

BRIDGING THE IMAGINATION GAP: HOW AUGMENTED REALITY CAN BOOST SALES

➤ **Flixmedia**



INTRODUCTION



ALEX SWORD

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The retail sector is being reshaped as the proportion of online sales increases, facilitating the use of a number of new technologies. Artificial intelligence (AI) is expected to revolutionise customer service capabilities while the likes of the Internet of Things (IoT) are introducing new efficiencies to the supply chain.

With so many new capabilities on offer, all promising to usher in the sector's next great revolution, it is important to stay grounded in your priorities. Despite the myriad disruptive forces reshaping the retail sector, the key question facing all retailers is the same as it has ever been: how do I get customers to buy more?

There are many possible answers to this question, but the easiest and most tangible way to start seeing results is simply to reduce friction. Online is an extremely convenient channel but it introduces new challenges that are not present in physical retail. While consumers may feel confident buying many items online, big ticket purchases can have an 'imagination gap', where consumers are missing key facts about the product they are buying and which can obstruct the path to a sale. This is a problem when conversion rates for online are still dwarfed by those of physical stores at the best of times.

While many retailers are making progress in reducing this gap through high quality imagery, detailed product descriptions and other features such as reviews, there is still a limit to what a customer can learn from these materials.

Luckily, there is already a new solution taking root in the industry: augmented reality (AR), meaning the imposition of virtual graphics over a physical environment.

While AR has been talked about for a long time, the technology has recently overcome some key technological barriers to become both economically viable and ubiquitous enough to make larger scale adoption not only a possibility but a virtual certainty. It is already being used by many retailers to allow customers to experience products.

In this white paper, we will explore how augmented reality can be used to narrow the imagination gap and get customers buying more. ■

SPONSOR'S INTRODUCTION

Sometimes language is the greatest witness to a fundamental shift. We have already seen terms such as 'click and collect' and 'omnichannel' become commonplace as retailers and – more importantly, customers – take advantage of the convenience and speed of digital.

Over the next few years, terms such as augmented reality (or AR) will become familiar to the majority of shoppers. Today, we all search using a keyboard and typing in what we want to find, know or buy. By 2020, we will be 'pointing' with our device cameras rather than typing, as the evolution of shopping goes from text-based research on products and services, to spatial interaction in the real world. We will directly shop and interact with the space around us as AR enters our mainstream lives.

In my work on the award-winning Point & Place® AR Shopping Platform, which was recently featured by Apple in its top AR applications, I have seen first-hand the power of augmented reality. Currys, one of the UK's largest retailers, was an early adopter of Point & Place. Stuart Ramage, the chain's Ecommerce Director, remarked to me recently that the service not only educated the shopper in a faster and more engaging way, but also personalised their experience. And he's not alone in this view. Having launched just four months ago, the app is now live with 258 retailers in 52 countries, which testifies to their belief in AR changing how we shop too.

We are on the cusp of mainstream AR shopping adoption. Consider the words of Apple CEO Tim Cook, who says that one day we will wonder how we ever lived without AR. Apple has just launched its latest iPhone models, which all include its ARKit platform as well as powerful chips capable of the computational heavy lifting required for AR. With handset manufacturers integrating as standard, processing power, cameras, and operating systems into our phones and tablets, the opportunity is there for retailers. Our Point & Place Shopping Platform – free for retailers – takes advantage of these to be the fastest and easiest way to implement AR shopping on a website.

I believe that this is the next great revolution in retail. The time to act is now – before your competitors do. ■



SCOTT LESTER

CEO and Founder of Flixmedia

WHY AUGMENTED REALITY?

Any claim of a new dawn for augmented reality must inevitably come with the disclaimer that the technology has been talked about for a while.

The earliest roots of what we now call immersive computing stretch back to 1968, when Harvard professor Ivan Sutherland created a “three-dimensional display to present the user with a perspective image which changes as he moves.” The device was too heavy to be carried on the human head and accordingly was suspended from the ceiling.

It took until the early 1990s for the idea of augmented reality, in which graphics are overlaid on the external world, to really arise. Searching for a way to make repairs more efficient, Boeing engineer Thomas Caudell found a way to superimpose a diagram on a real-world object to guide workers putting together electrical wiring harnesses.

Nowadays, from a consumer perspective, the technology still sees its most wide use in gaming. But it is also used in niche applications in a professional context in education, healthcare and real estate.

As recently as the last year, however, augmented reality has begun to gather momentum. The technology has now reached a price point and ubiquity where it is within the grasp of the vast majority of consumers.

For many, the mobile application *Pokémon GO* signalled the mainstream arrival of AR. Launched in July 2016, the game allowed users to hunt animated creatures which were interspersed with the player’s real-world environment. Many customers will also have become used to using AR through applications such as Snapchat filters, which allow users to superimpose graphics onto their faces.

Like so many of the biggest shifts in the mobile world, the growth of AR is being driven by two companies: Apple and Google.

THE USUAL SUSPECTS

Apple introduced the ARKit, a development platform for AR, at its World Wide Developer Conference in June 2017 and formally released the service in September of the same year.

New versions added support for vertical surfaces and allowed AR apps to be experienced by multiple users simultaneously and resumed at a later time in the same state. The platform allows real-world objects to be integrated into AR experiences.

September saw Apple unveil its latest iPhone models, including the XR, XS and XS Max. The devices feature the A12 Bionic chip, which brings real time machine learning to heavy computational tasks such as augmented reality.

Not to be outdone, Google introduced ARCore to its Android operating system in March 2018, available on Android’s Version 7.0 and higher.

The capability combines three key elements. One is motion tracking, which enables the phone to track its position relative to the world, while another is environmental understanding, which allows it to detect the size and location of surfaces. It also features light estimation, which means it can estimate the lighting conditions in the customer’s local environment.

Major apps launched so far using the capability include Google’s own proprietary virtual measuring tape app, Measure, as well as Just a Line, which allows users to draw virtual lines on the physical environment around them.

Both companies have invested heavily in augmented reality to make this happen, not only in the technology itself but also in marketing and promoting it.

The point of all of this is that the technology is not a fad and it is not going to go backwards – the commitment of two of the most valuable companies in the world all but guarantees that AR has a prosperous future ahead of it. This is without

even considering the participation of other tech giants in the sector – the \$2 billion that Facebook paid to acquire Oculus for example.

The technological advance is not just taking place on the consumer technology side. In the early days of augmented reality, the design and rendering of AR models would have required huge investments of time and capital. With new advances in software, it is increasingly possible to automate this process and quickly spin up new models from photographs, not only reducing the price but also the time-to-market for new models.

Deloitte predicted at the beginning of the year that the number of augmented reality users will exceed one billion in 2018, as the technology becomes more widely accessible due to technological advances. The firm's TMT Predictions 2018 report predicted that billions of smartphone users will download apps or operating system updates allowing them to create their own AR content.¹ ■

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WHY RETAIL?

There are growing signs that retail could be a beneficiary of this shift. A global survey by law firm Perkins Coie in January revealed a huge spike in respondents expecting retail to be a major area of AR investment. The figure rose from seven percent in 2016 to 18 percent this year.

On the customer side, there are already signs of interest in specific applications. A survey by L.E.K. Consulting in 2017 of 1000 consumers that had used the technology found that 80 percent would be keen to use augmented or virtual reality to design a room or physical space.²

Meanwhile, 70 percent want to use VR to try on clothes and accessories, as well as customise them.

This is borne out by other research from DigitalBridge, which has predicted that AR could add £1 billion to the home décor market in the UK alone.³

According to the survey last year, 41 percent of consumers already expect to be offered access to augmented reality by retailers, while 74 percent of shoppers expected retailers to use ARKit to develop AR tools and 20 percent of shoppers had expected retailers to launch an AR tool immediately after Apple launched its ARKit.

Crucially, a third said that they would be more likely to buy something after using mixed or augmented reality to preview products. Taking into account that a generation of digitally native millennials is now becoming an important and lucrative target market, the research found that 69 percent of 18 to 24-year-olds would be more likely to shop with a brand that offered AR or AI.

Another survey by Retail Perceptions found that 71 percent of people would shop at a retailer more often if they offered augmented reality while 61 percent prefer to shop at stores that do over those that don't.⁴

In terms of sectors, 60 percent of respondents said they would use AR to shop for furniture, 55 percent said clothing and 39 percent grocery. 35 percent said they would use it to shop for shoes while the figure for both make-up and jewellery was 25 percent.

The value of the technology to the retail industry is simple. Online commerce comes with the benefits of increased convenience for the customer and reduced overheads for the retailer. But this also creates a distancing effect that can make it harder to convert potential customers into paying ones.

Consider the traditional high street store: a showroom where the customer can physically see and touch the objects. It goes without saying that the experience is an interactive one.

Now compare this to an online store. Often the 3D product is reduced to a 2D image and a description of three or four lines. This might be fine for FMCG goods, for example, but for many products this produces a barrier that may put the customer off. Just a small amount of doubt or uncertainty can spell the difference between a sale and a dropped basket – and many of these over time will add up.

Conversion rates have long been a key focus of online retail but it is a lingering problem that is hard to solve. Progress is slow, with a range of global studies showing very little uptick in conversion rates year-on-year.⁵

Research by Barclaycard has found that UK retailers are losing £18 billion per year in

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dropped baskets, with the average Brit abandoning baskets worth almost £30 per month.

These figures make grim reading for the industry, but rather than indulging in hand-wringing exercises it is time to do something about it.

WHAT THE RETAILERS ARE DOING

Where AR can come in is closing the ‘imagination gap’. Being able to use AR to model a product within their own home will remove some of the doubt in the consumer’s mindset as they approach purchase.

This is not just about smoothing the purchasing experience, of course. It also has the important added benefit of reducing returns as customers are able to make more informed purchasing decisions. With more and more consumers expecting hassle-free and more importantly, free, delivery options, it is in every retailer’s interest to reduce the number of returns they have to do as much as possible.

There are other benefits. Put simply, physical store space is expensive. Yet even pure play online retailers have been at pains recently to establish a physical presence, whether it is the Boohoo.com pop-up model or Zalando actually opening dedicated stores on the high street. Even Amazon, the world’s biggest pure e-tailer now has physical stores.

AR can remove the need for this expenditure by turning the customer’s own home into the showroom. It doesn’t require storage space or stock availability, nor does it require a space to exhibit the products. All of this can now be contained within a device that fits into the customer’s hands.

There are already signs that the retail industry is using AR to bridge the imagination gap in various ways. As a technology, mobile AR solves many of these problems with online commerce through the combined power of the smartphone screen and the camera. A 3D model of a product not only allows the customer to see what it looks like but also to superimpose it on an environment of their choice.

It is also important not to underestimate the benefits of technology leadership. AR provides the opportunity to associate your brand with an emerging new capability which is set to become increasingly ubiquitous across a whole range of industries.

When it works, AR can be fun – a sentiment expressed by 55 percent of respondents to the Retail Perceptions survey. Imagine a family browsing together for new toys or furniture around a smartphone. It can also be a social experience if you allow users to exchange AR images with each other via social channels such as WhatsApp or Facebook Messenger, or more conventional ones such as email.

WHO IS DOING IT?

As with many of the biggest innovations in shopping, Amazon has got on the boat early with this trend. In 2017 it introduced the AR view feature into its iOS app, following suit on Android at the beginning of this year.

“Picturing your new space can be a challenge,” said a promotional clip released on YouTube, focusing on a young couple looking for furniture and appliances to fill a new loft space. “AR view in the Amazon app lets you see how different items will look before you buy them, so you can see what works.”

Within the application, the feature sits next to the other camera-related capabilities. This puts it alongside capabilities such as product search, which allows users to point their camera at certain products in the real world and receive product recommendations, and package X-ray, which allows users to scan a barcode to find out what is inside a package.

Elsewhere, some of the earliest adopters of AR sector-wise have been retailers

THE KEY BENEFITS OF AR FOR RETAILERS

- Closing the imagination gap – more sales: Smooth the path to purchase by removing consumer uncertainty
- A more informed consumer – fewer returns: Reduce returns by ensuring that customers are happy with what they get
- Dazzle and awe – stronger brand: Become a pioneer in an emerging technology and make your brand synonymous with innovation

focused on the home space, including electronics and home furnishings. In July, Currys PC World launched an AR app built on the Point & Place platform, meaning it did not have to spend anything on developing its own software. The app allows its customers to visualise more than 800 products – from fridges to televisions and printers – in their home.

Swedish home retailer IKEA has been another early pioneer, developing its own IKEA Place application and releasing it in autumn 2017. Consumers can place scale models of (already assembled) furniture from IKEA's product range in their own home. The dedicated application was an update to the interactive furniture experience released in 2013 as part of the IKEA Catalogue app.

British retailer Argos is another company that has launched the capability, building AR into its existing sales app. The company capitalised on a potential surge in demand for televisions ahead of the 2018 FIFA World Cup. Customers were able to tap the 'countdown to kick off' section on the Argos app, then simply click 'summer of football' – from which they were transported to a list of different TVs. Shoppers could then view a TV in their home using AR with just one tap on 'view in AR'.

Some companies are looking into AR to sell even bigger and even more expensive items. BMW introduced the BMW i Visualiser, allowing potential customers to view and interact with full-scale virtual car models. Using their smartphone to display the car in their home or driveway, they can customise all parts of the inside and outside of the vehicle.

HYPER-PERSONAL

Retailers are not just looking at superimposing objects into an environment but also onto the customer themselves. UK retailer Specsavers has introduced the 'Virtual Try On' button in its app, which sits on many of its product pages. The user simply has to scan their face into the app and then they can try on any glasses frames.

The apparel and footwear sector is also looking at solving the imagination gap – Lacoste created the LCST Lacoste AR mobile app that customers could use to virtually try on shoes in stores. By scanning store window displays, in-store signage and promotional postcards, users could also trigger 3D video animation content.

Even the beauty industry, which has been slower than other sectors such as



fashion in embracing ecommerce, is now using AR to tackle some of the major challenges faced in getting online.

For example, one of the barriers to selling cosmetics online has been that consumers generally want to try cosmetics before they use them. An application designed by beauty retailer Coty in conjunction with Walmart allows shoppers to use their smartphone camera to virtually try on one of five pre-set looks. It has generated five million impressions.

This personalisation trend also extends to electronics, with shoppers able to try out headphones on themselves in Point & Place.

THE FUTURE OF AR IN RETAIL

We are still very much seeing the beginnings of what AR can offer. For now, the smartphone provides everything that a retailer needs – a powerful screen, a good camera and processing power to boot – but the rapidly advancing capabilities of AR will also allow experiences that we cannot predict yet. Mobile giants Apple and Google will continue to bolster the capabilities of their platforms and this will continue to open up more possibilities.

There are a few emerging trends. A 3D model is already a vast improvement on a 2D image, but beyond this, the virtual world provides the opportunity to demonstrate as well as display the products.

For example, imagine the benefit that could be added if consumers could not only see a TV in place in their home but see it displaying one of their favourite programmes. AR models could be animated to display the functionalities of certain items, becoming a miniature showcase for the product within the customer's own home. This provides an opportunity to break the fourth wall and place consumers right inside an advert, with their own home serving as a backdrop.

The visualisation capability would also give consumers an easier way of comparing different products. For a retailer that is charging a higher price for a more advanced model, animation will provide an easy way to show why – one far more engaging and reliable than a 2D image and a couple of bullet points could ever be.

It is when the technology is combined with other emerging technologies that some of the most exciting applications emerge. Exhibiting furniture within your home or virtually wearing make-up is one thing, but when this is combined with AI and behavioural analytics users can benefit from even more personalised selling.

Imagine, for example, a virtual assistant that not only uses information about the customer to serve them with personalised products, but combines this with contextual information gathered from the camera. In a furniture context, the implications could be huge. An AR interior designer, powered by AI, could guide the user through the purchasing journey, automatically searching for products that might fit into specific spaces in a room, making suggestions on colour schemes and general décor choices.

For example, beauty brand Coty plans to use data on the customer to offer a virtual make-up assistant, with tailored recommendations and the ability to try these.

There is also the potential to make AR a new touch point for customer service. Perhaps models in the customer's home could be used to illustrate repairs or show how a product works.

Taking these potential benefits together, there is the scope for AR to become a new all-purpose touch point for retailers to engage with their customers. Done properly, it can stretch across the customer journey from marketing, purchase to post-purchase. ■

SOME KEY SECTORS FOR AR IN RETAIL

Home: Furniture is a sector where both the aesthetics and size of the items are key. Furniture must not only fit in with its surrounding environment in a physical sense but also must correspond with the existing décor. AR allows furniture to be physically placed in the environment where the customer will actually use it. Meanwhile, the camera could be used to place furnishings such as curtains or blinds onto a window.



Electronics: TVs and other items are large and need to fit in amongst items of furniture, power supplies and other electrical items. Consumers can use AR to test whether a TV should be mounted on a wall or placed on a table top.



Cosmetics: Physical cosmetics stores often allow customers to try out products before buying. Being able to try on cosmetics through AR will remove one of the key stopping blocks that the sector has faced so far.



DIY: Rather than having to flick through sample books for things like paints or carpets, customers can simply point their phone at a surface and choose what shade to apply to it – an application which paint seller Dulux has already developed. In addition, the two major platforms from Google and Apple both offer support to model lighting and its effect on a room. AR could be used to plan the best positions for lighting fixtures around a room.



INTRODUCING AR: HOW TO MAKE AR A REALITY

If the idea of AR appeals to you, the first step is determining whether you sell the right kinds of products to benefit from the technology. For example, while it is perfectly possible to create a 3D model of a packet of sugar, this is not particularly likely to tip the balance on whether a consumer buys it or not.

On the other hand, items such as dishwashers, fridge freezers, home furnishings, wardrobes, furniture, laptops, TVs, printers, home appliances and even art would be at the high end of relevance.

The simple rule to determine which camp you fit into is this: AR could be relevant to any product where you would get a faster sale by allowing the shopper to physically see the product at home rather than rely on the 2D image.

The next step is to determine your approach – do you really have the tools to build your own application or would it make more sense with a partner? It is important to emphasise that this is not something that can succeed if approached as a side project, but something that requires dedication and expertise simply to make it work.

Consider how you build the capability into your customer journey. While AR can be seen as an exciting and glamorous new technology, it is also a functional and useful technology in the here and now. The key for any retailer then is to slot augmented reality into your existing channels and not make a customer feel like they are embarking on a huge learning experience but are still buying a product.

Remember that the goal is to make the buying journey smoother, not to introduce new types of friction. With the right approach you can make the customer feel that AR is simply an extension of their usual buying journey.

Ensure that you are clear on the value proposition. To earn usage from already-busy consumers, applications and services must deliver clear value to the customer. So make sure you explain clearly to customers what problem the application is solving.

REALITY CHECK

The number one risk for launching an augmented reality project is of course the investment. For multi-billion dollar companies such as Amazon, it is not impossible to set up a full service AR studio, complete with design, computing and content creation facilities.

But smaller retailers may be harder pushed to really focus in on launching new capabilities such as AR, let alone to set up their own in-house team. When ROI is the overwhelming deciding factor when determining a technology investment, it may be that other areas end up getting more attention.

However, there are business models out there that shift the CapEx and OpEx burdens away from the retailer and onto other parties such as design agencies and the product manufacturers themselves. It doesn't mean that you can't benefit from the branding benefits of AR, as well as of course the sales increases. ■

CASE STUDY

CURRYS PC WORLD

A subsidiary of Dixons Carphone, Currys PC World is the UK and Ireland's largest specialist electrical retailer.

Following extensive testing, the company worked with digital agencies Flixmedia and EyeKandy to introduce augmented reality functionality on the pages of 800 products across several categories.

The functionality appears as a small button on each page with the text 'POINT & PLACE: See it in your space' and is available on products from some of the world's largest consumer electronics manufacturers that have contracted with Flixmedia and EyeKandy to build the model.

For Currys, the inclusion of the button is free. The retailer added a line of JavaScript to its site, which matched its database with the selection of products that offer the Point & Place AR functionality. The button automatically appears on those pages. Currys has also added a best-in-class category page where shoppers can browse a range of AR models instead of having to access them from individual product pages.

Clicking the button or scanning the QR code takes the customer to a link to download Point & Place either from the App Store or Google Play. It works on iPhone 6s and up, iPad 5th Gen and up, running iOS 11 upwards, as well as Android 7 and up.

The app enables shoppers to see what items such as televisions would look like in their home as well as rotate or walk around the products to see things such as cable connection points.

The AR app comes at a time when the retailer still doesn't have a standard customer-facing mobile application. According to Stuart Ramage, Ecommerce Director, Dixons Carphone, the retailer is looking for specific mobile portals which really add value.

"The discoverability and the usability of an app need to be pretty high," he says. "You rarely get consumers with a retail app on their phone unless they are transacting weekly or monthly and that simply isn't the case with us because of the nature of the products we sell."

Ramage says that the addition of AR was "worth the investment in time", especially due to the limited cost to the company. He adds that it was also an advantage to partner with a smaller, innovative company.

Mark Adkin, Head of UX, Design and Digital Strategy at Currys PC World, said at the time of the launch that it placed them ahead of their competitors and at the forefront of technological developments.

"We ran extensive tests on the impact augmented reality shopping has on our customers and found that they are actively interested in the technology and the way it aids their decision making.

"Our desire, as the UK's largest electrical retailer, is to ensure that our customers get it right when it comes to buying any product from our extensive range. Point & Place will assist decision-making further by reducing purchasing risk, be it from the comfort of your home or in-store." ■



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CONCLUSION

While more transactions are certainly going to take place online in the future, there are two trends that are less talked about. The first is that bricks and mortar is going nowhere and will continue to take the lion's share of retail overall for some time, the second is that conversion rates for online are still strikingly lower than those for offline.

It is time for retailers to look at why this is and home in on where online is lagging behind physical and specifically, where they can address this. Cometh the hour, cometh the solution. Augmented reality provides the opportunity to replicate the benefits of the physical experience in the online channel, smoothing that all-important path to purchase.

As we have seen, augmented reality has already become a reality. Far from being the realm of science fiction, the technology is now being widely used by retailers. In the future it will be combined with technologies such as AI to build new comprehensive touchpoints for the consumer.

Its presence is only set to increase. With so much buy-in from some of the biggest players in technology – Apple, Google, Amazon – it is safe to say this is not going to be a passing fad. The catalyst is the smartphone, the device that brings together a powerful camera and a touch-screen in a way that allows AR objects to be rendered, to powerful effect, in any environment of the user's choosing.

The key point to bear in mind is that with the right partners and solutions, adding AR does not need to be demanding either in terms of capital or time. You can integrate the technology into your existing processes, both front end and back end, and make sure that AR is a new integral part of the customer journey.

Like all major innovative projects, you can't do AR as a sideshow. Be aware of which things you can do well and where you should look for third party help. And make sure that AR is an extension and complement to your existing channels and systems, both those that face the customer and the back end.

All that's required is to determine whether AR is relevant to you. As was said earlier, AR could be relevant to any product where you would get a faster sale by allowing the shopper to physically see the product at home.

If you grasp the possibilities of AR, you can gain the benefits of this emerging technology before your competitors do. ■

FIVE QUESTIONS YOU SHOULD BE ASKING

WHAT?

Develop an understanding of AR and what it is capable of. Look around the marketplace to see how it is being used.

WHY?

Determine whether AR is relevant to your product line and think about how the functionality might be used to cross the imagination gap in your customer's mind.

HOW?

Work out how you will roll out technology – is the functionality something you will introduce to your own app or will you have a dedicated AR application? How will you get people using it?

WHO?

AR cannot be done well as a side project – find a partner that complements your capabilities and fills in any gaps in expertise and resources. There are existing solutions out there that can plug into your existing customer journey, systems and processes quickly and easily.

WHEN?

There is no reason why you can't start taking advantage of augmented reality straight away. AR is not some futuristic technology – it's something that can run on a device most people carry in their pocket. Bear in mind that your competitors may already be looking at this – or even offering it. ■

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