SMART SPEAKER CONSUMER ADOPTION REPORT

EXECUTIVE SUMMARY

APRIL 2020

voicebot.ai™

Welcome Voice Revolutionaries!

I am excited to bring you the executive summary of the third edition of Voicebot's Smart Speaker Consumer Adoption Report. We are seeing some trends emerge in 2020 that are offering new insights into how consumers view smart speakers specifically and voice assistants in general. These are intriguing developments to us and I suspect you will agree.

This is the first time we are releasing a report without a sponsor so we are incurring all costs internally. The full 30+ page report with more than 30 charts requires a membership in our newly launched Voicebot Research service. However we are pleased to offer a subset of the content here to you at no cost.

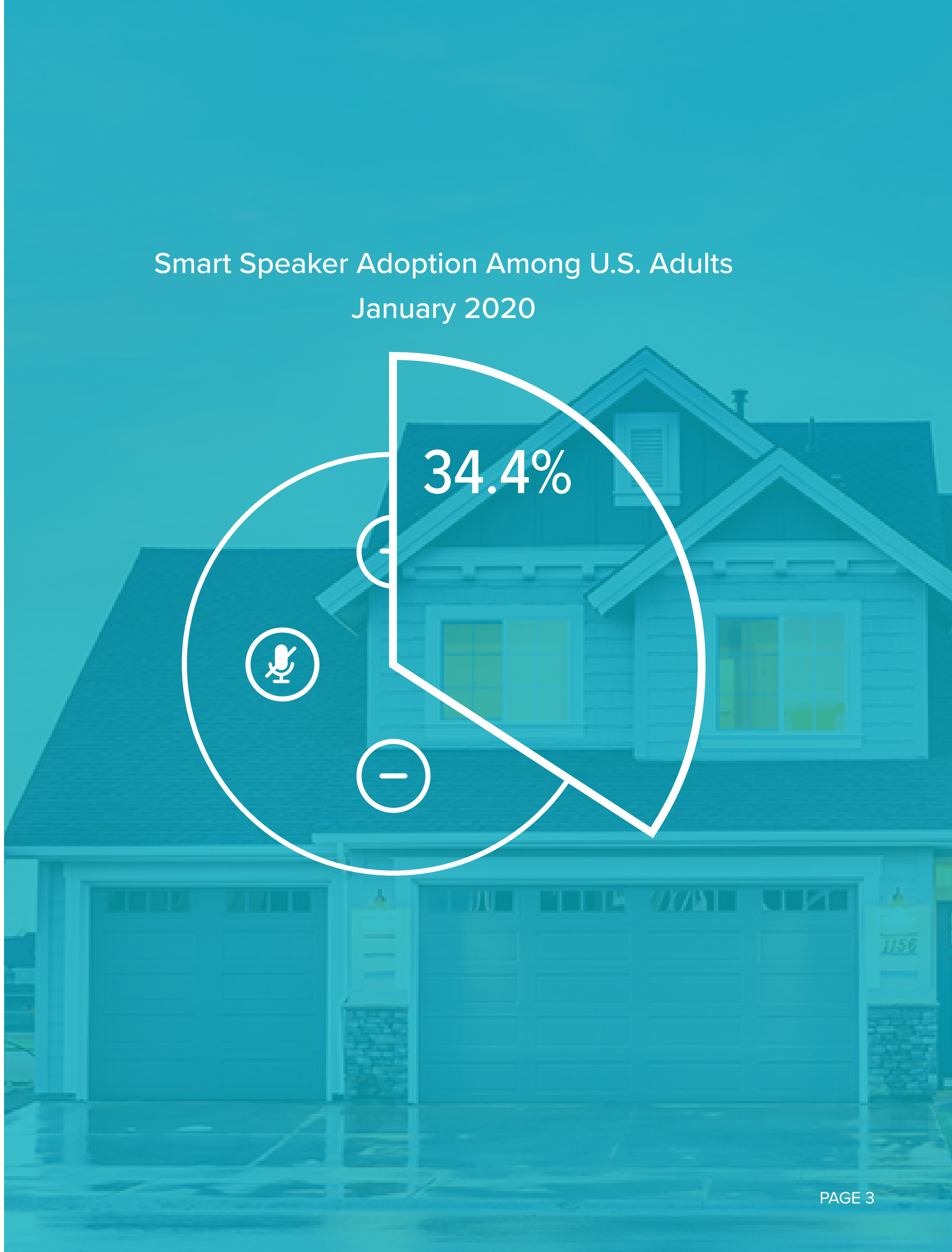
If you would like to learn more about our new research offering, you can click here for more information. We have new analysis this year around third-party voice app adoption, consumer privacy, habits of recent versus longer-term owners of smart speakers, the number of new users by vendor and more.

Whether or not you become a Voicebot Research member, we hope you find the data useful, it offers you a deeper understanding of the rapid evolution of voice AI adoption, and it enables you to make better decisions faster. Let us know your thoughts and questions on Twitter by tagging @voicebotai and @bretkinsella in your Tweets.

A New Fixture in the Home. Now What?

Smart speakers are clearly more than a novelty. At the beginning of 2020, over one-third of U.S. adults had a smart speaker in their home and about 50% say they are using the devices daily. That translates into nearly 90 million U.S. adults with devices, 45 million daily active users, and over 70 million monthly active users.

Smart speakers have been the biggest consumer electronics product success story over the past five years. Interestingly, the closest rival for that title is another type of smart speaker albeit of the personal, in-ear variety, Apple's AirPods. However, smart speakers to date have had far broader and deeper impact. It's fair to say the era of touch, swipe, and video is making room for an audio comeback of sorts and voice interactivity was the catalyst.

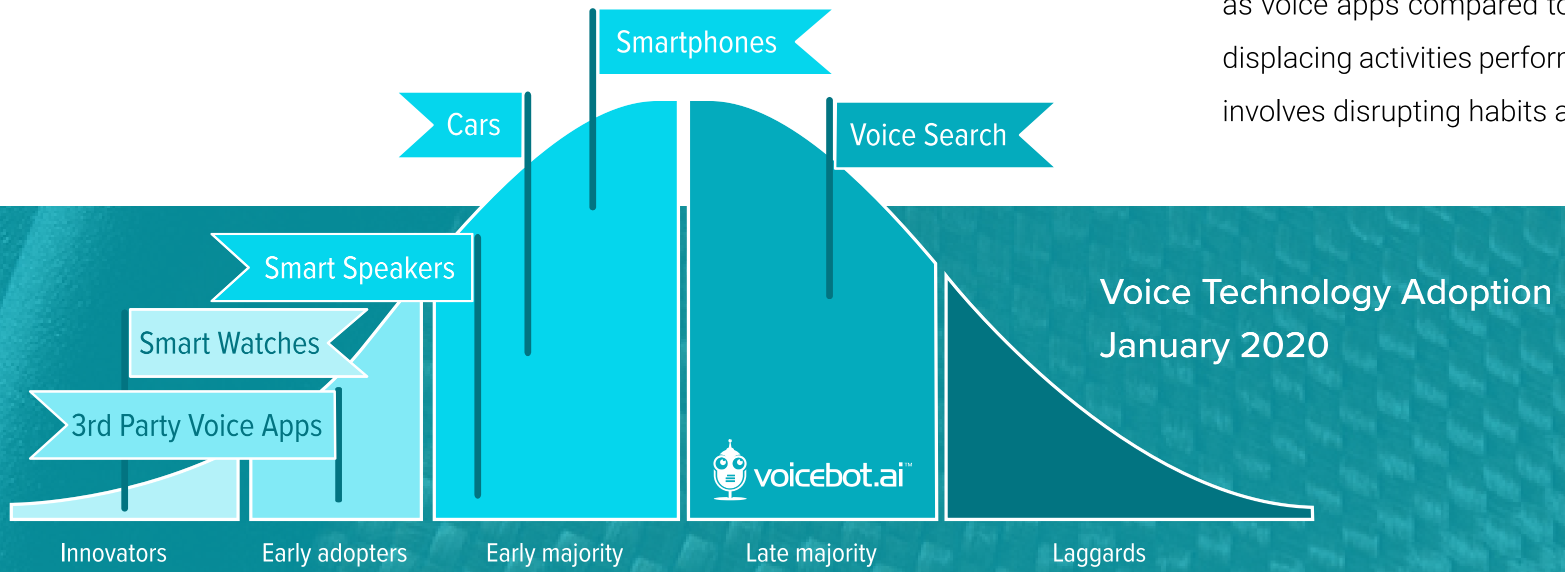


Voice Assistant Use on Smart Speakers Still in the Early Majority Market

We noted last year that smart speakers were solidly in the early majority market of consumer technology adoption. This is represented in the model created at Iowa State University as the group between 16% and 50% of the population.

At Voicebot, we place technologies in this model based not on total users but on monthly active users. Smart speakers currently fall in the 28% range. That positions smart speakers behind voice assistant adoption in the car and on smartphones but not as far back as total usage might indicate. Smart speakers have a higher percentage of monthly active users than other voice-enabled devices so the gap with automobiles and smartphones is much smaller.

To offer some contrast, the model here also presents the use of voice on smart watches in the low single digits and voice search across all devices which is already in the late majority with over 50% adoption.



This offers some insight into that "Now what?" question. First, we should expect smart speakers to continue growing within the early majority. This is where feature breadth and depth play a big role, and notably, integrations with other popular digital services do as well, These will be key drivers in consumer selection of smart speakers and which voice assistant ecosystem they prefer.

If we look at third-party voice apps we see a different near-term outlook. Regular use of these smart speaker services is still in the early adopter phase (N.B. this is third-party voice apps excluding streaming music and radio). In the vernacular popularized by tech consultant Geoffrey Moore in the 1990s, third-party voice apps have not yet crossed the chasm into widespread mainstream use. To do that, more voice apps will need to show significant utility for users beyond what the first-party voice assistants provide today. However, this is not shaping up as a battle between first and third party apps as much as voice apps compared to mobile apps in use today. Third-party voice apps are largely displacing activities performed today on mobile. That means the path to success in voice involves disrupting habits already tied to the last big computing platform to emerge.

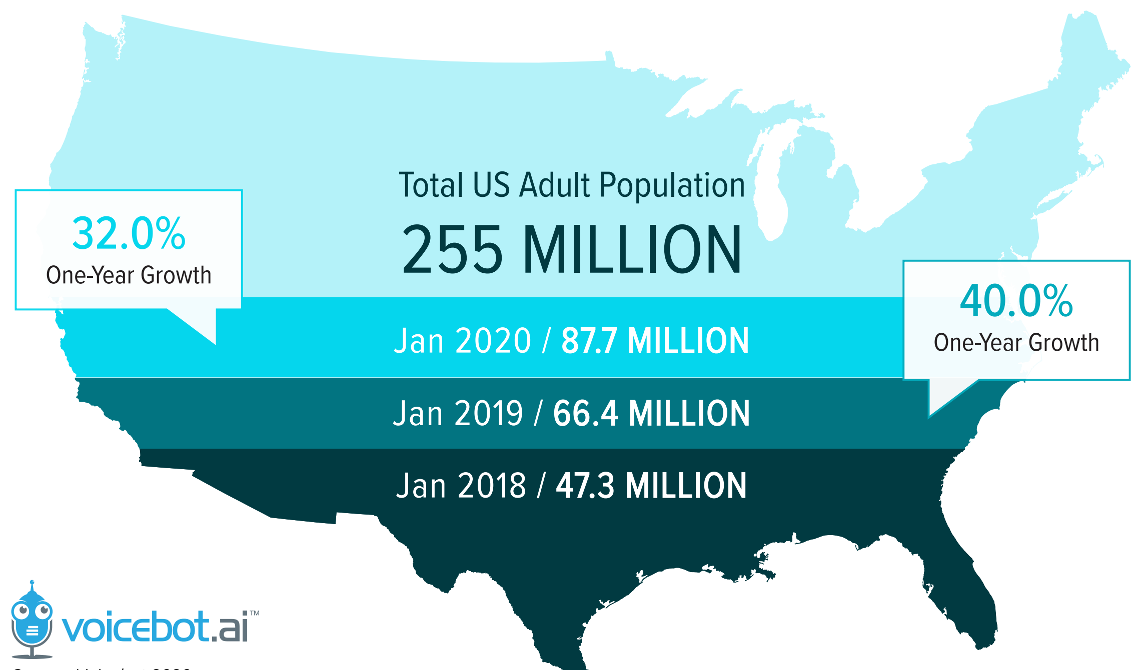
More Than a Third of U.S. Adults Have a Smart Speaker

U.S. adults with as least one smart speaker rose 32% between January 2019 and 2020 to 87.7 million, up from 66.4 million a year earlier and 47.3 million at the beginning of 2018. More than one-third of U.S. adults now have a smart speaker at their disposal.

It took about five years from the limited release of the Amazon Echo smart speaker to reach one-third of the U.S. population. However, it is only three years since Google Home validated the market with an alternative offering for U.S. consumers. Smart speakers are without a doubt, the most important consumer electronics success story of the past five years. There is now a voice assistant endpoint available in tens of millions of U.S. households that ties them more closely to services from the tech giants, particularly Amazon and Google.

Over 21 million U.S. adults became new smart speaker owners in 2019, up from a gain of 19 million in 2018. That reflects nominal growth of 11% more new smart speaker owners added in 2019 over the previous year. However, it also indicates a slowing growth rate of adoption at 32%, down from 40% in 2018. At this point, evaluating the health of the smart speaker market in the U.S. should include both nominal and relative growth rates.

U.S. Adult Smart Speaker Installed Base January 2020



Source: Voicebot 2020

Amazon Retains Over Half of U.S. Smart Speaker Market, Barely

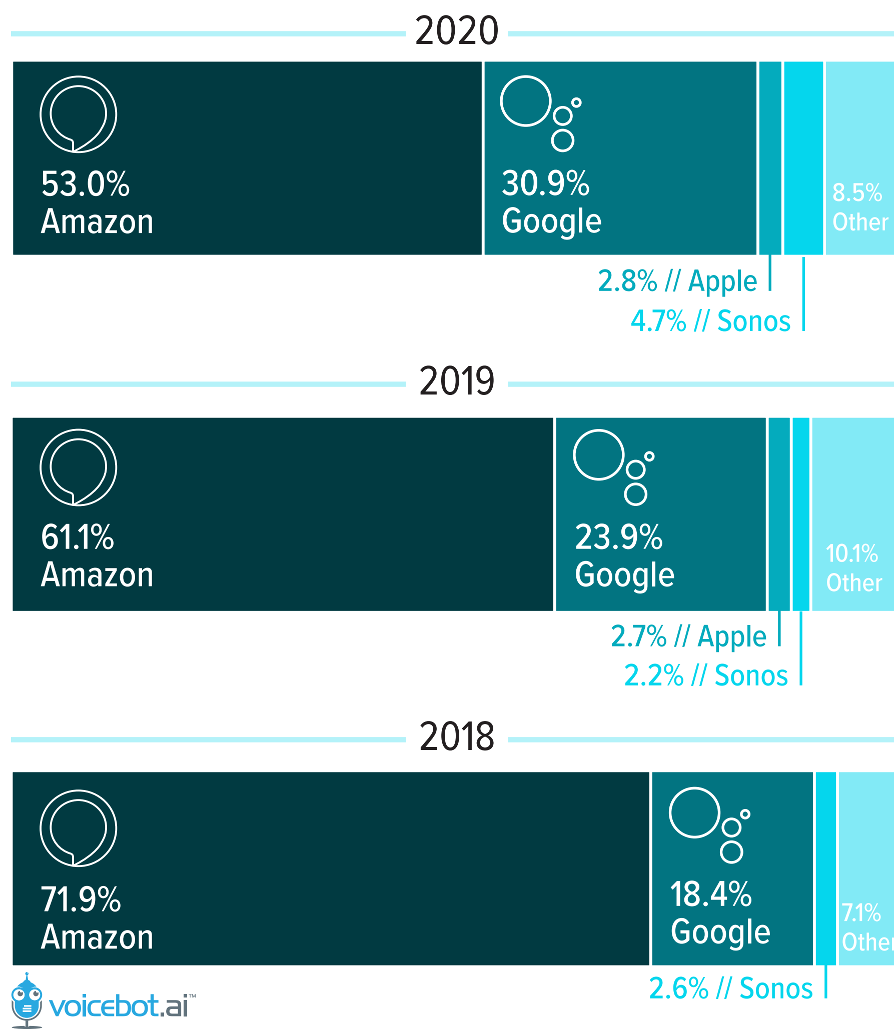
The Amazon Echo created the smart speaker market and continues to enjoy many of the benefits of being first to market. Amazon still commands over half of the smart speaker installed base in the U.S. but its 53.0% share in January 2020 is down from 61.1% a year earlier and over 70% the year prior.

Google is the biggest beneficiary of Amazon's falling market share rising from just 18.4% to 30.9% in two years. However, Amazon has a host of competitors including Apple and Sonos. Apple captured 2.7% market share in 2019 and it essentially maintained that level in our 2020 data. Sonos, on the other hand, was behind Apple at 2.2% in January 2019 but a year later leapt ahead to a 4.7% share.

When you add in the "Other" category you see that this non-Amazon and non-Google market share has rise from 9.7% to 16.1% over two years. Most of that growth went to Sonos and Apple but there are also credible offerings from Bose, JBL, and many other well-known audio brands. All of that share has come out of Amazon's former stake.

The feature of the smart speaker market share that seems most resilient is a duopoly of Amazon and Google. Combined they control 84% market share, down just 1% from January 2019. And, the vast majority (over 97%) of other smart speakers use either Alexa or Google Assistant as their voice assistant and ecosystem of voice apps and services.

U.S. Smart Speaker Market Share by Brand
January 2018 - 2020



Source: Voicebot 2020

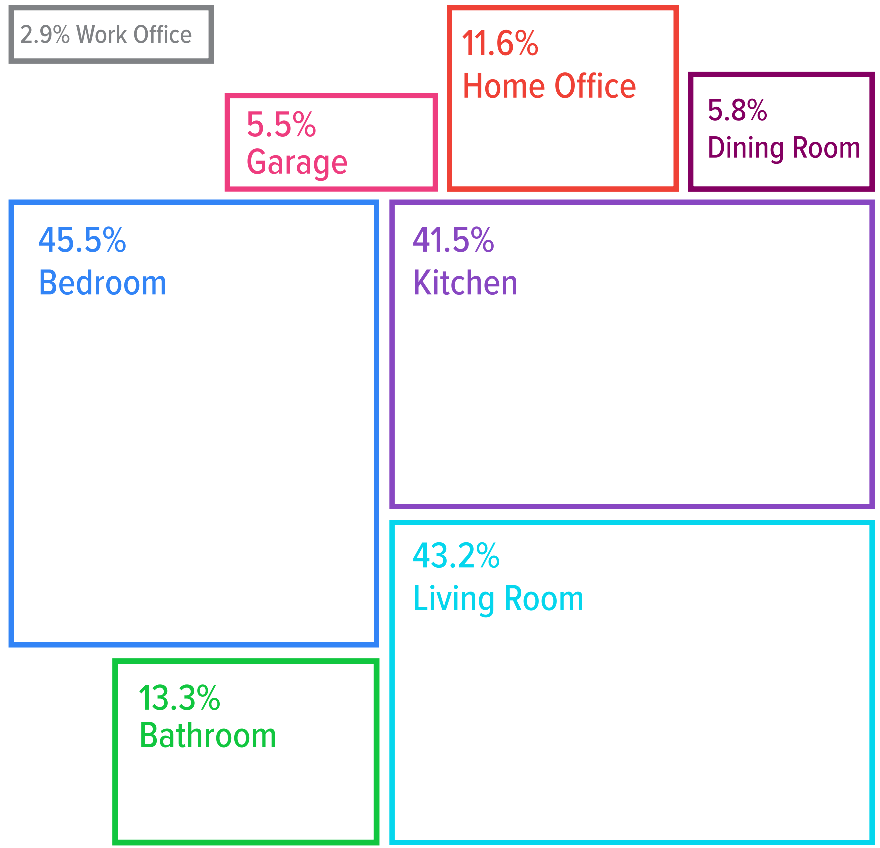
The Bedroom Becomes Smart Speaker Central

Could it be the popularity of ambient “sleep” sounds on smart speakers? Could it be the convenience of having easy access to your smart home controls at the bedside? Or, maybe it is an affinity for audiobooks or a Flash Briefing each morning. Whatever the reason, the bedroom is now the most popular location for smart speakers. It jumped eight percentage points from a second place 37.6% in 2019. As people have added smart speakers to the home, the bedroom seems to be the biggest beneficiary.

Over the past three years, the living room has consistently been the most frequently selected location for a smart speaker in the home and it has ranged 43% and 46% of device owners. The Kitchen has also been a consistent leader with over 41% in 2020, back to where it was in 2018. It is fair to call the bedroom, living room, and kitchen the “big three” for smart speaker locations as each is the choice of 41 - 46% of users.

The other big mover in 2019 was the bathroom. It more than doubled from results the past two years to 13%. When looked at in combination with the rise in smart speakers in the bedroom, it suggests that the devices are becoming more ingrained in bedtime and morning routines. This also reinforces the conclusion that habit formation may be the driver behind the rise in daily active smart speaker users.

Where Consumers Have Smart Speakers in 2020



Source: Voicebot Jan 2020

Audio, Questions, Weather, and Alerts are the Killer Apps

Listening to streaming music and smart speakers continue to go together like chocolate and peanut butter. It was the top cited daily (39.8%) and monthly (73.6%) use case for smart speaker owners for the third straight year. In January 2020, streaming music even edged out “Ask a question” for the most tried use case at 88.7%. The daily and monthly figures were up slightly from 2019 while the ever tried jumped up over 5%.

Asking a question is still popular at 83.1%, 66.2%, and 29.4% respectively for tried, monthly, and daily use. However, the daily use figure dropped significantly (-7.6%) between January 2019 and 2020. Since search behavior is not declining, this finding suggests that consumers are not finding the voice search results for general questions through smart speakers as useful as in the past.

A similar but more broad-based trend is playing out for weather information. Users have recorded a declining use of smart speakers for weather information each of the past two years. Employment of timers and alarms are also mostly down, although monthly active users did rise materially for timers in 2019.

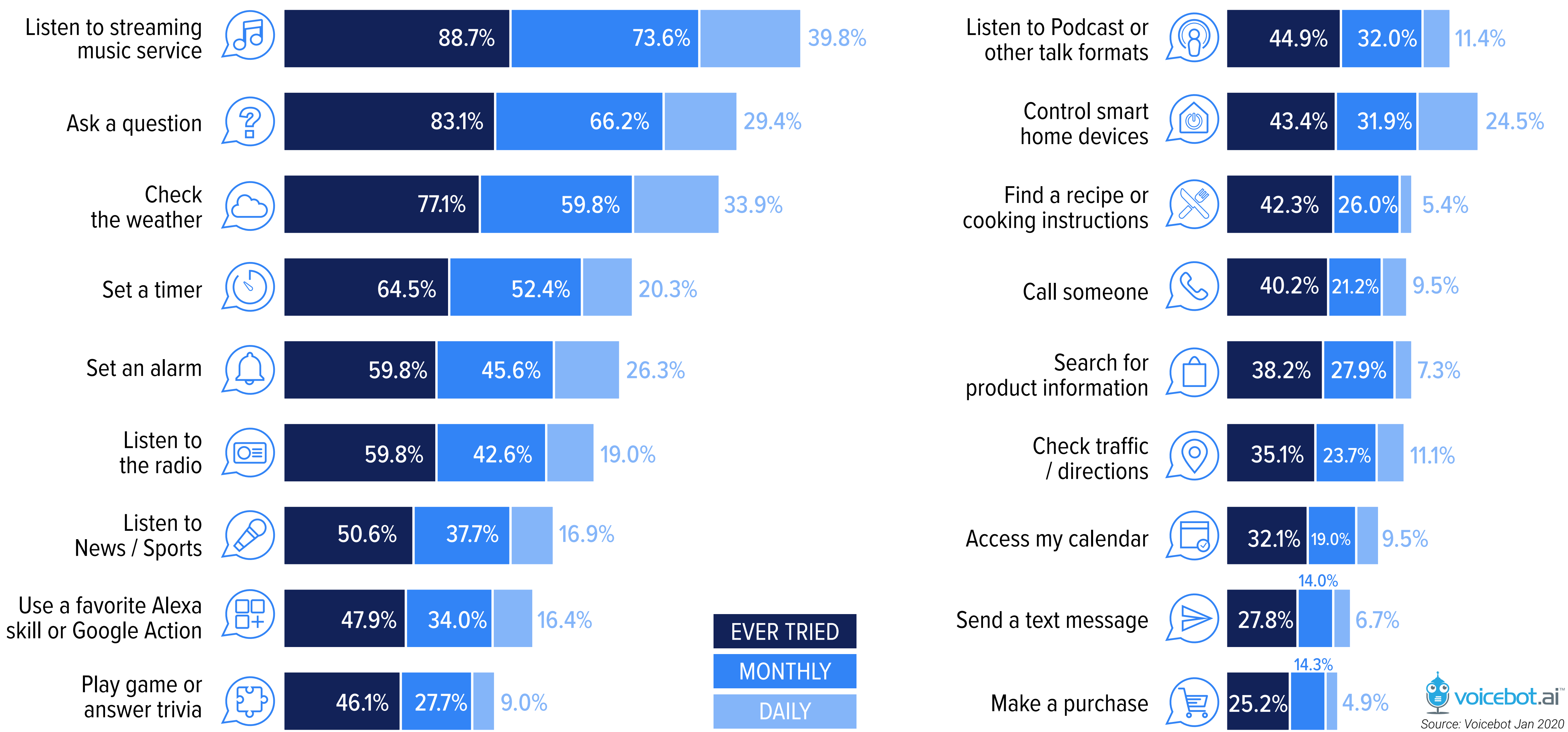
Streaming music, questions, weather, and alerts (our categorization for timers and alarms) round out the top five use cases. The next two are more audio content, and if you go to position number 10 you get more audio. Sixth place in January 2020 is listening to the radio which is not in a virtual tie with alarms. Heavy advertising by radio stations to listen through their Alexa skills is paying off.

This is particularly true for News and Sports. The percent of users that have listened to news and sports on their smart speaker for this use case at least once is up about 7% year-over-year and now exceeds 50% of smart speaker owners. Monthly active users rose 9% and daily users 3.5%. Podcasts, which have had slower adoption on smart speakers, also picked up significantly in 2019 rising over 5% for consumers that have tried the use case and also became monthly active users.

Most other use cases are flat or slightly down. This is likely due to new smart speaker owners being a bit less adventurous in exploring the many uses of the devices. This is surely disappointing news for voice app developers who have hoped for increased frequency of use by consumers.

Smart Speaker Use Cases are Still Broad and Daily Use is Up

Smart Speaker Use Case Frequency January 2020



Voice App Discovery is Getting Worse, Not Better

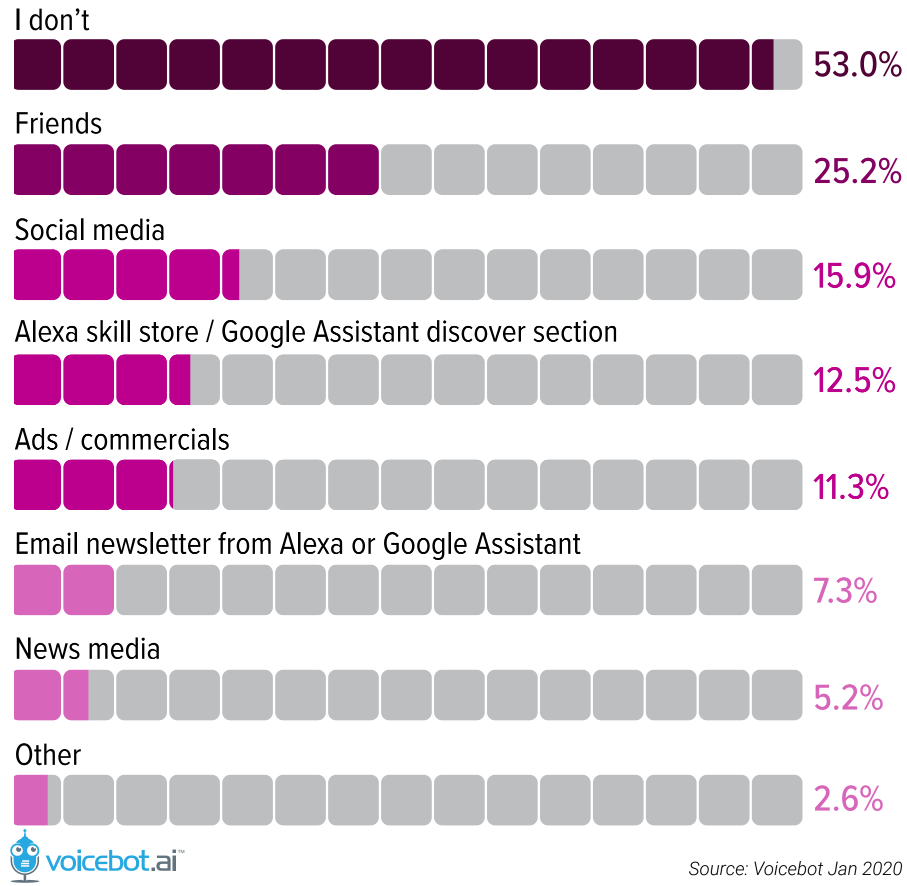
Discovery remains a top issue for third-party voice app developers nearly five years after Amazon released the Alexa Skills Kit (ASK) enabling anyone to launch their own voice experience. More than half of smart speaker owners say they haven't even tried a third-party Alexa skill or Google Action.

That figure is down for two consecutive years which means that the platforms and the ecosystem are not making progress on tackling the discovery challenge. The growth in smart speaker audience means that there are more third-party voice app users in 2020 than in 2019. However, the big opportunity for audience growth is the more than 40 million smart speaker users that say they are not using third-party voice apps.

There is widespread agreement in the voice developer ecosystem that the most reliable route to discovery is through the platform controlled promotional channels. These include Amazon's and Google's email newsletters to smart speaker owners and the voice app stores both provide within their mobile apps. However, even these seemingly bulletproof sources of discovery are on the wane. Smart speaker owners saying they discovered new voice apps through the Alexa and Google Assistant stores was only 12.5% in 2020, down from 17% in 2018. Attribution to the email newsletter was off even further declining from 13.8% in 2018 to only 7.3% in 2020.

The only discovery channels to show improvement were social media and advertising which both rose by less than 1%. Even word-of-mouth discovery from friends declined in 2020. Discovery is a problem on every technology platform so voice apps are not an exception. However, the more familiar pattern is for discovery to improve over time which is not happening today in the closed voice assistant platforms.

How Smart Speaker Owners Discover Voice Apps January 2020



Source: Voicebot Jan 2020

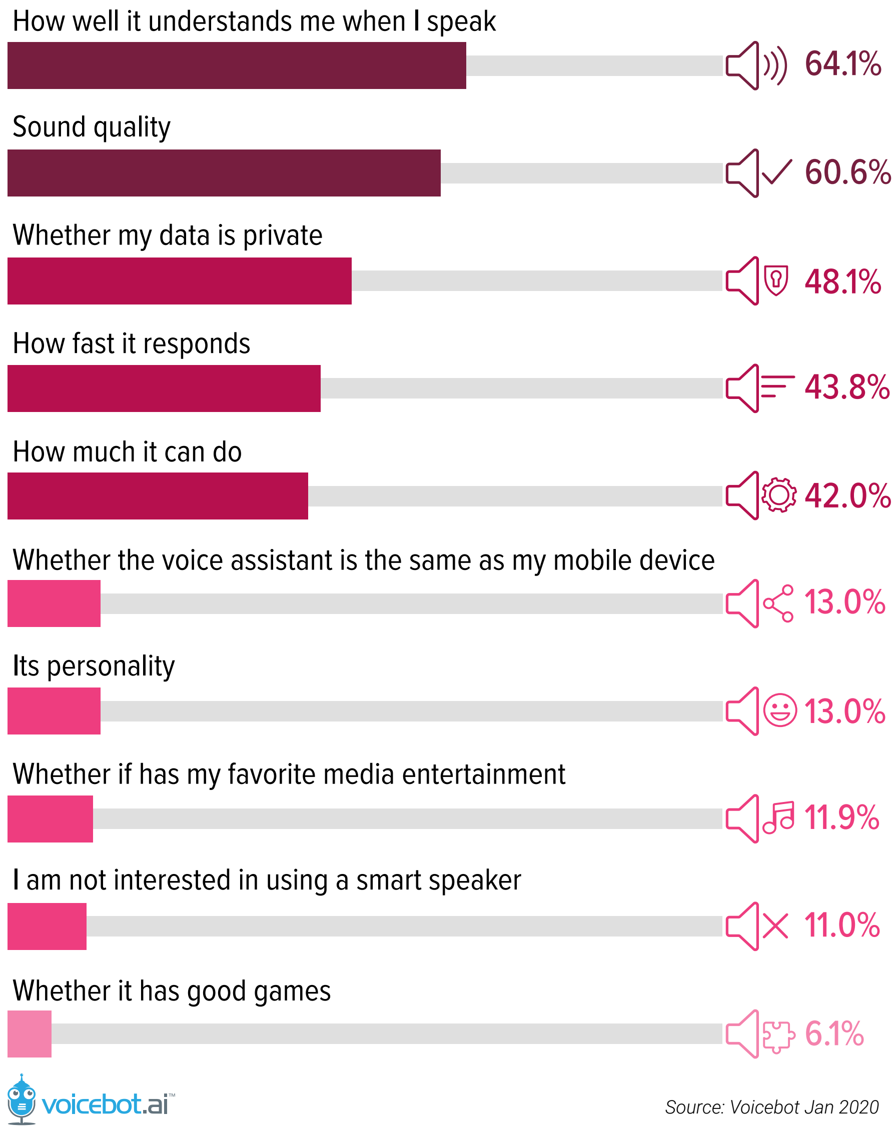
Consumers Still Want to be Understood

For the second straight year, consumers placed “How well it understands me when I speak” as the top quality they value in a smart speaker. Speech recognition accuracy was cited by 64.1% of users down from 67.0% the previous year which may suggest that improvements are making this a less noticeable issue to some device owners.

Second place went to “Sound quality” at 60.6% followed by “Whether my data is private” at 48.1%, “How fast it responds” with 43.8%, and “How much it can do” at 42.0%. We see a clear divide in the 10 options that consumers could choose in terms of what they value in a smart speaker. The top five were selected by between 42% and 64% of smart speaker owners whereas the others were only cited by 6% to 13%. Consumer consensus is clear.

We pointed out last year that the voice assistant personality was a lower-tier value for consumers and that carried over to 2020. In fact, it was cited as even less important than in the 2019 survey. However, personality may not be noticeable as a differentiator given that the leading consumer voice assistant providers have all invested in this area. The qualities that appear to make a difference for consumers are performance and privacy. Or, stated another way, consumers favor substance over style in their smart speakers.

What Qualities Users Value in Smart Speakers - 2020



Source: Voicebot Jan 2020

Privacy Concerns Rising Among Those Without Smart Speakers

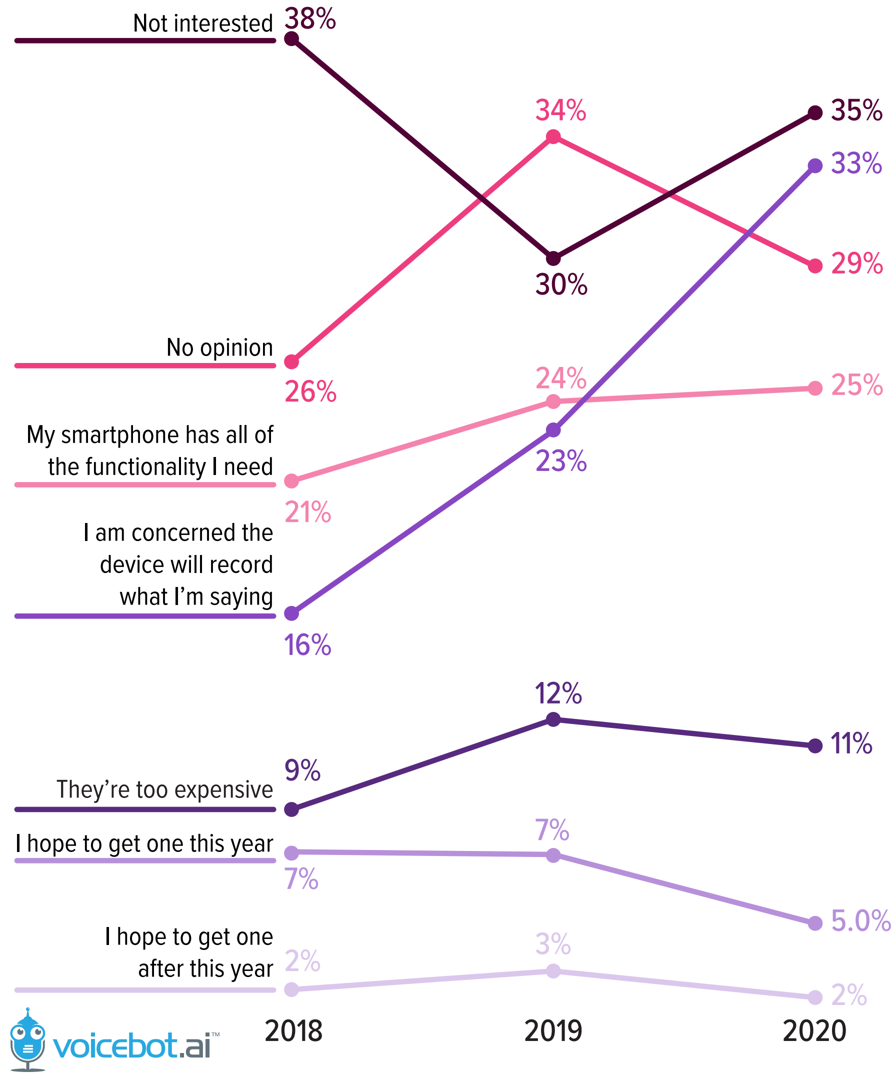
The top reason that consumers report has kept them away from smart speaker ownership in 2019 was they were simply "not interested." That has fluctuated with "no opinion" for the top spot in our recent surveys. Overall, sentiment related to why consumers have not purchased a smart speaker has been fairly consistent over the past three years with two exceptions.

The first big change and the clearest trend from the data is the rising number of consumers that expressed privacy concerns. In 2018, only about 16% of U.S. adults were concerned that smart speakers would record what they were saying. That jumped to 23% in early 2019 and then all the way to 33% in our January 2020 survey. So, what happened?

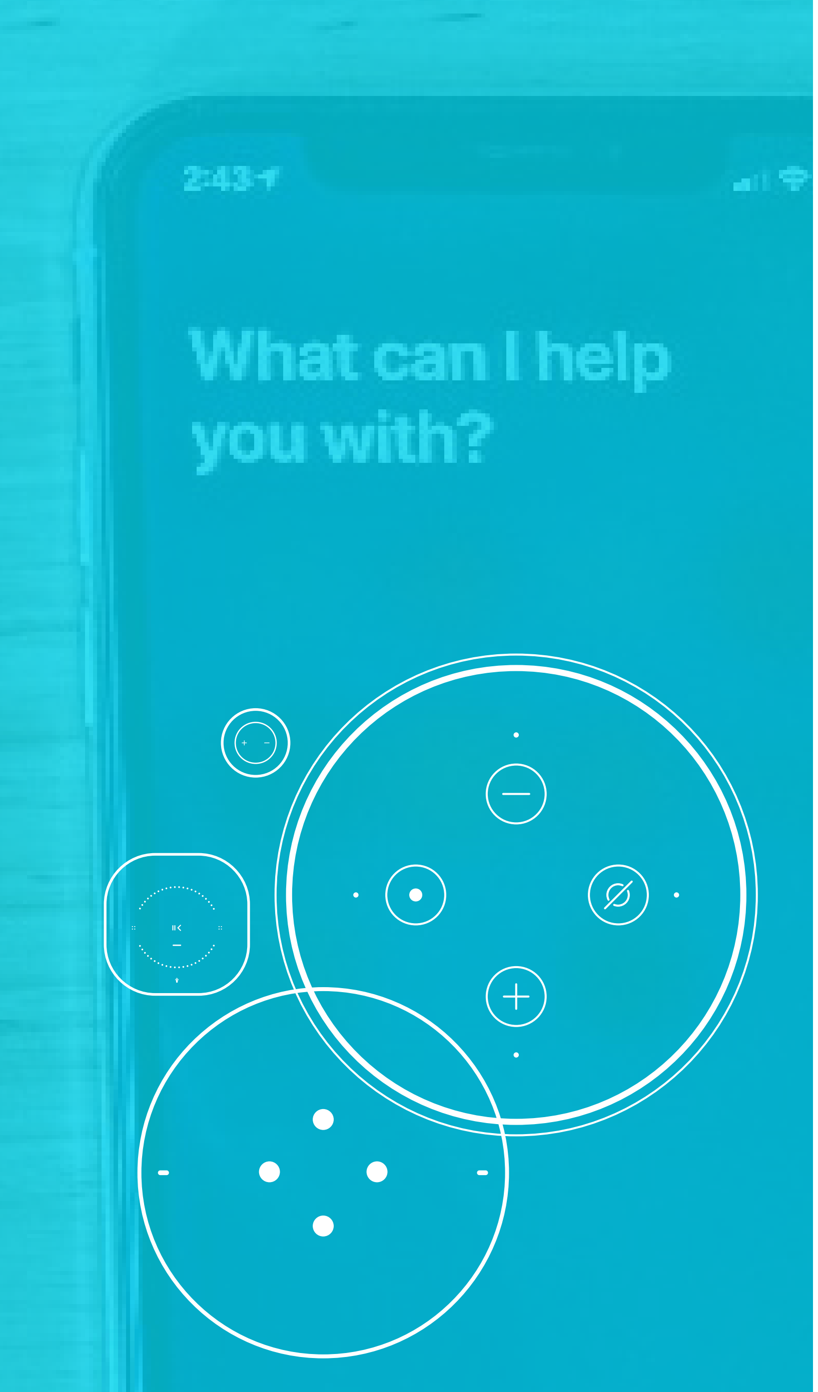
Well, in April of 2019 we saw the first news article citing that Amazon contractors were listening to Alexa conversations with users as part of its QA process. This might have been more benign in another telling but Bloomberg found seven contractors in far-away Romania that talked about their work and how there was some information in the clips which could help you identify the user in the real world. Voicebot reported at the time that this was unlikely to be a "'death blow' that undermines consumer confidence in voice assistants. However, each incident does chip away at confidence and could cumulatively inhibit adoption."

What happened next was that relentless chipping away as similar stories ran in ensuring months that implicated Apple, Google, Facebook, and Microsoft. Despite the negative publicity, it was a record year for smart speaker sales. You might conclude that privacy concerns therefore had little or no impact. However, the data among non-owners suggests that the impact might be longer lasting as it created a clear rationale to not purchase. Privacy concerns were the fourth most cited reason for not owning a device in 2018 and registered with less than half the amount of consumers as "not interested." Two years later and it has doubled in importance, is the second most cited reason, and is only two percentage points behind the top result. Privacy definitely matters now when it comes to further expansion of the smart speaker user base.

Reason Consumers Don't Yet Have a Smart Speaker



Source: Voicebot Jan 2020



Smart Speakers Are a Catalyst for Voice Adoption

Voicebot observed in 2018 that smart speakers had become the training wheels for voice assistant adoption. Voice Assistants first became broadly available through smartphones, namely Apple's Siri but later Google Now, and had been adopted for a narrow set of use cases, mostly around alerts and communications, and later for search and navigation. However, adoption of new use cases stalled. The Amazon Echo changed everything.

Once consumers started using a voice assistant in the home through their smart speaker a few things happened. First, the voice-interactive use cases they employed expanded significantly, in particular adding entertainment services to the mix. Second, the frequency of use accelerated. Since most smart speakers only have a voice interface, there was no way for the assistant to fade into the background in favor or touch or swipe.

This then led to consumers expanding their use of voice on smartphones (see chart on the following page). More than a quarter of smart speaker owners say that after purchasing a device they started using voice on their smartphone more often. That figure was up nearly 2% in 2020 over the 2019 survey. More notable was the fact that the number of smart speaker owners that don't use a voice assistant on their smartphone declined between 2019 and 2020 from 24.1% to 17.7%. The trend toward using voice is clear.

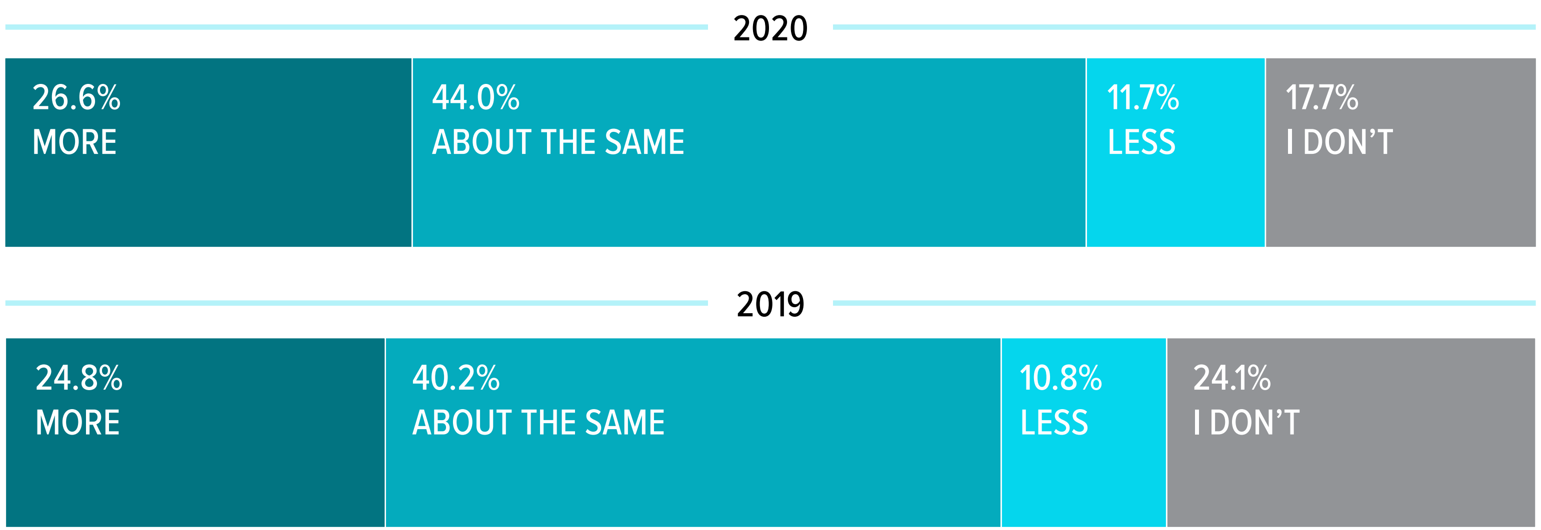
It could have turned out that users employed voice less often on their smartphones after acquiring a smart speaker as tasks switched from one device to the other. Instead, the voice assistant interface has become a more common consideration for users when they need to get a task done or request information on smartphones because of their familiarity with voice as an option.

From Novelty to the Digital Gateway to Voice Assistants

The growth rate of smart speaker adoption slowed in 2019 even while the total number of new users exceeded 20 million for the first time. By the end of 2020, there are likely to be around 100 million smart speaker users in the U.S. That figure will further cement the importance of smart speakers in the digital device ecosystem. However, the real action is shifting away from simply planting digital endpoints in U.S. households to deepening user relationships with voice assistants.

Voice assistant frequency of use and scope of consumer reliance on these services is now a greater focus than scaling up the smart speaker user base. Amazon's and Google's expanded focus in hearables, watches, other devices, and automobiles are signals that they also see the next phase of voice assistant adoption quickly moving beyond the speaker. We are shifting from an era of scaling to scope expansion. The key obstacles these companies need to overcome are assuaging consumer concerns about privacy and relentlessly adding new ways that consumers can benefit from using voice over touch. Smart speakers still have a role to play, but their biggest contribution has been to spark a revolution in voice.

Use of Voice on Smartphones After Purchasing a Smart Speaker



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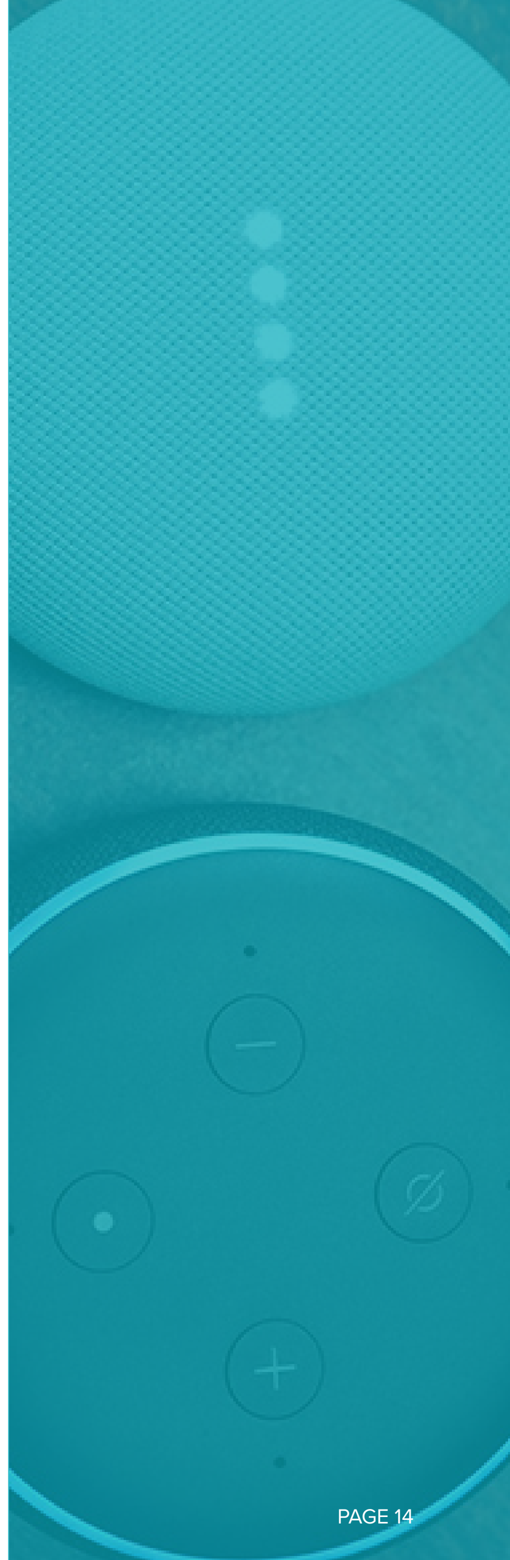
Source: Voicebot Jan 2020



Charts In Executive Summary and Full Report

ACCESS FULL REPORT

Chart	Summary	Full Report
Percent of U.S. Adults with a Smart Speaker	X	X
Technology Adoption Lifecycle Position of Voice Interactive Devices and Solutions	X	X
U.S. Adult Smart Speaker Installed Base	X	X
U.S. Installed Base Smart Speaker Market Share by Vendor	X	X
Amazon Echo and Google Nest Home User Base 2018-2020		X
Total Smart Speakers in Use in the U.S, 2018-20		X
U.S. Installed Base Smart Speaker Market Share by Device Model		X
U.S. Smart Display Installed Base by Vendor		X
U.S. Smart Display Adoption by Smart Speaker Owners		X
Smart Speaker Frequency of Use		X
Smart Speaker Use Frequency and Ownership Duration		X
Smart Speakers Per Household January 2018-20		X
Average Smart Speakers Per Household 2018-20		X
Where in the Home Consumers Have Smart Speakers January 2020	X	X
Smart Speaker Use Case Frequency January 2020	X	X
Question Category Frequency on Smart Speakers		X

Chart	Summary	Full Report
Consumer Interest in Using Smart Speakers for Customer Service		X
How Smart Speaker Owners Discover Voice Apps	X	X
Third-Party Voice App Users January 2020		X
Third-Party Voice Apps Tried Per User		X
Number of Voice Apps Tried 2019-20		X
Monthly Third-Party Voice App Users January 2020		X
Third-Party Voice Apps Used Monthly Per User		X
Number of Third-Party Voice Apps Used Monthly		X
What Qualities Users Value in Smart Speakers	X	X
Percentage of Consumers That Value Smart Speaker Audio Quality and Breadth of Capabilities 2019-20		X
Reasons Consumers Don't Yet Have a Smart Speaker	X	X
Concerns About Smart Speaker Privacy Risk All U.S. Adults 2019-20		X
Concerns About Smart Speaker Privacy Risk Smart Speaker Owners 2019-20		X
Consumers Expecting to Become Smart Speaker Owners		X
Use of Voice on Smartphones After Purchasing a Smart Speaker	X	X

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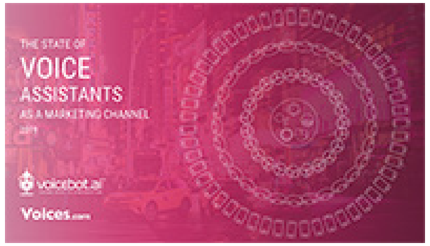

The State of Voice Assistants as a Marketing Channel

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Voicebot Research is focused on helping business executives make better decisions faster to inform and propel their voice AI strategies. Voicebot analysts tap into the deepest reservoir of data and contacts in the industry to provide new insights into where voice AI is headed, and how to optimize your approach to navigating the most important technology platform shift since mobile and the web.

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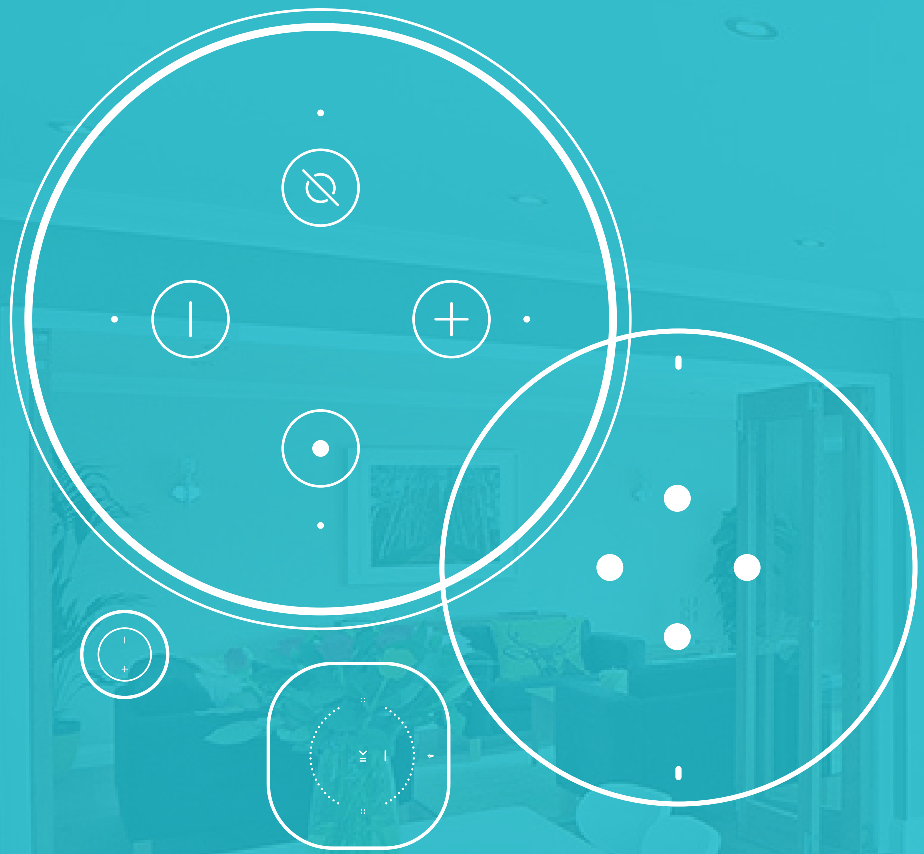

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About Voicebot

Voicebot produces the leading online publication, newsletter and podcast focused on the voice and AI industries. Thousands of entrepreneurs, developers, investors, analysts and other industry leaders look to Voicebot each week for the latest news, data, analysis and insights defining the trajectory of the next great computing platform. At Voicebot, we give voice to a revolution.

Methodology

The survey was conducted in January 2020 and was completed by 1,056 U.S. adults age 18 or older that were representative of the U.S. Census demographic averages. Because we reached only online adults which represent 89% of the population according to Pew Research Center, some totals are adjusted downward to provide device and usage numbers relevant to the entire adult population. Other findings are relative to device ownership and do not require adjustment.