



**Smart speakers:
Not just a pretty voice**
The Deloitte Consumer Review

February 2019



Deloitte Global's predictions

- The market for smart speakers – internet-connected speakers with integrated-digital assistants – will be worth £5.6 billion in 2019, with 164 million units being sold at an average price of £34.¹
- Our prediction compares to 2018 sales of 98 million units at an average price of £35 worth a total of £3.4 billion. This 63% growth rate would position smart speakers as the fastest-growing connected device category worldwide in 2019, and lead to an installed base of more than 250 million units by year-end.²

What is driving growth?

Smart speakers have, literally, a world of opportunity for growth. Much of that opportunity comes from expansion into non-English-speaking countries. In addition to wider language support, smart speakers are improving in speech recognition accuracy. For example, Google's word error rate for English speech recognition has declined steadily from 8.5% in July 2016 to 4.9% in May 2017.³

The complexity of smart speakers and the cost to build them are also declining, partly due to a reduction in the number of microphones required per device. As microphone technology improves, less power is consumed compared with earlier technologies. While most current smart speakers need to be plugged in, new microphone technology uses almost no power until the speaker is activated by the 'wake word'. This new technology enables digital assistants to be more readily incorporated into battery-powered speakers.

Longer-term prospects

2019 will likely be a strong year for smart speakers but what are their longer-term prospects?

Potential demand for smart speakers could be in the many billions of units, possibly even higher than for smartphones. In some contexts, voice can be the most natural and productive way to communicate with a device. When one's hands are occupied operating machinery, typing, holding an infant or cooking, voice may be the most convenient option. Voice may also be the safest option while driving.⁴ As a result, smart speakers could end up being installed in every room in a house or a hotel, every office in a building, every classroom in a school, every bed in a hospital, every car or simply in every digital device.

Already several hotel chains have undertaken mass installations of smart speakers, whose applications include serving as in-room concierges. The Marriott International Group plans to install Amazon's and Alibaba's smart speakers in some of its hotels, with 100,000 units deployed in China alone.^{5,6} The Wynn Las Vegas has installed smart speakers in all 4,748 of its rooms.⁷ If this trend continues, many of the world's estimated 187,500 hotels and 17.5 million guest rooms could feature smart speakers or voice control within the next decade.⁸

Drive-through restaurants could use voice automation to take orders. This would free up workers from having to process orders manually. Indeed, in many workplaces, including theatres, factories, chemical labs and restaurant kitchens, smart speakers may make operations safer and more precise than they are today. In the long term, the number of smart speakers in the workplace could exceed the number in homes, and the value of the tasks they do may be greater than just playing music, or listening to the weather forecast. Moreover, for the visually impaired, smart speakers can be an additional, more convenient way to access computing power. Smart speakers may also be the way in which illiterate people are able to access the Web.

What does it mean for consumer-facing businesses?

While consumer adoption of smart speakers remains low, businesses continue to invest in this market as they see the potential and want to learn how consumers use them. With sales of smartphones declining, virtual assistants and smart speakers have become the next battleground for technology companies not just in the home but also in businesses given the potential for multiple applications. Amazon has sold more than 100 million devices with Alexa inside, while Siri is actively used on more than 500 million iPhones and other Apple products. Google Assistant is now available on almost one billion devices, from smartphones to its home speakers.⁹ At stake is the vital data that smart speakers and virtual assistants collect which combined with artificial intelligence will help to identify ways to improve business efficiency as well as customer service.

Owning that 'space' between consumers and products or services can bring many strategic benefits for consumer businesses. The more data that is obtained about consumer interactions via smart speakers on a growing number of connected devices, the better able companies will be at learning and adapting their offering to serve their customers better. And, for the leading smart speaker manufacturers, controlling the user interface can become more important than the device on which it operates. This is because of the strategic value of licensing the platform to other device manufacturers while retaining access to the data generated by the devices using the interface.

Google is already making it easier for device manufacturers to integrate voice technology into their device through the use of 'Google Assistant Connect'. The new tool allows manufacturers to connect their devices to a consumer's existing Google Home smart speakers, which will then handle communication with Google's cloud. The company is also working with Samsung and Sonos to allow Google Assistant Connect to control more devices around the home.

Specifically, the artificial intelligence will be able to control music played through Sonos's WiFi-controlled speakers and change settings on Samsung smart TVs, for example turning them on and off, adjusting the volume or changing the channel.¹⁰

Over the next few years, consumer devices enabled with voice will be the next big thing. As a result, by 2022, more than 50% of premium white goods in developed markets will have a voice interface, up from less than 1% in 2018. By 2021, early adopter brands for white goods that extend their products to support voice will increase market share by 30%.¹¹



Case study BevMo smart speaker Bev

BevMo an American speciality grocery retailer introduced a voice-powered smart virtual assistant in store to help shoppers decide between whiskey brands. BevMo's 'talking shelf' is a stand-alone display. Nearly 50 whiskey bottles sit on five shelves with an Amazon Echo smart speaker programmed to offer recommendations. BevMo appears to be the first chain of specialty grocery stores experimenting with such a feature. Once activated, Bev guides customers through questions about their whiskey preferences, such as type, taste profile and price. Three bottles, along with names and descriptions, then become illuminated on the shelf. Shoppers can ask about a specific bottle or brand. However, the technology has also confused some consumers who thought they could order the product from home using Alexa.

In their attempt to reinvent the store experience, retailers are offering different types of interactive technologies to improve how they engage with consumers, to understand their needs better, as well as supplement staff product knowledge and provide an interactive experience that might attract foot traffic.¹²



Bottom line

With 'voice' poised to surpass mobile as the preferred digital shopping interface, voice technology needs to be considered as part of a broader digital commerce strategy. Work is still needed to improve the responsiveness and accuracy of smart speakers to achieve 'ambient computing' – the notion that computers are all around us and can sense and respond to our needs. As consumers increasingly interact with their devices through voice, there could be risks for brands. First, when consumers use their voice device to shop, they are no longer able to see the full range of products available, potentially preventing them from visually – recognising and choosing – a specific preferred brand. Second, the voice device could 'choose' both the product, and the retailer, depending on factors such as device partnerships, promotions or speed of delivery. Managing such risks could be especially challenging for low-engagement brands where a user may simply request "buy butter" rather than asking for a specific brand. In the same way that mobile forced brand manufacturers and retailers to rethink how they engage with consumers, voice will require both manufacturers and retailers to explore and be innovative in managing the shift from consumers making the decision to an algorithm. Machine learning and artificial intelligence will play an important role for brands in managing these risks.

However, as voice activated AI devices become more and more conversational, they will increasingly earn their keep in homes, cars, offices, or anywhere consumers use their smartphone. The more 'smart' devices that are sold, the more data technology companies will have to improve their voice-assisted technologies, and the more voice-controlled services improve, the more compelling connected devices become. It is predicted that voice is going to have a bigger impact on the consumer journey than 'Google search' had in the 2000s.³ In their quest to go direct to consumers, through voice brands will find a new and more intimate channel that they can use to listen and talk to their consumers and ultimately serve them better.

Endnotes

1. The sources for our forecast include Canalys, "Smart speaker installed base to hit 100 million by end of 2018," July 7, 2018, and David Watkins, "Smart speaker price tiers by units, ASP & value forecast by region 2014–2023," Strategy Analytics, July 5, 2018.
2. This prediction focuses on smart speakers; the underlying voice assistant technology will also be integrated into smartphones, as well as a growing range of other devices, in 2019.
3. "Google's speech recognition technology now has a 4.9% word error rate," VentureBeat, May 2017.
4. Aftermarket dashboard-mounted smart speakers, such as Amazon's Echo Auto, are available. See Sasha Lekach, "Amazon brings Alexa into the car with Echo Auto," Mashable, September 2018.
5. These will be deployed at Marriott, Westin Hotels & Resorts, St. Regis Hotels & Resorts, Aloft Hotels, and Autograph Collection Hotel.
6. "The rise of Chinese voice assistants and the race to commoditize smart speakers." CB Insights, June 2018.
7. "The Wynn Las Vegas is putting an Amazon Echo in every hotel room," The Verge, December 2016.
8. "How many hotels in the world are there anyway? Booking.com keeps adding them," PhocusWire, March 2012.
9. Battle for connected home seizes the stage at CES 2019, Financial Times, January 2019. See also: <https://www.ft.com/content/487bb5bc-1515-11e9-a581-4ff78404524e>
10. <https://9to5google.com/2019/01/08/google-assistant-connect-platform/>, January 2019.
11. Voice-Based Interfacing Will Be Essential for Consumer Product Success, Gartner, August 2018.
12. <https://consumergoods.com/bevmo-tests-voice-enabled-shelf-shopping-assistant>, Consumer Goods Technology, January 2019.
13. http://www.insideradio.com/free/recode-exploring-the-voice-assistant-revolution/article_a72e1598-f925-11e8-86e8-03634610d2cb.html, Recode, December 2018.



This publication has been written in general terms and we recommend that you obtain professional advice before acting or refraining from action on any of the contents of this publication. Deloitte LLP accepts no liability for any loss occasioned to any person acting or refraining from action as a result of any material in this publication.

Deloitte LLP is a limited liability partnership registered in England and Wales with registered number OC303675 and its registered office at 1 New Street Square, London EC4A 3HQ, United Kingdom.

Deloitte LLP is the United Kingdom affiliate of Deloitte NWE LLP, a member firm of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"). DTTL and each of its member firms are legally separate and independent entities. DTTL and Deloitte NWE LLP do not provide services to clients. Please see www.deloitte.com/about to learn more about our global network of member firms.

© 2019 Deloitte LLP. All rights reserved.

Designed and produced by 368 at Deloitte. J17493/5