹⁰ So the most successful adopters of VR and AR will be retailers which use the technology to enhance their relationship with customers, rather than replace it.



Uses of VR/AR in retail

Solutions for your customers

Pre-plan shopping trips

AR and VR allow customers to make more informed purchases as they visit stores, increasing the buyer conversion rate.

Luxury boutique The Apartment has used Samsung Gear VR to give shoppers a view into its signature brick-and-mortar space from anywhere in the world.¹¹

Brand differentiation

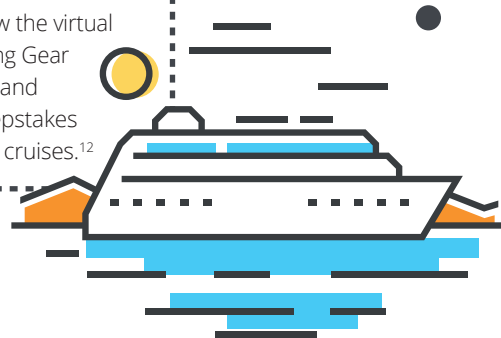
Gamification can be used to enhance a physical product, which can increase consumer engagement and incentive to purchase.

In 2016, Carnival Cruises launched virtual tours of their cruise liners to give potential customers a realistic experience of life on a Carnival cruise on the high seas. This initiative was launched in partnership with telecommunications company AT&T, where customers in AT&T stores could view the virtual tours through Samsung Gear VR headsets in-store, and could also enter sweepstakes to win one of ten free cruises.¹²

Information delivery

Customers can receive a myriad of information, from virtual coupons to nutritional information, about products while shopping.

Pre-packaged foods retailer Kraft has partnered with Walmart and the app Blippar to deliver, through AR, digital recipes, other assets and a points loyalty system for customers.¹³



In-store engagement

AR and VR can be used to assist customers to navigate a store, find or receive product information in-store and gain store incentives or rewards as they move through the store.

L'Oréal's Makeup Genius app allows users to virtually apply L'Oréal makeup products such as lipstick and eyeliner to their face, with their smartphone camera acting as a virtual mirror. Australian customers can then purchase the products from Priceline directly through the app. Makeup Genius has already piqued a lot of consumer interest, having been downloaded more than 16 million times worldwide.¹⁴

Product customisation

Clients and potential customers are able to customise product features and designs using AR and VR technologies, allowing them to visualise what the product might look like in different scenarios.

The Dulux Colour app uses AR technology in its 'ColourView' feature, which enables users to visualise through their smartphone camera what a certain colour of Dulux paint will look like on the ceilings, walls and furniture of their home. Users can browse through 4,000 different Dulux colours and get an accurate projection of what the finished product will look like in their chosen space.¹⁵

Experiential campaigns

AR/VR can add an emotionally immersive component to any product activation through gaming, storytelling and branded experiences.

At the end of October, Shangri-La Hotels announced the introduction of Samsung Gear VR headsets across all global sales offices. Shangri-La Hotels introduced Samsung VR headsets across all global sales offices. The hotel group has produced immersive VR videos for all of its 94 hotels and resorts.¹⁶



Group entertainment experiences

This involves theatre-style immersion in AR/VR experiences with multiple audience participants.

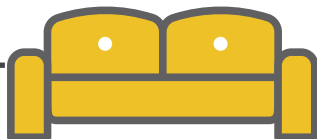
Live-streaming 360-degree video was an area of focus at this year's Consumer Electronics (CES) conference. Guests were able to watch a live basketball game being broadcast, choosing from multiple points of view as the action moved up and down the court.¹⁷

Qantas has trialled VR headsets for in-flight entertainment on the A380 Airbus.¹⁸ Virgin has already rolled out VR headsets for business class passengers.¹⁹

Visualisation tools

Using visualisation to help customers find the right product for their needs results in higher conversions.

IKEA's catalogue app uses AR to allow customers to virtually place IKEA products in their home and get a realistic idea of whether a piece of furniture will fit in their living room or bedroom. This saves the customer time in measuring the dimensions of a piece of furniture and calculating the amount of space it could potentially take up.²⁰



Live streamed VR lectures and events

Increase overall engagement through AR/VR experiences, which leads to higher knowledge retention rates.

In New York, Tommy Hilfiger's Fifth Avenue store has installed Samsung Gear VR headsets, immersing shoppers in a virtual journey to view and shop the label's fall fashion show.²¹

VR/AR manuals

Create more engaging product manuals and installation guides.





Low-cost visualisation of high cost assets

High-cost assets often carry a high cost sales cycle because of customers' hesitation in purchasing something they can't properly visualise. Using VR, models of high-cost assets can be developed at a much lower cost, increasing accessibility.

Australian home building company Metricon is using VR headsets to showcase its display homes to potential buyers in regional areas. Sales staff in regional offices such as Wonthaggi in Victoria are providing virtual tours of the display homes through VR headsets, enabling customers in areas where Metricon doesn't have display homes to get a highly realistic view of the homes. As VR software improves, more building companies could offer highly realistic virtual tours of homes that haven't been built yet, potentially removing the need for display homes.²²

Some advice

To harness the power of VR, retailers shouldn't focus on replicating the environments where their products are purchased, but rather on using environments to enhance the presentation of their products by connecting with the emotions and experiences inherent to them; running shoes were created for the joy of running, hardware for the thrill of building, fashion for the pride in knowing you look good.²³

Let's look at clothing as an example of this. If we distil the core mission of a clothing brand, based on what's in the consumer's mind, what becomes clear is that it isn't to get people to buy clothes. If it were that simple, then discount clothing would outsell every other brand because they offer the cheapest, most sellable goods.

If we boil away the retail strategy and strip away the fact that they operate bricks-and-mortar stores, at their very core, clothing companies are a fashion conduit for their consumers. It's where styles and fashion are presented to the consumer to accept or reject, and adopt based on their self-image and perception.

Therefore trying to get the consumer to picture themselves with an item – a shoe, a jacket, some perfume, is a core VR value proposition, because it creates empathy. We can picture ourselves in other situations much more easily in VR environments.

VR/AR solutions for your business

Designing for customer experience

One of the major uses for VR in the customer experience journey is the ability to design spaces and experiences for customers virtually, and be able to test, refine and enhance these at a much lower cost and quicker turnaround than testing physical prototypes. Robbie Robertson, lead partner in the Spatial and Brand Experience team at Deloitte says "In our ever changing world the need to test, immerse and validate our ideas with our customers has become paramount. Using VR and AR we can provide a mixture of three core elements:

- **Engage:** VR is an immersive technology that allows customers to experience a space and place before it is built.
- **Persuade:** we can test and train stakeholders in new work practices or process to ensure that they are adopted correctly.
- **Inform:** visualising a new idea or concept has always been a challenge for many clients. VR and AR allows us to inform them immediately as to the impact of our designs."

New Balance flagship store

In this project for New Balance, the Virtual Reality team at Deloitte, working in partnership with the Deloitte interior design team, visualised the designs for the new flagship store to a level of detail that, when viewed through a VR headset, allowed all departments to preview and understand if the concept would work and meet the required needs. Once completed, the VR rendering was used as the primary training facility for retail staff, allowing them to feel confident in how to engage with customers from day one of the opening of the new store.

Store, centre and warehouse planning

AR can be used to improve navigation while in-store as well as be used to improve retail zoning and the management of inventory and stock.

InContext Solutions produces technology that allows you to run research and simulations to discover how product/store/ad layouts drive traffic and gaze attraction.²⁴

Virtual stores and at-home try-on

Ready for a plethora of choice? Take e-commerce to the next level by allowing consumers to enter a virtual store and pick online shopping items or to try on 'digital' clothes at home prior to purchase.

Google has announced two new retail partnerships, with BMW and Gap Inc., deploying its 3D-scanning project, Tango. Tango is a real world application with an ambitious aim: letting shoppers see what they might buy without ever leaving the comfort of their home.

For example, Tango allows shoppers to virtually test clothes from the GAP brand without having to try them on, by using a 3D avatar. The tech that allows shoppers to do this with a scan of their own body is on the way.

With Google, BMW is testing a new app that displays an i3 city vehicle and i8 sports car on smartphone screens. Car shoppers can walk around the superimposed vehicles, placing it to look life-size inside their driveway or garage. Users can choose from six different colours, four types of trims and wheels, all appearing in a high-resolution image.²⁵

Space optimisation and navigation

AR can be used to improve navigation around large spaces (e.g. hospitals, large shopping centres) particularly when there are a considerable number of people, departments, levels and rooms.

VR and AR can also assist with behavioural analytics, crowd movement (where do people walk), simulations (how claustrophobic would certain amounts of people be in certain places), and scenario planning (emergency/disaster mandated planning).

Experience optimisation

Using experience design techniques in combination with AR/VR applications to identify and improve current and future customer and employee experiences.

MYOB has used the technology as a way to engage with new recruits and introduce them to life at the company in an engaging and high-tech way.²⁶

Training workshops

Helping staff and customers adapt to new processes, spaces or products by experiencing these in virtual test scenarios first.

Arriva Trains Wales has created a virtual platform at their driver training centre in Cardiff to train station staff and conductors on how to identify hazards on the platforms.²⁷

AGL Energy Limited has trialled VR technology for its employee orientations, office learning and development, and safety training.²⁸

Customer experience experiments

Using AR/VR to test multiple customer/staff scenarios, spaces or applications.

Immersive journey mapping

Creating virtual journey maps that allow staff to put themselves into the customers 'shoes' and experience their current journey live.

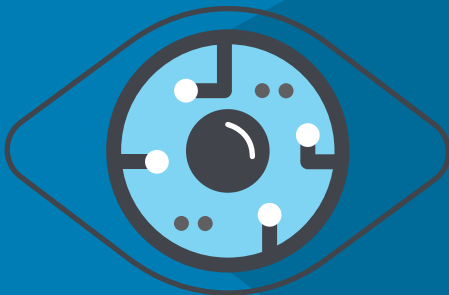
An example of VR helping to widen understanding around important social issues is in the aged-care field: Alzheimer's Australia Victoria has created a 'Virtual Dementia Experience', which simulates real-life scenarios for people living with dementia. The program is used for aged-care trainees to help them have a better understanding and appreciation of what their patients experience in their daily lives.²⁹

Lo-fi testing

Testing multiple scenarios in virtual spaces to iterate on solutions and identify the best customer solution to mitigate implementation risk.

3D visualisation and interactive experiences

Audi creates a new dealership experience with Audi City



Audi is hoping its technologically equipped 'Audi City' stores will redefine the way customers shop for new cars, providing an exciting and engaging dealership experience. The stores focus on giving the consumer the ability to digitally explore and personalise Audi's line of vehicles. It's a new take on the conventional dealership, with virtual touchpoints able to present Audi's entire model range, while enabling millions of different possible configurations of the vehicles.

Audi has teamed up with ZeroLight to provide the real-time 3D visualisations. Multi-touch tables present a 3D virtual car to the consumer, which can be fully customised. The models that have been configured on these tables can then be viewed on a 'Powerwall', which presents a life-size scale of the car in large-format and 4K resolution, which can be explored inside and out. A member of the sales team is on hand to assist with the customer experience and journey throughout.

The level of personalisation that the technology allows for, creates a truly customer-centric experience, where the power is in the customer's hands to choose the right model, features and add-ons to match their tastes and needs, and help them create their dream Audi vehicle.

Without the need to stock Audi City stores with actual cars, the dealerships can be placed in key cosmopolitan locations, such as within shopping centres or airports. Current locations include Beijing, Berlin, London, Moscow, and Paris. In this instance, technology allows the customer to get the full Audi service experience and explore the complete spectrum of options, without needing to visit a conventional dealership.

Taking decisions on adopting new technologies as a retailer

When considering adopting or rolling out VR or AR technologies, there are three aspects retailers need to consider:

- Your own organisation
- The technology itself
- The retail sector in Australia.

Your own organisation

Look closely at your own models, systems, and most importantly, your customers.

What are the strategic priorities, innovation appetite and organisational capability in regards to stakeholders and affected groups? What is your software ecosystem and digital backbone? Will adopting VR or AR integrate with this?

VR and AR can solve problems for both physical retailers and online retailers, but these technologies are not going to be suitable for all retailers, and are definitely not going to be a solution to every problem.

“Leveraging new wow-inspiring technology is pointless if you can’t provide an easy fulfilment experience for the consumer – if you don’t have the basics in place. When people can’t easily make the purchase they were promised, it damages your brand; those consumers often don’t come back to your platform, no matter how cool or new the technology is.”³⁰

Joe Migliozi Shop+ Leader at Mindshare, a global media agency

There is enormous potential for brands, but there are not many, if any, retail experiences that we have seen where the promise meets the expectation and motivates the participant to return beyond an experimental interaction.

Damien Ballesty leads Deloitte's consumer business and retail technology advisory team in Australia. He's on the fence about the suitability of VR for all retailers, but certainly sees great advantages for some. "I see an absolute business case for using VR with certain companies in the architectural and property development space. Basically any industries where the high cost of using VR technology is justified to give the consumer a proper experience to help make the decision to buy a high cost item such as a property, a kitchen or a wedding dress." He sees more use cases for AR.

"AR can be used to good effect to draw interest in a brand, but where I think it could really be successful is through companies offering personal curation – catering products to you based on what the AR picks up about you. So using the AR to reduce the product offering from 1500 items to actually knowing and personalising products for you. With the overwhelming choice now available to consumers, curation is the future of retail and AR can be a big part of that."

"Businesses thinking of investing in VR or AR need to consider how to measure benefits against objectives. They need to set concrete goals and be flexible in meeting customer needs while adopting different measures of success, such as search results and engagement scores. Regularly evaluating methods and carrying out user testing will help deliver a consistently positive user experience."

Serena Koivurinta Analyst, Deloitte Digital UK



The technology itself

The hype and buzz around this technology is definitely not undeserved – we are at an exciting stage in the roll out. But we are also at an early stage. A gap still exists between expectations of what the tech can do versus the reality of what currently exists.

The factors pushing VR forward:

- Improvements in supply chain fundamentals like faster and better display technology
- Companies bringing more consumer products to market
- A creative community producing content and discovering best practices for VR narratives³¹
- Trends – miniaturising displays, untethered, mobile (reducing cost and size of headsets, increasing performance)
- Authoring tools – 3D scanning, capturing, and content generation pipelines are getting easier to achieve
- Integrated Digital – connecting platforms to experience to make AR/VR a visual component of a digital consumer, rather than a siloed technical experience.

So while the reality catches up with the promise, there's going to be a classic hype cycle unfolding in the next few years.

However, Deloitte's National Head of Innovation and Digital Transformation, Jason Bender, says that this time, the hype is justified.

"I've been interacting with various versions of VR now for 20 years. But it's never been real. This is the first time that rendering, sound, design, computing power, and tech have come together. It's the first time I've had a VR experience where I was genuinely transported." Jason also believes that better is to come.

"The technology has come from nowhere in this past year, and given the rate of change, will be so much better in a year and two years. I predict mass adoption of it in the next three years. And it will be cheaper and more accessible – making it easier to make a business case for it at the enterprise level."

Nevertheless, retailers don't want to invest in the technology only for their customers' expectations not to be met. Instead of large scale investment, brands can — and should — experiment with executions of VR and AR on a smaller scale, even if it's in just a few stores.

Companies need to look at:

- What use cases for VR/AR in my business come out of our strategic and market priorities?
- Which technologies line up to the use cases to deliver best value?
- What is the best fit on timing, cost, and value delivery?

The retail sector in Australia

Our experience advising and working with retailers all over Australia and globally is that most Australian retailers prefer to see how a new technology goes overseas before adopting here. However, there is an opportunity for interested and adventurous retailers in Australia to be first in providing a unique experience for their customers.

To ensure VR and AR adoption is an integrated experience for customers, many retailers would need to look at introducing VR or AR as part of an omni-channel approach to improving online offerings, integration and internal systems.

A 2016 survey revealed that a significant number (28%) of Australian retailers plan to adopt VR within the next 12 months.³² However, the survey also revealed that over half the business leaders surveyed said they did not have a mobile app or mobile website.

In terms of the prioritisation of resources and investment, our bet is that most companies will put developing a mobile friendly site to the top of their to-do list and that VR or AR will rank fairly far below those priorities.

But as we've shown, it shouldn't. Why? Well, the adoption of VR or AR technologies, even in some small areas of your business, can bring immediate benefits and cost savings for retailers and other sectors.

It can solve the pressure in the manufacturing sector on bottom line operating costs and efficiencies. It could play a significant part in achieving the public sector's ongoing drive to improve safety and regulation. Australia's continuing real estate boom means there is a growing appetite from foreign investors and buyers who want VR experiences in this sector.

The questions below could be useful for retailers in the process of deciding if this technology is right for them.

Six crucial questions for retailers considering the adoption of VR and/or AR:

1. Would I roll this out as a promotional/experiential tool or could VR/AR be integrated as a central component of the experience of my customers or for managing my business?
2. Is this the right time to invest in this technology? Can a core competency of my business be accelerated or does this sit on the fringe in a non-core area?
3. Are the systems and processes right within my organisation to allow for a relatively straight-forward adoption?
4. Are my customers interested, excited, or even aware of the possibilities of VR/AR?
5. Who is the right person in my organisation to take this decision – CMO, CTO or CIO?
6. Have my competitors, either within Australia or overseas, trialled this technology? If so, are any results available or has there been feedback from their customers?

Final word (until we meet virtually)

At Deloitte, we're learning too, and we've been amazed at how we are able to put the technology to work for our customers – far beyond what we originally expected. The possibilities for practical application are endless.

We've found so many other uses for VR and AR beyond our initial intention, which was to help visualise spaces for our customers. We've been using the tech in a number of ways. First of all, it's given renewed vigour to what had been quite standard processes and products, e.g. if we are mapping a customer journey for our clients, instead of being on paper, that journey can now be brought to life through VR.

We've also used our VR capabilities to run war-gaming for clients, and we have a client in the energy and resources sector who has asked us to use AR to assist their staff in repairing complex machinery, sometimes located in the middle of a desert. This will save them hours if not days of downtime where they would previously have waited for an engineer to service.

We trust this guide has given you some ideas around the breadth of applications for the technology and some inspiration for how it could be used in your business.

In the past six months we have undertaken a range of strategic explorations into differentiated business offerings, rapidly prototyped solutions across a range of new technologies, tested and refined our offer based on client feedback and uncovered novel ways to address unmet customer needs.

We are also part of a global community of VR and AR experts emerging within Deloitte. We collaborate, discuss and share learnings regularly with colleagues in Canada, Japan, Germany, UK and the US.

We are developing the best of the best of innovation and cutting-edge solutions for our clients and we'd love to talk to you about how this technology could work for your business.

Looking to enhance your reality? Or your customers' reality? Contact Deloitte for more information.

Endnotes

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