CAN VOICE CHANGE THE WAY WE TRAVEL?

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ABOUT

We bring together everyone in the travel industry, from small tech start-ups to international hotel brands, to form a community working towards a smarter and more connected travel industry.

Our mission is to be the place our industry goes to share knowledge and data so that travel and tech brands can work collaboratively to create the perfect experience for the modern traveler.

We do this through our network of global events, our digital content, and our knowledge hub - EyeforTravel On Demand.

Our Values

We believe the industry must focus on a business and distribution model that always puts the customer at the center and produces great products. However, to deliver an outstanding travel experience, the strength, skills, and resources of all partners in the value chain must be respected and understood.

At EyeforTravel we believe the industry can achieve this goal by focusing on a business model that combines customer insight with great product and, most importantly, places the traveler experience at its core.

At our core we aim to enable the above by valuing impartiality, independent thought, openness and cooperation. We hope that these qualities allow us to foster dialogue, guide business decisions, build partnerships and conduct thorough research directly with the industry.

These principles have guided us since 1997 and will continue to keep us at the forefront of the industry as a vibrant travel community for many more years to come.

Our Services

Our events are at the heart of EyeforTravel. These draw in experts from every part of the travel industry to give thought provoking presentations and engage in discussions. It is our aim that every attendee takes back something new that can help their business to improve. This might be in the fields of consumer research, data insights, technological trends, or marketing and revenue management techniques.

Alongside this we provide our community with commentary, reports, white papers, webinars and other valuable expert-driven content. All of this can be accessed through one place - the On Demand subscription service.

We are always expanding the content we create, so please get in touch if you want to write an article for us, create a white paper or webinar, or feature in our podcast.

EyeforTravel by the Numbers

80,000+ database contacts

2,500+ annual event attendees

100,000+ monthly online reach

1,000+ online conference presentations

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ACKNOWLEDGEMENTS

The development of this white paper was made possible due to the input and support of industry leaders in the hotel industry and hospitality technology field. EyeforTravel acknowledges and thanks the following for their time and support to this project, either through direct interviews or through speaking at one of our events:

Fabrice Otaño | Chief Data Officer | AccorHotels Group

Michael Mrini | Director of Information Technology | Edwardian Hotels

Steve Glenfield | Head of Digital | Heathrow Airport

Sam Turner | Sales Director | Hotelbeds Group

Bill Keen | VP of Mobile Solutions & Digital Guest Experience | IHG

Paul English | CEO | Lola

Del Ross | Senior Advisor | Mckinsey & Company

Nate Tomasi | Chief Operating Officer | Mycroft.AI

Stephan Keschelis | Vice President of E-Commerce and Digital Transformation | NH Hotel Group

Dan Christian | Chief Digital Officer | The Travel Corporation

Jonathan Moore | Chief Products Officer | Trainline

INTRODUCTION

Its early days for voice technology but it is an area that the travel industry will need to start planning for. Already large numbers of consumers use artificially intelligent personal assistants on a regular basis. Although this usage is limited and largely quite functional currently, the end game could be transformational. Right now, the tech giants are piling in resources and trying to hoover up as much data as they can.

What they are doing with this data is training their Artificial Intelligences (AIs), so that they become consistently better at answering our queries and knowing what we might want. As this is a process of constant improvement, the eventual route will take us to a point where they sound and seem human but are able to access the entire digital space.

Whilst this can potentially mean a way for travel brands to reach out directly to their customers and more plurality in distribution, it may also go the other way, creating a new oligopoly of powerful AI assistants that capture the way consumers access apps and digital services.

Despite amazing progress from the likes of Baidu, Amazon, Microsoft, iFLYTEK, and Alphabet/Google, an AI that can converse and fully understand context remains some way away. In the meantime, major ecosystems are being developed that travel brands can utilize in a number of ways to improve the customer experience and their relationships. Hotels and airports are experimenting with speakers in rooms and helpful locations and intermediaries are experimenting with apps for the major players in the space.

They aren't doing this out of the goodness of their hearts but because there are already billions of devices with voice assistants enabled on them and sales of smart speakers are growing rapidly. China, in particular, is a leading market, with the biggest voice AI providers processing hundreds of millions of requests per day.

Therefore, it seems prudent for travel brands to at least begin experimenting with the potential that voice affords and building up expertise in this area to prepare for greater capabilities and adoption in the years to come.

We hope you find this report useful and if you would like to learn more about artificial intelligence in the travel industry then check out the two other reports in our *How Will Artificial Intelligence Transform Travel?* report series. You can download the *Are Bots Worth the Bother?* report here and the *Does Deep Learning Hold the Answers?* report here.

Alex Hadwick,

Head of Research, EyeforTravel

1. HOW POPULAR IS VOICE SEARCH NOW?

1.1. What Is Voice Search?

Have you heard the call – or made it? Technology based on voice commands is booming, everywhere from mobile phones to smart home devices.

Once, people had to pick up the phone to a human being or write a request to be read by one. Now, you can simply speak to a device, asking an electronic personal assistant to do everything from turning on your music to searching for a hotel.

There's plenty of talk about this phenomenon – known as voice search – and tech giants, such as Google, Microsoft, Amazon and Apple are piling in with new products and plenty of investment.

Advances in the Artificial Intelligence (AI) known as deep learning mean computers are getting better at understanding speech, and translating it to and from text. Meanwhile, businesses report that their customers just want things to be easier: To order a cocktail from a hotel spa via app, customers increasingly want to talk, not type.

"We think that all search through desktop is dead."
Fabrice Otaño, chief data officer, AccorHotels Group

In 2015, the first "Echo" voice-responsive speakers for the home were launched by Amazon, selling an estimated 1.7 million units. Speaker sales grew to some 6.5 million in 2016 after Google began selling its Google Home device. Launches multiplied and industry analyst VoiceLabs predicts that there will be 33 million "voice first" home devices in use by 2017 (VoiceLabs, 2017).

These services and, far more importantly, mobile-based voice search functions, tend to rely on the leading AI computer personal assistants: Amazon Alexa, Apple Siri, Google Assistant and Microsoft Cortana. But there are also open-source developers such as Mycroft, which share voice assistant technology freely, on the basis that users themselves help to improve it (Forbes, 2017a).

Yes, these devices and assistants can perform simple commands or answer simple questions: open a weather forecast, play a tune, find a location, adjust the heating. But when they start to search the internet for your business's customers, use your website, or find your product in results, their impact is far wider. And if you have to pay to appear in the first two or three answers, who benefits most?

1.2. Widening the Net

It's not easy to get reliable figures on how big voice search is, because the major firms will not disclose their numbers and – ironically – even data experts sometimes cite misattributed and misunderstood data.

At the 2016 Google I/O conference, chief executive Sundar Pichai said 20% of queries Google received via mobile phones in the US were spoken, rather than typed – and Google is understood to have used this figure in workshops with British travel firms this year. In China the usage of voice is very high for market-specific reasons, with hundreds of millions of users and queries per day (see Section 3.2 for more).

Looking forward, projections are confident that voice search will experience major growth. Back in 2014, Andrew Ng, then chief scientist at China's largest search engine Baidu, guessed that half of all searches would involve voice or image search by 2020 (VentureBeat, 2017). Gartner analysts currently believe it will be 30% (Gartner, 2017a).

Ng has done more research since, looking at why we might speak not type: Last year a joint Baidu, Stanford University and University of Washington study found voice recognition is now better at producing text on a mobile device than punching words into its keyboard (Ruan, Wobbrock, Liou, Ng and Landay, 2016). It was three times quicker to say English words than type, and 2.8 times faster with Mandarin – while the rate of mistakes was a fifth lower using English and almost two-thirds lower with Mandarin.

It is this capability shift in Mandarin that is one of the most influential points in supporting the rise of voice search. Taking Chinese characters and making them work in modern formats is a longstanding challenge. As Chinese characters do not conform to a standard alphabet as seen in the West and instead operate as independent characters for each word, putting the thousands of variations into a workable typeface has been more complex than in many other languages. Over time Chinese typewriters and different keyboard configurations have been able to refine the process but it can still be somewhat cumbersome, particularly on smartphones. Therefore, voice to text systems solve a clear need and China is a leading market in this area in a similar way that its digital ecosystem is leading the charge for mobile payments and integrated social media apps.

This has pushed Chinese companies to move to the forefront of speech recognition, making breakthroughs that have beaten Western companies to the punch. Baidu, China's dominant search engine, has invested heavily in speech recognition artificial intelligence and view it as a critical area for the future of their business as they try to catch up to the market leader iFLYTEK (see Section 3.2 for more).

"We think voice has the potential almost nothing has. But it's complex to get right."
Jonathan Moore, chief products officer, Trainline

1.3. Big Buts?

However, there are provisos: From the tech side some worry about the impact of privacy regulations limiting how voice searches can be stored and how much artificially intelligent computer programmes can learn from a data set.

There are also consumer issues. Some advertising for home speaker devices in markets, such as Germany, focuses on the consumer behaviour challenge – how to avoid feeling stupid when talking to a plastic box. The success of voice search also depends on whether the major operators can keep consumer trust by behaving with their new toy.

Furthermore, a more voice-focused world could be a negative for many travel players as it may consolidate power. Travel companies already complain about the costs of adverts and listings on search engines, says Tim Gunstone, managing director of EyeforTravel. "If you only hear one result, and it's an advert, there has to be a time when people stop trusting the media companies," he adds. "There could be a backlash."

2. TALKING TO THE TRAVEL INDUSTRY

2.1. Search Is Small but Growing

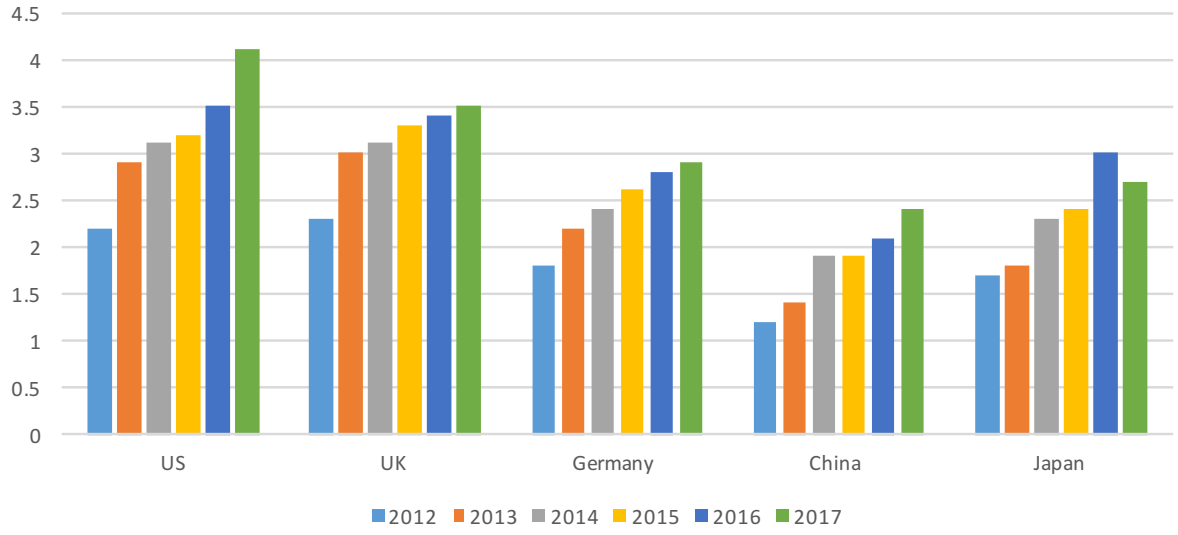
Some of travel's pain points are ideal motivators for voice search: You're on the move, a bag in each hand, trying to find a hotel. What could be more convenient than to talk into your phone and ask Google Assistant to help? However, research suggests that although important, usage of voice is still at quite an early stage overall and even more nascent in travel.

Figures from Bing, which carries out 9% of searches worldwide, including for Amazon Echo and Microsoft's digital assistants, released figures that suggest voice search for travel is at an early growth stage (Bing Ads, 2017). In April 2017, Bing Ads claimed that the number of Britons using voice search on their mobiles to book hotels rose by 343% from the previous year, and the number of people searching for flights rose by 277% (Tnooz, 2017). It has declined to release actual figures, and such high percentage increases more likely means growth from a low base, but it does suggest more people are waking up to voice command.

Juniper Research thinks so too, estimating that more than USD12 billion in advertising will be spent through voice responsive digital assistants like Siri and Cortana on smart devices by 2021 (Juniper Research, 2016). German market research aggregator Statista is even more optimistic, predicting that the virtual digital assistant market will be worth almost USD15.8bn in 2021 – a fivefold increase on this year (Statista, 2017).

Overall device adoption and ownership trends are for the most part strongly trending upwards, supporting the idea of consumers taking additional devices into their homes, including smart speakers. Out of the world's top five travel markets, connected device ownership has been consistently rising, with the exception of Japan, where average numbers fell in 2017 according to Google Consumer Barometer. These range from a low of 2.4 devices in China to 4.1 in the US. Overall the number of connected devices per person has risen by nearly 40% on average across the five economies from 2012 to 2017, demonstrating the hunger for smarter, internet enabled devices (; see Figure 1; Google Consumer Barometer, 2017).

Figure 1: Average Number of Connected Devices Per Person

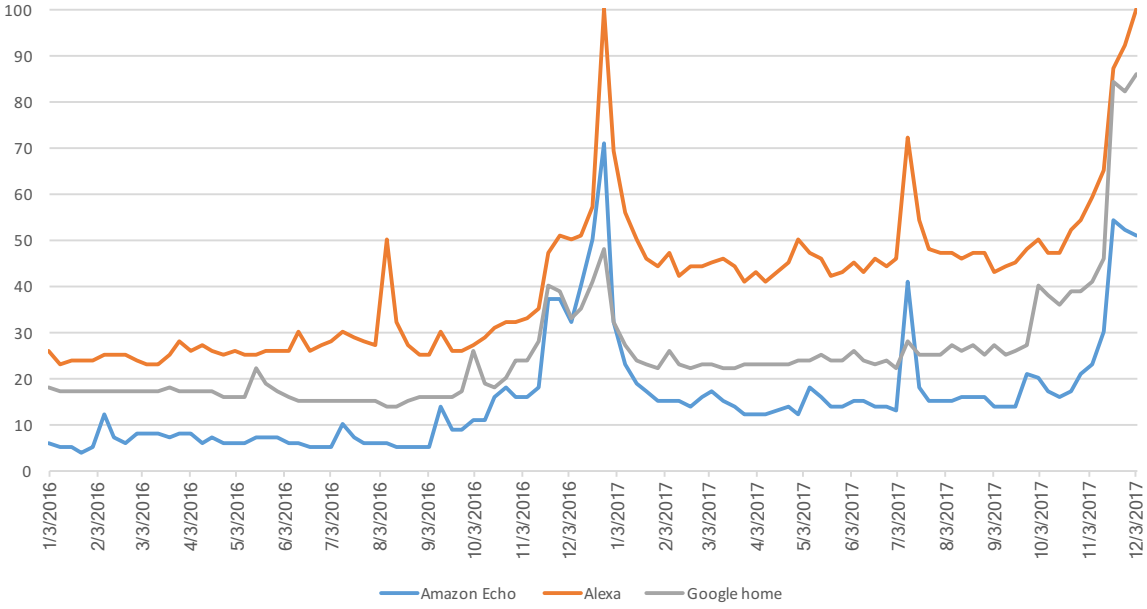


Source: Google Consumer Barometer, 2017

Currently, what will hold back the market for voice-activated devices for the home is the lack of killer apps and functionality, with the hardware predominantly used for simple functions. According to VoiceLabs, which surveyed consumers in late 2016, almost half of people with an Amazon Echo or Google Home device use it to play music or audiobooks, 29% operate smart home gadgets and just over a quarter search for news and podcasts. The proportion looking for business services (1.1%) or brand content (2.7%) is very small. VoiceLabs categorises this as an "experimentation phase", where people may use a voice application but only 3% of users will employ it beyond a week.

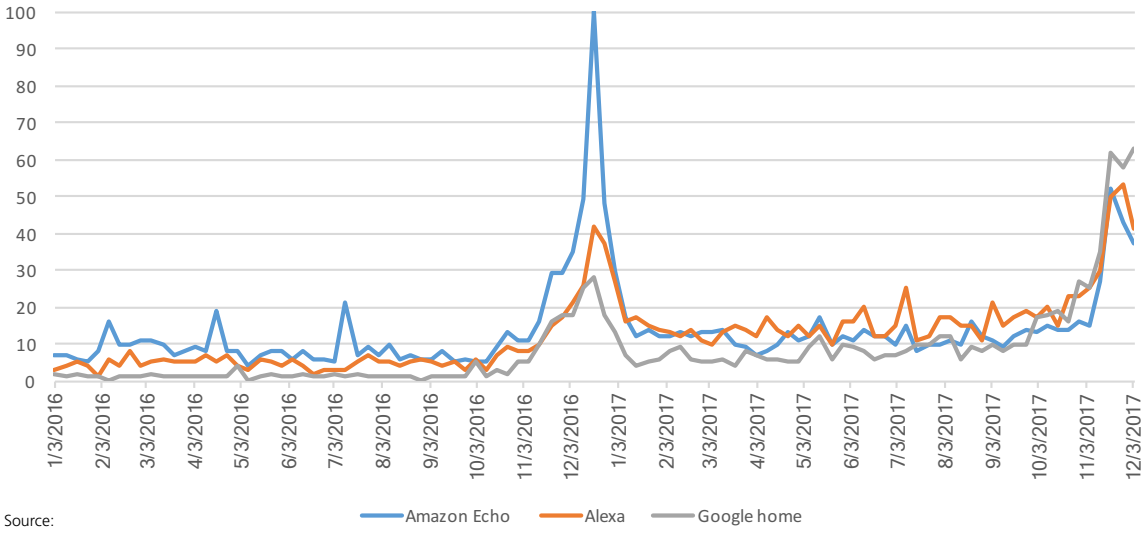
Google Trends data also suggests that interest for voice products for the home is at an early stage, with the festive period seeing by far the strongest peaks in both web searches and Google Shopping searches. This pattern of interest correlates strongly across the terms 'Amazon Echo', 'Alexa', and 'Google Home'. This suggests that these are being bought first and foremost as gifts and have a novelty factor currently, rather than reaching the stage of mass adoption or being a consumer must-have.

Figure 2: Interest in Amazon Echo/Alexa and Google Home on Google Web Search (Worldwide; 1 Jan 2016 to 3 Dec 2017)



Source:

Figure 3: Interest in Amazon Echo/Alexa and Google Home on Google Shopping (Worldwide; 1 Jan 2016 to 3 Dec 2017)



Source:

2.2. Generational Gap

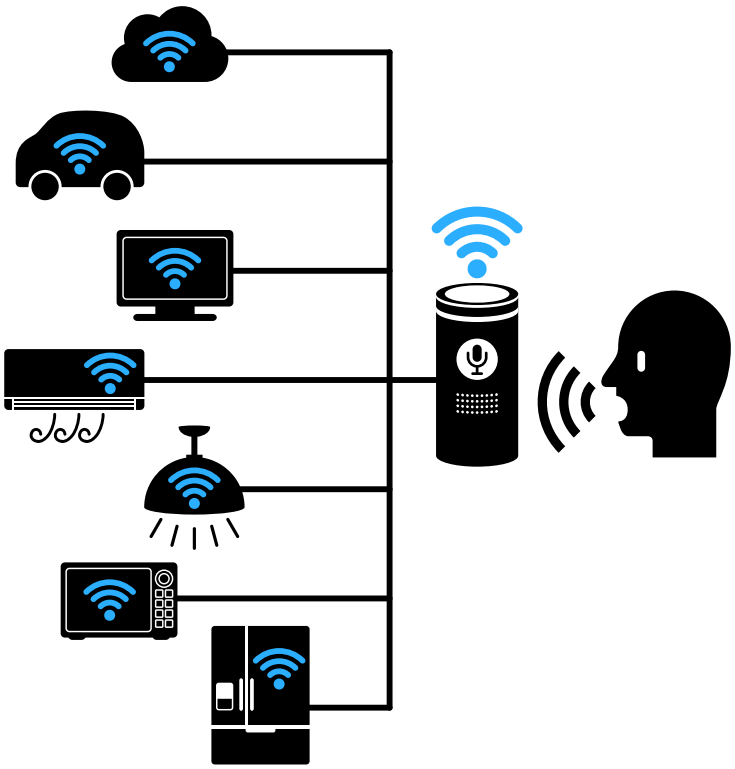
At the EyeforTravel Amsterdam 2017 conference, the consensus was that either end of the age spectrum will drive growth for voice usage. Stephan Keschelis, vice president of e-commerce and digital transformation at NH Hotel Group, said: "Whoever has kids loves Siri [the iPhone, iPad or iPod touch personal assistant] because it's a lot of fun, but if you look around your office, you don't see so many people talking to their phone."

It's not just teens who could find uses for voice-command based assistants, as there are clear applications for people with impaired movement, sight and the elderly might benefit too. "My 70-year-old father recently tried to book accommodation, asked Siri, and it predicted a result on the first page," says Dan Christian, chief digital officer at The Travel Corporation. "Siri found him a cottage when his efforts typing it in didn't."

According to Heathrow Airport's head of digital, Steve Glenfield, "silver chatters" are a natural target for voice command. "They are travelling more nowadays, retiring on their final salary pensions, have equity in their homes," he said. "What do they do? They like to travel."

This concurs with findings from Verto Analytics, who used a panel of US consumers to explore assistant apps, and discovered that just under half (48%) of those who report using a personal assistant app were aged 45 or older (Verto Analytics, 2017).

As more of the world adopts the internet, including places where literacy is lower, voice search could have even more currency. Caesar Sengupta, VP product management at Google, told the Wall Street Journal: "The new users are very different from the first billion." A kind of user, in somewhere like rural India, who thanks to poor written skills but cheap smartphones and data may even rely entirely on video and voice (Wall Street Journal, 2017a).



3. WHO IS BIG IN VOICE?

3.1. The Big Beasts: Amazon, Google, and Apple

There are two sides to the market in the form of speaker devices for the home and digital assistants on smartphones. When it comes to the former, the biggest beast in the jungle is Amazon. According to research firm eMarketer, Amazon Echo and Echo Dot speakers were expected to make up 70.6% of home devices in the U.S by the end of 2017 (Reuters, 2017).

As can be seen in Figure 3 there is a lot of first mover advantage here for Amazon, with a big spike in interest on Google Shopping for their devices massive in 2016 when compared to Google Home but a less pronounced difference in 2017. This leaves Google Home, created by Alphabet Inc and launched in November 2016, bringing up the rear at a 23.8% share, with other smaller competitors at just 5.6%, according to Gartner's estimate (Gartner, 2017a). Apple also has big ambitions and is launching a HomePod smart speaker competitor, but delayed the release until "early 2018".

Amazon is keen to make partnerships with other companies: it has some 25,000 "apps" or skills developed by third party developers such as The Washington Post (owned by Amazon chief executive Jeff Bezos) and AccuWeather forecast service and allows shopping via its own e-commerce site.

It is also targeting the business market to use its virtual assistant as a PA, and announced in November 2017 that it would soon introduce new technology for third parties to recognise individual voices – although it doesn't allow third parties to sell via Alexa yet.

Certainly, for the hospitality industry Amazon is the main player. A variety of brands have been experimenting with Alexa in select properties, including Marriott, IHG, Best Western and Kimpton.

Del Ross, senior advisor at McKinsey & Company, believes that if Amazon even starts something like a voice specialty app for travel, it could be a godsend for the industry.

"From a supplier standpoint you might welcome it because today, Google is terrifying," he said. "They are so important to all travel decisions. There's no alternative or competitive pressure. Maybe we need someone like an Amazon who can be the short-term white knight suppliers need."

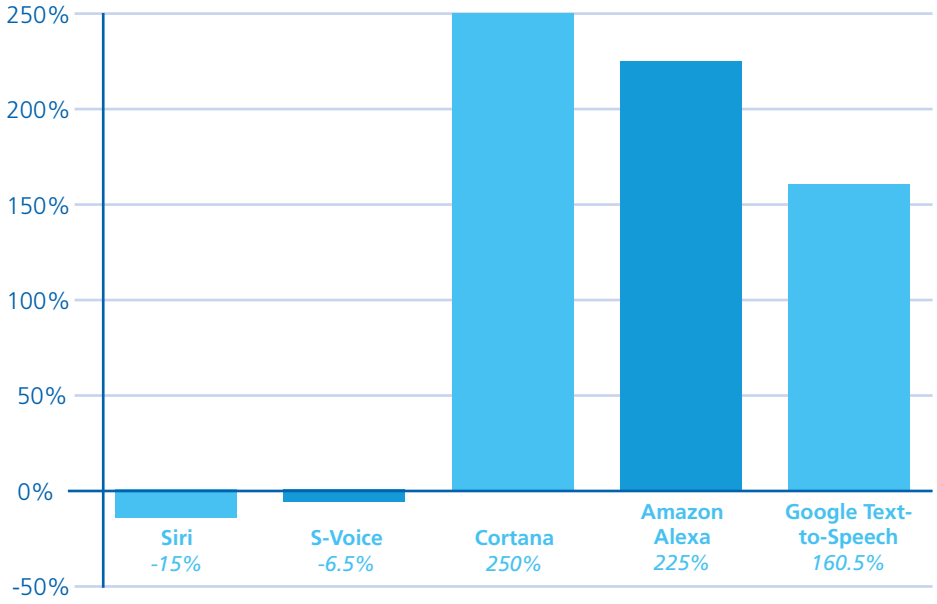
But Alphabet, inevitably, is mustering its forces: its Google Home is increasing sales and has partnerships with retail companies such as Walmart, Target and Walgreens to sell their products via voice command home shopping (Forbes, 2017b).

On smartphones and mobile devices, which is the more important area for voice, Alphabet has a built-in advantage over everyone else, including Apple, which launched the first personal assistant, Siri, on the iPhone back in 2011. According to Gartner, Android phones represent 86% of the world's smartphones, with Apple iOS devices at just under 15% (Gartner, 2017b). Google also competes on iOS devices, with a voice search app that can now also search in multiple languages at the call, "OK, Google".

Siri on the other hand may be in need of a refresh in order to avoid falling behind. Although currently it is probably the market leader outside China for the single most popular personal assistant app, with the company claiming that Siri reaches 375 million users on a monthly basis, others are catching up in terms of users and Siri may actually be falling behind when it comes to utility (Wall Street Journal, 2017b).

Verto Analytics extrapolated from its US panel that Siri's monthly users had fallen 15% from May 2016 to May 2017 and it was the only one of the nine apps measured where time spent per user per month had fallen. In comparison, major rivals Microsoft, Amazon and Google were experiencing big gains, albeit from smaller bases, with Cortana and Google Allo seeing major rises and far outstripping alternatives in terms of the number of sessions launched (Verto Analytics, 2017). At Microsoft's Build 2017 conference in May, Microsoft claimed that Cortana had more than 140 million month active users, although this figure will be aided by the its installation alongside Windows operating systems (On MSFT, 2017).

Figure 4: Percentage Change in Estimated Monthly US Users of Personal Assistant Apps In May 2016 and May 2017



Source: Verto Analytics, 2017

Siri's woes in this area appear to be because Apple has neglected to develop the product and despite being first in, is now behind the crowd. Disruption to project management and personnel as Apple focused on the new iPhone hindered project development of Siri, as did the lack of development of an external ecosystem, around Siri. However, the most crucial issue is Apple's emphasis on user privacy protection, which could mean the company faces a mountain compared to its rivals that puts it behind in the race to true voice capabilities.

Data volume is vital to training deep learning programmes to understand language and speech, as well as to personalize content, which is crucial in voice formats. As Paul English, CEO of travel tech company Lola, pointed out at EyeforTravel North America 2017, "A lot of getting voice to work really well is having good context and good history for that person, so that the voice-powered system can interpret what the person wants." Apple's policy of anonymizing Siri requests and removing data tags after six months hinders this process (Wall Street Journal, 2017).

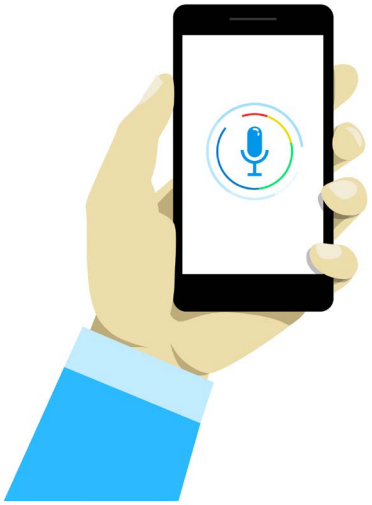
English pointed out the advantage Google has in this field "I'm a huge Alexa fan, but I think Google is going to have a big advantage as they have a lot of the context. When you do a simple query to Google Home, it can piece together all of that." The disparity was demonstrated by Stone Temple Consulting Corporation, which quizzed the leaders with 5,000 questions and found that the Google Assistant had a clear lead over Cortana, Siri and Alexa when it came to questions they attempted to answer and the correctness of those answers. Siri was the bottom performer.

Stone Temple found that Google Assistant was able to answer 68.1% of questions with a direct answer rather than a generic search result and achieved a completely correct answer in 90.6% of those cases. Siri answered 21.7% of questions and only got 62.2% of those correct. While Google Assistant had a particularly prominent lead when it came to the percentage of questions it was able to answer verbally, they also noted that Cortana had made strong progress to become a leading contender. It answered 56.5% of questions with a non-generic answer with an accuracy rate of 81.9%, which makes it the second most potent player in Stone Temples tests (Stone Temple Consulting Corporation, 2017).

3.2. The Mandarin Candidates

The Chinese government has made the development of AI a strategic goal and in the field of speech recognition the country is surging ahead, helped by a couple of internal advantages. A vast population, heavily connected to their smartphones and in need of voice-to-text capabilities creates an excellent internal market. It also leaves Chinese companies with the potential to access to a vast repository of data, data that can be collected, analyzed and deployed with far fewer legal data security and privacy restrictions than in the EU or the US. This latter point could be key, as the quantity of data is key in this kind of machine learning, especially as engineers tackle the next challenge of getting AI to understand and respond to speech in a contextual framework.

Baidu is taking the field of speech recognition incredibly seriously, reportedly pouring in around USD3 billion since 2015 to the time of writing into AI research (Bloomberg, 2017). It has brought in talent from outside China, including a team in Silicon Valley, and has periodically hired thousands of freelancers to provide it with language data to train systems.



This has allowed the company to rapidly build up a suite of language products, including multiple APIs, an open-platform operating system based around voice (known as the Duer OS Prometheus Project), and is now on the third iterations of its Deep Speech machine learning exercise. The latter is a deep learning programme largely developed by their US-based team to demonstrate that machine learning could be used to understand language contextually from end-to-end through training alone and to do so in multiple languages. It has been successful enough to be deployed in real-world applications and in some instances is reportedly better at transcribing than native speakers.

These efforts appearing to be bearing fruit for the company and may point the way forward for a voice-based ecosystem. Baidu claims in November 2016 that "the daily requests for speech recognition grew from 5 million in 2013 to 140 million this year, and the number of daily requests for speech synthesis stands today at 200 million. In the meantime, the number of developers using Baidu's speech system has also grown from 10,000 in 2014 to 140,000 this year." (Baidu, 2016)

There is reason for Baidu to throw resources at the issue, as not only is the market ripe for voice but they are in fierce competition with a key rival in China. The current crown in terms of reach for voice products belongs to a little know company in the West – iFLYTEK.

iFLYTEK largely powers third parties with its voice recognition software, hence why it is less known in its field than other players but the company has been in operation since 1999. As its products are pre-installed on a number of Chinese smartphones and are used across a wide variety of sectors, including automotive, health care, education, call centres, and appliances, they have one of the deepest datasets to play with.

According to the company, they claim more than 700 million end users, which they believe gives them more than 70% of the Chinese voice market. Media reports more widely quote a figure of around 500 million regular users, which is still a vast userbase and data source, This has allowed them to train the algorithms to reputedly have an accuracy rate of 98%, which would put in at the very least on par with any other software currently deployed (Medium, 2016). iFLYTEK is also attempting to create a dependent ecosystem for its voice offering, with more than 2,000 companies operating their products and the heart of the company running through a cloud solution that reportedly is used by tens of thousands of partners (iFLYTEK, 2017).

Both Baidu and iFLYTEK also have the blessing of the Chinese state, which is a powerful ally to have on board, with the latter particularly close, going so far as to assist in police operations (The New York Times, 2017).

3.3. Concerns

Some people are worried about the dominance of big brands. Tim Gunstone, managing director of EyeforTravel, said travel firms do not want to repeat the pattern of the internet revolution.

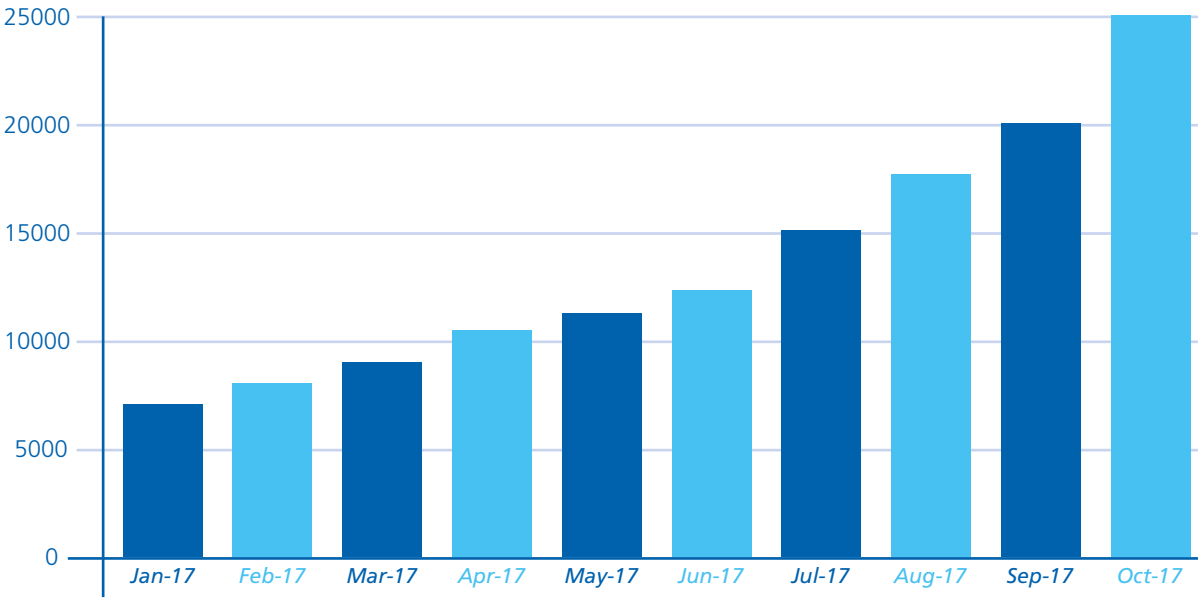
"Google was the most amazing way to sell hotel rooms out there, they piled in and Google ratcheted up the price so it is no longer affordable," he said. "The industry has developed strategies to cope with effectively a media monopoly currently, but this is going to happen with Amazon voice, and Google voice and all the other voices coming along. The monopoly aspect is the most worrying thing."

Fabrice Otaño, chief data officer in AccorHotels group, agrees that when the voice devices start charging companies to be listed in results, the fight begins again. "What we don't know is how much we have to pay to be referenced behind Google Home," he said. "If Booking.com invents a new voice assistant and will pay three billion to be referenced, it's the same battle as today but on a different channel."

It's not just suppliers that should be worried by the potential monopoly aspect either. The AI that powers voices is by necessity learning constantly to try and improve the effectiveness of its responses. If intelligences continue to be designed and refined to the point where they might pass the Turing Test (where an AI is indistinguishable from a person in conversation) then even more companies could be cut out. "The bigger disruption that's going to happen around search and voice-driven search is when artificial intelligence and digital assistants can search everything and be the ultimate meta and find the five closest properties in a given price range, specific to your priorities. Who owns that data? Is it the digital assistants?" Points out Stuart Greif, formerly a senior executive at Microsoft and now one of the leads at Amperity, an AI data platform.

"The question is will the digital assistants continue to partner with third parties?" he asks. "Will they have a dominant position, or at some point will the digital assistants become powerful enough that it obviates the need for third parties to plug in?"

Figure 5: Number of Alexa Skills Available in the US – January to October 2017



Source: Voicebot.ai, 2017; GeekWire, 2017

3.4. Mycroft: Open Source Alternatives

There are other options to the tech giants. Nate Tomasi, chief operating officer at Mycroft.AI, is working with an open source personal assistant that aims to challenge the market leaders – and he believes increasing concerns about our personal data could steer businesses and customers his way. "All the other players in this space are really concerned about one thing: Your data," he said. "Building ad profiles for users so they can direct traffic to sell you something. If you think about the importance of privacy, someone or something listening to you interact with your loved ones or colleagues has to be one of the most private moments."

By contract, his firm pledges only to use data to interact with customers at the time of a query, and has a specific clause for people to opt in so the artificial intelligence can use data to learn. He added: "At Mycroft, our goal is to provide the most relevant answer, not the one that has paid us for the search."

3.5. The Tech Isn't Quite There Yet

Excitement abounds about voice – alongside a degree of nervousness – but travel expert Del Ross points out that we are a long way from receiving apposite, accurate results from voice searches on our home devices or mobile phones.

In his own experience, the results you'll get to a voice search for something like a hotel booking question on your mobile phone today are "pretty terrible". He explained: "The search engines have to be smarter about what information to deliver orally and on screen. Suppliers have to deliver content that's optimized for listening – that's different and nobody does that today. I've done some testing across different suppliers and intermediaries and it doesn't appear any are designed for this to be read aloud."

For Tim Hentschel, CEO of HotelPlanner, which is dipping its toe into voice search, brands need to work harder at improving their capabilities: "You can't go too broad … because - this is the feedback I've got more often than not – [customers] start asking it anything and everything and you just get a horrible user experience and then your assistant on Alexa's store gets bad ratings and quickly ruins your brand reputation," said Hentschel at EyeforTravel North America 2017. "The instructions that come with how we are going to communicate in AI with a virtual assistant have to be very specific and what you want them to achieve has to be quickly obtainable."

He gives an example of a simple and specific skill that could be implemented on Alexa: "I can see an easy use case for just 'Alexa, what are my Marriott rewards balance and can I use it to book me this room.' That could be done tomorrow just to pull up reward balances and that's helpful."

For IHG, they went back to basics to try and avoid the potential pitfalls of a bad voice experience by bringing in a human element and training their Alexa virtual concierge through their call center, "Central Reservation Offices (CROs) have been trying to manage a downward cycle in that not many people are calling them anymore, but they know a ton about the way people actually talk, their cadence and what they ask for," said Bill Keen, IHG's VP of mobile solutions & digital guest experience at EyeforTravel North America 2017. "Through voice listening tools they actually powered our initial Alexa implementation in the hotel rooms, where we actually had a repository of things that guests normally ask when they call the call center desk and we could actually build it into. Voice is sexy again. I do believe that's the next interface for us."

For all the presentation videos from EyeforTravel North America 2017, click here.

4. CASE STUDIES: CHANGING HOW CONSUMERS SEARCH AND BOOK TRAVEL

Some companies aren't just thinking about voice assistants – they are partnering with major providers or building their own.

4.1. Amazon Alexa: Heathrow Airport Talking to the Clouds

Steve Glenfield, head of digital at Heathrow Airport said the London operator is launching a "proof of concept" app with Amazon Alexa, so that people can search for the status of any flight.

"We've been looking at the latest trends, and seeing that Amazon Alexa is probably the largest out there in the home," he said. "We decided to go with them, to make an app and we think we are the first airport in the world to do that. It's a very simple flight information status [search]: most people want to know if a flight is on time, if they are meeting someone, their partner is coming home, or before they travel."

If uptake is good, and Amazon opens to third-party transactions, they will look at flight bookings via voice and potentially ancillary sales such as taxis to the airport. The app is only available in English, and even then, there were challenges. "Getting a flight number like AI177 right is quite tricky," he said. "We default to a flight number, if we don't recognise it, we ask you to name the airline and then the flight numbers." The other challenge is people's embarrassment about talking to a device: "We talked about putting Echo Dot [speakers] on flight screens at the airport so you just walked up and talked into them – but we don't think the environment is ready for it. We're starting in the home with a proof of concept because that's where we think people feel comfortable."

4.2. Google: Trainline Tells You How Fast to Run

Jonathan Moore, chief products officer of Trainline rail booking and search firm, told the **EyeforTravel Amsterdam 2017 conference** it believes voice queries will become the "new paradigm". In November 2017, it launched a new voice app for Google Assistant – available via Google Home speakers and Android mobile devices.

"We think voice has the potential almost nothing has," he said. "It's complex to get right. We've been working with this for three months with Google to search in real time for your commute. It will tell you how long it takes to walk to the station and a bunch of smart data information [including] the likelihood your train is going to be delayed."

He added, though, that people's privacy concerns could affect data collection. "Generationally, there are going to be extraordinary differences in how happy I am to share my data," he added. "I might be the last generation to have a strong personal opinion. The generation that follows feels fundamentally different. It will be interesting to see how legislation copes with that."

4.3. The Independent: Edwardian Hotels' Virtual Butler at Your Beck and Call

Less than two years ago, Edwardian Hotels' director of information technology Michael Mrini dreamed up a new butler service via a text-based app. Now the UK hotel chain's award-winning service responds to voice commands too.

"We went from SMS to a chat app, and now Edward can talk as well – a lot of people think he's a butler!" said Mrini at the **EyeforTravel Amsterdam 2017 conference.** "With everything we did, I asked guests to provide feedback and one of the biggest requests was to make it voice enabled. The technical challenge was in finding the technologies and voice library."

On the back end, the system is integrated with a universal data pool and an array of apps, updating staff devices every few minutes. Now, Mrini is working on putting Edward responsive speakers in hotel rooms too – not using major voice-responsive systems such as Google Home, but independent technology.

5. CONCLUSION: SHOULD YOU ANSWER THE CALL?

Tech is getting better, and it's inevitable that more services will be provided via voice command in the future. Whether or not you make your own voice app, partner with a giant or open source virtual assistant, your media channels will need to respond to the call.

Will your brands appear on a voice search when someone asks about, say, European holidays, wonders Dan Christian of The Travel Corporation? Lola's Paul English believes that "ultimately talking to your phone and saying I want a hotel tomorrow night and I am going to be in Chicago Thursday and then having it know enough about the context and enough about the personalization requirements that it does everything for you" is the future.

When that future might arrive is difficult to say. From the tech side the possibility may be sooner than you think given the speed of progress in terms of the underpinning AI. However, consumers conduct a large amount of research for their vacations independently and want choice, so they may be reluctant to cede this level of control to a voice protocol.

"When you do a normal screen based search, a whole screen of information comes up – but on a voice based search there isn't time for Siri, Echo or Home to read out the whole page," Sam Turner, sales director of Hotelbeds Group told EyeforTravel. "A much more personalized response is required to give you the most relevant information only, and nothing more, otherwise it simply doesn't work."

Legislation could be another issue. When the European Data Protection Regulation is enforced in May 2018, you'll need customers to opt in explicitly to their data being used for marketing, which could be a problem – unless, like AccorHotels Group's chief data officer Fabrice Otaño, you encourage people to sign up to your loyalty programme and agree.

Voice search isn't just about providing apps that people can use to find your products, but also what kind of response is read aloud back to them – if they want a voice-to-voice transaction.

Del Ross, hotel and travel expert, adds that companies might even think of a completely different site, choosing key information to read aloud. "In the early days of Google, it had the 'I'm feeling lucky' function," he said. "They don't particularly like that as it doesn't make them as much money at the moment – but that could be the best option, that the computer distils the best option for you. Right now, it doesn't work today, and if it did, it's not apparent that it would give you good results."

For Gunstone, the advertising model will make or break voice search: If there's a monopoly and only adverts dominate, consumers might even choose a less convenient option for their search or purchase. "On a desktop, you get 20 results, and the first 10 are adverts," he said. "On mobile you get two results, maybe one, and that's bound to be an ad. Voice is going to be more. In my mind it's a huge barrier to trust it, but I don't hear anyone else saying these things."

Voice, everyone agrees, is calling: how it picks up has a lot to do with your response, the behaviour of the major technology firms, privacy concerns…and how quickly people get used to talking to little boxes.

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