## **AUGMENTED REALITY: OVERHYPED OR UNDERPLAYED?**

IMPLICATIONS FOR THE MEDIA INDUSTRY



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Augmented Reality Is About to Change Everything

What Ever Happened to the AR Revolution?

The Future of Augmented Reality Will Be Boring

Augmented reality: a revolution?

## Augmented reality hits the mainstream

Augmented Reality Still Far From Reality

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Reality is often subjective to each person, although by its very definition it should be fixed and immovable. One person's door is a barrier, another's is an opportunity.

For many years, technology has been looking for ways to enhance and improve an individual's reality by making it more entertaining, more understandable, more useful, more personal, or improved in any other way. Technology can even take us away from our reality altogether into a new, simulated world.

Extended Realities (XR) is the catch all term for technologies that enhance or transform reality, with each technology a variation on how far it removes the user from physical reality. Augmented Reality (AR) is widely predicted to be the most successful of these technologies; whereas Virtual Reality (VR) immerses the user in a fully simulated environment (which has clear benefits for gaming, film, and training), AR keeps users connected with the physical world, overlaying interactive virtual objects on the real world (digital content, videos, texts, animations and more).

Our own research revealed that consumers see AR as a fun experience to explore and experiment with, but its future holds much more for our everyday lives, and it is expected to be the next computing platform. Development is likely to play out in three stages:

- 1. Adding functionality to mobile devices to locate and map virtual objects onto what we see via smartphone screens [where we are now]
- **2.** A head mounted display that does the same thing (5-10 years away)
- **3.** A head mounted display with advanced Machine Learning built into it that understands context and can adapt seamlessly to the environment [20+ years away]

Thinking about where the industry is headed, today's version feels comparatively gimmicky and clunky (at least it will feel that way when we look back years from now; much as we do with Teletext as an early version of the Internet). However, it is already reaping benefits and providing opportunity. For advertising, it is a "pull" format, which means that once users have opted to engage, the interaction is significant – formats tend to have an average of 75 seconds of dwell time", and research shows that what is encoded into memory is 70% higher for AR experiences.<sup>III</sup> For this reason, among others, global ad spending on AR is expected to grow more than 30% each year until 2023.iv

Naturally COVID-19 is likely to change our relationship with AR in the way it is changing our relationship with other media. Snapchat saw global downloads of its Snap Camera feature increase tenfold in March, before the UK lockdown had even begun, demonstrating how a restricted lifestyle has driven consumers to find new methods of entertainment. Even more interesting will be the companies that develop new AR solutions in this time, not only to entertain, but to provide practical and long lasting solutions to everyday needs.

Overhyped or Underplayed? The AR industry has had many well publicised highs and lows: the mass participation of Pokémon Go, Snapchat lenses and the consequent rise of social AR, versus the ridiculed Google Glass, AR vandalism and the recent fall of Magic Leap<sup>vi</sup>, whose headsets were expected to be one of the leaders in consumer-facing AR. In this report we explore where the industry is headed, what it means for media and advertising and what brands need to do now.



### When will AR become mainstream?

### Past: Pre Smartphone

Before smartphones were even invented, people could imagine a world where we would be able to overlay information on the real world

### 1968

Ivan Sutherland creates the first head mounted display system

### 1990

Tom Caudell coins the term "Augmented Reality"

### 2000

The world's first outdoor AR game ARQuake is launched

### Present: Smartphone Era

Smartphones provide the critical handheld and always-available device that we can use to scan the world around us

### 2012

Google Glass launches, to

### 2015 Snapchat launches

### 2016

Pokémon Go launches and reaches a peak of 45m daily users

Apple launches ARKit and Google launches ARCore to allow developers to build AR functionality subsequently AR-based apps skyrocket

2017

Google announces an AR search feature

2019

### 2020

Magic Leap shifts focus to create headsets for enterprise, rather than

### Future: Next Platform

A new layer to bridge the physical and digital, widely anticipated to be a form of head mounted display

### 2022

Apple will launch an AR headset

### 2023

Apple will launch AR glasses

### 2025

Facebook will launch AR alasses (reportedly in partnership with Ray Ban]

### Where are we now?

Augmented Reality has been around for longer than we realise, although it has only become widely known in the past few years thanks to social media and games. Social AR could be considered "mainstream" now. with 4 out of 5 of Snapchat's users leveraging the app's AR features at least half the timevii. However, the technology faces a number of barriers to overcome before it is widely used in everyday life.

- No universal point of entry: There is no single digital layer that serves AR experiences e.g. it is not available in every smartphone camera. Users need to either download a specific app, access a web page, or open a social platform to engage, all of which then require additional permissions to access the camera. This means experiences can vary between platforms, or aren't easily accessible.
- The technology is young: AR is very much in its infancy so the experience may have a lag, may not always recognise objects, or not always place overlays in exactly the right place, resulting in clunky interactions. Simple experiences tend to work the most seamlessly.
- Barriers to repeat usage: Web AR and social platforms have made the tech much more accessible in recent years but it still drains batteries and consumes a high volume of mobile data which can prevent users re-engaging.
- **Brand opportunities:** Opportunities are largely limited to social platforms to get scale, although there are a range of opportunities available through web AR

providers, or through the brand's own app, but high levels of engagement may be harder to achieve.

### How is it going to change in the next few years?

Three critical elements will help the technology become much better on all fronts: better connectivity, advanced machine learning and upgraded hardware. As all three develop and work better together, developers will be able to create invaluable AR experiences that supersede tools we already use in our daily lives.

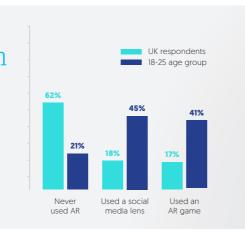
- Robust and reliable connectivity: 5G will provide the critical increased network capacity, as well as faster and more widely available internet connection, which will allow more complex and seamless AR experiences.
- **Smarter experiences:** Advancements in Al will make the tech smarter and more contextual, meaning that objects are more likely to be correctly recognised and will supply more relevant information to the user.
- **New hardware:** Upgrades to the hardware on smartphones and head mounted displays will offer new opportunities to engage and make the experience more user-friendly.
- **Brand opportunities:** People will be using AR experiences more often in their daily lives so they will become more familiar with how the technology works and will more readily engage with branded experiences.

## Consumer attitudes to AR

Zenith conducted proprietary research with a sample of 2084 UK respondents to gauge levels of awareness and usage of AR. Three key findings emerged, to help brands understand the AR opportunity at present:

## 18-25 age group is far more likely to use AR than the rest of the population

- **62%** of respondents said they have never used AR but this shifts to only **21%** for 18-25, who are likely to be engaging frequently with lenses on social media and sharing the experiences with friends.
- 18% of respondents have used a social media lens and 17% have used an AR game [versus 45% & 41% for 18-25]



## Consumers have a positive view of AR, which brands can tap into

72%

40% 18-25

36% 18-25

respondents said they see AR as "fun and engaging"

have recommended the experience with others

have directly shared the experience, demonstrating the additional earned media opportunity

Of those that have used AR,

have bought a product . This demonstrates that those who have engaged with AR have found value in the experience and it has triggered a purchase decision.

29%

78%

say they are more likely to engage with an ad if brands use AR in their advertising. are excited for the future of AR.

## Barriers cited by consumers are easy to overcome for brands interested in using AR



The main reason consumers will not use AR is because **there is not enough content** that is useful or relevant [**38% of respondents**] – showing the gaping opportunity to populate the space.



**32% are concerned about privacy**, so if brands can address any data sharing required early on and offer a clear and compelling value exchange, this is likely to be overcome



31% do not want to have to download another app to access content,

demonstrating that the experience must be effortless and smooth. Opportunities with social platforms and web AR in the short term will help this.



# **Opportunities for brands**

Although the tech is still in its infancy, there are numerous ways brands can get involved with AR to suit their budget, audience and objectives.

AR offers unique opportunities for advertisers, not least because the technology is still a novelty for many users (as per the research that shows it is largely seen as "fun and engaging"). It also stands out from many other forms of advertising because it is a "pull format" which means brands have the opportunity to invite users in, rather than speak at them one-way – the result is that those who choose to engage are higher quality users. The key is cracking the critical value exchange that gives users a reason to interact.

As we will explore, AR can also deliver across the full purchase funnel, driving both upper and lower funnel metrics to drive brand results, making it a powerful and dynamic tool for advertisers.

This report identifies three roles AR plays in advertising to provide unique opportunities for brands to communicate with consumers:

- The Cure to Creativity
- The Great Connector
- The New Way to Shop

In each area we explore both the short and long term impact; the short term examines the next 1 – 3 years and how brands can start to take advantage of AR advertising opportunities now.

The long term considers the next 5 – 10 years, and beyond, to anticipate how these opportunities will develop as the technology advances and scales.

### The cure to creativity

With the use of ad blockers impacting publisher revenue<sup>viii</sup>, there has long been a call for more creative, relevant and respectful advertising. When done right, AR provides this opportunity. The creativity of AR formats surprise and delight consumers and provide a refreshing perspective to static, intrusive advertising, instead offering users a unique experience they can opt to take part in.

Short term: engaging formats, gaming, interactivity, and UGC, with programmatic AR & web AR making experiences more widely accessible.

### Social AR: Co-creation and UGC

AR ad formats have been around for several years but they started taking off when social platforms (initially Snapchat) made AR engagements easily accessible, shareable and fun.

Social filters (or lenses) have taken off in a big way, made famous through celebrities and animals, and the ease of sharing through social media. They are unique because they encourage users to create their own content, overlaying filters on to their faces or the world around them to enhance the photo sharing experience. These filters respond dynamically to movement, gestures and voice, mindaking them interactive and entertaining.

Snapchat's most successful sponsored lens campaign to date was from Taco Bellix, which

turned the user's head into a giant taco shell to celebrate Cinco de Mayo.

Social filters are very straightforward for brands to build and activate, and Snapchat and Instagram have introduced their own user-friendly AR builders to allow anyone (not just developers) to create and publish their own filters. This makes it an easy and cost-effective way for brands to dip their toe in the water with AR as they can build experiences in-house, and reach audiences at scale.

"With augmented reality, you're not designing for 100% of the screen, you're designing for about 20 - 40% of the screen. You invite people to use it, to make it their own, essentially turning it into a co-created piece of content between brand and consumer. For a brand to be able to spend time with someone, to be experienced in that moment, with such high levels of intent and attention, make it an incredibly powerful format for driving awareness, consideration and action. When I look at a branded lens, I'm looking at the world as I see it with that brand in it as well. The result is incredibly authentic."

> Will Scougal, Global Director Creative Strategy, Snap Inc

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### Web & Digital Display: Accessible engagement

Away from social platforms, AR ad formats have also been progressing rapidly, making unique ad experiences available to a wider audience and bringing increased creativity to mobile advertising. AR ad formats can incorporate videos, games, touching, swiping, 360 view, 3D objects, all of which can interact with and enhance physical objects in the real world.

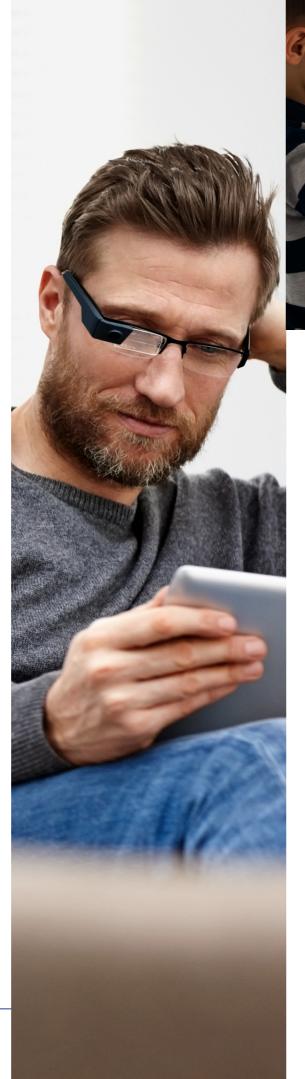
In the early days of smartphone AR these formats had to be delivered through an app, to provide the necessary camera access for the experience. In recent years, however, the development of web AR experiences has become much more advanced, meaning advertisers can scale the delivery of these ads to a wider range of publishers, and allowing those publishers to offer more premium rich media formats.

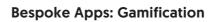
What's more, AR ads can now be bought programmatically, which means they are much easier for brands to buy, and bringing them in line with other digital formats.

Jaguar Land Rover<sup>x</sup> were one of the early advertisers to use web-based AR formats, allowing users to explore the interior and exterior of their new car launch directly from a banner ad to reduce friction in the user journey.

In a world where the subscription-based model seems finally to get serious traction (Spotify, Netflix, various online publications), the ad-funded model still plays a major role in the distribution of content (news, video, games etc). AR is proving particularly effective to "resuscitate" something old (and normally quite ineffective) as online ads.

Marco Delvai VP Business Development, Blippar





Several companies have created apps that specifically create maps or scavenger hunts in the real world, mimicking the successful Pokémon Go model, and making rewards relevant to everyday life.

These interactive maps use AR to gamify the experience, offering clues or hints in the real world and allowing users to virtually "collect" their rewards or tokens when they physically go to the right location. The "magic" of these experiences is also where the physical and digital becomes even more blurred – users can collect a digital reward [for example, a drink offer], save it to their phone and redeem it in-store for a physical reward, offering a clear and meaningful value exchange for the interaction.

Ben & Jerry's<sup>xi</sup> did exactly this to celebrate their 10th anniversary, with rewards dropped in high footfall locations close to stores, so users could collect them via an AR web experience, to redeem for a physical treat.

Advertisers can create branded scavenger hunts, or offer branded rewards as part of these hunts, with the benefit of creating a memorable experience as well as a tangible reward.

"Pokémon Go was such an interesting phenomenon and taught us two key things - that people are beginning to understand the concept of scarce digital objects that you can capture in AR and that these digital objects affect people's behaviour, even driving them to specific locations. AR is far more powerful when it is combined with other principles, such as geolocation, gamification, the ability to redeem for a physical good etc. It's then that you begin to create a meaningful, more long-term dialogue between brands and consumers, rather just a one-off 'wow' moment."

> Sophie Conway, Project Manager, BlockV

### Long term: more creativity and intelligence in formats, but greater need for value exchange

The expansion of 5G in the coming years will allow for greater creativity in these formats with more interactivity and complexity.

Advertisers will also have the flexibility to deliver AR experiences at any time [whereas many of today's formats – especially those that are web-based – require a stable Wi-Fi connection for the best experience].

As the tech capabilities advance, AR will become more contextual which means overlays will be able to interact more intelligently and dynamically with the real world surroundings, rather than simply placed on top. For example, today an overlay of a cat will respond to every user's

surroundings in the same way, whereas in the future the tech will recognise if a dog enters the user's physical world on camera. and the cat may respond by running away.

Further down the line when AR glasses become more widely used and open up opportunities for advertising, brands will need to be even more conscious of the user experience and have an even more compelling value exchange. In today's world, mobile ads can be intrusive but appearing

on a screen in front of someone's face, and appearing uninvited, will result in negative sentiment.

> "Brands will be wise to dip their toes in and play, learn, test. What does my brand look like in this space? What does my brand look like when I'm unconstrained by 2D screens? What does my brand look like when it can react in real time to consumers and physical surroundings? And every brand will have different answers to those questions"

> > Matt Simmonds **Head of Creative & Production, Publicis Content**

## What can

- using them
- Develop a test and learn strategy and A/B test



As the glue that bridges the divide between physical and digital, AR can augment and enhance media and events in the real world. For advertisers, this means not only opportunities to engage further with audiences, but also an additional layer of measurement for channels that have typically been difficult to quantify.

### Short term: connect with print, TV, OOH, events, packaging... or anything in the real world

### Make offline media interactive

Advertisers can make any existing print, OOH or other offline media interactive by directing users to scan the ad with their camera. using a dedicated app, web AR experience, or social media platform. When the user scans, additional information or experiences can be overlaid on top to bring a static ad to life, as well as provide data about interactions and identify the most engaged users for future campaigns.

In fact, any physical marker in the real world can become an AR experience, even a competitor's advertising, as Burger Kingxii did when they asked users to scan McDonald's OOH ads to "burn the ad": once scanned. flames appeared over the ad and revealed a free Whopper at their nearest restaurant.

By pairing AR with existing media channels, advertisers can make these ads work harder and maximise the investment already made for indeed, the investment of others, in the case of Burger King).

"AR is not a medium per se, but a technological layer enabled by the smartphone's camera that can be deployed across other media, channels or disciplines to deliver immersive experiences aimed at increasing engagement. Mobile, web, social, e-commerce, experiential, B2B, internal comms etc. are perfect candidates for being enhanced and improved by AR."

> Marco Delvai **VP Business Development, Blippar**

### Add an extra dimension to experiential activity and events

As above, where advertisers have experiential activity or events planned, it can be cost effective to add an AR experience to make the event more memorable, sharable and scalable.

A dedicated event app could offer map or direction functionality at a large scale event. A web or social experience could be used to scan an experiential installation to add additional engagement opportunities, or invite users to create UGC, which encourages users to share the brand experience online and create fame and virality.





the barrier to entry as low as possible

Covent Garden<sup>xiii</sup> in London turned the site into an AR retail event at Christmas; visitors used the Blippar app to scan products and shops to redeem offers, receive recommendations from experts for the perfect gift. There was also an AR treasure hunt for children to find a missing reindeer and win prizes.

### Make products and packaging more engaging

Likewise, marketers can add a simple call to action to their packaging to encourage users to scan using social media or a web experience to bring the packaging to life to provide additional information (for example recipes, or how-to tips), entertainment, or even education for children's products.

LEGO have done this by creating a companion AR app to bring their products to life, which extends the experience beyond a physical product into a virtual game.

Once again this provides opportunity to maximise the work of existing media and understand which users are most engaged with the brand.

"As things move on and progress, creating experiences for AR becomes cheaper and makes it accessible for everyone. In the early days a lot of brands were put off by expensive AR builds but now, a lot of brands will have existing assets already available that you can turn into an AR experience really quite quickly."

John Macbeth Sales Director, Hoopla Digital

### Long term: new integrated brand experiences, increasing regulation, voice-activated AR

Connecting all brand touchpoints is a marketer's dream, and AR can offer one way to help bridge the gap between online and offline experiences. As more marketers and consumers adopt the technology, brand experiences will become much more integrated and relevant across platforms. This will also provide some of the necessary data needed to start measuring the holistic customer journey, rather than looking at channels in siloes.

As we move into a future with AR glasses, there will be a fine line between information that is useful and information that is intrusive, especially in public locations where many companies will want to grab attention in the new merged digital and physical world. Brands will need to tread carefully in order not to bombard the user with an onslaught of unrequested information in physical environments – and new software and regulation will likely block these bad practices.

As the hardware in AR glasses develops, voice-activation will become an important part of the product to allow for a fully hands-free experience, as well as the opportunity to opt-in for certain experiences and branded messages. Brands will need to consider how to use voice to trigger experiences from media and objects in the real world – being mindful of what is appropriate, or feels comfortable, to voice out loud.

# What can brands do now? to enhance existing media offline media channels. Think about whether there is a "pull" the user in from a passive experience with the brand to a packaging or products to

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### The new way to shop

The commerce landscape is changing in many exciting ways, and AR is one way of enhancing the consumer shopping journey, both in-store and online. This is a key area in which AR is starting to shift from being a fun, whimsical experience to becoming a useful tool for consumers to make their lives and their shopping decisions more straightforward.

### Short term: online try before you buy, in-store product information

### Online "try before you buy"

Using AR to test products online is starting to stretch further into the retail landscape – the L'Oréal virtual make up app<sup>xv</sup> and Ikea furniture apps<sup>xvi</sup> have been applauded for a number of years now. AR allows users to see what a product will look like in the physical world by overlaying a digital version of the product; in the case of L'Oréal users can test make up on their face, or with Ikea users can visualise how furniture looks and fits in their home. These (among other examples) are both app-based tools but as web AR becomes more sophisticated, tools like these will become more widely available to consumers.

It's easy to see how this will impact the shopping journey, particularly for items that need to be trialled before purchase, and it is more likely to do so for many consumers in light of COVID-19 and the growth of online commerce. AR commerce will particularly benefit Direct to Consumer (DTC) brands and online retailers that don't have a physical store presence, to allow consumers to experience their products before buying. It's unlikely to replace in-store purchases

altogether because it can't replace, for example, the feel of furniture fabric or other important sampling criteria – but it could significantly shorten the decision making process.

AR shopping formats can also be made scalable to a wide audience through social media ads, and these formats also include shopping functionality within the ad unit to make the process as seamless as possible

"One of the largest benefits that I would expect brands may see off the back of AR adoption is lowering return rates; this can be a huge drain on profit and is an expensive headache for brands to manage. By giving more confidence to customers up front and allowing them to visually inspect products in greater detail, it's fair to say we could see drastic reduction in goods being sent back to brands and retailers"

Stuart Johnston Global Commerce Director, Zenith

### In-store experience

While users are shopping inside physical stores there are also opportunities for brands to prompt customers to scan products for more information, for example, scan a food item for recipe suggestions, or scan a car to see it in different colours. While the call to action to get users to scan the product in the first place must be very compelling, once the user has engaged the AR experience offers an opportunity to convert a potential customer at point of sale.

Adidas<sup>xvii</sup> has worked with Instagram to allow users to scan shoes in-store and find out the story behind their products, which provides emotional brand engagement while instore to drive purchases, as well as sharable content.

"Beyond virtual try-on, brick and mortar sales still account for 94% of total retail sales, so providing your customers with interactive AR experiences in-store, whether it is to provide product information or to entertain, will ensure they spend more time in your store, converting this time into purchases."

Lilit Mesyan Business Development Lead, Poplar

## Long term: glasses transform the commerce landscape

With AR glasses, customers will see overlays that provide product information while instore, removing the need to talk to shop assistants about products. AR glasses could also be connected to a credit card info so customers can check out straight away.

From an advertising perspective, advanced contextual capabilities in AR glasses can allow advertisers to offer personalised offers

or experiences at point of sale to prompt the consumer. Equally, third parties could offer comparison information as a user walks down the high street, or as a user lingers next to a product in-store, meaning brands will need to consider how their brand stands out, not just in physical spaces, but also alongside digital displays in the new augmented world.

## What can brands do now?

- Stay up to date with what competitors are doing in this space, especially challenger brands
- Test how AR commerce could work through an AR ad formal and measure engagement rates, as well as sales and footfall uplift against standard advertising to gain an insight into the consumer shopping journey.

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# Conclusion: (19) overhyped or underplayed?

It feels wrong to call AR an "emerging" technology – it has been around for a number of years and the opportunities to engage are widespread and varying. Yet, looking at how far the technology still has to go before it is integrated in our lives, it is very much still emergent – learning, optimising, evolving.

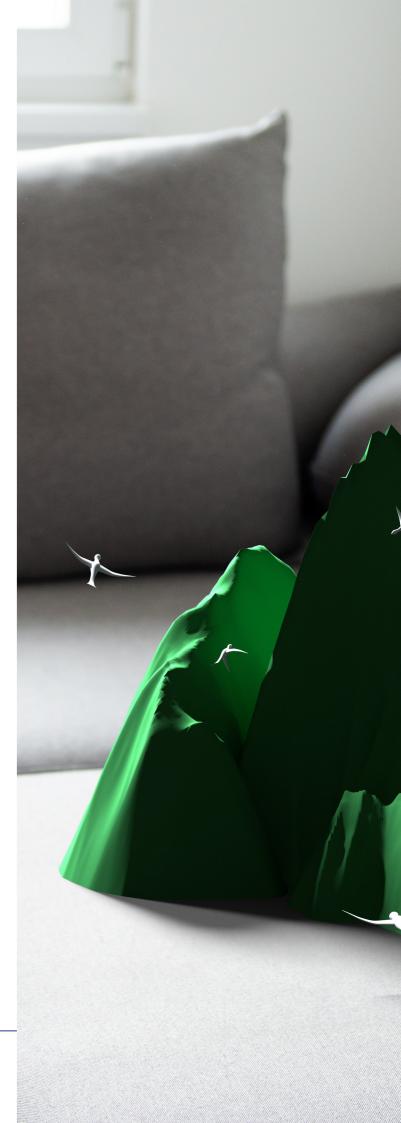
Although AR will change significantly over the next few years (both in the short term and longer term), it is important for brands to understand what the opportunities are now and how they will change moving forward. Early tests with the AR now will stand brands in good stead to evolve alongside the technology, and be in a good place to adapt their brand communications to augmented environments.

Reality is subjective – for some, the technology has no place in their lives, while others engage with it on a daily basis. But what is true is that AR will develop and will become even more critical to our lives, with AR-enabled headsets eventually superseding the key role our smartphones play.

In today's reality the technology is somewhat overhyped as it adds little meaningful value to our everyday lives, beyond entertainment or occasionally a surprising new tool. But we are barely skimming the surface of its capabilities, and it's likely that we'll look back in years to come when it is fundamental to the way we live our lives, and realise just how underplayed and underrated it has been.

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designing for about 20 - 40% of the screen. You invite people between brand and consumer. For a brand to be able to be apple of the simulator. and only become popular these technologies; whereas Virtual Reality [VR] immerses the whole it their own, essentially their own, essentially the only become popular with the between brand and consumer. For a brand to be able to spen simulated environment (which has clear benefits for gaming film between brand and consumer are ality, you're not designing for about 20 - 40% of the screen sough it has only become popular with the screen film overlaint (which has clear benefits for gaming film between brand and consumers see AR as a further own research revealed that consumers for a further own revealed that their own revealed that the [Cligital Content, Information on pseudomented Reality (AD): Reality has been around feenefits for garring, nim, and training), AR keens all though it has only by while the past few years Reality has been around feenefits for garning, that monday that moment although it has only become nected with the physical world, overlaying into a brand that moment with such levels of intent and attention, make it an incredibly powerial media and attention, make it an incredibly power to be experienced in that moment, with such levels of intent and attention, make it an incredibly power format for driving awareness, consideration and action where the part and attention, make it an incredibly power and attention and action where the properties and attention and action where the properties are also attention and action where the properties are a second power and action where the prop ial media and gamiler reed ill that morners, when such levels of intent and attention, make it an incredibly power for be experienced ill that morners, with such powers of intent and attention, make it an incredibly power format for driving awareness, consideration and action. When I look at a branded lens I'm looking at the world. of intent and attention, make it all increasing powers of intent and attention, make it all increasing powers of intent and attention, make it all increasing powers of intent and attention, make it all increasing action. When I look at a branded lens, I'm looking at the world are driving awareness, consideration and action. When I look at a branded lens, I'm looking at the world are branded lens, I'm look at a branded lens, I'm ne, to be experience of intent and attention, make it an incredibly powerfy at a branded lens, I'm looking at the worldsee it is incredibly powerfy at a branded lens, I'm looking at the worldsee it is incredibly powerfy at a branded lens, I'm looking at the worldsee it in the worldsee it is incredibly powerfy at a branded lens, I'm looking at the worldsee it in the worlds The result is in the standard of the control of the standard of the control of th pug format for driving awareness, make it an incredibly powerfik at a branded lens, I'm looking at the world that brand in it as well. The result is in mented Reality has peen around for the powerficent with the property of the property o alise, althoug! Normat for driving awareness, consideration and action. lar social messes it with that branded lens, I'm looking at the world as ignered Reality has been around for the that brand in it as well. The result is in gaming, film, and training), AR keeps in the result is incredible. It is incredible to be soreen, past few years as a solution of the screen. You invite people to use its description applied. with the physical world (digital ccmake it their own, essentially turning it into a co-created in with the provincer world (digital ccmake it their own, essentially turning it into a co-created piece of confidence in the real world (digital ccmake it their own, essentially turning it into a co-created piece of confidence in the real world to be able viin augmented reality, you're not designal - \*\*between brand and consumer. For a brand to be able to spend time<sub>or</sub> 100% of the scre designing for about 20 - 40% of the screen. You invite people to use it someone, to be experienced in that moment, with such high levels o<sub>1</sub> invite people to nake it their own, essentially turning it into a co-created piece of consugmented reality. Volumer it into a comeone, to be applied to be able to see a for about 20 - 40% of the into a containing it into a consumer. For a brand to be able to see a consugment about 20 - 40% of the into a containing it i etween brand and consumer. For a brand to be able to spend timegning for about 20 - 40% of the consumer. For a brand to be able to spend timegning for about 20 - 40% of the consumer. For a brand to be able to spend timegning for about 20 - 40% of the consumer. For a brand to be able to spend timegning for about 20 - 40% of the consumer. For a branch bight is their own, essentially turning the consumer. For pmeone, to be experienced in that moment, with such high levels oe it their own, essentially turning it into a co-created piece of consugmented reality. You of the view of th

these technologies; whereas Virtual Reality (VR) immerses the lated environment (Which It which It which It which It which It was a second and consumer the lated environment (Which It was a second and consumer). these technologies; whereas Virtual Reality (VR) immerses the L<sub>someone</sub>, to be experienced in that moment, with such high legated environment (which has clear both has clear a film and someone).

ated environment (which has clear both has clear a, film, and training simulated environment (which has clear has clear a, film, and training simulated environment (which has clear a, film, and training). AR keeps users interpredicted (Xk) is the cuttual objects on the real world, or the real world, or the real world, or the real world. simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment (which has clear than the physical world, or simulated environment).

with the physical world, overlaying into a large reality. Augmented Reality (AR) immented Reality has not the real world (digital content, videos hese technologies; whereas Virtual Reality (VR) immented Reality has not real world (digital content, videos hese technologies; whereas Virtual Reality (VR) immented Reality has not reality for gare realise, although it one experies much more for our everyday lives, form reality, with each technology a variation on how far it removes for driving awareness.

gaming, film, and training], AR keeps users reality, with each technology on the with the physical world, overlaying interactival reality. Augmented Reality (AR) is widely provided the physical world, content, videosthese technologies; who read Videosthese tech

of intent and attention, make it an incredibly pe

