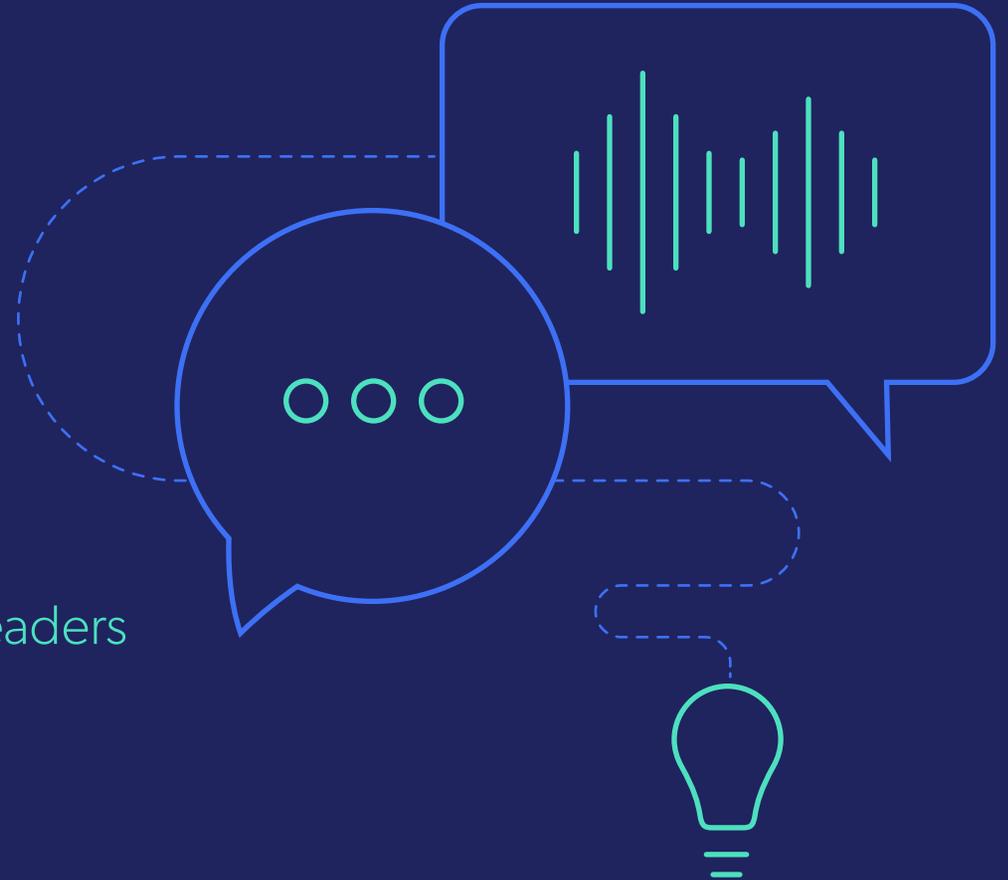

Applied Voice Execution:

A handbook for marketing and business leaders





00	INTRODUCTION	03
01	FINDING OUR VOICE	04
02	TALK ISN'T CHEAP	07
03	VOICE IN THE DRIVER'S SEAT	11
04	SAY VS. SWIPE	15
05	BRAND VOICE	18
06	WHAT CAN YOU DO TO GET READY?	21
07	LET'S TALK	24



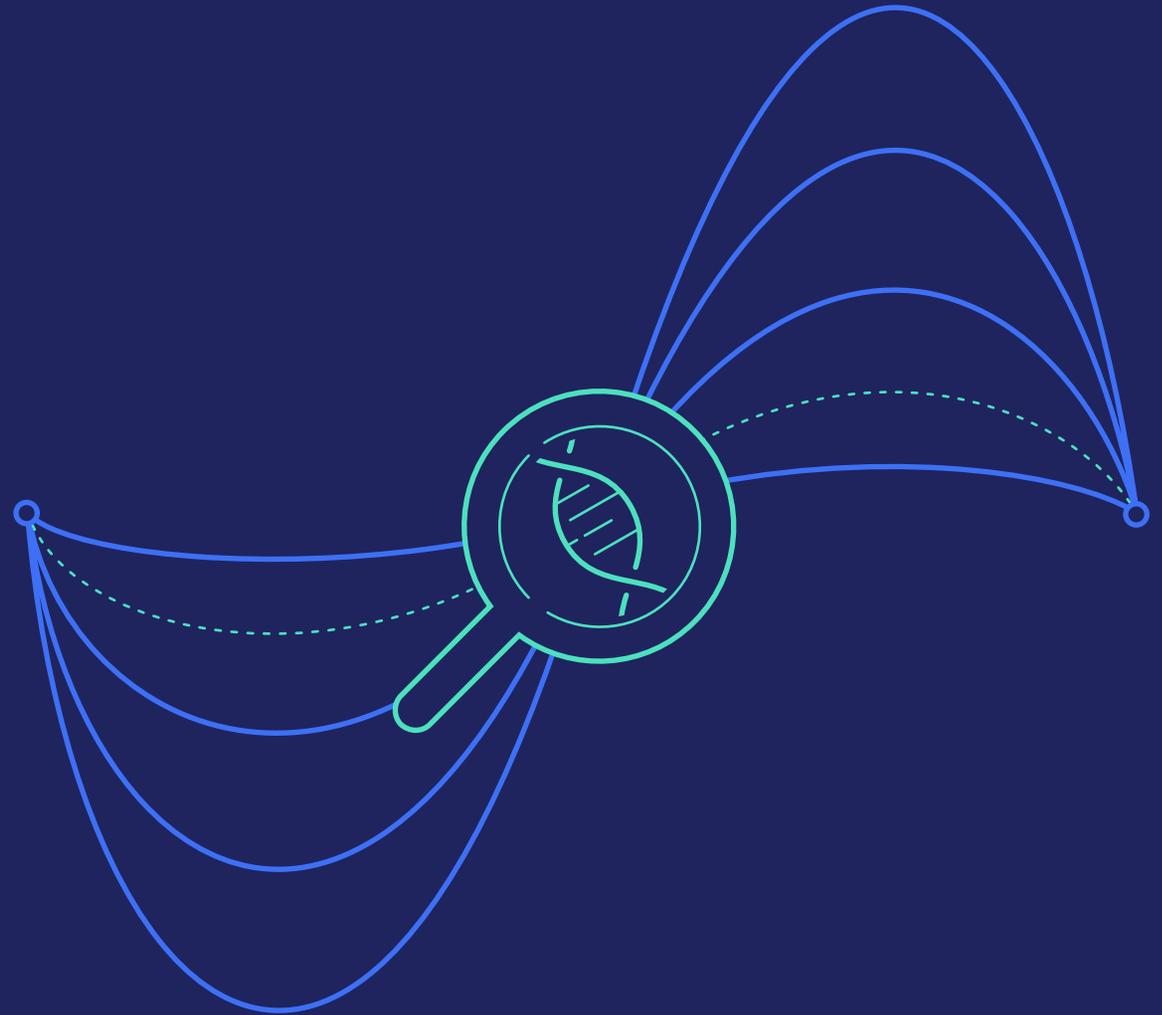
In a crowded Seattle conference hall, a nervous IBM developer stood in front of dozens of reporters and spoke slowly and deliberately into a hand-held microphone: “Six, seven, eight, plus, two, three, four...” he began, and the rapt audience watched in wonder as his “voice recognition machine” – dubbed Shoebox because of its size – typed each number on a thin strip of paper and tallied his equation.

It was the 1962 World’s Fair, and the world had just gotten its first glimpse of Alexa’s earliest ancestor, complete with a 16-word vocabulary¹. Fast forward to the 2018 Consumer Electronics Show (CES)—a modern-day equivalent of the World’s Fair—and it’s stunning just how far Shoebox’s progeny have come. The human voice can now control myriad devices and services, enabling you to start the laundry, adjust the room temperature, turn down the lights, start a movie, order take-out, and check to

see if it’s the delivery driver at your door, all without ever lifting a finger. No longer fantasy or fad, the voice market has become a \$600M juggernaut that is reshaping consumer behavior and presenting retailers with a powerful opportunity to drive loyalty to their brand, and dollars to their bottom line. The implications—and the impending disruption for businesses and brands—cannot be overstated. Companies that aren’t already thinking voice-first may soon find themselves in last place.



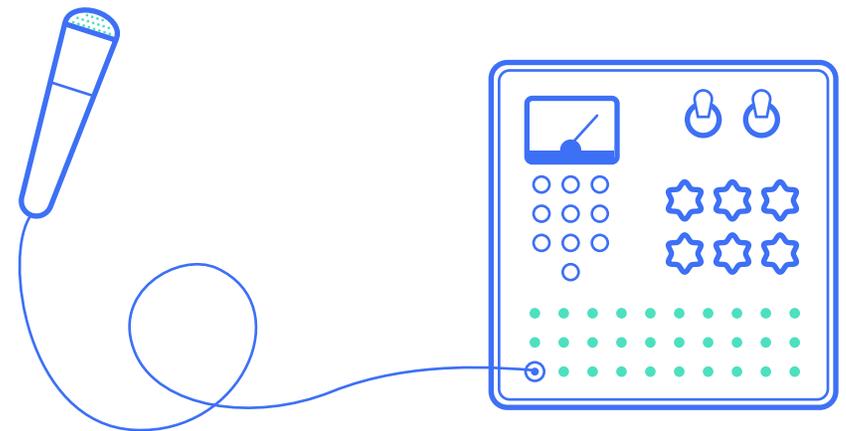
Finding Our Voice





Skeptics tempted to dismiss voice as a non-threatening novelty would do well to remember this is a burgeoning market that's decades in the making. IBM's second leap forward came 20 years after Shoebox: a talking typewriter premiered in 1980, followed by speech recognition software and talking web browsers in the 1990s.

When computers got small, big things began to happen with voice, and the market's focus shifted from corporate desktops to individual consumers backed by powerful cloud computing. Apple launched Siri on the iPhone 4s in 2011, touting it as "an intelligent assistant that helps you get things done just by asking." Though the beta version got off to a rocky start, it was revolutionary. By providing even limited context to verbal requests, Siri ushered in the era of voice-activated smartphones that use artificial intelligence (AI), natural language processing (NLP), and machine learning (ML) to power their services. The sci-fi dream of everyday people speaking commands into thin air and having them fulfilled was finally coming true.





2011
Apple Siri



2012
Google Now



2013
Microsoft Cortana



2014
Amazon Echo

The market's biggest players responded in rapid succession: Google Now launched in 2012, and Microsoft launched Cortana in 2013. The next year, Amazon Echo transfigured the voice market by leapfrogging from phones to standalone speakers, and the smart home scramble began in earnest. Over the past three years, manufacturers have been clamoring to integrate voice into everything from washing machines to light bulbs to automobiles. Alexa has learned more than 30,000 skills. Google launched its Google Home smart speaker; Samsung entered the fray with Bixby; and Apple brought Siri center stage once again with HomePod. In January, Rockchip stunned many by releasing a \$14 chipset that is pre-certified by Google to add voice assistance technology to consumer devices. With cost of entry to the market now lower than ever, the proliferation of voice-enabled products—and the need for a cross-platform development strategy that accommodates all players—will only intensify in the months ahead.



Talk Isn't Cheap:

VOICE IS BIG BUSINESS





If it seems like everyone you know received an in-home voice assistant during the holidays, you're not too far off. Smart speaker sales doubled in the U.S. in 2017², and Gartner is predicting that by 2020, 75 percent of U.S. households will have smart speakers³. If those projections hold true, the total number of installed devices will exceed 130 million in the next three years, paving the way for Americans to perform more than 200 billion voice searches per month⁴.

Sales are booming outside of the U.S. as well: a new survey of 21 countries reveals that sales of smart speakers grew more than 50 percent in 2017, and more than 1 in 3 consumers in Mexico, Brazil, China, and India are so interested in the new technology, they're ready to buy regardless of spotty availability of local languages—a gap providers will need to tackle more aggressively as the global voice market matures⁵. No wonder, then, that RBC

Capital Markets has said Alexa could become a \$10 billion business by 2020, thanks to its ability to power voice-driven shopping and other platform revenues. The phrase “the Alexa economy” has even started making its way into the American lexicon⁶.



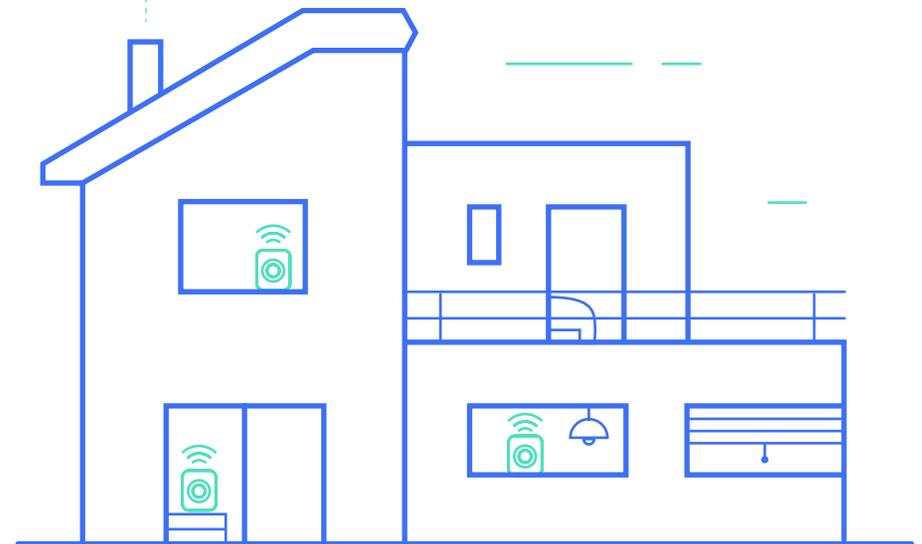
Still, is all the noise about voice just hype? How are consumers actually using smart speakers in their homes? While it's true that seeking information (news, weather, etc.) is the top-requested task, it's also true that people are becoming more comfortable using voice as a means of commerce. A 2018 Capgemini study found that 35 percent of voice assistant users have made purchases via voice^{7,8}. That figure is destined to rise as retailers strive to capture a larger share of the voice marketplace. The intense competition between Amazon and Google shows how serious these leaders are about the future of voice – and they're making big bets in a multitude of areas. Amazon generated headlines and hype with its \$14 billion acquisition of Whole Foods in the summer of 2017 – a move that PayPal CEO Dan Schulman called, “a Pearl Harbor moment for the retail industry”⁹. The bold bet is paying off so far. With consumers able to order Whole Foods items via Alexa, Amazon's grocery-delivery service increased sales by 35 percent in the last four months of 2017¹⁰. More importantly, the acquisition highlighted the shift to an omni-channel approach to retail, one that integrates voice as a necessary platform for connecting with consumers beyond traditional brick and mortar.

IN 2017

50%

increase in sales of smart speakers in 21 countries

BY THE YEAR 2020

75%of U.S. households will have smart speakers³

Just two months after the Amazon-Whole Foods deal, Walmart announced it was partnering with Google to enable shoppers to order products via voice; today, customers can shop more than two million Walmart items via Google Home. The list of retailers who have forged “voice partnerships” with Amazon and Google continues to grow, as savvy merchants capitalize on the trend toward voice-enabled shopping. Walgreens, Home Depot, PetSmart, and dozens of other popular brands are turning to voice as a means of staying relevant, competitive, and offering consumers another means of accessing their products.



Seize The Moment

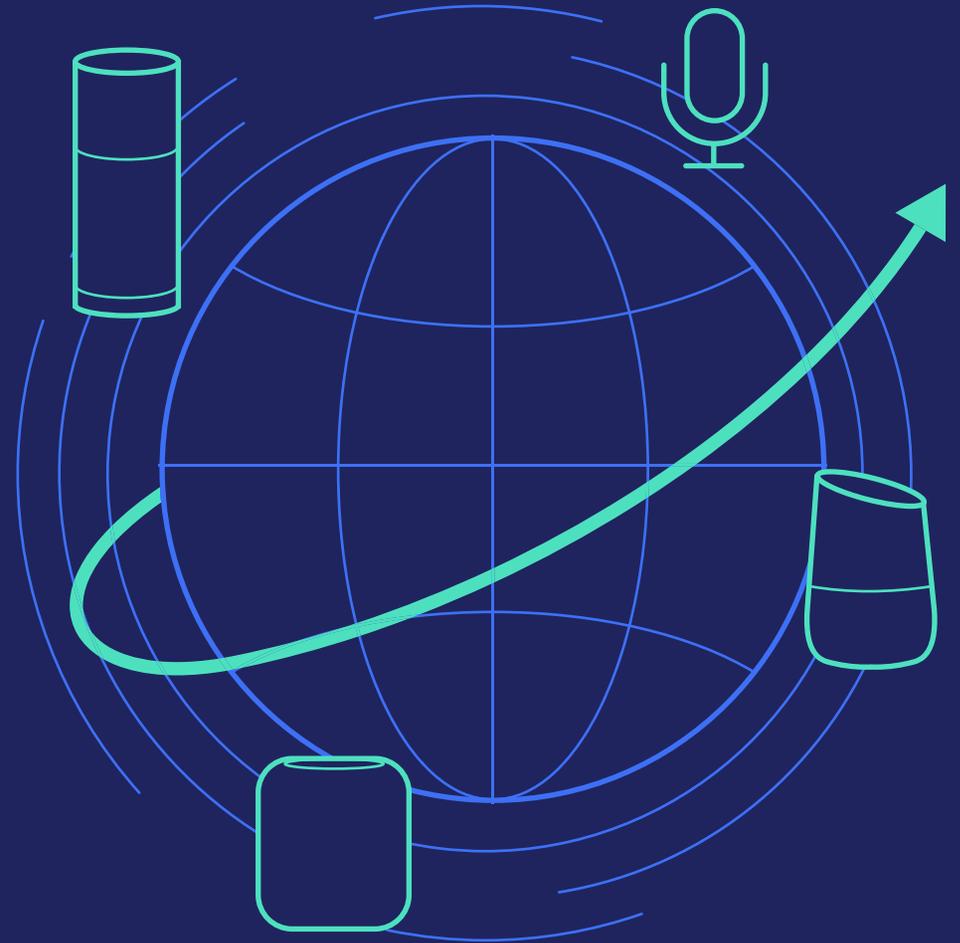
The opportunities reach beyond direct purchase intentions, creating the potential to meet consumers in the moment and offer solutions before they ask. Picture the common scenario of someone asking their Amazon Echo or Google Home for dinner recipe ideas. A local grocery retailer who knows that shopper is gluten-free and often buys organic chicken, basil pesto, and pasta can suggest those products and ask if she'd like to add them to her shopping cart, securing that purchase with a simple question.





Voice In The Driver's Seat

THE RACE IS ON





As smart speakers go mainstream and consumers clamor for simplicity, voice is rapidly progressing through all sectors and segments of the marketplace. Automotive leaders, appliance manufacturers, grocers, restaurateurs, retailers, and even service providers are leveraging voice to expand their market reach and meet customers where they are, on the platforms of their choosing.

Even without fully autonomous cars, the voice recognition system market for automotive is projected to reach nearly \$4 billion by 2025, an impressive CAGR of 19.41 percent¹¹. Existing platforms like GM's MyLink, Fiat's Blue&Me, and Ford's SYNC are swiftly incorporating voice recognition to control connected systems, making voice part of a much broader suite of functionalities¹². Android Auto is already available in more than 400 car models

from 40 brands, and Amazon just signed up Fiat Chrysler, Ford, Hyundai, BMW, Mercedes-Benz, and Nissan to start offering in-vehicle Alexa connectivity, enabling drivers to seamlessly mirror how they use Alexa in their homes¹³.



Beyond voice commands for in-vehicle controls, the car has become a hub of purchasing activity: more than 70 million Americans use order-ahead features to pay for food on their way to and from work, and two out of three drivers say they would be even more likely to order ahead if voice service was available through their automobile. The market potential with younger drivers is particularly lucrative: 8 in 10 millennials said they would shop more during their commute if they had voice-activated technology in their vehicle¹⁴. As voice is added to vehicles, it will fuel further growth in an already impressive market: drivers generate \$47.3 billion in commerce every year, and that annual figure swells to a stunning \$212 billion when additional in-car purchases like ordering coffee, buying groceries, and paying for parking and gas are factored in¹⁵.

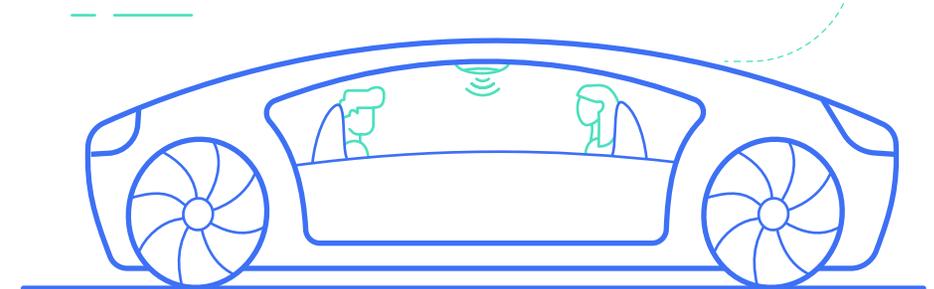
Little wonder, then, that restaurants and grocers are embracing voice's potential. Domino's Pizza was an early cross-platform innovator in this field, launching voice ordering from within its iPhone and Android apps back in 2014. Its voice assistant takes orders for carryout or delivery, remembers what customers ordered in the past, upsells by suggesting sides and additions to

the meal, and even locates coupons. Starbucks launched voice ordering capabilities early in 2017; now customers can simply speak into their mobile app or say, "Alexa, order my Starbucks" to place their usual order at their usual location. Ocado, a UK grocer, became the first British retailer to launch voice ordering through Alexa last year, enabling customers to not only place orders but also seek information on in-season products and how to use them in recipes.

8 in 10

MILLENNIALS

Would shop more during their commute if voice technology were available to them





The power of voice extends well beyond local food choices to products and services as well. Capital One now enables customers to access their bank account information and even pay their credit card bills through Alexa. Sephora lets consumers book beauty services using Google Assistant. Staples' famous "Easy Button" is using IBM's Watson AI and natural language processing to enable enterprise customers to simply ask for their office supplies to be reordered. And in the home, the number and variety of connected devices continues

to surge as consumers embrace the convenience and efficiency of voice assistants to manage everything from refrigerators to light bulbs to doorknobs to security cameras – and yes, even smart bathrooms with mirrors that talk and toilet seats that warm up.

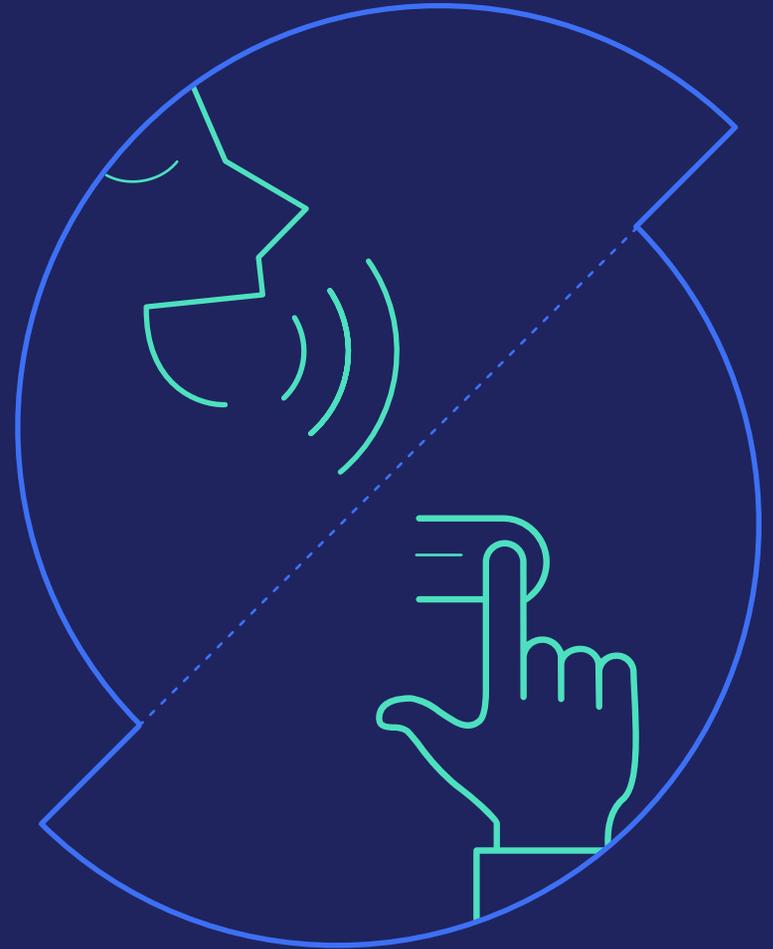
The bottom line: The earliest adoption of voice is already over, and players who sit silently on the sidelines are falling further behind, losing precious market and mind share among consumers. The spoils will go to firms that develop cross-platform voice strategies capable of working with Amazon, Google, Apple, Microsoft, Samsung, and other key players, reaching consumers on their preferred platform. Given the proliferation of voice and its growing disruption of the mobile market, hesitation is likely to be costly indeed.





Words Speak Louder Than Actions

SAY VS. SWIPE: WHY A MOBILE STRATEGY
IS NO LONGER ENOUGH





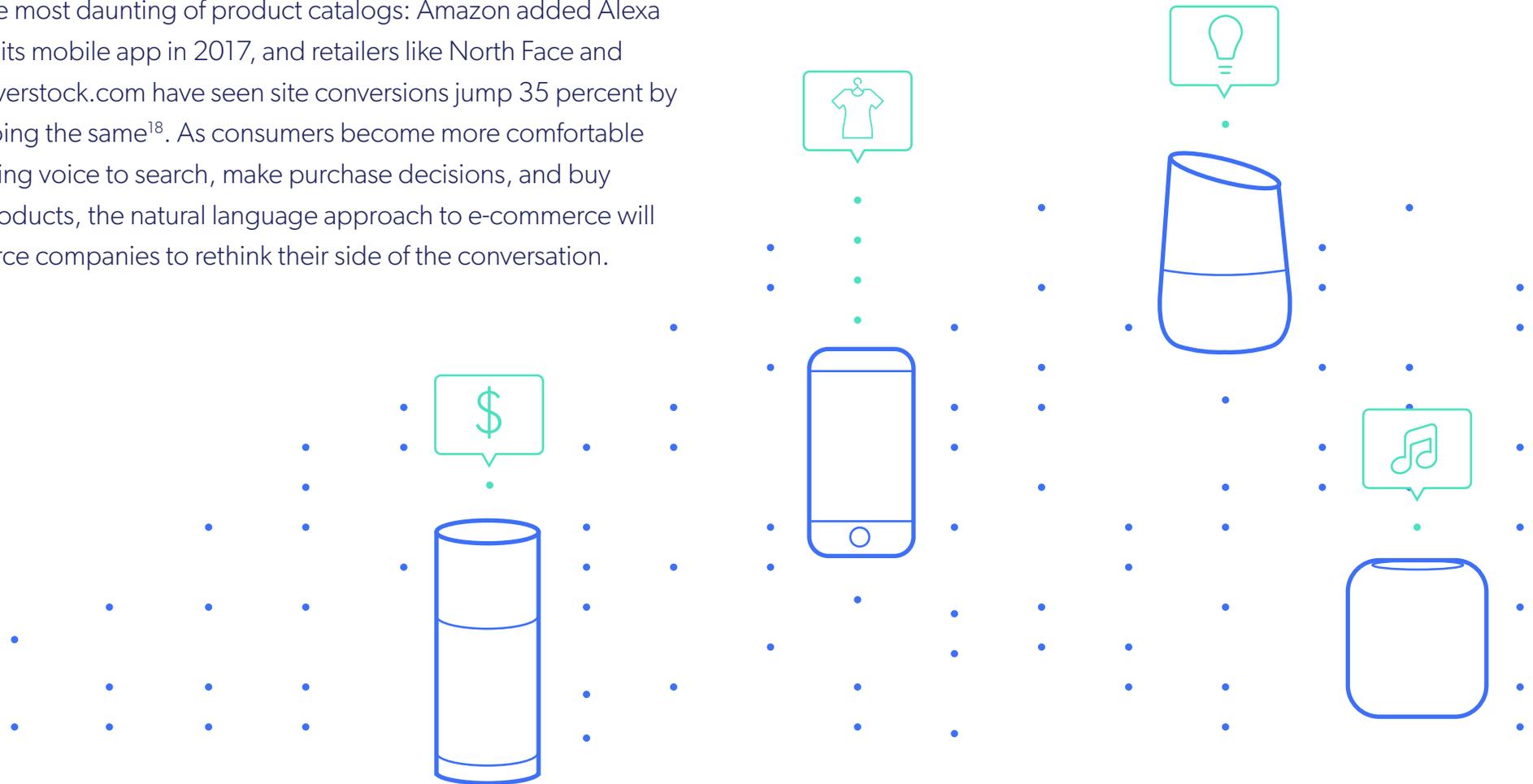
Before Alexa changed the game in 2014, all eyes were on mobile as the disruptive medium of the future. Now voice is proving itself a worthy challenger for consumers' attention and companies' development dollars.

While its size is dwarfed by mobile—1.5 billion smart phones were sold in 2017, compared to 27 million smart speakers – this fast-growing market packs a powerful punch and is starting to change how consumers use their smartphones. A new Accenture study reports that in homes equipped with Alexa or Google Home, nearly two thirds of consumers have scaled back their use of smartphones for entertainment, and more than half now use their phones less frequently for online purchases and general queries¹⁶. Likewise, a 2018 Capgemini study projects that by 2020, 40 percent of consumers will use voice assistants rather than an app or a website¹⁷. After 10 years of touching, tapping, and swiping our way through the consumer experience, voice is poised to transform the way we interact with brands and learn about products and services.

It's easy to understand the appeal: Voice offers simplicity and instant gratification, an irresistible combination for impatient and distracted consumers. Why take the time to stop what you're doing, unlock your phone, open an app, and click through selections when you can simply say "Alexa, reorder baby food" without ever diverting your attention from the baby? Likewise, tech-challenged older consumers can forego the reading glasses and manual search process to jump directly to the products or tasks they need.



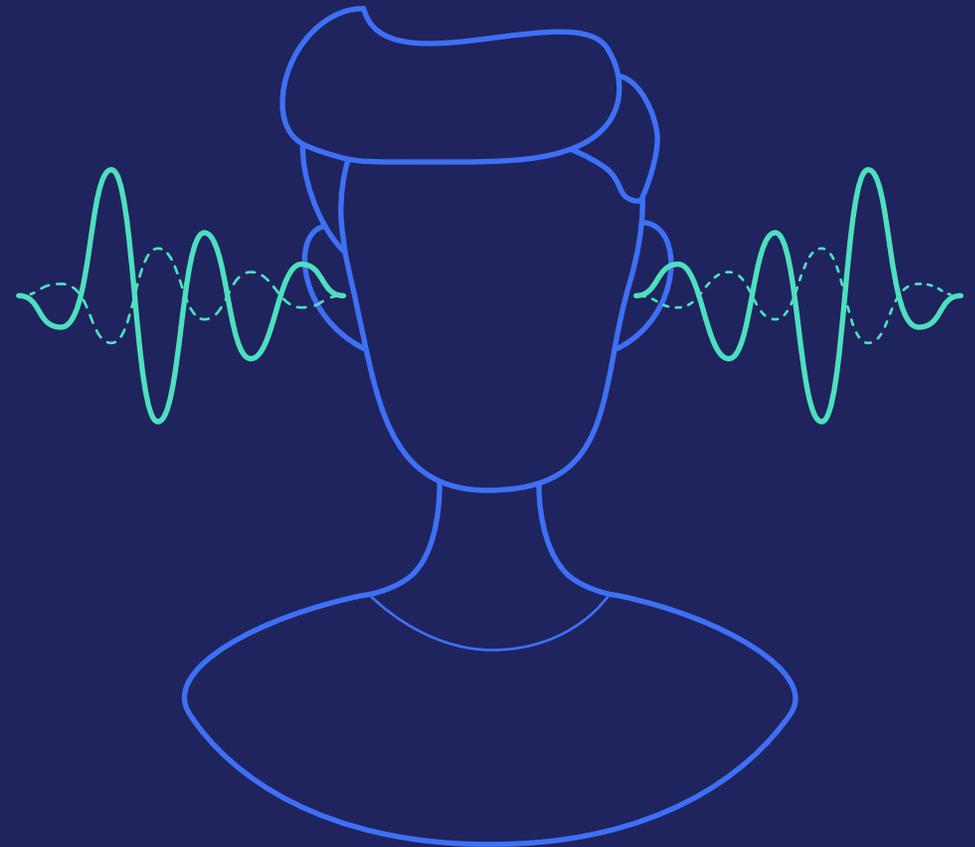
For on-the-go searches and purchases, mobile is still currently king. Voice can be a powerful accelerant and may prove to be the best way to optimize the mobile experience. Natural language provides a simple way to quickly cut through even the most daunting of product catalogs: Amazon added Alexa to its mobile app in 2017, and retailers like North Face and Overstock.com have seen site conversions jump 35 percent by doing the same¹⁸. As consumers become more comfortable using voice to search, make purchase decisions, and buy products, the natural language approach to e-commerce will force companies to rethink their side of the conversation.





Are You Talking To Me?

"BRAND VOICE" TAKES ON NEW MEANING





Ten years ago, the mobile transformation turned marketing on its head and ushered in a new way for brands to meet audiences where they were. Still, there was familiarity amidst the market mayhem: mobile screens bore a resemblance to miniature desktops, and many of the same search rules still applied.

Voice poses a fundamental shock to the system: What happens to marketing and brand awareness when all visual cues disappear? No logos, no catchy headlines, no killer apps, no compelling graphics or videos to draw consumers in or shape a brand identity. How do you feature your brand in a seemingly ad-free environment? What does a meaningful customer experience sound like? How do you convince Alexa or Google Assistant to suggest your lightbulb, order your energy bars, or point travelers to your hotel?

For the past decade, swiping and scrolling have offered limitless screens' worth of choices serving up SEO-driven text.

Consumers have grown accustomed to this visual "noise": type almost anything into Google and thousands of results appear. Voice silences that noise. We are on the precipice of a narrowly targeted, highly selective environment that changes all the rules. Imagine typing something – anything – into Google and getting only one or two results. That's the new reality of search via in-home voice assistants like Alexa and Home. If a brand isn't in first or second place, it may as well be in last¹⁹. What that means for the future of paid search is unclear, but it's safe to say the rules that have reigned for the past 10 years will need to be rewritten.



Beyond the search implications lies the challenge of what to do once consumers actually find you. At first blush, the notion of real-time interactive conversations with millions of individual consumers might seem like brand nirvana. But as we've seen with mobile, modern consumers can be an impatient and fickle audience. Six out of 10 won't forgive a bad experience with an app, and brands might not get a second chance to make a first impression with voice, either. Companies must be ready to deliver seamless experiences that reach and delight their customers on whichever voice platforms they prefer.

The good news is that voice presents retailers with a powerful opportunity to improve the customer experience and secure higher customer spending. Capgemini found that consumers who are satisfied with their voice assistant experience are willing to increase their spending with a brand by 5 percent, and those who are very pleased with the experience will spend as much as 16 percent more.





What Can You Do To Get Ready?

THINK BEFORE YOU SPEAK /
PUT YOUR MONEY WHERE YOUR VOICE IS





With the voice conversation getting louder, those who wait to join the noisy marketplace may find themselves drowned out altogether. But jumping into the fray without thoughtful planning can do more harm than good.

If you plan to incorporate voice into an omni-channel strategy, it needs to be precisely that: a strategy. The role of voice should take multiple forms and balance the strengths of various platforms and channels. As a critical means for optimizing the mobile experience, voice can be the gateway to more familiar visual cues and conventional branding. For in-home or in-vehicle assistants, brand identity and customer experience will be solely dependent on voice. For smart home devices connected to voice assistants, reliability, flexibility, and accuracy will be key: a refrigerator doesn't have a personality (yet), but it needs to work seamlessly with whatever systems the consumer chooses to use in their home.

While in-house developers may welcome the opportunity to try something new, it's critical to understand that standard mobile and web development skills do not transfer cleanly to the voice environment. The natural language interface is an art and a science unto itself and requires highly specialized skills to create a customer experience that will stand the brutal test of consumers' impatience with imperfection. Nothing can replace hands-on experience when it comes to working with disruptive technology. An ecosystem of partners can ensure you strike a successful balance of internal and external talent necessary to smooth the integration, maximize value, and ensure things work together seamlessly.

To deliver that unified experience, consumers have come to expect companies to cater to their platform preferences. Just as the marketplace now expects apps to be available on both Android and iOS, the best voice strategies span multiple platforms. Voice is still evolving, but it is doing so at a much faster clip than mobile ever did. The smart speaker market is being spurred forward by intense competition that is likely to heat up further now that Apple has officially joined the fray with HomePod. In the meantime, Google's search capabilities are unrivaled, but so is Alexa's purchasing power. Writing off either camp could be a perilous decision that sets your brand and development efforts back precisely at a time when there is no time to lose. By leveraging an ecosystem of partners, you can streamline development across platforms and build your omni-channel capabilities to scale with increased speed and efficiency. Vectorform, for example, works closely with Amazon as a preferred resource to enable brands and companies to develop custom skills leveraging the full capability of Alexa. We've also designed a cross-platform development tool that is not confined to a single channel or a dominant leader, creating an agile voice strategy that can adapt as the market changes.



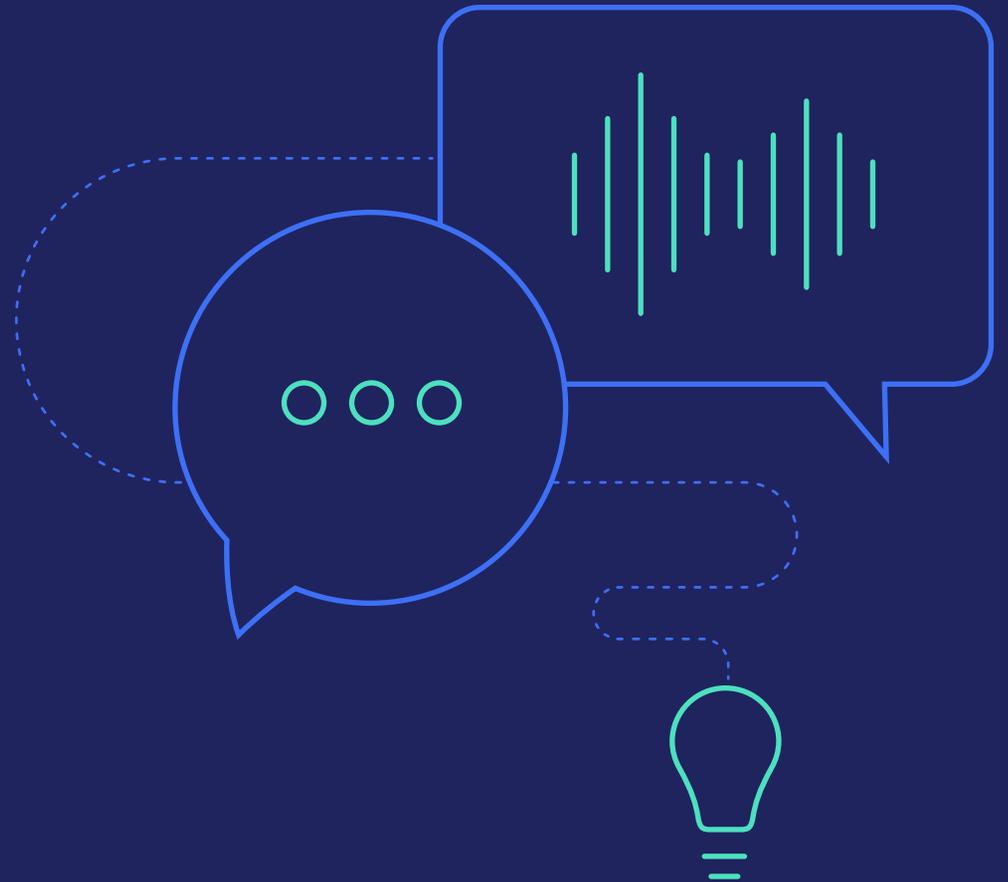
Join The Conversation

The simplicity and affordability of smart speakers presents an opportunity that isn't always available when it comes to new technology: the option to try voice for yourself. While big-ticket items like connected refrigerators and washing machines don't make practical test subjects, you can set up a Google Home Mini and an Alexa Dot for less than the cost of dinner and a movie. Explore each platform. Use your voice to spontaneously ask questions in a way that feels natural. Ask each the same question and see if you get the same results. Put yourself in your target customers' shoes: ask questions that relate to your brand and see how (or if) you fare in the results. The experience is likely to be an eye-opening foray into the environment of voice-driven marketing and commerce (and just might save you a trip to the grocery store).



Let's Talk

LEVERAGING EXPERTISE





More than 50 years after the premiere of Shoebox, its progeny continue to impress. IBM's Watson can now not only hear the human voice, but also detect whether the person speaking is angry or fearful, happy or sad²⁰. The ability for speech recognition technology to learn our emotions, social tendencies, and language styles will bring yet another layer to the conversation between man and machine.

Driven by consumer demand, as well as a cultural shift in the comfort level with using voice commands, the underlying voice recognition technology will continue to improve. In a future where companies and consumers can converse naturally and seamlessly, the ones leading those conversations will be modern brands willing to think beyond platforms, surround themselves with the right partners, and bring their own voices to the table with clarity and confidence.

As the voice market accelerates, manufacturers and service providers must choose to build or buy their way in, as well as borrow additional expertise along the way. It's not an easy undertaking, but Vectorform can offer the experience and insight you need as you begin defining your voice strategy, identifying how to monetize this powerful new platform, and determining how to differentiate your brand in a noisy marketplace.



Vectorform is proud to help companies not only respond to voice trends, but proactively position themselves for success in this rapidly evolving market. I welcome you to [subscribe](#) to our newsletter where we share our thoughts on the latest innovations. You can also [contact us](#) to continue the conversation around the voice market, including conversational user interface concepting, [Alexa skill development](#), and platform-agnostic integration with a variety of voice services.



About Vectorform

Vectorform is an invention company that creates digital products and experiences for the world's leading brands with a focus on Mobile, Augmented and Virtual Reality, Internet of Things, Smart Home, Connected Vehicles and Wearable Technology. Founded in 1999, Vectorform has five global offices: Seattle, Detroit, New York, Munich and Hyderabad. Visit Vectorform.com and connect on [Twitter](#), [Facebook](#), [Google+](#), and [LinkedIn](#).



¹ [https://mediacenter.ibm.com/media/\(1961\)+Shoebox+-+IBM+Archives+\(78-013\)/0_4m2ynnkk](https://mediacenter.ibm.com/media/(1961)+Shoebox+-+IBM+Archives+(78-013)/0_4m2ynnkk)

² <https://www.forbes.com/forbes/welcome/?toURL=https://www.forbes.com/sites/johnkoetsier/2018/01/09/adobe-echo-google-home-sales-doubled-in-2017-and-22-shop-by-voice/&refURL=&referrer=#728f8c4b1931>

³ <https://investorplace.com/2018/01/smart-speaker-sales-faster-smartphones-u-s/#.WmE7e66nHIU>

⁴ <https://www.mycustomer.com/marketing/technology/voice-search-how-could-it-change-your-customers-journey>

⁵ <https://www.forbes.com/sites/johnkoetsier/2018/01/08/smart-speakers-are-eating-mobile-66-of-owners-use-smartphones-less/#7b6390c013ad>

⁶ <https://techcrunch.com/2017/08/22/walmart-and-google-partner-on-voice-based-shopping/>

⁷ <http://www.cmo.com/adobe-digital-insights/articles/2018/1/8/the-future-of-consumer-electronics-is-voice-activated.html>

⁸ https://www.capgemini.com/resources/conversational-commerce-dti-report/?utm_source=pr&utm_medium=referral&utm_content=dcx_none_link_report_conv_commerce&utm_campaign=disruptdigital_dti

⁹ <https://www.thestreet.com/story/14444698/1/>

¹⁰ <https://www.wsj.com/articles/amazons-grocery-sales-gained-weight-after-it-devoured-whole-foods-1515934801>

¹¹ <https://www.marketsandmarkets.com/Market-Reports/automotive-voice-recognition-system-market-213347129.html>

¹² <https://auto.economictimes.indiatimes.com/news/auto-technology/top-3-trends-impacting-global-automotive-voice-speech-recognition-market/53378071>

¹³ <https://www.forbes.com/sites/davidkiley5/2018/01/10/ces-amazons-alexa-making-more-inroads-into-vehicles/#6ec8d75933d2>

¹⁴ <https://www.pymnts.com/intelligence-of-things/2018/digital-drive-report-connected-cars-commerce-order-ahead-visa/>

¹⁵ <https://www.pymnts.com/intelligence-of-things/2018/digital-drive-report-connected-cars-commerce-order-ahead-visa/>

¹⁶ https://www.accenture.com/us-en/_acnmedia/PDF-69/Accenture-2018-Digital-Consumer-Survey-Findings.pdf

¹⁷ https://www.capgemini.com/resources/conversational-commerce-dti-report/?utm_source=pr&utm_medium=referral&utm_content=dcx_none_link_report_conv_commerce&utm_campaign=disruptdigital_dti

¹⁸ <https://www.forbes.com/sites/grouphink/2017/09/29/your-mobile-strategy-needs-to-include-voice/#37aac7dad5ce>

¹⁹ <http://www.adweek.com/digital/heres-what-you-need-to-know-about-voice-ai-the-next-frontier-of-brand-marketing/>

²⁰ <https://www.ibm.com/case-studies/Q417239C20517Z65>



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