Internet Retailing

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HIS MASTER'S VOICE

Understanding and unlocking the potential of voice commerce

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INTRODUCTION

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Your customers are talking to you; are you listening? In this day and age, this maxim is more important than ever – because your customers are *literally* talking to you.

Voice-activated devices such as Amazon Alexa and Google Home, along with the rise of voice assistants such as Siri, Cortana and Bixby, are all now increasingly part of many people's every day internet experience – even my kids have them in their rooms – and they are starting to have a massive impact on retail in general and ecommerce in particular.

In fact, a fifth of US shoppers have made a purchase with a voice-controlled personal device, such as a Google Home, Amazon's Echo and Alexa, or, if they have deep pockets, Apple's Siri-enabled HomePod this year, according to research by Walker Sands[1]. This number goes up to 43% amongst millennials.

Investment firm Mizuho[2] goes further, predicting that revenue generated by the Amazon Echo and Amazon Alexa services could exceed £8.37 billion ($11 billion) by 2020. The firm also predicts that £3.04 billion ($4 billion) of that would come from the sales of the Echo device itself (including the Tap and Dot), while the other £5.33 billion ($7 billion) would come from all the commerce transactions derived from those devices to Amazon.com.

This has serious implications for retail. Not only are shoppers wanting these devices in their home to help them do all manner of things from play music to finding recipes to shopping, but also they are starting to expect retail apps and retail websites – especially on mobile – to also be voice controlled.

What does this mean for retail? In many ways, voice opens up a whole new channel to converse with shoppers, to build truly engaging relationships and build two-way conversations with them. Voice also allows retailers to build trust and to create those all-important 'experiences' for consumers and to talk them through the sales process.

For consumers voice offers a way to interact with brands at a fundamental level, to better research goods and services and to handle many of the mundane elements of ecommerce – such as order tracking, delivery rearrangements and returns – simply and more effectively.

But for retailers, making this happen is a challenge. The technology needed to recognise speech and to understand what is being said has been commoditised by the likes of Amazon, Google, Apple, Microsoft and Samsung, but adapting the existing ecommerce sites, apps and marketing functions to accommodate this is a huge sea-change for many retailers – many of whom are already struggling with non-voice, omni-channel strategies.

For consumers, voice devices today are limited to re-ordering of often non-branded goods – for example "Alexa, order more milk" – and with no visual element, search results and the purchase of any items that have variations of size, colour or any thing else, voice is limited.

For consumers, these challenges will be overcome – and already a whole generation is growing up expecting now to talk to the internet – and soon voice will be a key way to naturally search, often with visually delivered elements.

For retailers, even if the voice device isn't going to be a major channel, adding voice to their web and mobile offerings is going to be crucial in the years ahead.

In this white paper we outline these challenges and offer some practical advice and insights into how to make it work in your business. We take a look at how some retailers and brands are already putting voice to use and how they have had to tweak their back ends to make it happen – and we take a look at where voice is driving ecommerce and what you need to be aware of in the coming months and years.

Some of the forward-thinking retailers are already starting to exploit these home devices, but for the majority who are still struggling to deliver a good mobile user experience, it is simply seen as a bridge too far. But they ignore voice at their peril. Voice is calling – and retailers need to answer. ■

References

1 https://walkersands-dot-yamm-track.appspot.com/Redirect?ukey=1Bw6FposNqVsadatUXOZ8GSL1lkoo8mEEvCBLhQchVJY-2052141166&key=YAMMID-11068984&link=https%3A%2F%2Fwww.walkersands.com%2FFutureofretail

2 https://www.onespace.com/blog/2018/01/new-research-emphasizes-importance-voice-commerce-cpg-brands/

SPONSOR'S INTRODUCTION

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Voice Commerce has gone from a concept to a daily reality for many consumers in an incredibly short space of time. It's hard to imagine that the entire product segment of smart speakers only emerged in the last three years. Amazon's launch of Echo, followed by Google and Apple's offerings have transformed the voice device industry and left retailers wondering what's to come.

Estimates by Google predict that voice search will jump to 50% of queries to its search engine by 2020. If that's anywhere close to accurate, this will mark a fundamental and dramatic change to the commerce landscape.

But why has voice commerce taken the industry by storm? We think it's the next logical step for commerce, taking frictionless shopping even further by reducing the need for customers to research product themselves – providing a more direct route to purchase. Consumers don't want obstacles in their way when shopping online, and just like mobile before it, voice commerce is removing barriers.

What's more – voice offers a rich and personalised relationship between brands and consumers. It brings us closer to normal human interaction through speech.

Retailers are both excited and concerned about this latest trend. Will it be just another area of focus in an omnichannel world – an extension of other digital activities? Or will it transform and revolutionise the way consumers shop? It's hard to predict – but with transactions on smart speakers expected to increase to £3.5bn by 2022, it's clear we won't have long to wait before we find out, says OC&C.

To get ahead of the game, retailers should start thinking of a voice strategy now. It's a winner takes all model across platforms. So, how do you get your products to the top? Through advertising. For Amazon search that means Amazon Marketing Services. By leveraging AMS and vying to become an Amazon Choice product you improve your chances of being an option for voice commerce. Amazon will recommend 'choice' products when customers request a generic item or a specific brand name isn't known, such as 'shampoo'. As consumers have a high propensity (85%) to purchase Amazon's recommended product, achieving 'choice' status can potentially triple sales volume, says OC&C.

Additionally, become a user, test out different devices and experiment with the shopping experience. Similar to mobile, you want to navigate and understand how people interact with your products in order to optimise for success.

Finally, think about products that would do well with voice search, then think about what skills your company could build and invest in. Don't make the mistake of building a skill just to follow the pack, take time to determine how you can best take advantage of voice commerce.

The path ahead is exciting for voice commerce. It will continue to grow - it will evolve and change but it's here to stay. So take this chance to research, adopt and evolve your strategy. Become an innovator today rather than scrambling to keep up with competitors down the line. ■

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VOICE COMMERCE: AN INTRODUCTION

As if retailers don't have enough platform challenges on their hands with in-store, online, mobile, marketplaces and social media as places to get their goods in front of their customers, now they are having to deal with yet another interface: voice.

Increasingly, consumers are using a plethora of new devices to search for things and even buy over the internet using voice commands – and it is set to be almost as big an impact on the way retailers behave as mobile has had on 'traditional' ecommerce.

The cause? Voice assistant devices such as Amazon's Alexa, Google Home and Apple HomePod – and some may also argue Apple's Siri and Microsoft's Cortana – have all brought voice recognition and, more importantly, voice control into the homes of millions of early adopter consumers. And millions more are likely to follow. So what is it all about?

IN THE BEGINNING WAS THE WORD...

The rise of the voice assistant, or smart home voice controller devices has been swift and largely unexpected, yet voice recognition and voice control have been around for many years. Some of you may even remember being able to say "yes" and "no" to computer-telephony systems when you rang up your gas or electricity supplier as far back as the late 1990s. The more adventurous of you may also remember that voice control was built into Windows Vista and the first iteration of Mac OS X in the early 2000s too.

In fact, we have been using voice assistants for some time in mobile devices and laptops, primarily to control the playing of music and, with iPhones, to make phone calls. Yet its arrival in an affordable home device has been sudden and its impact on retail is likely to be major.

Before we go any further it is worth noting that most of the voice devices currently on the market started life as 'intelligent speakers': a tool to play music streamed from Amazon's music service and Spotify at the verbal behest of the owner. Amazon rapidly evolved its Alexa offering, however, to do a range of other tasks, such as set alarms, control the burgeoning number of smart home devices, call and message and, increasingly, to tap into the world of commerce.

Simultaneously, speech recognition and natural language processing has been maturing for more than two decades and, with artificial intelligence (AI) becoming more mainstream and affordable, this too has started to have a growing impact on how these devices operate and what they can deliver.

But there has been another driver of the rise of the voice device: the internet of things (IoT).

VOICE DEVICES AND IOT

The rise of these voice assistant devices has also been driven – and in part has become such a mainstream device – because of the rise of the internet of things (IoT). In fact, you can't talk about voice assistants without considering IoT.

While Apple was the first tech company to truly embed voice recognition into its devices as far back as 2010 in the iPhone, it hasn't been until the idea of web-enabled lighting, doorbells, home security systems and heating controllers such as Nest caught on that voice

devices suddenly make a whole lot more sense.

And all this has been enabled by better wifi and mobile phone network connectivity – as well as commoditising of broadband and mobile phone access pricing – which has allowed for the cost-effective deployment of the connection of rudimentary household objects such as light bulbs, door bells and more.

Where telling your speaker to "play something sexy" is nifty, getting it to also turn the lights down at the same time is even better. Controlling the heating, too, is yet more affecting. These practical applications of voice control are what have made voice assistant devices something that have caught the popular imagination – and seen sales of these devices in the millions in the UK market alone.

MASS MARKET ADOPTION

And the market has embraced these devices with alacrity. It may not sound much, but already 2% of all UK consumers are using voice-controlled devices for online shopping – that's 20% of all device owners in the UK, according to figures from Kantar Worldpanel research, or equivalent to 9.96% of total UK households based on latest ONS figures[1].

This is backed up by data from OC&C Strategy Consultants[2], which finds that a tenth of UK homes already have such a device and they are using them to shop with. By 2022, this is projected to increase to 48% – delivering £3.5billion worth of spend.

Amazon's Echo voice-activated technology is currently the dominant player in voice commerce, with a clear lead (8%) of UK household adoption in comparison to the use of (2%) smart-speaker Google's Home device.

Some 45% of UK grocery shoppers are already moving from brick-and-mortar stores to online, the majority of which heading to Amazon Fresh via Amazon's Echo voice technology.

Even though groceries and other low-value fast-moving consumer goods (FMCG) items form the bulk of purchases made through voice-technology, browsing opportunities remain limited, with 70% of overall are made on specific 'known' product, typically as a repeat order.

However, the restricted browsing doesn't deter Amazon from taking advantage to prioritise its own choice of product assortment; this is often a previously bought product or one which is popular and well-priced, with positive customer experience metrics and a solid supply chain performance, enabling rapid delivery.

In fact, the majority (85%) are very likely to accept Amazon's recommended product, which can typically boost pre-choice status sales by around three times.

VOICE DEVICE CAPABILITIES

Today's voice devices can do a multitude of things around the house – they can relay news bulletins and the weather, play music and perhaps video, act as timers and alarm clocks, can answer general questions and to be able to control third party devices such as smart home systems such as lighting and heating.

Many of the most popular devices (see panel overleaf) also allow

VOICE DEVICES: FIVE OF THE BEST

Amazon Alexa

Amazon Alexa debuted on the Amazon Echo which is now a range of products including the Echo (2nd Generation), Echo Dot (2nd Generation), Echo Plus, Echo Show, Echo Spot. Echo connects to Alexa to play music, make calls, set music alarms and timers, ask questions, control smart home devices, and call or message hands-free and connect to other Echo devices in your home using just your voice. Alexa can check your calendar, weather, traffic, and sports scores, manage to-do and shopping lists, control your compatible smart lights, thermostats, garage doors, sprinklers
Launch Date: November 2014
There are over 23,000 add on Alexa Skills.

Google Home

Google Home is a smart speaker powered by Google

Assistant available as Google Home or Google Home Mini formats. Google Home Max offers a better speaker set up and is designed primarily for music. You can listen to music, control playback of videos or photos, or receive news as well as control smart home devices.
Launch Date: November 2016
There are less than 100 add on Google Home apps but Google has many capabilities built in.

Microsoft Cortana

Originally launched within Windows 10, Cortana has

been released on a few standalone third-party devices. Cortana responds to voice commands and results are powered by Microsoft's Bing search engine.
Launch Date: January 2015
There are 200+ add on Cortana Skills

for additional functionality to be added in the form of apps or 'skills'. These vary between devices and their underlying operating systems, but generally feature a range of add-ons such as news, music, games, recipes, smart home controls, ecommerce and delivery tracking.

There are also some interesting third-party integrations being launched, perhaps the most interesting of which is eBay's integration with Google Assistant which is live in the US and Australia. Users can simply ask Google to 'fetch eBay' and they stop talking to Google Assistant and the same conversation continues with eBay – somewhat akin to being on a phone call and being transferred.

On a Google Home device, it's a single conversation, but on an Android device even the Google Assistant logo changes to the eBay logo. Currently the eBay on Google Assistant integration is relatively basic and aimed at consumers, but eBay has a habit of spotting a tipping point in technology – as evidenced by the eBay mobile app which is still the most downloaded app worldwide after more than a decade – and building solutions to ride the wave of consumer adoption. This is one to watch for the future.

THE BIRTH OF 'VOICE COMMERCE'

Ecommerce on voice devices is still in its infancy, with both manufactures and consumers learning what works and what doesn't. The clearest business case for its use lie in re-ordering, tracking orders and re-arranging orders and setting up returns.

Because the device relies on voice and, with exception of some of the Amazon devices, has no ability to offer graphical information, what you can do with a voice device in a retail environment is limited.

However, that doesn't mean that there isn't a burgeoning move towards the 'voice commerce', with many predicting billions of dollars of sales being handled through voice devices in the coming years.

Grocery and takeaway food ordering are two of the biggest early adopters of voice commerce, since they lend themselves to re-ordering by voice alone, although there is less than adequate ability to choose product size of much in the way of variation of the order without resorting to traditional ecommerce tools such as a laptop or a mobile.

With that in mind, it would be easy to write voice commerce off. However, just like mobile before it, voice is going to become an essential part of the omni-channel shopping experience and part of the shopping 'journey' for consumers.

As we have seen with mobile commerce, mobile has become a platform for sales, but what it has really done is shake up the purchase funnel, offering another platform on which to research and review what a consumer wants to buy. The final payment may be made on mobile, a PC or in store; the key thing is that the journey to that payment has been more complex than in the pre-mobile age.

Voice will have a similar impact: it will become one of the ways in which parts of the purchase journey are made. It may be the platform where the order is placed; it may be where reviews are sought; it may be the place to check the weather and buy a bus ticket to go to the shops. The crucial thing is that voice is now part of the 'commerce' journey and needs to be factored in to any omni-channel strategy.

Amazon has been quick to add ecommerce to their Echo devices and Google Home supports shopping but currently only in the US. Bixby Vision support shopping for media with transactions being completed on Amazon.

As we shall see in the rest of this white paper, retailers should consider carefully what approach they should adopt to capture a share of voice-based ecommerce as consumers start to spend more through the devices. Lessons can be learned from mobile where many retailers rushed to launch a mobile app only to discover that consumers preferred consolidated shopping apps, often marketplace apps.

References

1 https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/families/bulletins/familiesandhouseholds/2016

2 http://www.occstrategy.co.uk/en/

Samsung Bixby

Bixby is split into three parts, Bixby Voice – a Virtual Assistant; Bixby Vision – augmented reality in conjunction with the smartphone camera; and Bixby Home – a list of information that Bixby can interact with.
Bixby launched on the S8 and S8+ smartphones and is now found on many of Samsung's latest products.
Launch Date: March 2017

Apple Siri

Apple's HomePod device has just been released. As with all Apple products it is locked into the Apple ecosystem, working with iOS to make calls and send messages, play and buy music from iTunes and stream Apple Music – and needs an existing iOS11 device to set it up.
Apple users should already be accustomed to using Apple's Siri voice assistant on iPhone and other Apple devices, so the format is familiar, but Siri continues to be heavily criticised as a voice recognition platform.
Launch Date: February 2010
The device will work the 100+ apps on Apple HomeKit and it will play music and other services such as Spotify if streamed via airplay to the device from an iPhone or iPad.

HOW VOICE CONTROL WORKS

There are three fundamentals that make voice control work – and the 'perfect storm' of all three coming to fruition at the same time have been what has made both IoT and voice commerce mainstream. These three elements are: maturation of voice recognition; the cost-effective deployment of artificial intelligence (AI); and the ubiquity of the cloud – or, rather, reliable, fast access to the web that enables cloud-based technologies to be routinely accessed by devices.

These three elements together are what in essence drive voice control and voice commerce for all devices regardless of manufacturer.

And none of them would work without wifi. While a consumer may have spent their hard earned money on the device, the bulk of the work is done on the web and relayed to and from the voice device using wifi. The AI and speech recognition technology used all reside in a server farm on the other side of the world, the device is there to take in the information, relay it and output the end-result.

NATURAL LANGUAGE PROCESSING VERSES SPEECH RECOGNITION

Fundamental to all voice devices are two key technologies: automated speech recognition (ASR) and Natural Language Processing (NLP). These are often confused with one another, or intermingled, but are in fact two very separate things, both of which are needed to make these systems work.

HEARING OTHER VOICES

Thus far we have, rightly, concentrated on personal in-home voice devices such as Google Home, Amazon Alexa and Apple HomePod, but there is a wealth of other voice applications out there that are also likely to impinge on retailers.

For starters, voice recognition and natural language processing is also increasingly essential in customer services, offering the ability for customers to 'talk' to the business without having to talk to an actual person so that their calls and queries can be routed automatically and for staff to also interrogate the business to check on orders and other aspects of the day to day running of the company.

So here are a few of the other ways in which speech and language recognition are impacting the retail business.

- **IVR** – The old man of speech recognition, IVR – or interactive voice response – has been around for years and has long powered many a customer service and call centre on-ramp. And it is still going strong. Initially, it was used to recognise simple "yes" and "no" instructions to route calls into a call centre. As natural language recognition has advanced, so it has come to recognise bank account numbers and other more 'natural' requests made when dialling into a business with a question.
  Today, IVR can use much of the natural language processing available to voice assistant devices to understand natural requests, contextualise them and even respond. It is also starting to feed into how shoppers interact with apps via what are increasingly becoming known as chatbots (see below).
- **Chatbots** – While the name implies that they talk, chatbots are mainly text messaging-based customer service tools that can engage in a basic two-way instant messaging 'conversation' with a customer using text. Why they are interesting is that they too need to use text recognition to work and are, more than likely, a precursor to automated, voice-based chatbots that will talk to customers. Currently, chatbots crop

Automated speech recognition (ASR) essentially is the part that recognises what is being said as an audio input and tries, using machine learning and other AI algorithms, to identify it against a database of spoken words and sounds. Typically, this then outputs a 'word graph' that shows a network of possible words in text format.

This lattice is then fed into the Natural Language Processing (NLP) – which is the real brains of the operation – where it is undergoes the rather marvellously named techniques of 'speech tagging', 'noun-phrase chunking', 'dependency' and 'constituent parsing' to translate transcribed text into 'parsed text'.

This parsed text is then analysed using question and intent analysis tools for all the possibilities of what may have been said and what sense it might make. AI determines what combinations of words work together given the context of who said it, where, why and when. Much of this is junk, so the system can rapidly exclude many possibilities, and then output what it thinks is probably right.

Once it has the questions sorted, this is routed to the correct application database and into that application's application logic centre to find an answer.

The output is then conveyed back through a natural language recognition system, which turns it back into words and back to the device that then speaks the answer.

The clever part lies in the NLP where the various permutations of what has been parsed by the speech recognition system are assessed and mean established. Here, the technology has to pull in all sorts of other data to work out what is likely being said.

Take the example of using voice to book a flight to Barcelona. The Spainish cities of Barcelona and Pampeluna could sound very similar in Spanish. So, here the system can, in fact, have a couple of options. The first is based on the business logic: has the user specified a specific date and are there flights on those dates to both or neither or just one of the cities? Checking with the database can confirm if there are flights to Barcelona on that day, and if there aren't any, it will be assumed that the client meant Pampeluna.

However, if there are flights to both cities on the same day, and the system knows that these names often cause a recognition problem, the system could look to see if the user has been to either before – if Barcelona is a regular destination it can move in that direction. If there is any uncertainty, the system must then go back to the user and confirm if they requested exactly that particular city (using a "yes-no" question). This may worsen the user experience a little but at least we could proceed with their request, which in this case is more important.

AMAZON ALEXA IN ACTION

So how is this manifest in practice? Take the case of Amazon's Alexa, where 'Alexa' herself lives in the cloud. In fact, Alexa is the combination of ASRs, NLPs, databases and everything Amazon knows about the user. Here, the Amazon device parses – or breaks up in to its component parts – what the user says and these are then sent to Alexa and her language recognition and processing engine that lives in the web. Here it is made sense of with language processing powered by AI. The 'sense' is then routed, again using AI, to the relevant server to get the information required.

This information is then sent back to Alexa, where it is turned into an audio file – again using AI-powered language engines – and

any graphical content added and it is sent back to the device in the consumer's home, where it elucidates a meaningful answer.

Depending on what 'apps' or skills the user has installed on the device will dictate where requests are routed from the device and to which servers – both Amazon's and third parties that are providing services to Alexa. "What will the weather be like today?" will trigger the device to use its weather app to route the request.

While this example is for Amazon's Alexa, all of these smart devices essentially work in the same way. ■

MAKING VOICE CONTROL WORK FOR RETAIL

There is a clear move towards voice as a medium of interaction between consumers and retailers and, as we have seen, there is in all likelihood going to be a swing towards some ecommerce taking place via voice – even if that means using voice as part of the retail journey. So how should retailers be preparing?

For starters, consumer goods retailers should focus their voice commerce offering on products that are most likely to be shopped through this channel: typically repeat, low price point items. Ensuring products are easily found can also be critical, as 70% of customers know the exact product they are seeking to buy.

The chances of products being 'found' can be increased by tailoring search terms to ensure distinctiveness against competitors, such as 'sensitive toothpaste' as we shall see.

To ensure voice is a useful channel for consumer goods businesses, maintaining Amazon's 'choice' status and implementing an effective marketing strategy is essential, but difficult. Around 4-5% of Amazon's 'choice' products change daily due to stock or delivery speed issues, which will have a negative impact on a business' bottom line.

To get ahead, retailers can develop 'skills' (akin to mobile apps) which are accessed through smart speakers. Currently, the channel has had limited investment by retailers – just 39 'skills' exist within the shopping category. This has allowed Amazon to capture consumer spend as the Alexa 'default'.

To drive incremental spend, retailers can capitalise on consumers' spontaneous or 'distressed' purchases. Inspiring a new recipe, for example, could encourage additional and higher price point purchases.

Building trust is also essential for retailers to succeed in the voice category. So far, only 39% of consumers trust in the 'personalised' product selection of smart speakers and less than half (44%) believe that they offer the best value section of products. Trust is a critical issue to bridge, especially among consumers who don't currently own a smart speaker.

It's clear that shopping with voice is going to account for a substantial and growing share of the retail market, presenting both a challenge and an

up in IM-based chat boxes on customer service websites to handle initial customer enquiries and route the 'problem' to the right agent to handle it. They are also being used to handle FAQs around menus and other online ordering services for take away food, most notably at Taco Bell in the US. In the retail space, Shop Direct has made significant investment in speech recognition and AI technology to enabled in-app chatbots, which promise to answer 32 different types of question and to recognise and respond appropriately to 4,000 written phrases. Eventually it plans to give customers a personal shopper type experience through the chatbot.

- **Text-to-speech** – Much of the technology used in voice services – the speech recognition and language processing – can also be used to drive text to speech applications, where a business can start to voice its content. This is helpful as it creates yet another way to deliver content, as well as tapping into all those people out there who can't see. With 1 in 10 people in the UK suffering eyesight problems, the visual nature of ecommerce often shuts many people out. Giving voice to website can help. One such service is Amazon Polly, which is a service that turns text into lifelike speech, allowing you to create applications that talk, and build entirely new categories of speech-enabled products. Amazon Polly is a Text-to-Speech service that uses advanced deep learning technologies to synthesize speech that sounds like a human voice. With dozens of life-like voices across a variety of languages, you can select the ideal voice and build speech-enabled applications that work in many different countries.
  It also enables developers to provide their applications with an enhanced visual experience such as speech-synchronised facial animation or karaoke-style word highlighting. Amazon Polly makes it easy to request an additional stream of metadata with information about when particular sentences, words and sounds are being pronounced. Using this metadata stream alongside the synthesized speech audio stream, customers can animate avatars and highlight text as it is currently spoken text in their app.

OPTIMISING FOR VOICE SEARCH

As we have said, voice commerce isn't necessarily just going to focus on using voice and voice devices to buy things, it is also going to play a part in finding and researching purchases as part of the overall omni-channel purchasing journey. And within this, voice search is going to be key.

Google has had voice search for some time now, as has Apple's Siri on some of Apple's devices. Just ask either anything and they will display the results clearly and simply.

But that is because it has a display. In a voice-only device this isn't an option and so retailers need to focus their attention on how to voice is going to be used to search and what that means for finding and delivering the results.

So here are some key things to bear in mind when looking to ready your business for a voice-search world.

1. **Think about how people speak** – as a successful retailer you will already have optimised your content for written search, however, people don't speak like they type and so you have to optimise your content for voice as well. Voice queries are subtly, but powerfully, different to what you have been used to so far. For example, when looking for the best purveyor of fountain pens online, a customer is likely to type into their search engine "best fountain pen sellers". If they were to ask a device they would say "who are the best fountain pen retailers?" For starters, the latter is a question, but also the word order is different and context different. This could be the difference between showing up first or on page three of a search. There is also the issue of accents – especially, but not limited to, the UK where despite the small size of the nation, accents vary wildly. This not only changes how the language has to be recognised (and good speech recognition system will learn and adapt to accents), it also means making sure that the system can handle the different colloquialisms that affect the speech of different regions. So, with the example of the fountain pens a southerner may ask "who are the cheapest fountain pen retailers?" whereas a Geordie may ask for "Wa's the most canny fountain pen seller?" This could be different again in East Anglia and Scotland and Ireland and so on. Make a list of questions and phrases related to your business that you'd want to show up for. Then make sure your site and/or content is optimised for them and start to train it regionally.

opportunity for businesses that can get ahead of the curve. There are different paths to success in the voice category. A key consideration for retailers is understanding what business objectives they want to serve, then tailoring their voice proposition accordingly.

For consumer goods companies, the focus should be on prioritising the products most likely to be shopped through this channel. For both retailers and consumer goods businesses, assessing how their brand plays to the strengths of different 'skills', is also crucial to maximise their success.

HOW TO IMPLEMENT VOICE CONTROL

With so much attention on adding voice to apps, either on the phone or for home devices, how do you actually make it happen?

The first stage in preparing a retail business for the new voice frontier is early adoption. Your business needs to have a voice activated assistant. There's plenty to choose from depending on your requirements so purchasing is the first step. Besides the obvious advantages of letting your developers experiment, setting up a device in your office can really help productivity for everything from scheduling a meeting to ordering stationary.

Ensuring your website and apps recognise voice-enabled searches is a very small piece of the puzzle, but an important one. Implementing natural language understanding to deliver a seamless customer experience across multiple devices, that all talk to each other, will be the difficult part.

Another element of utmost standing is building trust. Trust is a key consideration at a time when customers are used to reading about high profile data privacy breaches on an almost daily basis. Amazon is currently developing speaker recognition features for Alexa so we may see a surge in biometric security to ensure that purchases and financial information are kept safe and secure – critical if consumers are going to adopt the technology and keep coming back. Keep a lookout for announcements to make sure you and your business stays ahead of the curve.

Finally, begin to think about integrating data from Amazon's Alexa to deliver relevant messages via SMS, email or push notifications to customers on the move. For the time-being, Alexa is restricted to just the home, so consider how you can also combine geo-location technology with spending habit information from Alexa to create the ultimate digital experience for the 'on-the-go' consumer.

The fast moving, inquisitive and time poor consumer is who business is catering for. The need to anticipate their needs in order to stay ahead of the curve, remain competitive and attractive is integral. The customer communication landscape is being modified, business needs to move with these times and ensure the correct channels are accessible.

WHAT IT MEANS IN PRACTICE

Right now, voice commerce is ideal for re-orders and for non-branded goods, but what about brands: how can more sophisticated 'sells' be worked into the process?

Here age is going to be key. While anyone over 30 may struggle to see how voice fits in as a way to shop (rather than just an add on to the existing shopping paradigm), today's kids in Alexa and Google Home homes are all very well adapted to talking to devices. I have seen it in action in my own home.

While most do use it to launch a search for pretty much anything they are looking for, variations in colour, size and style are more difficult to convey via voice.

That said, if today's kids are still voice-centric by the time they are 16-24, then retailers and brands will have to find a way to deliver this sort of functionality.

In practice today, the single most important aspect of looking at developing a voice commerce strategy is to assess what goods you sell are likely to work on a voice device and then try it out in your own world. Then roll that out and see where you go.

Analysing the voice search data will also help you understand what else shoppers are looking for and this can also help you understand what, at least, of your inventory you might consider putting up for 'voice' – but again, each new addition you make you must try it out and iron out all the kinks in how it may be work in the real world. ■

SOUNDS OF THE FUTURE

It is clearly that voice, search, commerce and control is a technology in its infancy – however it is rapidly approaching adolescence and, if the predictions come off, maturity within the next two to five years. The 'future' of voice is only just around the corner.

So what can we expect from the burgeoning world of voice commerce?

Clearly, voice is going to play a growing role in retail, but quite how will depend on the retail sector and on the type of journey that will be taken by shoppers. Fashion, for example, is probably going to be slow to adopt voice commerce for actual purchases, but is likely to use its early adopter form to start using it for research and enquiries. For grocery and non-branded re-ordering then voice is going to become standard very quickly.

What is important to note, however, is that voice isn't going to replace any channel, nor is it going to become a dominant channel. Rather, voice will fragment yet further the omni-channel retail space, offering yet another channel to do all or part of the ecommerce process from search to research to sale to returns.

As we have seen with mobile's disrupting influence on ecommerce and in-store retail, voice is going to merely be yet another piece of the puzzle: retail is now a multi-funnel operation. The channel is making it all work together.

That said, there are two key areas where we do see some future development that we can generalise with voice commerce which all retailers need to be aware of: personalisation and mobile.

BRANDS GET PERSONAL

One area where voice is going play a key role is in brand and retailer loyalty and personalisation. As stated above, voice isn't going to be a 'thing' on its own for many retailers and brands, but rather it will be tool that they add to their armoury of existing customer service weapons. And building personal relations with voice will be key.

Retailers and brands are already locked in a battle to deliver a one-to-one relationship with consumers at scale. Voice is going to be another part of that – voice search alone adds personalisation being a dialogue rather than just a request.

And powered by AI, devices are set to become much more conversational: rather than just telling Siri you want to know what the

2. **Focus on mobile** – This isn't just a voice search tip, but one that applies to all SEO activity. Google already indexes based on mobile optimisation so to rank high in a voice search you also have to be looking good on mobile too. It is also worth bearing in mind that as voice commerce through voice devices such as Google Home and Amazon Alexa become more widespread, so the desire for a generation of shoppers to use voice to interact and search via their mobile will also come into play, so to get the best from voice search results you need to be thinking mobile.
3. **Make your site fast** – As with 'normal' search and web site use, speed is crucial – no one waits now more than a few seconds for a page to load before moving on. But in the world of voice search site speed is even more crucial. As we have seen in the previous chapter, to work the voice device has to parse and send the voice request to some pretty heavy duty natural language processing tools in the cloud which then has to use the data that creates to go off and find what it is the user has asked for. This means interrogating your site – and if it is slow to respond then it will slow this complex process down, possibly to an unacceptable level. The result will be that your site can't get enough information back fast enough (remember, it all has to then be translated back into voice for a device like Google Home or Amazon Echo) and your site will be passed over.
4. **Use schemas markups** – Schema markups can be a powerful tool for retailers wanting to take advantage of voice commerce. As already mentioned voice assistants and searches need to operate extremely quickly to come up with what is often just a single result or answer. But schema markups add rich snippets that highlight key information from your content – like product, brand, size, price, stock and ratings.

   Voice search tools can quickly take in this info and decipher what your page is about without needing to actually visit the site – meaning they're much more likely to suggest this search result to consumers.

   The task of actually adding schema markup is a little complicated, but when it comes to winning at voice search it is worth the effort.

   All in all, voice commerce and voice search still have a mighty long way to travel. But it's growing rapidly with a high likelihood of becoming huge. And savvy online retailers will be optimising their sites and service now in order to avoid playing catch up later on.

weather will be, you will be able to talk to your device – and it will talk to you. This is a huge marketing and loyalty opportunity for retailers and brands.

Where some sectors may not find voice the ideal channel to sell goods, they will find it an ideal way to advise on goods and services, as well as offer much more intelligent interaction about goods and services, opening times, stock availability and more.

Moreover, the context of voice retail is set to become more important and more sophisticated. For example, in 2017 LG launched a fridge featuring Alexa to allow direct ordering of food, which both Ford and VW have built it into their cars. BMW, as outlined in the case study section of this white paper, has Alexa built in and allows the purchasing of goods from the car.

These features matter, as ecommerce is set to become increasingly experience focused – rather than focusing on mass consumption, it will be personalised to an individual. This means that experiences will drive commerce, rather than traditional trade.

Here the brand has to thrive through engaging content – and not just voice, it also involves augmented and virtual reality (AR/VR) enablement, personalisation, AI-driven recommendations and on-demand customer service.

As retailers continue to explore opportunities for using voice commerce, it will be critical that the unique capabilities of voice are integrated into a more comprehensive set of customer experiences.

GOING MOBILE

Where it gets interesting is that voice control is going to not only be the preserve of these devices, but also of all devices: it will be the way we interrogate the web. This means that voice control in retail is not just a matter of building out platforms that can handle voice inputs from these 'home' devices, but also to voice enable websites and apps.

This isn't just fanciful thinking inspired by another Apple hoopla-laden developer conference, but something driven by the other big game in retail: engagement.

It has become accepted wisdom that, in the age of abundance, consumers want more of an experience from retailers. This has become so over-powering that now the majority of execs in retail boardrooms rate customer experience as more important than marketing and even sales as a priority.

Voice control, as it gains acceptance in the home, is going to become the driver of much of this experience on mobile when out and about and it is what is going to shape how retail in store and on the web works.

Research shows that people are willing to spend more and keep coming back for more if they get a meaningful experience. Voice interaction is likely to be one of the key drivers therein.

Right now, one of the most compelling reasons for adding voice control is that it puts anyone offering voice control in their apps way out in front of the competition, makes their app look more modern and garners a lot more attention. But it delivers so much more.

Adding voice control leads to better apps and interesting new ways for consumers to interact. There are voice controlled apps to talk you

through your morning run, there are ones that can help you take a better selfie, you can even order a Domino's in the US using voice. More interestingly, iTranslate will translate conversations in real time, taking the voice activated app into the realms of what was once science fiction.

But can the technology and retailers make this happen? While Apple entering the fray with HomePod in June 2017 came as no surprise – apart from perhaps its dreadful name and the fact that it looks a bit like some sort of elaborate air freshener – it does beg the question that to be truly useful – and for me and many others to even contemplate buying one – Siri and the voice recognition tech in all these devices needs to really up its game. Until that part of the process works, the rest of the points here are moot. And while consumer demand is there, the tech is lagging.

For instance, while writing this I asked Siri: "Siri, what is your impact on retail going to be?" and she coquettishly replied: "I'd rather talk about your calendar and dinner plans, Paul".

Quite.

MAKING IT SEAMLESS

The winners in ecommerce are going to be the retailers and brands that can link together online, mobile, in-store, voice and all the other peripherals such as AR, VR and AI-powered marketing.

Bringing all this together offers a powerful opportunity – and in some regards voice is going to be the glue that holds it all together. As voice gets more sophisticated and speech recognition, AI and natural language processing improve in line with Moore's Law, voice will be the tool through which consumers interact with online, mobile and the technologies that sit around it.

Voice will make for a seamless way to interact with all these facets of a brand or retailer, to control how interaction takes place and to make very specific and ongoing requests.

On the flipside, the brands and retailers themselves will be able to use the same technologies via voice to interact on a much more personal and deep level – answering their questions, offering suggestions, talking them through the shopping process, helping make transactions easier and more straightforward. It will also add a level of trust to proceedings, holding the consumer's hand through the whole retail process from "do you have a black dress" to "will this one fit me?" to "how to I order it now and pay later?".

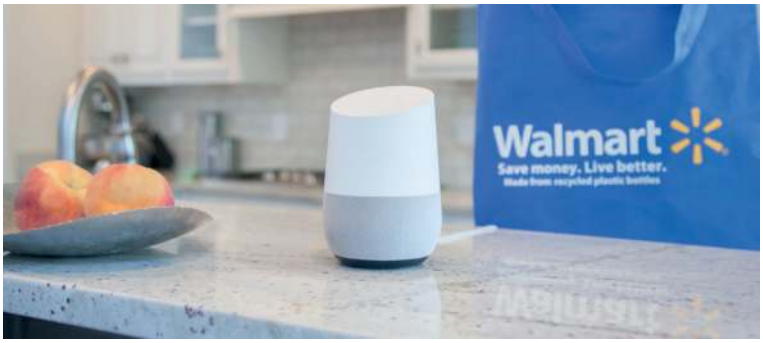
The retailers and brands that will benefit the most from voice commerce will be those using this forward-looking approach in conjunction with existing capabilities – and using this combination to develop new services that give consumers unique and engaging experiences that not only simplify the transaction process, but also help customers make smarter decisions.

For example, Amazon has added a camera to Amazon Echo that can help users take selfies and then talk to someone to gain a second opinion. With retailers such as Victoria's Secret, Sephora and Burberry continuing to explore opportunities for incorporating selfies and Instagram into the customer experience, there is a strong likelihood that voice and visual will combine and integrate in a plethora of new ways.

IN PRACTICE: VOICE CONTROL CASE STUDIES

There is much that retailers can do and both technology and retail are changing so rapidly that it is impossible to predict where this is going. But today, some forward-thinking retailers are already looking at how to make use of voice in their commerce processes. Here we take a look at some of the most established as a guide to what is possible today and hopefully what is coming down the pipe of tomorrow.

WALMART FIRES STARTING GUN ON VOICE COMMERCE PROPER IN TRIAL WITH GOOGLE



Walmart

Walmart is set to give Amazon a run for its money in the voice commerce stakes, partnering with Google to let shoppers in the US buy hundreds of thousands of items through Google Assistant.

According to a Walmart blog post[1], the retailer has opened up to voice commerce in September 2017, but promises more this year.

Says Marc Lore, President and CEO, Walmart US ecommerce: "One of the primary use cases for voice shopping will be the ability to build a basket of previously purchased everyday essentials. That's why we decided to deeply integrate our Easy Reorder feature into Google Express. This will enable us to deliver highly personalized shopping recommendations based on customers' previous purchases, including those made in Walmart stores and on Walmart.com. To take advantage of this personalization, customers only need to link their Walmart account to Google Express."

He continues tantalisingly: "And, this is just the beginning. Next year, we will also leverage our 4,700 US stores and our fulfillment network to create customer experiences that don't currently exist within voice shopping anywhere else, including choosing to pick up an order in store (often for a discount) or using voice shopping to purchase fresh groceries across the country."

The announcement has been greeted enthusiastically by analysts who see the move as not only a real challenger to Amazon, but also in firing the starting gun proper on voice commerce.

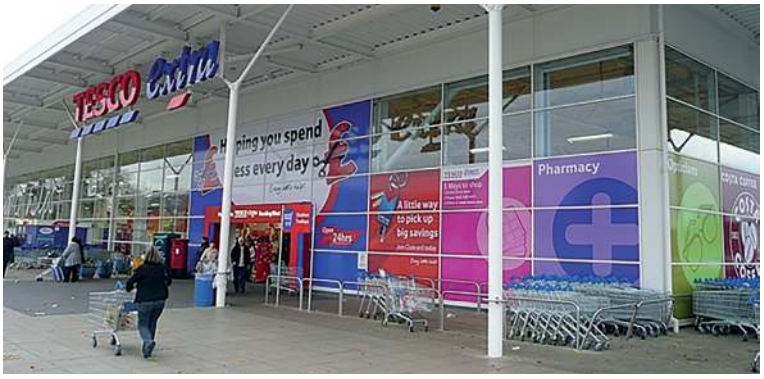
According to Walker Sands' 2017 Future of Retail report[2]: One in five consumers (19%) have made a voice purchase through Amazon Echo or another digital home assistant, and another third (33%) plan to do so in the next year, while, nearly a quarter of consumers (24%) own a voice-controlled device like Amazon Echo (16%) or Google Home (6%). Another 20% plan to purchase one in the next year.

Brennan Wilkie, SVP Customer Experience Strategy, InMoment comments: "Walmart is already making waves for its experimentation with facial recognition technology. As the retailer navigates its new partnership with Google, keeping the customer experience top of mind is crucial in ensuring the program's success. Monitoring for customer feedback and iterating accordingly is ideal when rolling out a first-of-its-kind offering like this."

Igor Gorin, CEO of Astound Commerce, adds: "While Google Home and Google Assistant were initially more in the business of information and convenience, they've now entered into the commerce game with this partnership with Walmart. The introduction of voice as a commerce channel – just like online, mobile and brick-and-mortar- will present new challenges to Walmart when merchandising and marketing products. The unique user experience and interaction model through digital assistants will necessitate a new approach to product attribution, product descriptions and how sites and catalogs are structured to help people navigate and shop via this channel."

Ed Kennedy, Senior Director of Commerce at Episerver concludes: "It's clear from Walmart's strong Q2 earnings that focusing on e-commerce and in-store digital strategy was the right move. The retail giant has deep roots in brick-and-mortar, but has adapted to the growing need for digital commerce capabilities such as mobile payment options, click-and-collect and same-day pick-up perks and added inventory for online shoppers. Focusing on the digital customer experience and refining its already promising tech investments is what will lead Walmart toward success in the future."

TESCO TEAMS WITH GOOGLE AS GROCERY RETAIL FINDS ITS VOICE



geograph

In 2017, Tesco teamed up with Google Home to allow Home users to add things to their Tesco shopping basket via voice – a move that also marked a fundamental shift in the grocery business.

According to Paul Wilkinson, head of technology research at Tesco Labs, the system not only listens to what you say, but can refine the list by referring also to your 'Favourites' and 'Most frequently purchased items' in the Tesco grocery app.

"It prioritises these in the search results and so can be very specific on the products it adds to their basket," he says.

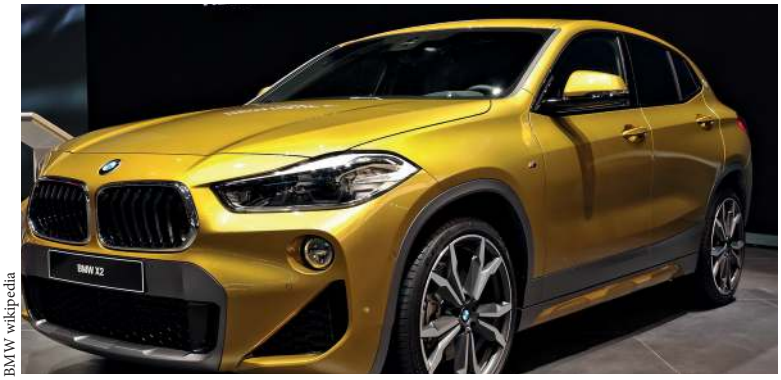
But the move by IRUK Top500 retailer Tesco to use voice not only taps into the growing move towards how these smart devices play a role in retail, but also it marks a cultural shift in retail: Tesco is now allowing its customer to access it through Google.

Amazon's Echo already allows users to add things to their Amazon Prime accounts, but this is the first time that a major retailer has used someone else's interface to buy – and it could have an unwanted downside.

The fact that Tesco is now promoting its sales through another retailer – Google – is a clear paradigm shift. Customers of Tesco are now accessing Tesco via Google. One thing that retailers and brands need to be wary of in a world of many interfaces is that branding and experience become less evident. As a result this could pose a risk to existing customer loyalty and brand equity that they possess with customers. While Tesco is undoubtedly right to get into this space and get in there early, for the sake of its future, we must hope that Tesco has also considered its strategy for customer ownership, data ownership and Tesco brand loyalty, or face becoming a tier two retailer accessed via an interface which isn't owned by them.

The move also marks the growth of the 'virtual ecosystem' for retail. As we see these virtual ecosystems grow and become more widespread, we are likely to see a battle commence between the digital assistants such as Google Home, Amazon Echo and the imminent Apple Home, as retailers and brands affiliate themselves with one or the other. Tesco is one of the first of what will inevitably be a long line of retailers making the decision to offer its customers a voice-controlled service, removing the need for a cumbersome, physical interface and allow consumers to slot digital services into their lives with less disruption.

BMW DRIVERS WILL BE ABLE TO SHOP FROM THE ROAD – USING AMAZON ALEXA



BMW wikipedia

BMW drivers will be able to shop from the road via voice from later this year – when the automotive group will start to integrate Amazon's Alexa into BMW and MINI vehicles.

Users will be able ask Alexa for directions, order a Domino's Pizza, a takeaway from Just Eat, or top up their Amazon shopping list once the feature becomes available in the middle of 2018.

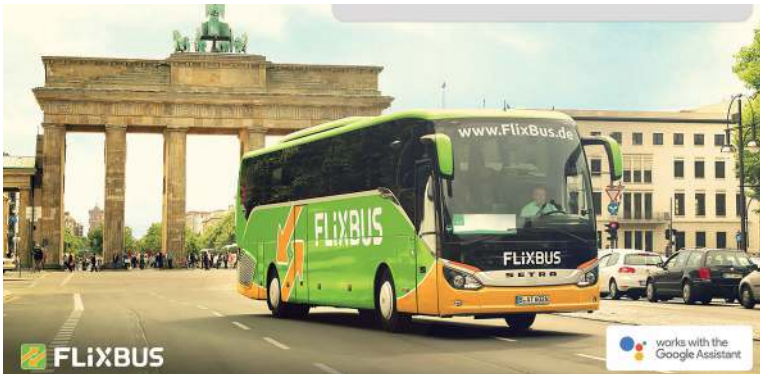
Customers will also have access to Alexa skills from third-party developers, while Alexa will provide voice responses paired with visual cards on the BMW or MINI control display in the case of features such as to do lists and weather forecasts.

"We are excited to work with BMW to bring the Alexa experience to their drivers," says Ned Curic, vice president, Alexa Automotive. "Voice is a big part of the future, especially in cars. Using your voice to enjoy content and interact with your car makes a great driving experience even better. We can't wait for BMW customers to try this out."

Dieter May, senior vice president digital services and business models at the BMW Group, adds: "By making this step and integrating Alexa into our models from 2018, BMW and MINI will form a more intrinsic part of our customers' digital lifestyles. Voice control first featured in BMW Group cars many years ago, and we are now enhancing its functionality by adding a digital ecosystem, which will open up all sorts of new possibilities that customers can access quickly, easily and safely from their car."

Amazon says voice is a natural way to interact with your car while you're on the go, citing examples such as Alexa's ability to turn on outdoor lights or adjust home temperature settings for drivers as they leave work for home. The in-car experience builds on the BMW Connected skill for Alexa that was introduced in 2016. That helps customers control their vehicle – including activating climate control, locking the doors, and more – from any Alexa-enabled device.

GERMAN BUS COMPANY FLIXBUS TEAMS UP WITH GOOGLE ASSISTANT TO VOICE ENABLE TRAVEL



flixbus

German coach company FlixBus has become the first coach operator in the world to integrate with Google Assistant – from April 2018, travellers can find FlixBus routes and book their tickets with voice control.

With Google Assistant, FlixBus users can quickly and easily access information about connections, timetables and current prices simply

by asking. Once the right journey is found, customers can then book their ticket with voice control. The FlixBus Action will initially launch in English, French and German.

Customer-oriented digital solutions have been at the core of the FlixBus model since the company's launch five years ago. In addition to partnering with leading technology companies such as Google, FlixMobility employs an in-house team of over 200 developers who work to consistently improve the FlixBus product, from the FlixBus App to the Where's My Bus real-time bus tracker.

"We want to give FlixBus users the best travel experience via innovative and digital solutions," explains Daniel Krauss, Co-Founder and CIO of FlixMobility GmbH. "By integrating with Google Assistant, our customers can easily book the fastest or cheapest connection with the FlixBus via voice control or receive up-to-date travel information on their long-distance bus journey."

"The sooner companies take advantage of assistive marketing, the more likely they are to build that expertise," adds Malte Will, Product Partnerships, Google Assistant. "We are pleased that we have a partner with FlixBus who recognized this potential early on and with whom we can jointly shape the future of the digital assistant."

In addition to helpful FAQ elements, the FlixBus Action includes more than 800 sample phrases in three languages, each tailored to specific FlixBus criteria. The Action also supports multimodal use, that is, voice, text, or a simple click, depending on which device the customer uses to communicate with the Google Assistant. The integration with Google Assistant makes the 250,000 daily FlixBus connections to over 1,700 destinations in 27 countries directly accessible from home and at any time. Beginning in Spring 2018, FlixBus users will also be able to travel within the United States. ■

References

1 https://blog.walmart.com/innovation/20170823/walmart-google-partner-to-make-shopping-even-easier-heres-how

2 https://www.walkersands.com/Futureofretail

SUMMARY

Consumers are already using voice to interact with everything from their music streaming services to re-ordering their groceries. Car makers are starting to add these voice technologies to new cars and a whole generation of kids is growing up thinking it normal to talk to the internet.

Already, this is having an impact on retail. In 2017, a fifth of US shoppers made a purchase with a voice-controlled personal device, such as a Google Home, Amazon's Echo and Alexa, or, if they have deep pockets, Apple's Siri-enabled HomePod this year, according to research by Walker Sand. This number goes up to 43% amongst millennials.

Investment firm Mizuho, goes further, predicting that revenue generated by the Amazon Echo and Amazon Alexa services could exceed £8.37 billion ($11 billion) by 2020. The firm also predicts that £3.04 billion ($4 billion) of that would come from the sales of the Echo device itself (including the Tap and Dot), while the other £5.33 billion ($7 billion) would come from all the commerce transactions derived from those devices to Amazon.com.

Not only does voice open up a new channel to sell to consumers, it also makes it easier for retailers to create personalised exchanges with them and developing those all-important 'experiences' that are going to differentiate one retailer from another.

For consumers, voice makes for a more natural way to interact with the web and to ask more natural questions or retailers and brands – and receive more interactive answers.

However, making it happen in practice is hard and retailers need to start making voice part of their omni-channel and marketing strategies right now.

In this white paper, we outline these challenges and offer some practical advice and insights into how to make it work in your business. We take a look at how some retailers and brands are already putting voice to use and how they have had to tweak their back ends to make it happen – and we take a look at where voice is driving ecommerce and what you need to be aware of in the coming months and years.

Voice is calling, and retailers need to answer. ■

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