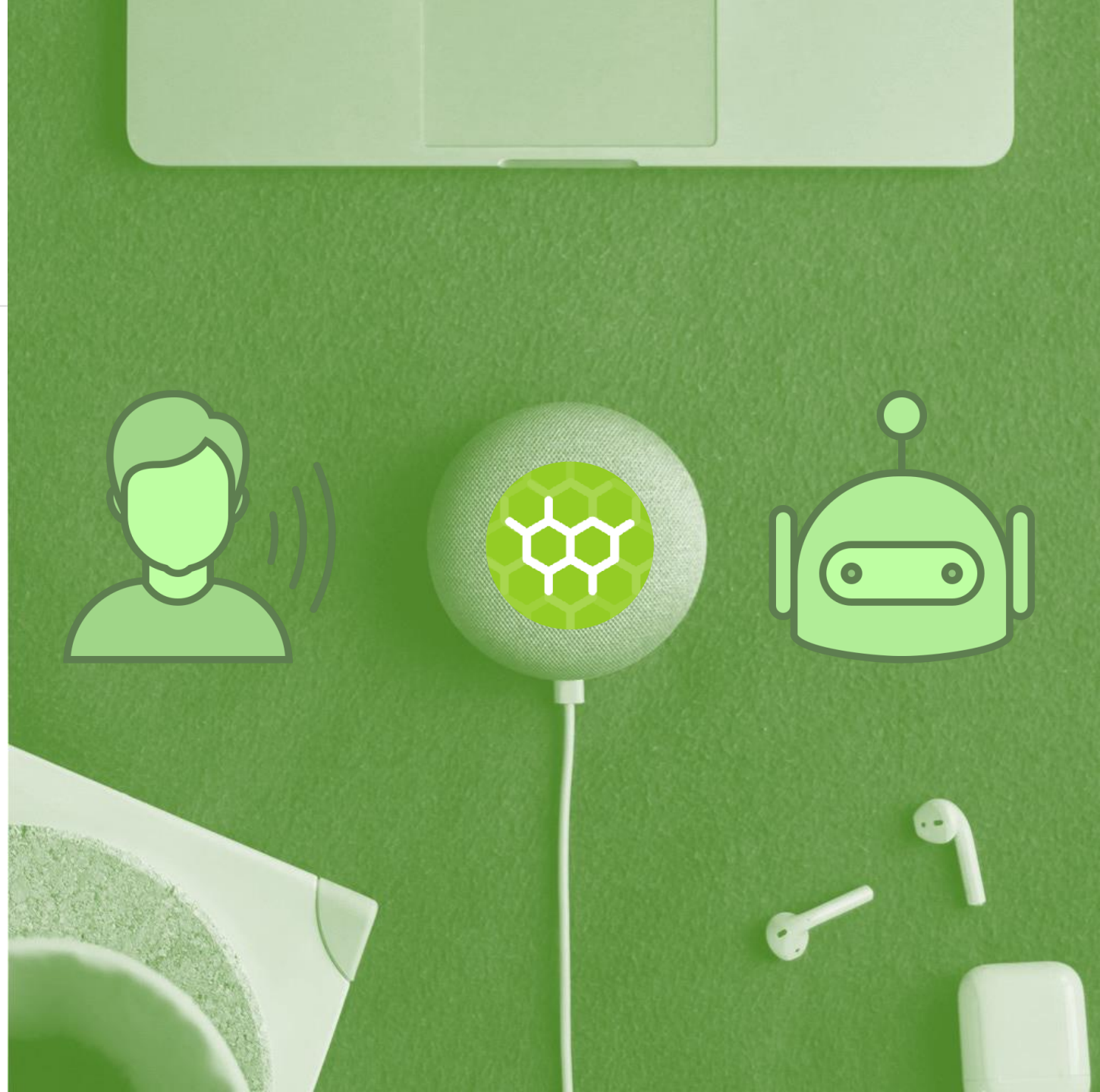




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According to comScore, **50%** of all searches will be voice operated by 2020.



# INTRODUCTION

According to the Accenture Technology Vision inquiry, out of more than 5,400 IT managers and businessmen, **79% agree** that the introduction of artificial intelligence mechanisms will help accelerate modern technology implementation in their companies.

Voice control brings fresh opportunities to e-commerce. As voice recognition technology continues to improve in accuracy, and services continue to be added, more consumers will shift to voice engagement. Screen plus voice interface makes intuitive sense and companies will be able to combine these to offer customers a better and more engaging experience.



A voice-first device is an always-on, intelligent piece of hardware where the primary interface is audial, both for input and output.

Digital voice assistant devices – also powered by artificial intelligence – are stand-alone hardware devices that use voice interfaces for a range of consumer services such as playing music, turning the heating and lighting on and off, and providing news, weather and sports scores.

2017 VISION TRENDS

**THE FUTURE OF TECHNOLOGY:  
TECHNOLOGY BY PEOPLE,  
FOR PEOPLE**





# KINDS OF VOICEBOTS: TWO WORLDS, SINGLE ECOSYSTEM

## VOICE + TEXT BOTS — HYBRID VOICE + CHAT SUPPORT MODEL



In this report we will discuss voice assistants (usually task-oriented) and talk about voice powered chatbots. This two technologies inspire a great interest from the wide audience. All voicebots act like conversational agents. In addition to integrating a voice interface, they also act as personal assistants and are able to perform simple tasks like making phone calls, reading messages, or setting alarms and reminders.

The applications of this technology extends to areas such as driving aids, marketing, e-commerce, in which chatbots are a key piece.

## VOICE ONLY BOTS—VOICE CONTROLLED DEVICES





# SMART AUDIO SPEAKERS ARE THE FASTEST-GROWING CONSUMER ELECTRONICS MARKET SEGMENT

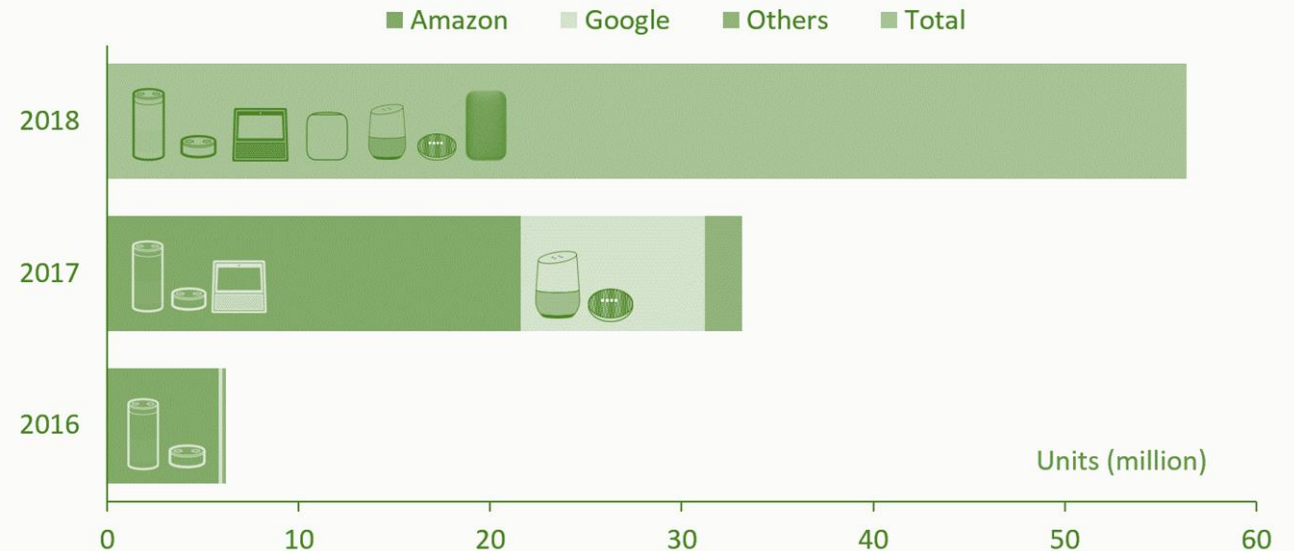
The US takes the majority share of the global smart speaker market and will remain the largest market through 2020, based on Canalsys forecast.

Despite the notable success in the US and Western Europe, China continues to ignore the products of two giants, Amazon and Google. The market will see a huge boost in 2018 as hardware vendors, software developers, voice recognition providers and operators join the game just in time to capitalize on the growing consumer awareness of smart home and artificial intelligence.

According to Google UK, 75 percents of consumers said they search more now they can use voice search, while 83 percents of consumers agree that voice capabilities will make it easier to search for things and 89 percents believe voice will enable users to find things more quickly.

## 56.3 million smart speakers to ship in 2018

Worldwide smart speaker estimates and forecasts by vendor, 2016 - 2018



Source: Canalsys estimates and forecasts, Smart Speaker Analysis, December 2017



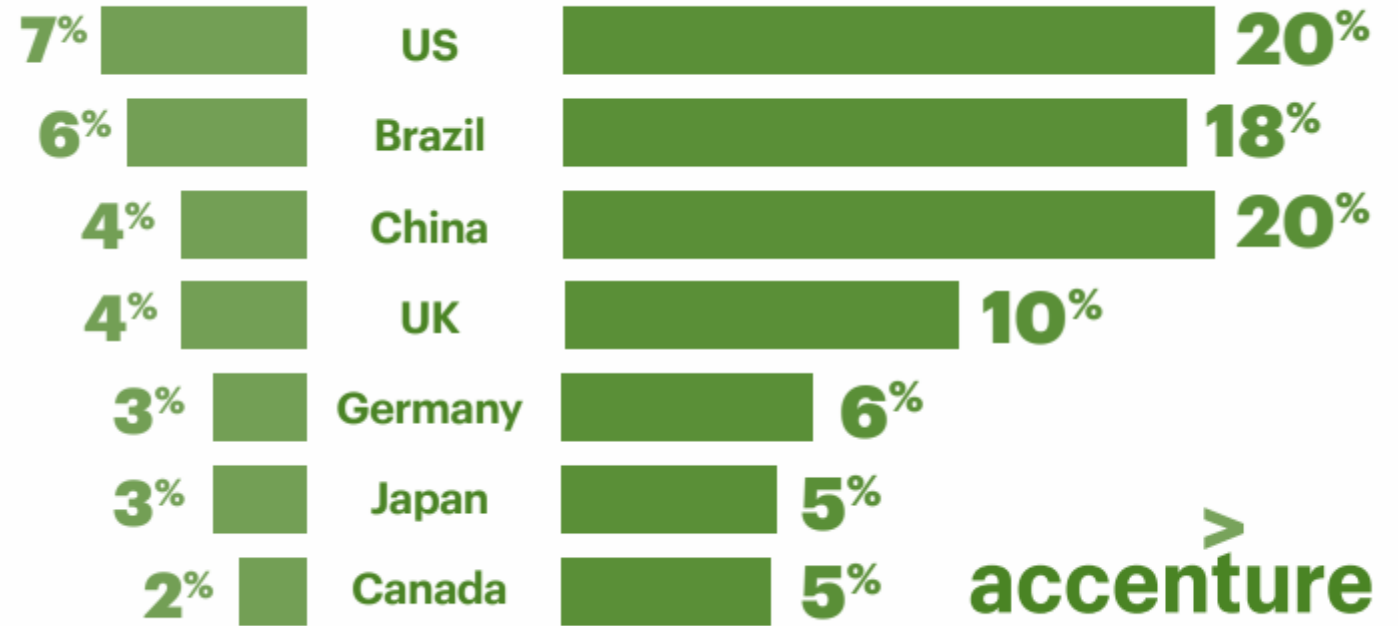
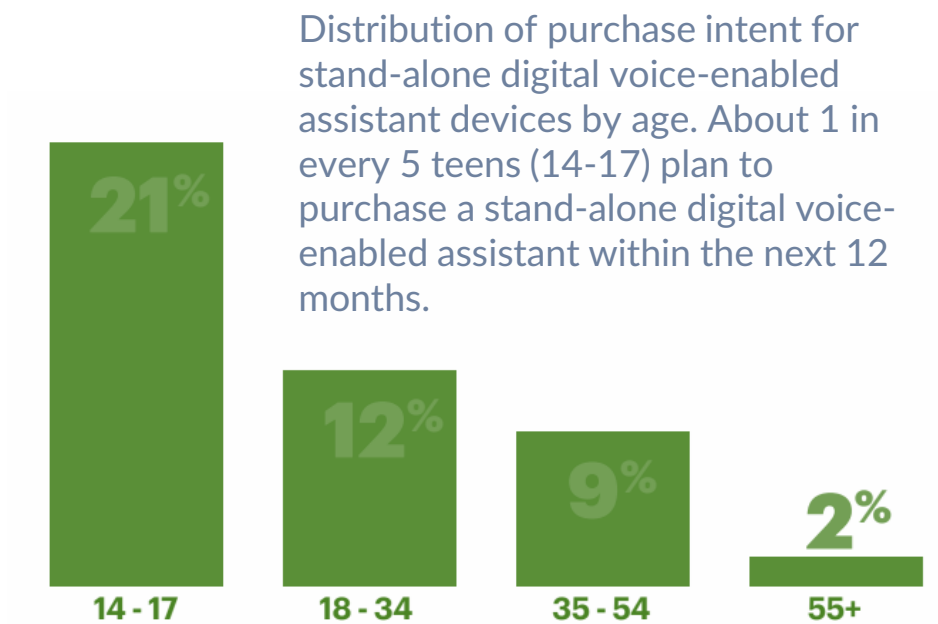


The demand for digital voice assistants is not only increasing but they are also satisfying consumers' wants and needs.

# DEMAND FOR VOICE ASSISTANT DEVICES

Consumers are starting to interact with brands in the same way they interact with people. It's informal, intuitive and immediate.

Current ownership of standalone digital voice-enabled assistant devices by country, and purchase intent for the next 12 months.





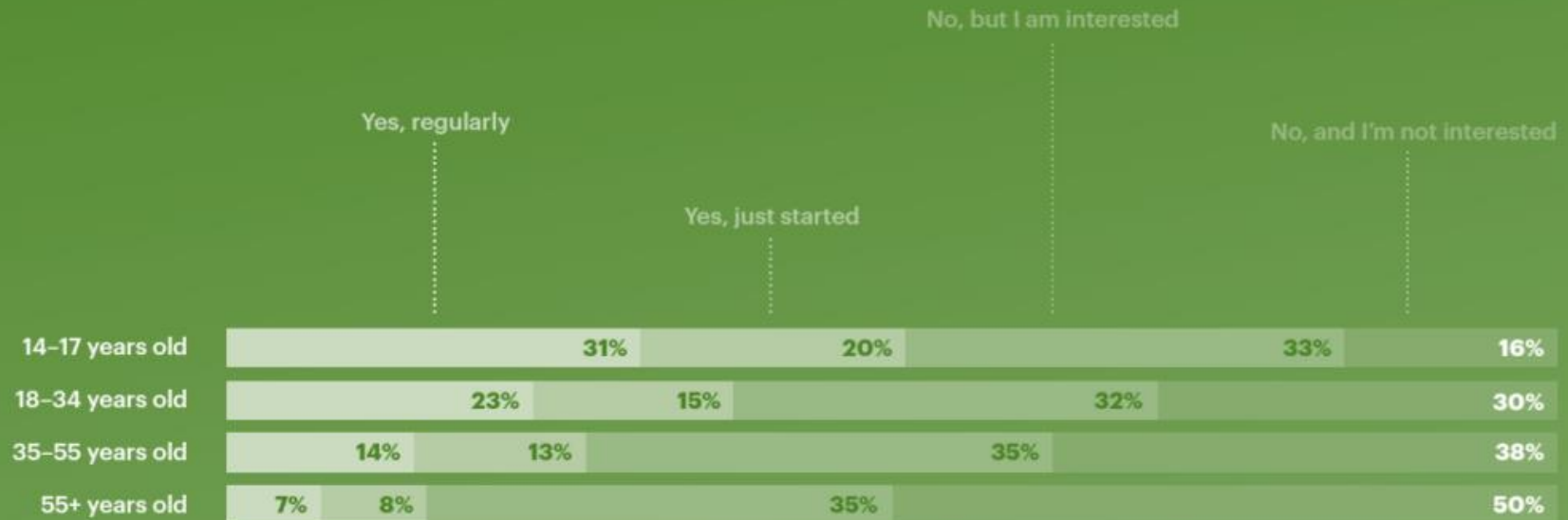
Stand-alone, digital voice-enabled assistants are more exclusively in the hands of early adopters, but a strong majority of early adopters are using them on a daily basis.

# USAGE OF SMART SPEAKERS WORLDWIDE

Accenture's Digital Consumer Survey in 2017 included 26,000 people from 26 countries. The survey found that 46% of US consumers are using "voice-enabled digital assistants". This numbers were even higher in India and China - 55%.

Equally interesting is the breakdown by age group which, predictably, shows more usage among younger users. Over 30% of 14-17 year olds use the voice assistants regularly with another 20% that just started and 33% interested. Thus, 84% of teenagers either already are using any kind of voice assistant or plan to.

## Are you currently using embedded voice-enabled digital assistants?



Sample: 25,996 respondents



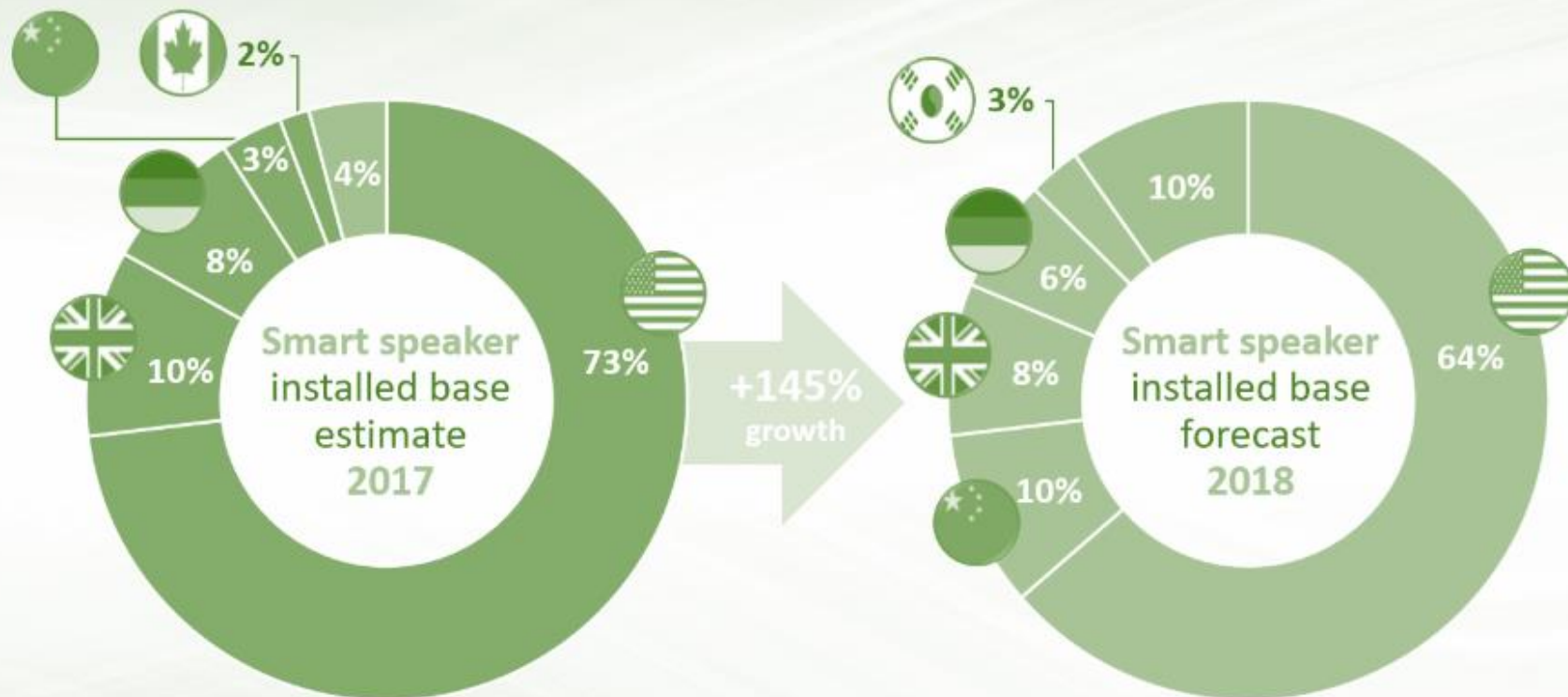
“China is still a nascent market for smart speakers, but it is a sleeping giant”

## SMART SPEAKERS DISTRIBUTION: TOP 5 COUNTRIES

As competition intensifies, Chinese vendors will expand their product portfolios to hit more price points and offer a greater range of capabilities. But for long-term growth in China, a more complete voice service and better user engagement are just as important. China has massive potential, with more than 450 million households, over three times the number in the US.

Local players, such as Alibaba and Xiaomi, are investing heavily. In the second half of 2018, sales promotions will be an important driver, as vendors anticipate a surge of shipments during the 6.18 Shopping Festival and Singles Day in November.

### Smart speakers installed base: top five countries

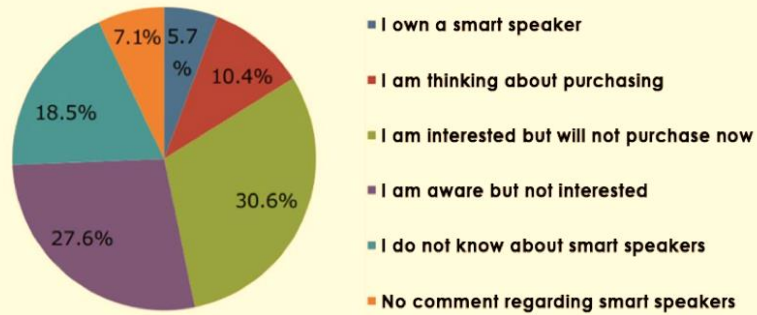




# SMART SPEAKERS AHEAD: NEW PLATFORM

According to Marketing Research Camp, by the end of 2017, the smart speaker ownership rate in Japan among those aged 15-69 was 4.5%, but the same research conducted two months later in February of 2018 yielded an increase to 5.7% showing continued segment growth.

**Smart Speaker Awareness and Adoption (Japan)**



Source: Marketing Research Camp

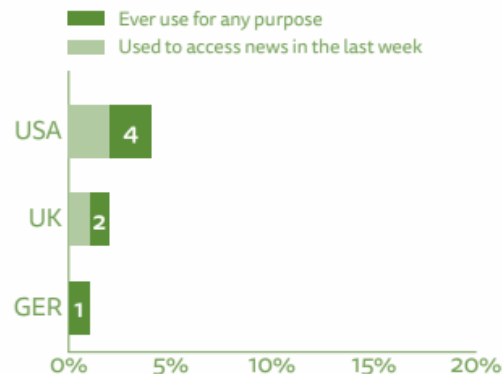
By 2021, there will be **7.5 billion** digital assistants in the world.



More than the current world population, according to the U.S. Census Bureau

## EMERGING DEVICES FOR NEWS – USA, UK, GERMANY

### Voice-activated connected speaker



**30%**  
of web browsing will be done without a screen (by 2020).



**20%**  
of brands will abandon their mobile apps (by 2019).



**100 million**  
consumers will shop in augmented reality (by 2020).





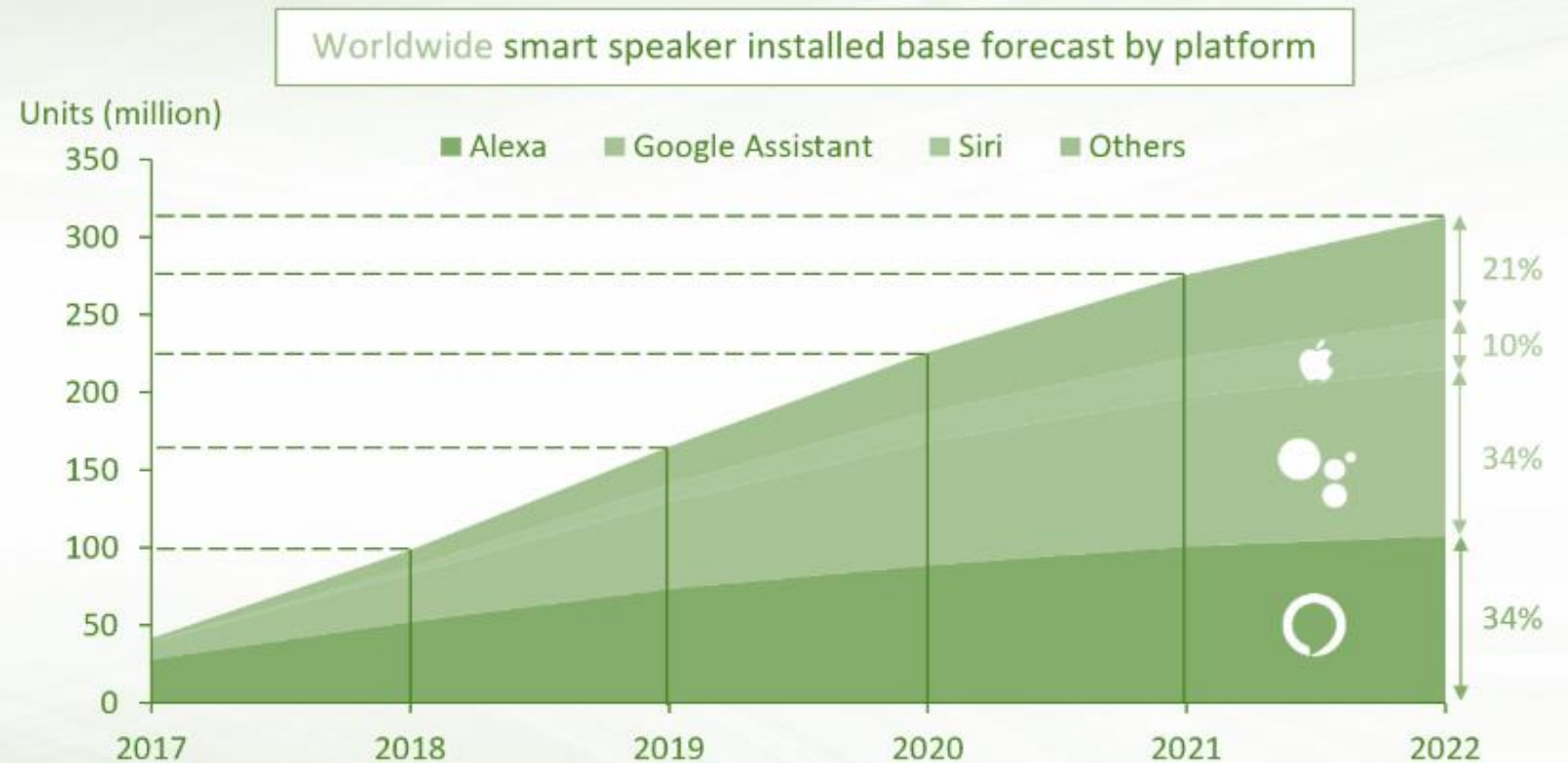
According to Accenture research 63 percent of respondents said they are either using or interested in using a digital voice assistant device, with the vast majority (94 percent) of current users either satisfied or very satisfied with these products.

# SMART SPEAKERS AHEAD: 100 MILLION BY END OF 2018

Canalys predicts that the smart speaker installed base will approach the 100-million mark by the end of this year, making it almost 2.5 times bigger than at the end of 2017. The installed base will keep growing, more than doubling in size to reach 225 million units by 2020.

Amazon Echo devices will account for over 50% of the installed base in 2018, while Google's Home series will account for 30%. Apple's HomePod models will trail, accounting for a meager 4% of the 2018 base.

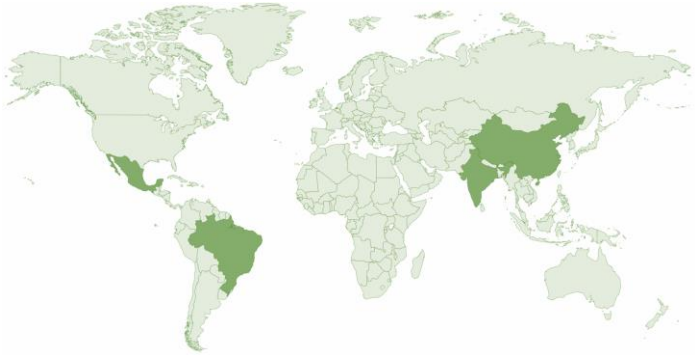
## Smart speaker installed base to reach 100m in 2018





## VOICE EXPERIENCES ARE A PART OF CONSUMER LIVES WORLDWIDE

Accenture claims that smart speakers will be owned by one third of the online population in China, India, Brazil and Mexico as soon as the end of 2018.



According to iProspect 15 percent of the British population is currently using voice-activation technology — this equates to 7.4 million people.



Juniper Research predicts that by 2022 over 70 million U.S. Households will have a smart speaker such as Amazon Echo, Google Home or Sonos One.

Source: Juniper Research/TechCrunch



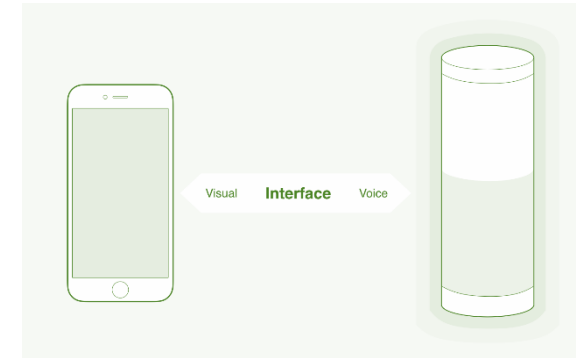
It's estimated that 18% of Americans now own voice assistant powered devices and 65% of owners say they wouldn't want to go back to life without them.

Source: The Smart Audio Report from NPR & Edison Research  
Fall/Winter 2017



# VOICE ASSISTANTS VS. OTHER KINDS OF PLATFORMS

Smartphones have apps, and smart speakers have “skills” or “actions” – applications created by developers and companies that can be used by listeners.



**26%** of smart speaker users have used them to order products using voice. **11.5%** do so regularly.

In addition, a recent survey from Narvar found that **24%** of virtual assistant users (Siri, Google Assistant) are also shopping using voice.

Consumers who own in-home digital voice assistant devices are using their smartphones less often for entertainment and online purchasing, according to a recent Accenture report.



## Utility & Task

- "Do Something For Me"
- Weather
- Control Smart Devices
- Hands-free directions
- Reminders



## Content & Entertainment

- Music
- Games
- Audio Books / Podcasting
- Flash Briefings

\* 71% of Smart Speaker owners say they're listening to more audio (NPR)  
53% of the time this is done with others (NPR)



## Search & Commerce

- Voice Search "I'm Looking For Something"
- Chatbots
- Shopping Lists
- Order for Now - (Food, Taxi, etc.)
- Order for Future



# CONSUMERS PREFER VOICE ASSISTANTS

According to Linknovate research the leading organizations working on Conversational User Interfaces (CUI) are all big tech or communications corporations.

Voice bots can be integrated with other services and data delivery channels.

Bots act as personal assistants and are able to perform simple tasks like making phone calls, read messages, or setting alarms and reminders.

In retail services, bots serve to increase the company profits and improve the user experience.

## Top 3 reasons consumers say they prefer voice assistants over human interaction:

1

**It's Faster**

(49%)

2

**It's More Convenient**

(47%)

3

**It Provides Great Choice**

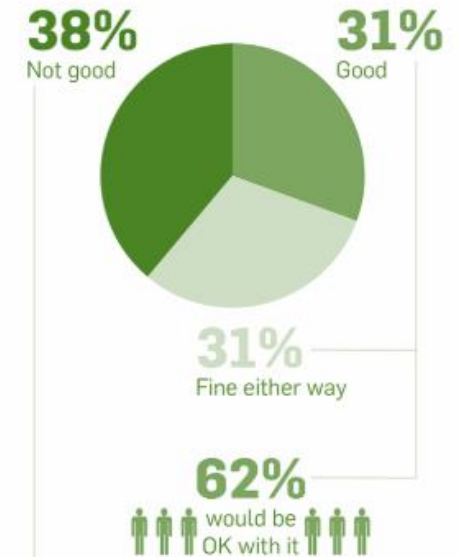
(41%)

Source: Capgemini

## How consumers feel about AI-based apps over humans

Survey (25,996 respondents)

"How would you feel about a computer-based application responding to your query instead of a human?"





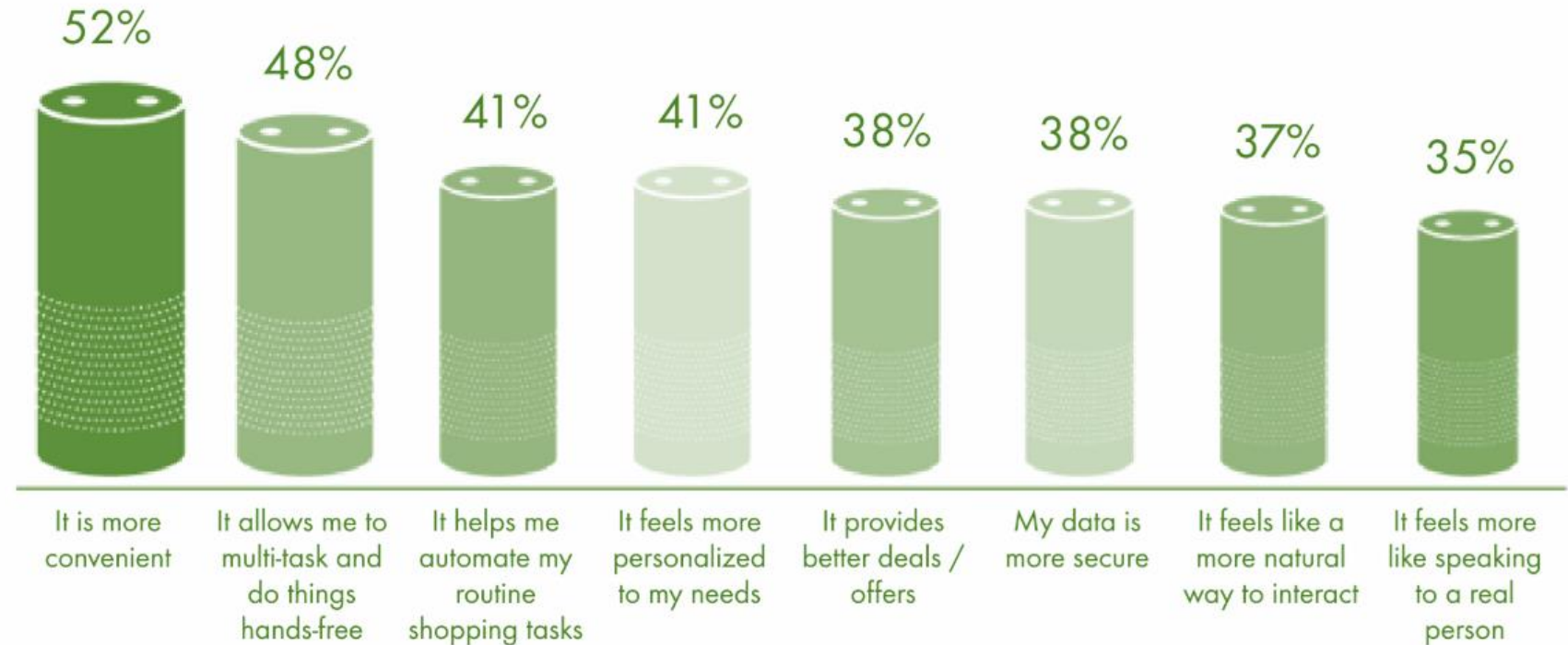


DIGITAL VOICE ASSISTANT owners demonstrate the high involvement - 2 out of 3 employ the help of assistants on an ongoing or daily basis.

## CONSUMER SURVEY: I WOULD PREFER A VOICE ASSISTANT OVER A WEBSITE OR AN APP BECAUSE:

New findings from the 2017 Accenture Digital Consumer Survey over a nearly 26,000 consumers across the globe reveal increasing demand and deeper interactions with standalone digital voice assistants.

**4% own** a standalone digital voice enabled assistant today, and **10% plan to purchase** one within the next 12 months.



**Source:** Capgemini Digital Transformation Institute, Conversational Commerce Survey, October-November 2017, N = 5,041 consumers in the U.S., U.K., France, and Germany.



# BENEFITS OF INTERACTING WITH SMART ASSISTANTS OVER HUMANS

## Voice will help people interact with the world around them

Percentage of global smartphone users who agree with the following:

Source: Speakeasy



**53%**

Voice technology will help people interact more with each other.



**39%**

Excited about a future where voice assistants will anticipate needs and take actions or make suggestions.



**62%**

Love their voice assistant so much they wish it were a real person.

## The benefits of interacting with computer-based applications over humans

Percentage of respondents selecting "completely agree" or "agree"

Available anytime



Less biased



Faster to engage



Faster to provide service



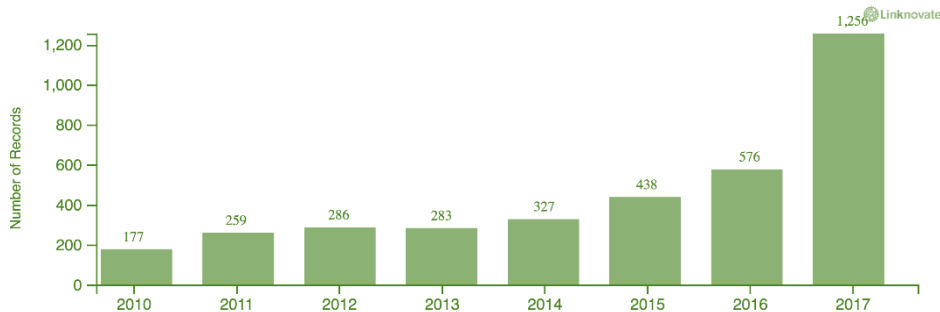
More polite





## WORLDWIDE LEADING CONVERSATIONAL USER INTERFACE INNOVATIONS

Conversational User Interfaces main trends lay in the development of **Service Interfaces** as well as the use of **Interactive Data** to improve the intelligence of the assistant and make the experience as humane (interactive) as possible.



Conversational user interfaces are shown as one of the top technologies in terms of growth in the recent years. And it promises to continue evolving given the great technological giants are betting on it.

Name	Score	Pubs.	Confs.	Grants	Patents	TMs	News	Web
Microsoft	3496.5	1	13	–	49	5	327	–
Google	1445.9	–	2	–	1	4	519	–
Samsung	589.7	–	4	–	8	3	191	–
HTC Corp	458.6	–	–	–	1	39	45	–
Facebook	438.8	–	–	–	–	–	119	–
Verizon Wireless	229.4	–	–	–	11	–	26	–
IBM	224.5	1	13	–	13	–	43	–
Apple Inc	217.8	–	1	–	26	10	30	–
YouTube	214.5	–	–	–	–	–	80	–
Nuance Communications	182.9	1	–	–	11	–	75	–

Top 10 entities worldwide leading Conversational User Interfaces' innovations. Source: Linknovate.com

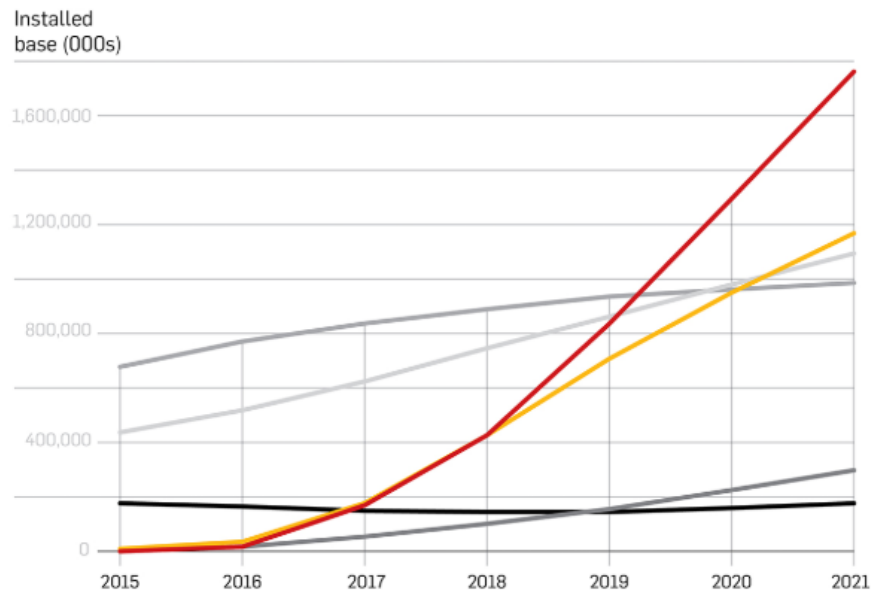


# VOICEBOT ENABLED DEVICES MARKET SHARE VIA

**ADWEEK**

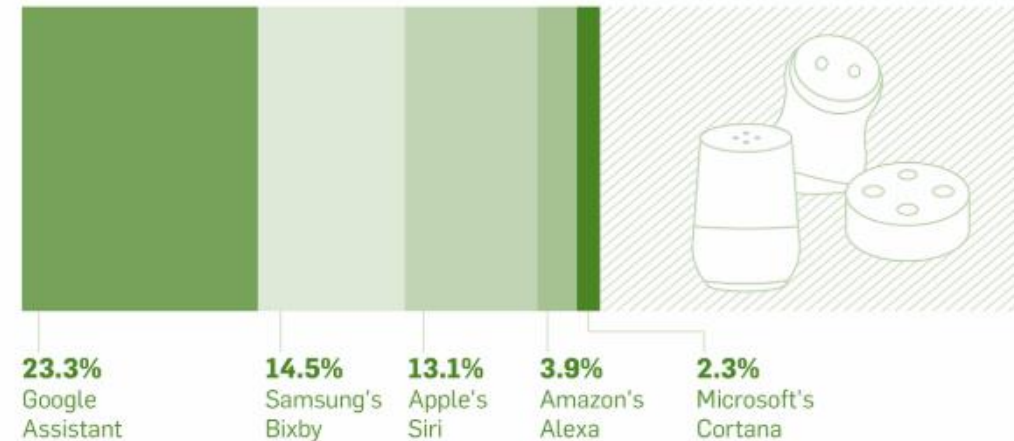
## How they'll grow

Google Assistant  
Chinese Assistants  
Samsung S Voice/Bixby  
Apple Siri  
Amazon Alexa  
Microsoft Cortana

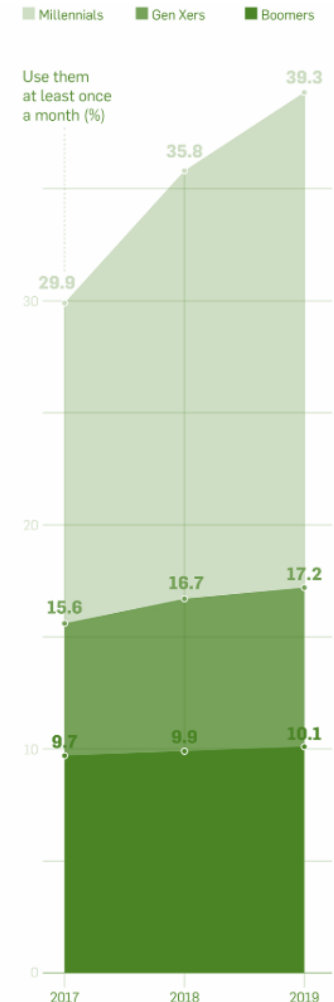


## Which digital assistants will dominate the market?

Projected market share numbers in 2021



According to research by Raconteur, the voice-enabled smart speaker market is dominated by Google and Amazon, with Amazon controlling a 71% share of the U.S. market. Given their popularity, Amazon Alexa and Google Home are the best products for beginners.







Only 11% of respondents who already own an Amazon Alexa or Google Home device will also buy a competing device.

## VOICEBOT ENABLED DEVICES MARKET: GOOGLE BEATS AMAZON

Smart speakers continue to be the world's fastest-growing consumer technology segment, with year-on-year growth. Only in the last year, shipments **grew 210%** and reached 9 million units. Google took the top spot, beating Amazon for the first time, shipping 3.2 million of its Google Home and Home Mini devices, against the 2.5 million Echo devices shipped by Amazon

Rank	Vendor	Q1 2017	Q1 2018	Growth
#1	Google	19.3%	36.2%	483%
#2	amazon	79.6%	27.7%	8%
#3	Alibaba 天猫 TMALL.COM	-	11.8%	N/A
#4	MI Xiaomi	-	7.0%	N/A
Others		1.1%	17.3%	161%
Overall market		2.9 million	9.0 million	210%



The US market share fell below 50% for the first time, partly due to Google and Amazon's focus on expanding beyond their home markets but also because of the increased traction that the technology is seeing with new vendors in markets such as China and South Korea. Vendors shipped 1.8 million smart speakers into the channel in Q1 2018 in China, while Korea overtook the UK to become the third largest market with 730,000 shipments.



Consumers are more likely to ask for a product type, not a specific brand, unless they have strong existing loyalty.

# VOICE TECH SHOPPING CHALLENGES BRANDS

Brands talk candidly about voice tech, before it gets out of hand, so to speak. With speech-enabled shopping offering the ultimate convenience, experts predict that mass adoption of this nascent, integrated technology is inevitable, triggering wholesale disruption across the retail industry.

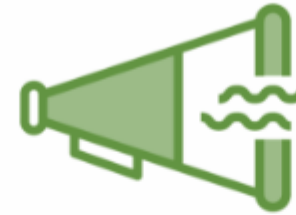
Voice apps that are integrated into a retailer's overall customer strategy and offer some degree of personalisation can certainly help brands build this experience.

A survey by Mastercard found that 20% of EU customers have shopped using a voice assistant such as Amazon Alexa or a chatbot. The survey also found that by 2022, the value of "conversational commerce" could reach \$40 billion or 6% of US online spending.



**69%**

of smart-speaker owners have encouraged their friends to buy one



**57%**

have ordered items through their smart speaker



**31%**

say they are spending more money on Amazon and Google since getting their smart speaker

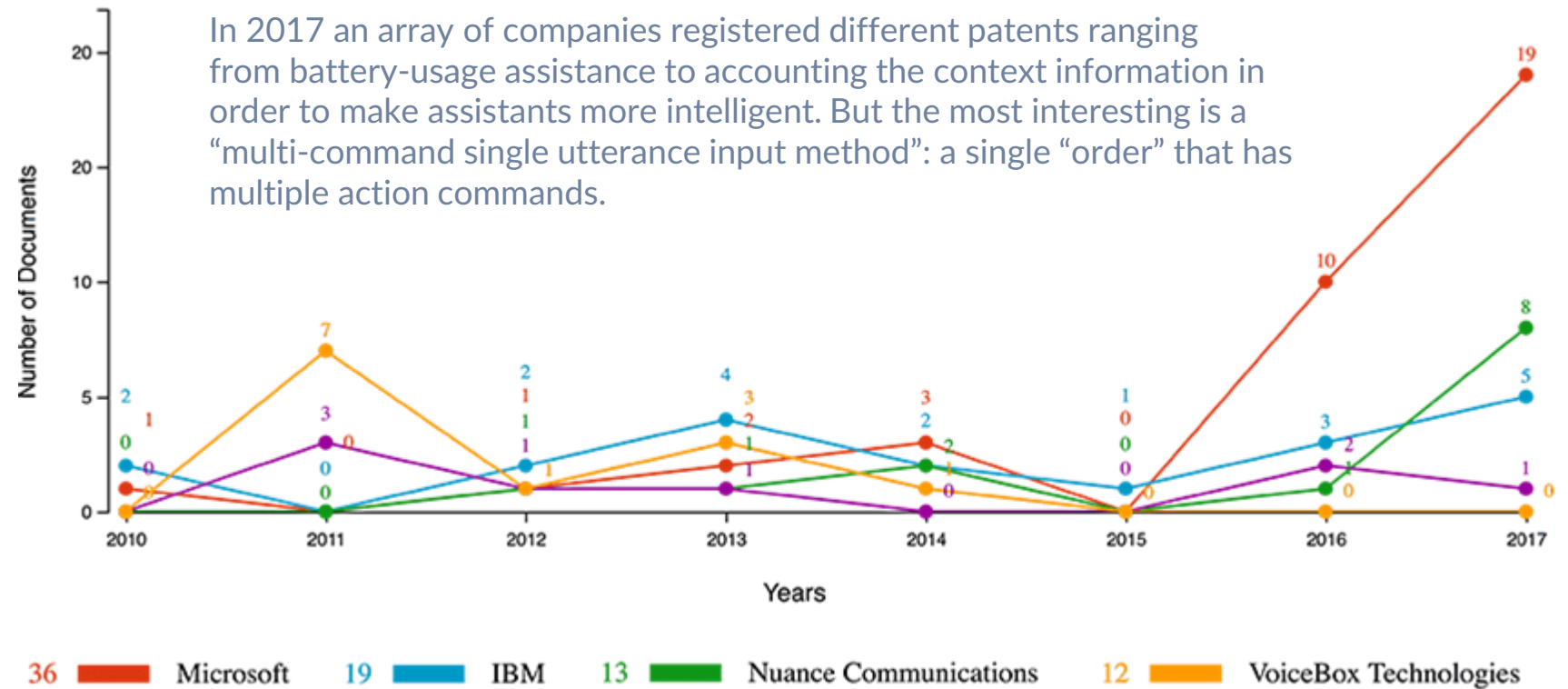


Voice interfaces give an unprecedented opportunity for brands to interact with consumers in an extremely powerful new way.

# INTERACTIVE VOICE TECHNOLOGIES FOR BUSINESS

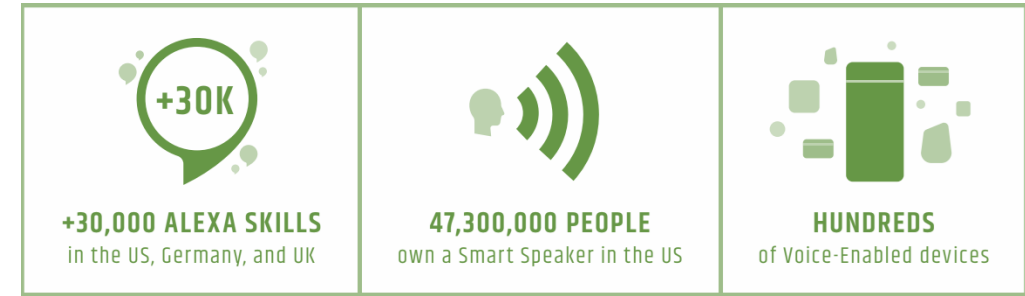
Voice based technology is going to have a huge impact on many sectors, with 50% of all online searches forecasted to be voice-based within just two years.

The rate of uptake is likely to vary based on age, geography and literacy—but some markets and platforms already have high penetration, while globally 10% of search is already voice based.



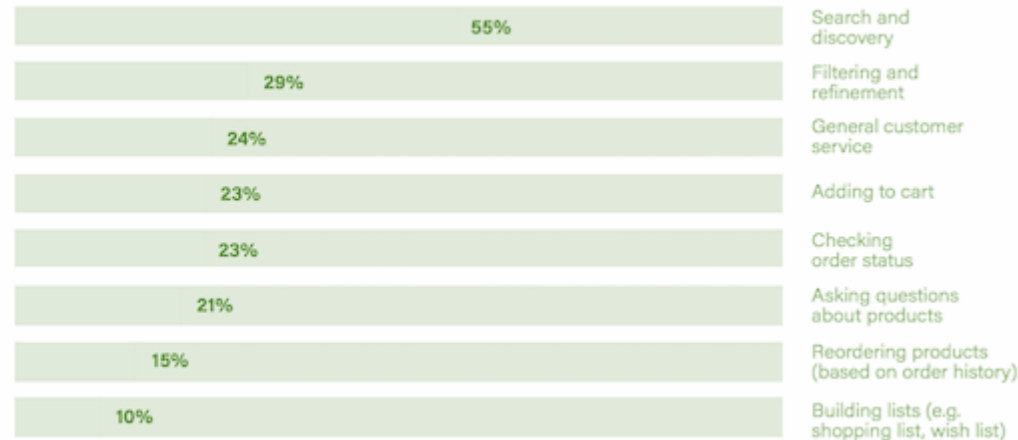


# THE FUTURE OF VOICE INTERFACES



## Of the possible use cases for voice-enabled technology, where do you see it having the greatest benefit?

(Please rank 1-8, 1 offering the greatest benefit)



The Narvar study found that 52% of voice assistant users opt-in to email programs, which is 22% more likely than non-users.

Alexa claims to have surpassed 30,000 skills, and almost 25% of online shoppers, for example, use voice assistants on mobile to shop.

According to a recent report from Voysis and Retail Touchpoints, retailers are investing approximately 14% of their digital budgets into voice technology and these levels of consumer use are aligned with their expectations for the technology.

In June 2017, Google's system was reported to have 95% accuracy (the same as humans, and an improvement of 20% over 4 years), while Baidu is usually rated as having the most accurate system of all with over 97%.





# THE FUTURE OF VOICE INTERFACES IN E-COMMERCE

While the data from various studies generally suggests that between 22-32% of voice assistant users engage in v-commerce, what we haven't known is how they're using the devices to get them to the point of purchase.

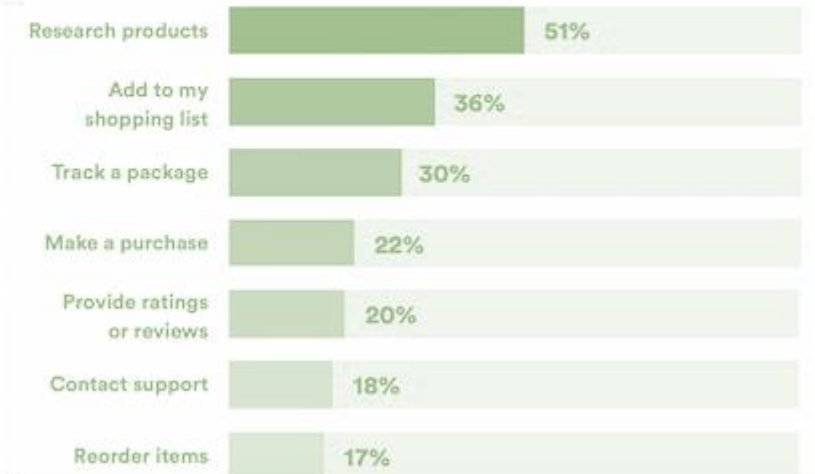
Narvar's study has found that users are turning to voice assistants for the entire purchase journey, from research to re-ordering.

A March 2018 study by Voicebot, PullString and RAIN Agency found that 19.7% of US adults own a smart speaker, up from less than 1% two years ago. In addition, 26% of smart speaker owners have made a purchase by voice, 11.5% make purchases by voice monthly and 16.7% of the general public is likely or very likely to order by voice

## Shoppers use voice before, during and after they make a purchase.



I use voice to:



(Source: Narvar November 2017)



# CHALLENGES AND OPPORTUNITIES FOR BRANDS VIA

# ADWEEK



**80%**  
of global voice technology users say it works best when there's only one answer to a question or command.



**67%**  
of global smartphone users like the idea of being able to ask their products questions about their origins.



**73%**  
of global smartphone users would use voice assistants all the time if they understood and spoke back as well as a human.



**52%**  
of global smartphone users want a voice assistant to help them navigate and find products while they're in a store.





In general, voice and text chatbots will continue to advance due to improved domain specific training data, advanced conversation flow tools and better access to conversation design best practices.

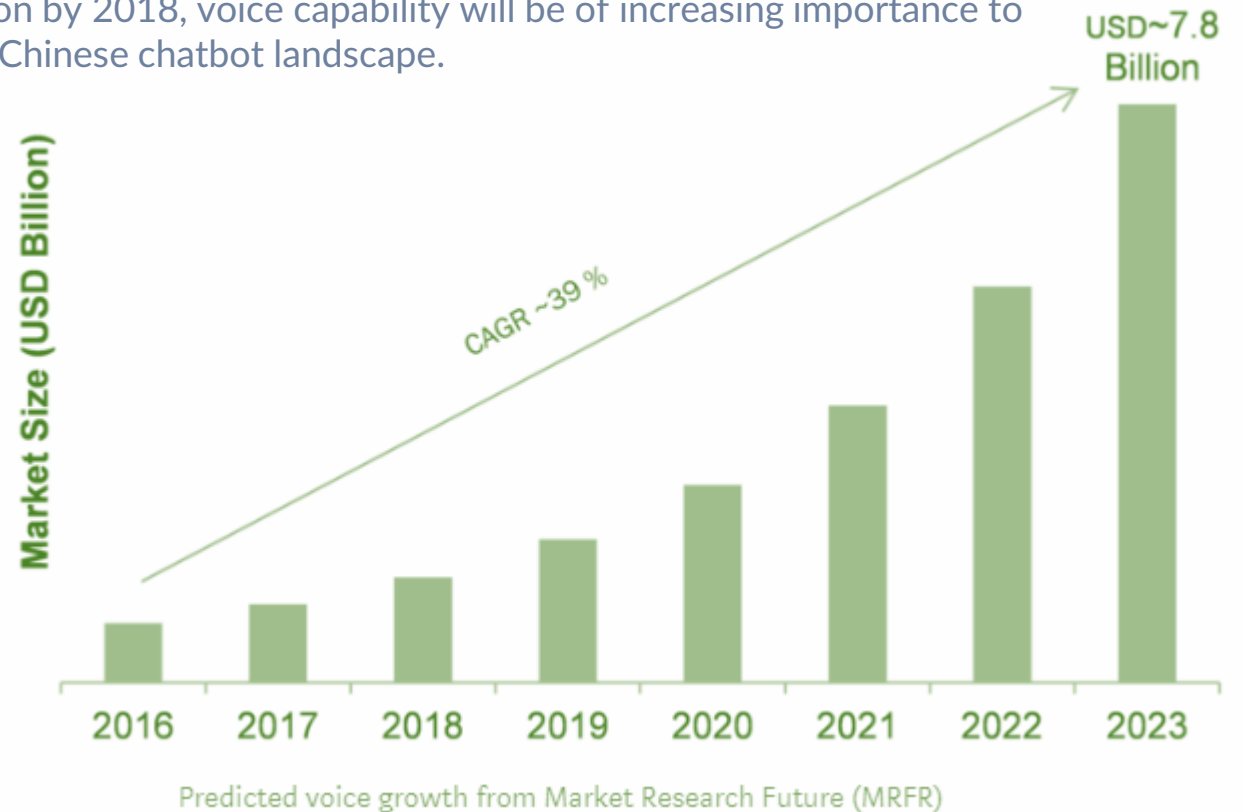
# THE FUTURE OF VOICE INTERFACES

Enter voice. The new channel where you just ask a question to have it answered or request to turn off the lights. The next logical step in interface development. 40+ million devices sold in the first 3 years. This is faster rate of distribution than web or mobile.

Mixed-mode experiences — voice and graphics, chat and web — will become increasingly common and important as customers become equally accustomed to interacting with chatbots via voice applications as they are with text-based applications.

However, in the next 12 months there is strong interest in expanding deployment across native apps and voice channels.

With the Chinese smart home industry expected to reach \$23 billion by 2018, voice capability will be of increasing importance to the Chinese chatbot landscape.





Consumers face challenges when first using intelligent devices  
– especially digital voice assistants. The most common is voice recognition not working properly.

## FEARS AND SILENCE OF VOICE BOTS

According to a 2017 voice search study by KDDI, 70% of users consider voice searching in front of the others embarrassing. In addition, even when operating smart devices in the home by voice, 40% of respondents say “I only do so with nobody in the house.”

Common Sense Media claims that Facebook and Twitter boast a combined total of 100 million fraudulent bot accounts:

Average of 16.4 percent of the followers of Instagram's top 20 accounts are fraudulent. As many as 48 million of Twitter's reported active users (nearly 15 percent) are automated accounts designed to simulate real people, though the company claims that number is far lower. Facebook estimated that as many as 60 million bots may be infesting its platform.

On April 9, 2018, the Pew Internet Center released the report stating that among all tweeted links to popular websites, 66 percent are shared by accounts with characteristics common to bots. The 500 most active suspected bot accounts are responsible for 22 percent of the tweeted links to popular news and current events sites over the period.

**22%**

Voice recognition feature  
did not work properly

**17%**

Was too complicated  
to use

**16%**

Could not connect to  
the Internet

**16%**

Setup did not  
work properly

**16%**

Concern for privacy

**14%**

Did not have the  
features needed





## CONCLUSION

Consumers are ready for new types of interactions with digital devices beyond touchscreens - especially voice control. Conversational user interfaces are shown as one of the top technologies in terms of growth in the recent years. And it promises to continue evolving given the great technological giants are investing in its development. To acquire real competitive advantage, connected speakers will have to go further than just a wide choice of functions by providing the most personalized user experience possible.

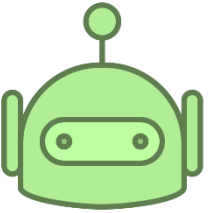
An increasing number of digital devices can be activated and controlled by gestures, touch, and voice. But consumers prefer voice control to any other type interaction with these devices.

Given the relatively low price point for many voice-enabled digital assistants, companies leading the charge with AI-dependent devices and services may risk alienating consumers with products not ready for widespread usage. It can lead to delayed adoption or potential loss of customers to a more capable competitor.

In long term many brands will benefit from having some or all of their core digital services available over voice interfaces and that the recent proliferation of the technology has created opportunities in the short and medium terms as well. There's no clear voice-platform winner yet, but Google's gaining steam quickly. All the researches claim that China's a big growth area.

### Voicebots real-life features:

- Reduced operational costs.
- Immediate customer interaction with 24/7 availability.
- Highly personalized offers and communication.
- Automation of the entire e-commerce customer lifecycle.
- Instant resolution to customer issues.
- Improved customer experience and satisfaction.
- Improved handling capacity & automation of featured e-commerce services.



### Voicebots future trends:

- Interactive voice for business.
- Interactive voice experience creating new retail experiences.
- The future of brands in an interactive voice world.



Ideally, brands should start devising an overall voicebots strategy for the long term. It should encompass which services might best be offered and how they may interact with customer services, CRM, social and advertising functions as well as a roadmap to measure progress.



**BRN.AI**  
REPORT 2018  
VOICEBOTS AHEAD

You can get White Label (BotFabric) for free –  
it's revenue sharing model. Start your Chatbot and Voicebot Business!

# CONTACT US: GET WHITE LABEL VERSION OF BRAIN

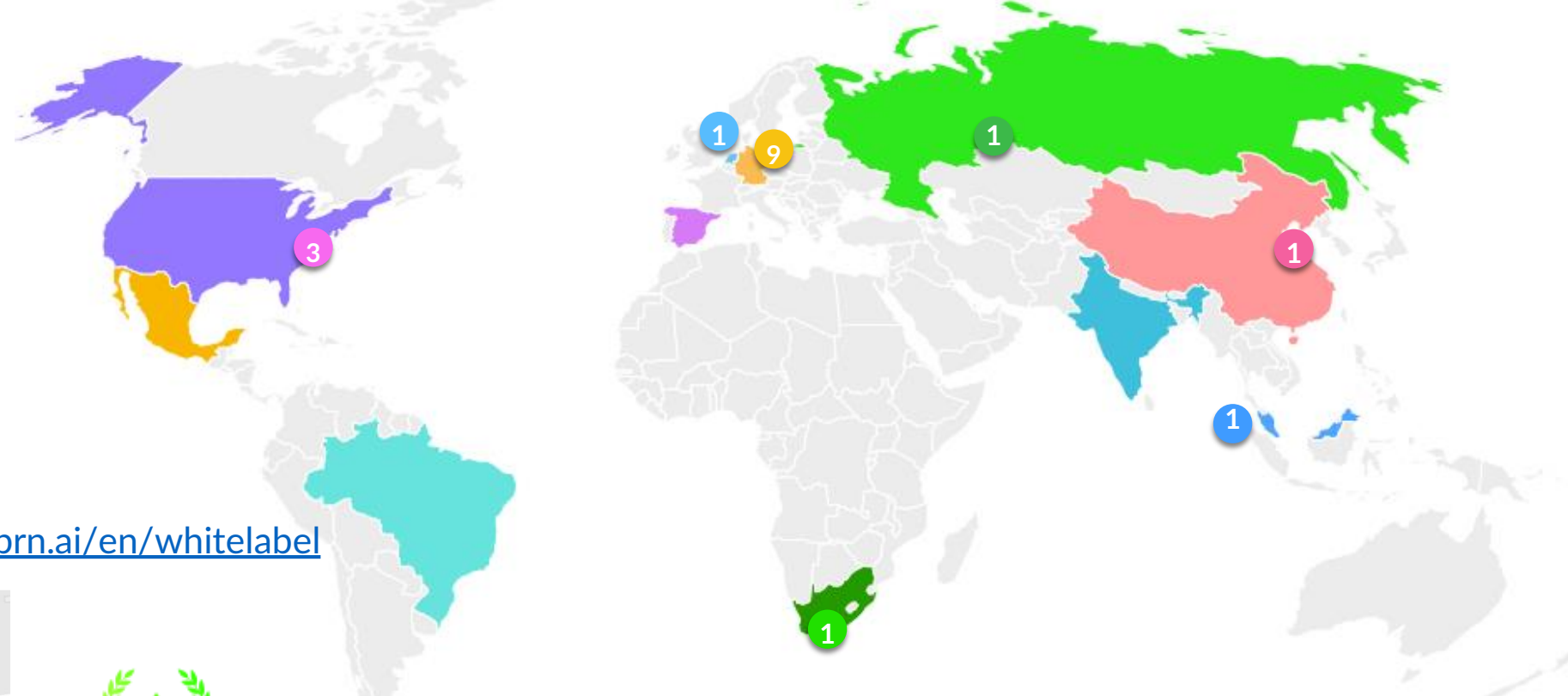
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Germany

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[info@brn.ai](mailto:info@brn.ai)

Let's start next step – <https://brn.ai/en/whitelabel>



Many successful global  
projects prove our skills in the  
composition of teams and  
effective management



● Ready-To-Run Regions

## COUNTRIES WHERE BRAIN PARTNER WORKS

- 3 USA
- 9 Germany
- 1 Holland
- 1 South Africa

- 1 Russia
- 1 China
- 1 Malaysia

## NEGOTIATIONS PROCESS

- India
- Spain
- Brazil
- Mexico



# SOURCES

The REPORT 2018 VOICEBOTS AHEAD is a collaboration by [BRN.AI](#) and open information sources about current state of voicebots market. All rights belong to their respective owners.

Our report was launched to better understand future trends and use cases for smart speakers and voicebots today. Feel free to visit our site and contact us!

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