



Augmented reality - Changing the face of retail

Research by DigitalBridge
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Introduction

Augmented reality has long been seen as a valuable retail solution and our previous research has shown that it could add as much as £1bn to the UK's home décor market alone.

But the launch of Apple's ARKit, and the announcement of Google's ARCore, have finally thrown this visualisation technology firmly into the mainstream and retailers are under more pressure than ever to implement some kind of tool that would allow consumers to preview products in their own homes before buying them.

Despite this rise of technology in the retail sphere the question remains, are retailers actually making the most of new technology available to them?

ARKit and ARCore will make it much easier to create compelling AR experiences that increase conversion and average order values, as well as drive customers into physical stores.

In this report, we will examine the impact of augmented reality on the retail sector – later taking a specific look at the kitchen, bedroom and bathroom market – and investigate consumer attitudes to new technology.

We will look specifically at AR through the context of ARKit, and find out what consumers really think about the prospect of being able to visualise products before spending money, how they would prefer to access this type of technology, and what they think should happen next to improve the platforms further – whether it's wearable or "smart" AR tools.

Finally, we will explore how immersive technology like AR could help retailers bridge the "imagination gap" and find out how much this problem continues to cost the UK economy.



About DigitalBridge

DigitalBridge is an award winning mixed reality company that uses AR, computer vision and machine learning to allow customers to “try on” home décor products in their own rooms, and in particular see what their kitchens, bathrooms and bedrooms would look like in a virtual setting.

Launched in 2013 by CEO David Levine, DigitalBridge works by letting consumers capture their existing kitchen, bathroom and bedroom space, using its AR measurement tool, Survey, and then its innovative and intuitive design visualiser guides them through 3D design and visualisation on a tablet or smartphone. Consumers can add or remove products like furniture, flooring and wallcoverings directly on the screen.

While still a relatively young company, DigitalBridge has quickly become established as an innovative retail technology tool, having received investment from John Lewis and innovation specialist L Marks. It's also been named best company at the retail giant's JLAB accelerator programme in 2016, and recognised as one of the most innovative start-ups in the retail technology sector by Retail Week Live and Wired Retail.

Most recently DigitalBridge was named as one of the world's top tech companies to watch by California based NVIDIA, after winning its retail inception accelerator scheme and was one of only two start-ups to be labelled “ones to watch” in Manchester as part of TechCity's Technation 2017 report.



Highlights

41% already expect to be offered access to augmented reality in retail

One in five shoppers (20%) expect retailers to launch an augmented reality tool immediately after the launch of Apple's ARKit

74% of consumers expect retailers to use ARKit to develop augmented reality tools

A third of consumers would be more likely to buy something after using mixed/augmented reality to preview products

More than half of consumers (51%) have put off home improvements in the last 12 months because they couldn't imagine what the finished project would look like

AR⁺

56% of 18-24 year olds would be more likely to use mixed/augmented reality if it was offered via a wearable device like Google Glass or Samsung Gear



69% of 18-24 year olds would be more loyal to a brand which offered them access to better technology



- 69% of 18-24 olds would be more likely to shop with a brand that offered mixed/augmented reality or artificial intelligence
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- More than half of consumers (51%) think retailers are failing to take full advantage of the technology now available to them
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Apple, Google and the AR revolution

Consumers have been eagerly awaiting the arrival of Apple's AR platform called ARKit and almost three quarters (74%) say they now expect retailers to offer them some kind of augmented reality experience.

And consumers are hoping they are not kept waiting long, with one in five (20%) saying they fully expect retailers to have developed an AR tool that would be ready to launch immediately after Apple's latest iPhone and iOS platform release.

Even of those who are slightly more patient, nearly half (49%) would expect retailers to have implemented an AR platform within 6 months, with 18% expecting to see something within the next 12 months at the latest.

Apple's focus on augmented reality comes as the visualisation platform overtakes virtual reality as the most sought after retail technology on the market, with 61% saying this type of tool is the most beneficial to retailers.

This is compared to 30% who think VR will be the best technology for shoppers.

Being able to use the technology on a smartphone or tablet (82%), previewing items in the real world (78%) – rather in a completely virtual environment – and ease of implementation thanks to ARKit (47%) are the main reasons consumers see more potential in AR over virtual reality.



“Augmented reality has been developing almost in the shadows of virtual reality in recent years but Apple’s release of ARKit, and Google’s ARCore, have completely changed the dynamic of the conversation. Consumers are now seeing the benefits of being able to place objects – like furniture – over a picture of the environment in front of them and are increasingly expecting retailers to offer them the ability to do this.”

“The next 12-18 months will see AR become a more mainstream technology and the prospect of seeing more retailers take advantage of it is an exciting prospect for those of us developing the products.”

David Levine

CEO DigitalBridge

Retailers are failing to make the most of available technology

While Apple's ARKit has put the focus of technology on the retail sector, there are already a number of tools and platforms available to businesses to improve the customer experience.

However, it seems that most retailers are not providing the kind of immersive or interactive experience modern customers now expect and demand. In fact, the majority of shoppers (51%) think retailers are failing to take full advantage of all the technology now available to them and are not providing a quality shopping experience compared to what they could potentially offer.

With only a minority of consumers believing retailers are fully grasping the potential new technology is offering them, businesses on the high street – and online – have some work to do to change that perception. Perhaps surprisingly, it is actually older shoppers who would like to see retailers make better use of these platforms.

Nearly half (48%) of shoppers aged 35-44 are unhappy with the current technology offering available in retail – either online or in store – while just 46% of consumers aged 45-54 say retailers are making the most of technology.

When it comes to younger shoppers, more than a third (35%) of 18-24 year olds and more than one in four (43%) of 25-34 year olds still think retailers could do better.

The fact that older shoppers are particularly disappointed with the technology being offered should be concerning for retailers, as previous research we have commissioned found that nearly three quarters (73%) of baby boomers and older shoppers are eager to use these platforms in a retail environment – the exact same as the proportion of millennials who feel the same.

AR⁺



“With so much technology now available for retailers and the well documented benefits they can offer to both retailers, in terms of boosting the bottom line, and for consumers in terms of a more interactive shopping experience, it is both surprising and slightly concerning that so many consumers seem disappointed with what is on offer.”

“The fact that more than half of all consumers, and a significant number of younger shoppers, are not satisfied with the technology being presented shows that retailers are in danger of failing to meet consumer expectations, which can be extremely damaging commercially and reputationally in the long term.”

- David Levine

Do you think retailers are making the best use of technology?:

Yes – 49%

No – 51%

Do you think retailers are making the best use of technology? (by age):

18-24: No – 35%

25-34: No – 43%

35-44: No – 48%

45-54: No – 54%

55-64: No – 63%

Direct integration is best when it comes to augmented reality

We've already established that augmented reality is the technology consumers are most expecting to be offered by retailers. The next question is how do they prefer to access it?

While apps have long been lauded as a “must have” for businesses, it seems that when it comes to visualisation tools consumers would much prefer to access them directly from a retailer's own website.

Indeed only 17% of consumers think AR would work best for a retailer via a dedicated app, compared to the 75% who think it would work best integrated directly into a retailer's website, with the majority of them showing a preference for mobile.

One of the reasons given for this preference is that consumers find it too inconvenient to be forced to look for and download an app rather than be given access to the technology directly.

However, today AR is largely restricted to mobile apps and this may constrain consumer (and retailer) adoption.

Some consumers also expressed a preference to having augmented reality provided in store so they could get the advice of a professional on their design choices as they go through the process.

“The problem with apps is that they have to be constantly updated and improved, which is costly and time consuming for a business.”

Failing to do this can be damaging for a brand if the app becomes too out of date.”

- David Levine

Commercial benefits of augmented reality

Being unable to visualise what a new and expensive bathroom or kitchen would actually look like in their own room has been a long-standing frustration for consumers – and a commercial challenge for retailers – but AR could finally have the answer.

A third (33%) of consumers would be more likely to make a purchase on the spot if they were given access to an augmented reality platform first, a significantly shorter time than the six months it currently takes the majority of people to decide on a purchase that is specifically for their bathrooms.

Having the option to preview a design for a new kitchen, bathroom or bedroom is clearly beneficial for customers, 49% of whom like the idea of being able to test more than one idea before making a decision, and 56% who think being able to get a better look at a product in a particular space first would be a major benefit when shopping – especially for large items like furniture.

Even among those shoppers who still wouldn't make an immediate purchase decision, 42% think using augmented reality first would make it easier for them to make a decision, and likely shorten the time between browsing and final purchase.

More than a quarter (26%) also say augmented reality would make the buying process quicker because they could share design ideas with friends and family to gauge their opinions first, and reduce the likelihood of them walking away to think more. 14% would also be more likely to use an augmented reality platform if it could be integrated with their social media profiles so they could share design ideas or products online first.

“Unlike virtual reality, which is about creating entirely new environments, the big advantage of augmented reality is that it can show consumers what a product will look like in a real space, like a bed in their bedroom or a new cooker in the kitchen.”

“These are not small purchases to make and being able to test multiple options before spending any money would be a major benefit for consumers and an entirely new kind of shopping experience for retailers to offer.”

David Levine
CEO DigitalBridge

Anticipating and previewing products with augmented reality

While augmented reality is still a relatively new technology in the eyes of consumers many have already grasped the potential to pair it with other kinds of next generation technology to improve the customer experience even more.

Artificial intelligence, like chatbots, have long been seen as one of the potentially ground-breaking tools in modern business, and for 64% of consumers putting AR and AI together would be the ideal personal shopping assistant.

This proportion of consumers say they would be more likely to use augmented reality if it was partnered with an AI assistant which could suggest products based on their previous purchases or browser history, and then automatically show them what these products would look like in their homes.

This all in one digital shopping assistant could be a few years from reality but there is clearly an appetite for it among shoppers.

“Retailers are already using tools to recommend products to consumers and place adverts in front of them of things a consumer may want to buy based on what they’ve looked at online. Putting that kind of machine learning into an augmented reality platform would totally transform the personal shopping experience for consumers.”

“Imagine starting to shop for a new bedroom or bathroom and a retailer could instantly show you 10 designs or products placed in your own home based on the things you’ve looked at in the past.”

- David Levine

The wearable and connected future of augmented reality

The pinnacle of most new technology to hit the market in recent years has been implementing it into a wearable solution, and augmented reality is no different.

And more than one in three consumers (37%) say they would be more likely to use augmented reality if they were able to access it from a wearable platform like Google Glass or Samsung Gear.

Wearable augmented reality may still be a few years away, although a recently filed Apple patent for a pair of augmented reality glasses – with specific reference to use in the retail sector – have kicked the rumours forward slightly, even if a patent filing is no guarantee.

But, given that Apple seemingly has a new committed focus on augmented reality as a mass consumer technology, it is likely that some kind of wearable AR will be heading our way in the not so distant future.

While shoppers of all ages are eager to see more technology on the high street, when it comes to wearable products it is decidedly the younger generation which is most excited about the prospect of wearing their augmented reality tool. 56% of 18-24 year olds and 51% of 25-34 year olds say they would prefer this option.

And with more than one in four (42%) 35-44 year olds and 32% of 45-54 year olds also saying they would like to have access to a wearable visualisation tool in retail, there is clearly an appetite for this among all consumers.

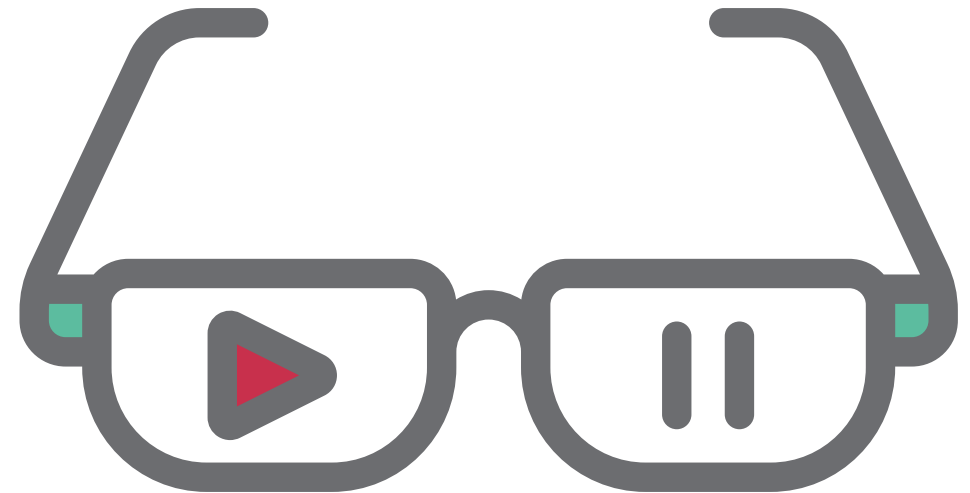
“It may be slightly future gazing right now to be talking about wearable augmented reality but the success of Samsung Gear and Apple’s focus on creating new AR experiences suggests it won’t be out of the question in the coming years.”

Also given that Apple has acquired companies working on lenses that can overlay digital information into the user’s field of vision, this suggests some exciting prospects are coming on the horizon.”

- David Levine

Customers who would be more willing to use mixed reality via a wearable device like Google Glass: (By age)

18-24	25-34	35-44	45-54
56%	51%	42%	32%



Building a brand around augmented reality

While augmented reality is clearly a major benefit to consumers, it is also a powerful brand building tool for businesses, with half of consumers (50%) saying they would be more likely to shop with a brand that offered them access to visualisation technology.

This clearly shows an appetite for new technology and should show retailers the dangers of letting their competitors get ahead in bringing a newer, more interactive experience to the high street.

Augmented reality is a particularly powerful brand building tool for targeting young people, with 69% of 18-24 year olds (the highest proportion among any age group) saying that they would be more loyal to a business offering a technology focussed and interactive shopping experience.

But with 59% of 25-34 year olds, 48% of 35-44 year olds and 46% of 45-54 year olds saying new technology is a key to making them loyal customers, this potential is not limited to particular age brackets.

Coupled with the fact that consumers are more likely to make a purchase after using this technology, it is clear that businesses should do more to embrace retail technology sooner rather than later.

“New technology like augmented reality and artificial intelligence have completely changed how we shop and interact with a business and have obvious benefits for making shopping and making purchases easier and more convenient.”

“But these figures also show that these technologies can be vital in growing and maintaining your customer base and giving businesses an advantage over the competition.”

“With so many consumers willing to base their decision of where to shop on which brand offers the best technology, businesses should take note and investigate how best to give their customers what they clearly want.”

- David Levine

The value of technology as a brand building tool



50% of consumers say they would be more likely to shop with a brand that offered them access to mixed/augmented reality or artificial intelligence

Consumers who would be more loyal to a brand based on the technology they offered

69% of 18-24 year olds
59% of 25-34 year olds
48% of 35-44 year olds
46% of 45-54 year olds
43% of 55-64 year olds

Sector focus: Kitchen, bedroom and bathroom (KBB) markets in the UK and US

While the consumer 'Imagination Gap' is an issue across the entire retail sector, it is particularly problematic for those businesses selling high value products, or involving projects that can have long lasting consequences for the customer – like home design.

The kitchen, bedroom and bathroom market is a prime example where the 'Imagination Gap' produces hurdles for retailers, with consumers more likely to walk away from these kinds of purchases if they aren't entirely sure about them, or take much longer (as much as six months) to make a buying decision.

In the next year, 27% of homeowners in the UK say they are planning to make changes to their living room or kitchen, with 24% planning a bathroom overhaul and 22% planning a change to their bedroom.

This is a significant market for the UK economy – estimated to be worth about £3bn a year – while the kitchen furniture market alone is projected to be worth £1.83bn by 2019, on a projected 4%-5% annual growth rate, according to AMA Research. In the US, the kitchen and bath market for new construction is estimated to be \$48.6 billion.

But the 'Imagination Gap' is severely impacting the growth of this sector, with more than half of homeowners (51%) revealing that they have decided against a kitchen, bedroom or bathroom renovation project in the last year, because of this issue.

And with 35% of consumers planning to spend between £1,000 and £2,000, and one in ten (10%) budgeting more than £3,000 per project, there is potentially millions if not billions being lost from this lucrative market, just because people can't imagine what products will look like at home.



However, the 'Imagination Gap' is not just costing money for retailers, it is also being felt in the pockets of consumers, some of whom have made a purchase or design decision only to regret their choices and spend even more money on further changes.

Of those consumers who have experienced this problem, 52% were forced to spend an extra £500-£1,000 with nearly one in five (18%) spending £1,000-£2,000 above their original budget on a second effort.

One in 10 spent as much as £3,000 righting a poor design or purchase choice.

In the US, the market is even bigger with more than 10% of residents completing a kitchen or bathroom remodelling project in the last 12 months adding \$85.2bn in the economy, according to the National Kitchen & Bath Association (NKBA).

This is split between 10m residents who remodelled their kitchen (spending \$50bn in total) and the 14m residential remodelled bathrooms (with costs totalling \$36bn).

On a cost per project basis, industry research shows that of those US residents who remodelled their kitchen in the last year, 48% budgeted a minimum of \$15,000 while 21% of those who remodelled their master bathroom in the same period spent on average at least \$7,500.

When it comes to new construction projects, the kitchen and bathroom market adds nearly \$50bn to the sector, showing the massive potential for retailers in attracting more customers.



One in 10 spent as much as £3,000 righting a poor design or purchase choice.

Augmented reality in the Kitchens, Bedrooms and Bathrooms sphere

When it comes to the use of augmented reality in this retail area, consumers are open to the concept of room visualisation and many are aware of the benefits it could have.

More than a quarter (27%) of consumers say it would be very important to them if a retailer could help them visualise their new bathroom or kitchen while shopping in store. Even more shoppers (35%) put the same weight on room visualisation technology when it comes to online shopping, labelling this ability very important.

It is also clear that implementing augmented reality online – rather than in store – is the preferred option for consumers, although most say having the option in store would also be highly beneficial. More than a quarter (26%) view augmented reality as an “important” aspect of future online shopping, with 18% saying the same of offering technology in store.

Augmented reality also has the ability to change how people engage with the kitchen, bedroom and bathroom market. Currently most consumers (37%) say they are most likely to buy their new kitchen, bedroom or bathroom in store because they could get the help and advice from a professional or designer. This is compared to 22% who would currently shop for these projects online.

However, if given access to augmented reality 41% of consumers say they would then be more likely to shop online – although some would still prefer to have the guidance of an in-store professional when using this technology.

Augmented reality could also reduce the amount of time it takes a consumer to make purchasing decision with most people saying it currently takes them at least six months to come to a decision.

But having access to augmented reality – and being able to visualise products in place and easily trying multiple options – would make 68% of consumers more likely to make a decision on the spot.

Conclusion: Retailers risk playing catch-up in the augmented reality race

Augmented Reality has been a developing technology for years, but advances in mobile devices such as smartphones and tablets mean that it is now poised to take the world of retail by storm.

In particular, Apple's ARKit and Google's ARCore is set to thrust the technology into the mainstream by putting AR in the hands of millions of phone and tablet users.

With this new technology suddenly in the hands of so many consumers, there is a huge opportunity for retailers to take advantage of this by using it to solve the everyday, real-life problems facing consumers in retail – such as visualising what a piece of furniture will look like at home.

And it is an opportunity retailers should take note of, especially considering the majority of consumers think technology is not being used to its full potential in the retail sector and are eager to see more businesses taking advantage of it.

The commercial benefits of embracing AR in retail are obvious, most notably in how the technology helps to solve the 'Imagination Gap' – referring to when consumers delay purchasing decisions due to not being able to visualise how a product will look in their own home. In fact, more than 28 million consumers (55%) say that a visualisation tool would make them more likely to make a purchase.

Looking to the future, AR technology is set to move beyond the realm of smartphones and tablets into wearable technology, placing a permanent digital overlay on the world. Apple in particular is continuing to invest in the augmented reality space, with experts predicting that the company is developing AR-enabled glasses.

Other brands are exploring even further into this space – Lenovo are now experimenting with incorporating Artificial intelligence assistants into their latest line of AR wearables, which has huge potential to be incorporated into the world of retail.

Imagine a time when a retailer could not only predict what you are likely to buy and make recommendations based on your browsing history and could also show you what a particular product would look like in a given space.

Overall, while AR technology is still relatively new, it is certainly here to stay. The advances in consumer devices coupled with initiatives such as ARKit and ARCore are bringing augmented reality into the mainstream in a way that has never been possible before.

Just as retailers who ignored the potential of e-commerce in that platform's early days missed out on a hugely lucrative stream of income, those who are not willing to move with the times and embrace the new opportunities AR brings are denying themselves a potentially vital competitive advantage.





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