

# What's the Latest with Smart Speakers and Virtual Assistants?

**Essie Snell**

Senior Manager, E Source

**Arthi Padmanabhan**

Analyst, E Source



**E Source**

Fall 2019 E Source Virtual  
Assistant Summit



# Why focus on voice now?

# Smart speaker adoption is growing, and voice assistants may represent the future of search

**“Computing is moving from mobile-first to AI-first, with more universal ambient and intelligent computing that you can interact with naturally”**

*—Sundar Pichai, CEO, Google*

# Customers actually want to engage with you on this channel

Sixty percent of smart speaker owners said they're "probably" or "definitely" interested in a utility app that uses voice-activated skills (data from the E Source Residential Utility Customer Survey).



# No firm expectations about what branded skills or actions should do



Source: iStock

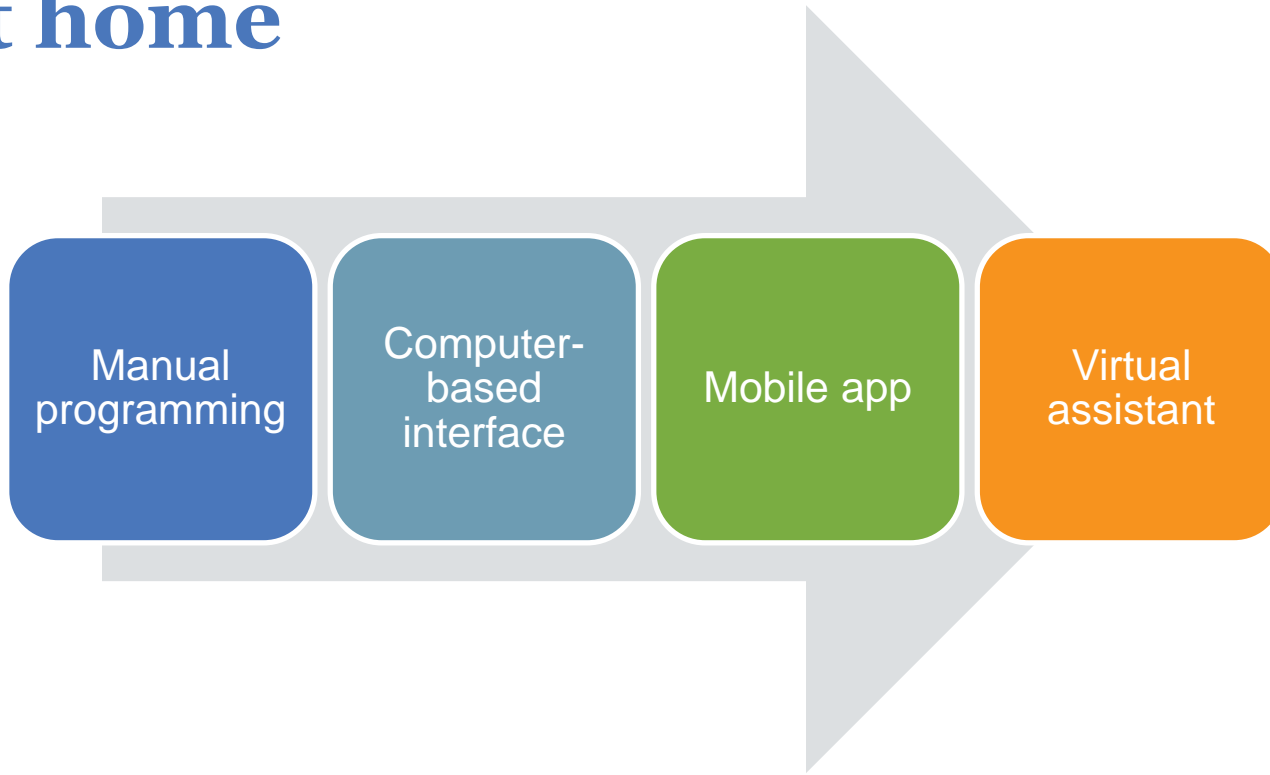
# Brands aren't currently being well-represented by voice searches

**“Overall, the scorecard for brands is not good when it comes to voice assistant SEO. Voice search is rising and third-party site such as Wikipedia and Yelp are defining the information consumers are hearing about brands. Much of that information is not flattering.”**

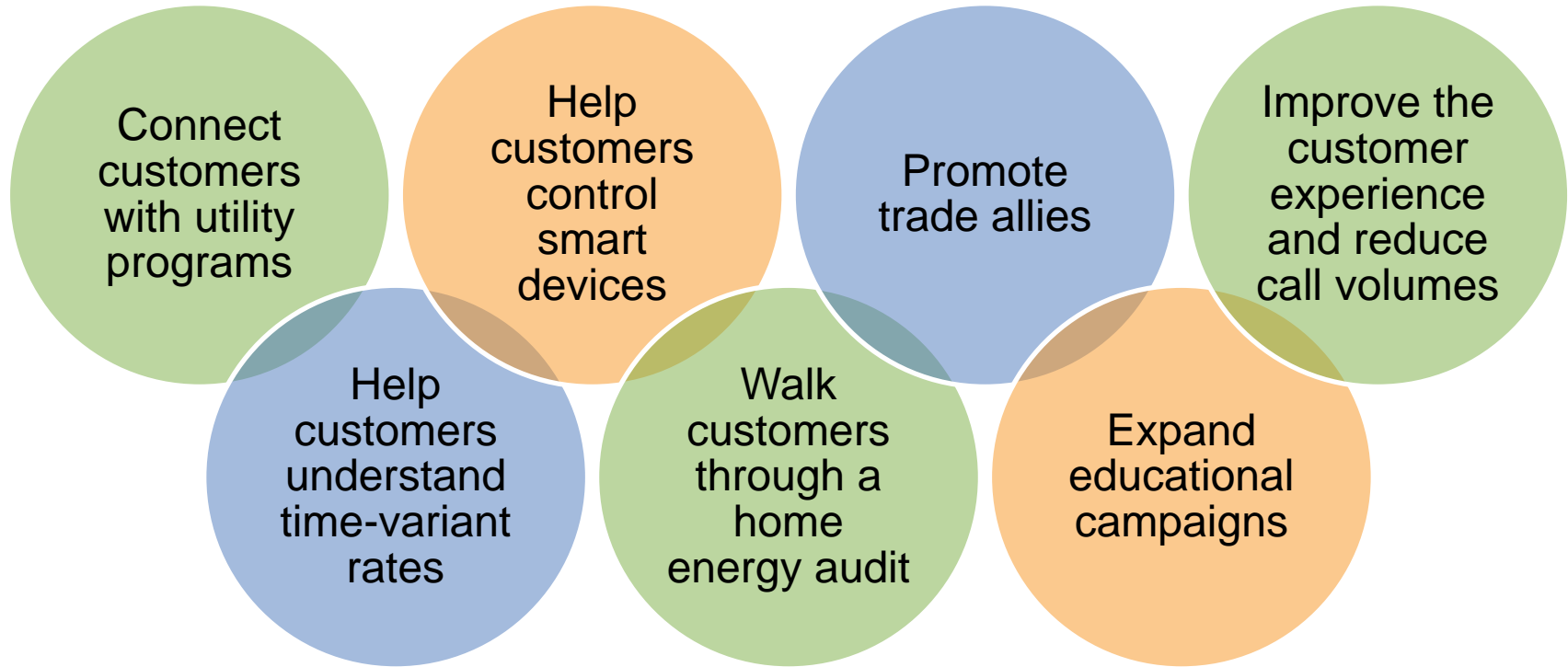
Source: 2019 Voicebot.ai report [Voice Assistant SEO Report for Brands](#)



# An emerging operating system for the smart home



# Myriad opportunities for utilities





# Smart speakers with screens have even more potential



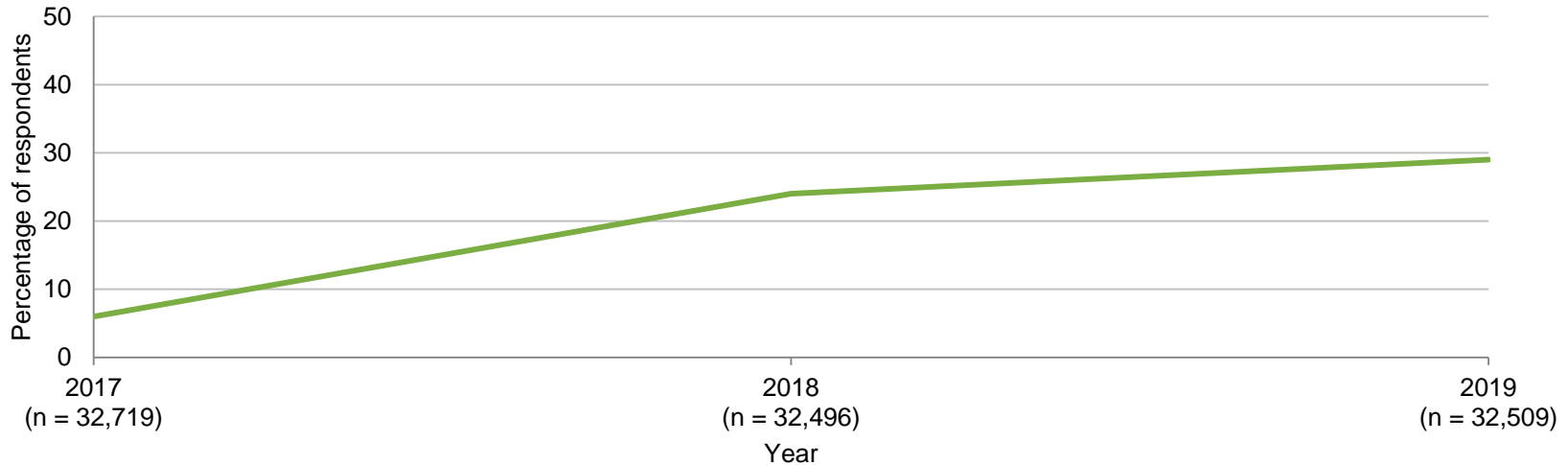
Sources: Google, Amazon

A smart speaker is centered in the background, surrounded by various icons representing different services like maps, music, and travel. The text is overlaid on a white rectangular box.

**What's the current  
market look like?**

# US household penetration

After a sharp increase in 2018, smart speaker adoption rates climbed slowly in 2019.

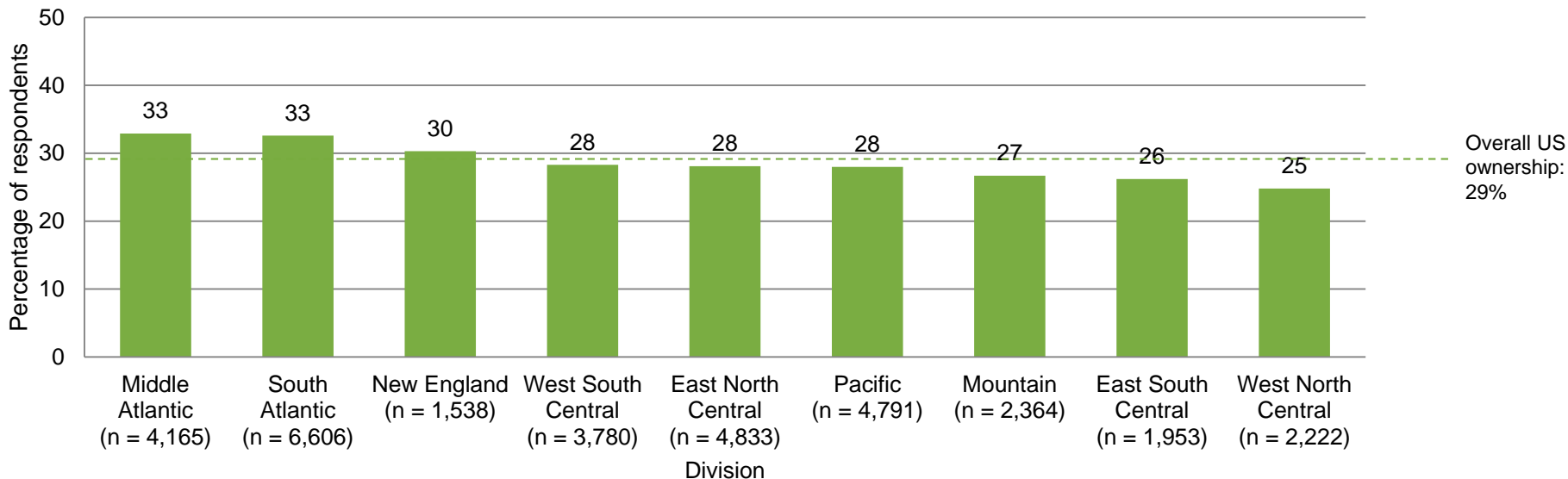


**Base:** All respondents (n varies). **Question B1:** (2017) Please indicate which of the following products/services your household owns or subscribes to. Virtual assistant (Amazon Echo/Dot, Google Home, etc.) **Question F1:** (2018–2019) Do you own any of the following devices? Please select all that apply. Amazon Alexa/Echo/Echo Dot/etc., Apple HomePod, Google Home, Other virtual home assistant, None of the above.

© E Source; data from the 2017, 2018, and 2019 Claritas Technology Behavior Tracks

# Smart speaker penetration by division

Adoption is highest along the East Coast.

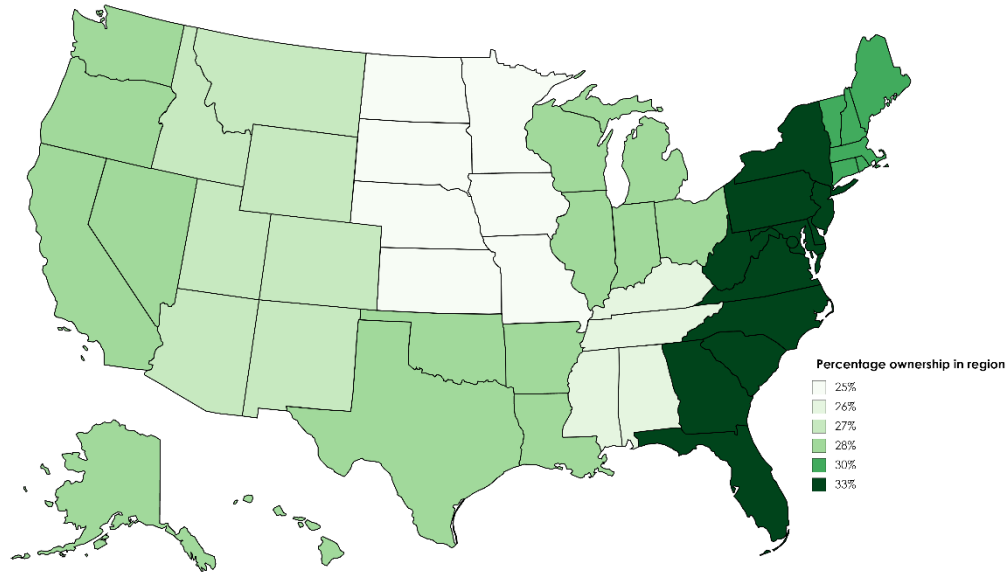


**Base:** All respondents (n = 32,509); n varies by division. **Question F1:** Do you own any of the following devices? Please select all that apply. Amazon Alexa/Echo/Echo Dot/etc., Apple HomePod, Google Home, Other virtual home assistant, None of the above.

© E Source; data from the 2019 Claritas Technology Behavior Track

# Smart speaker penetration mapped

Adoption is highest along the East Coast.

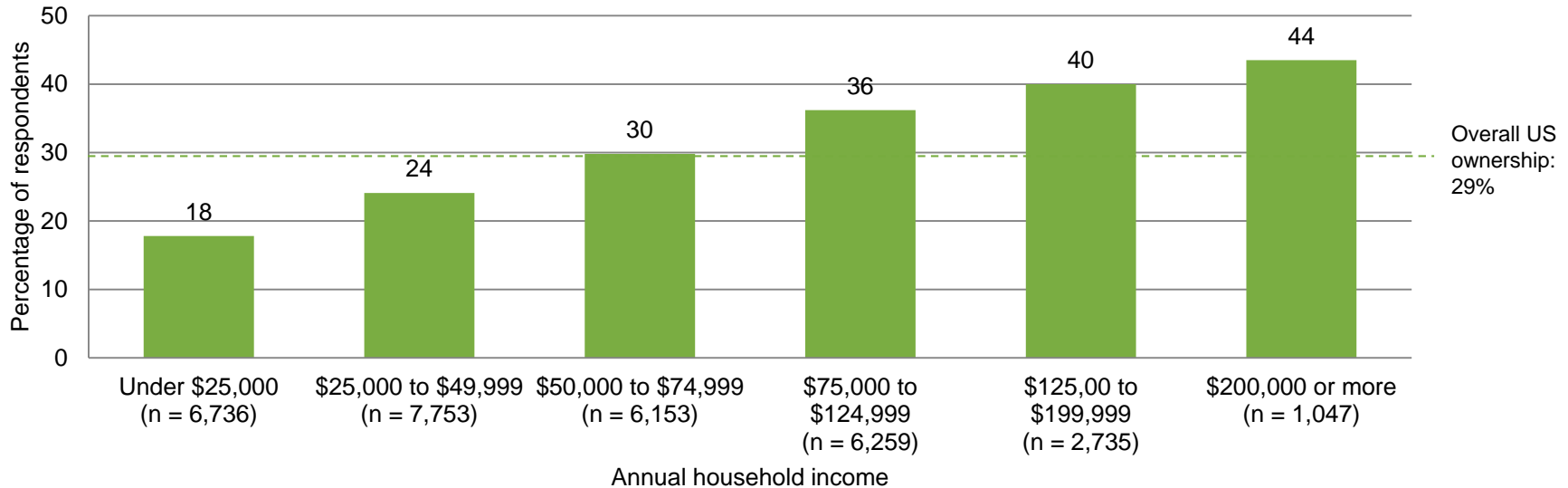


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Data: from the 2019 Claritas  
Technology Behavior Track  
Created with mapchart.net

# US household penetration

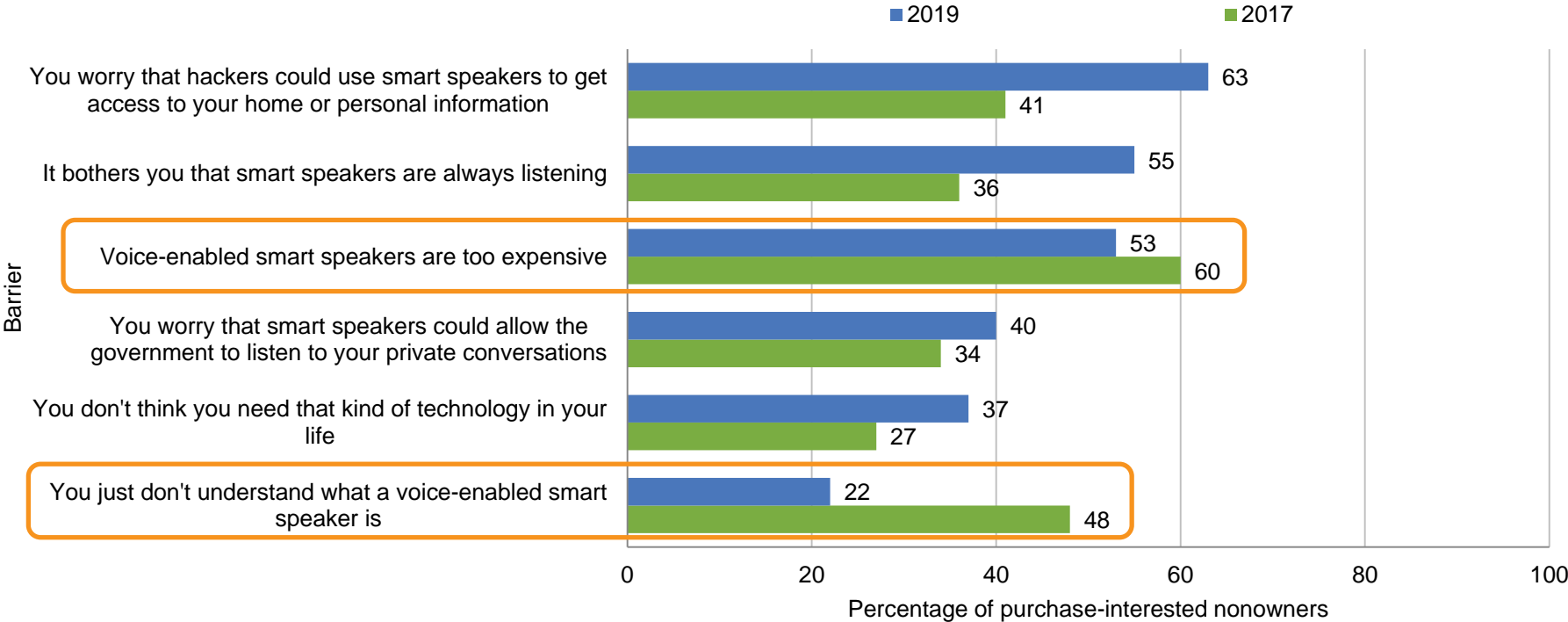
Adoption rates directly relate to annual household income.



**Base:** Respondents who provided income information (n = 30,683). **Question F1:** Do you own any of the following devices? Please select all that apply. Amazon Alexa/Echo/Echo Dot/etc., Apple HomePod, Google Home, Other virtual home assistant, None of the above.

© E Source; data from the 2019 Claritas Technology Behavior Track

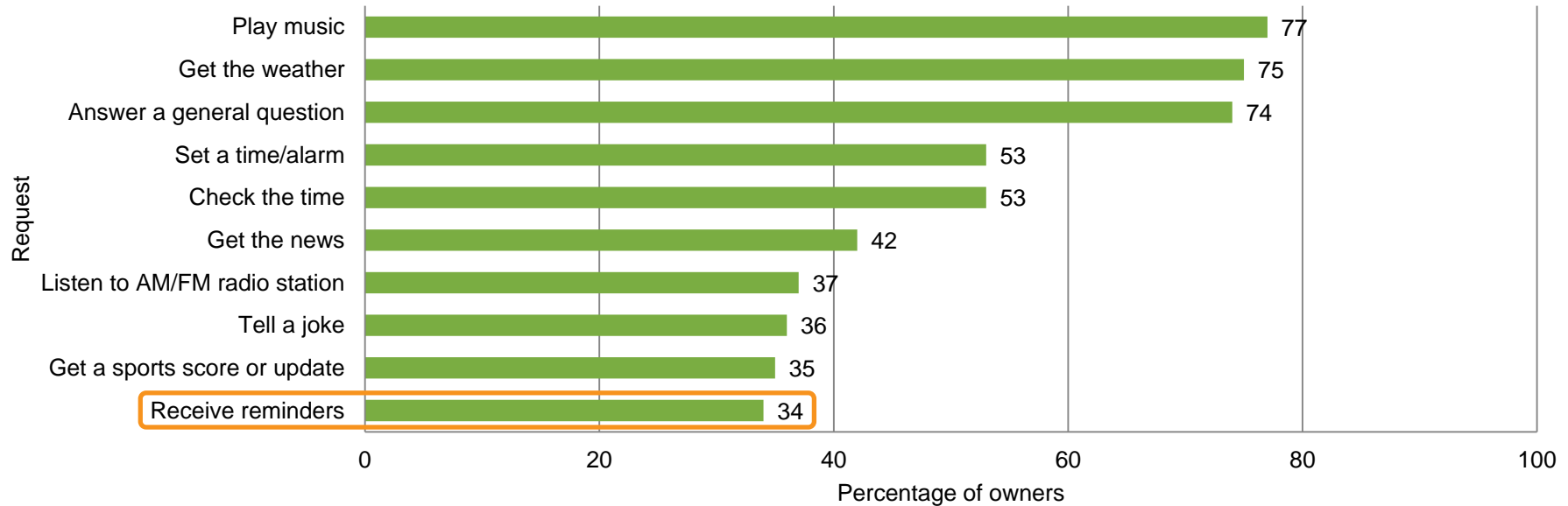
# Barriers to adoption



Base: Respondents interested in owning a smart speaker.

© E Source: data from the Smart Audio Report, National Public Radio, and Edison Research

# Top 10 smart speaker requests of owners' previous week



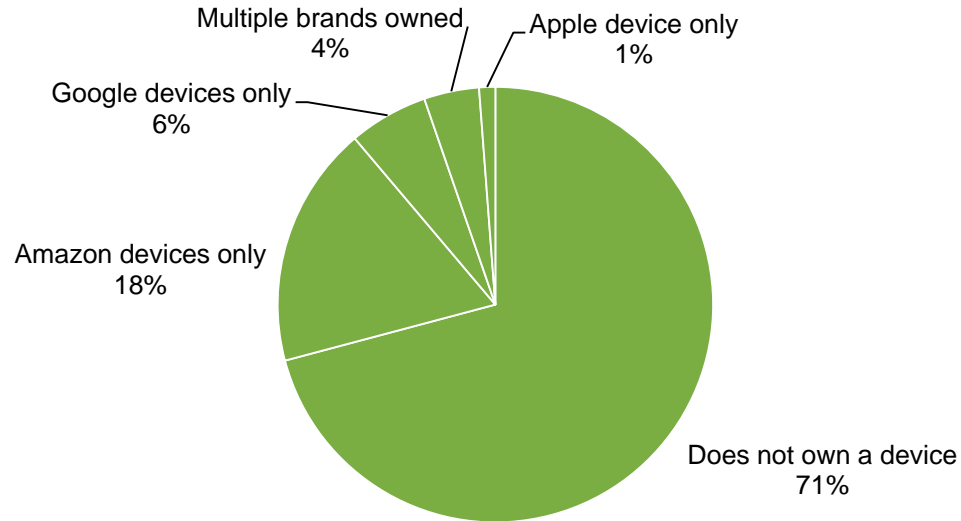
Base: Smart speaker owners (n = 812).

© E Source: data from the Smart Audio Report, National Public Radio, and Edison Research



# Smart speaker market share by brand

Amazon dominates the smart speaker market.

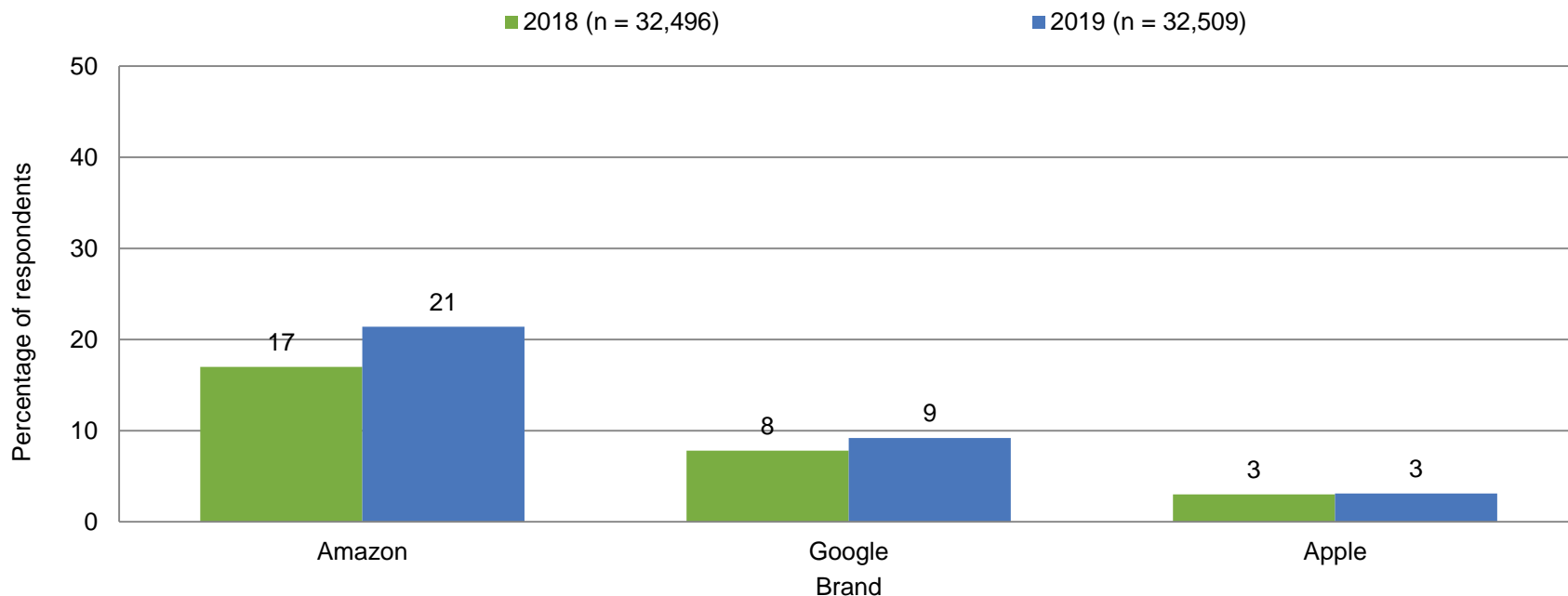


**Base:** All respondents (n = 32,509). **Question F1:** Do you own any of the following devices? Please select all that apply.

© E Source; data from the 2019 Claritas Technology Behavior Track

# Smart speaker market share: year over year

Both Amazon and Google increased adoption while Apple idled.

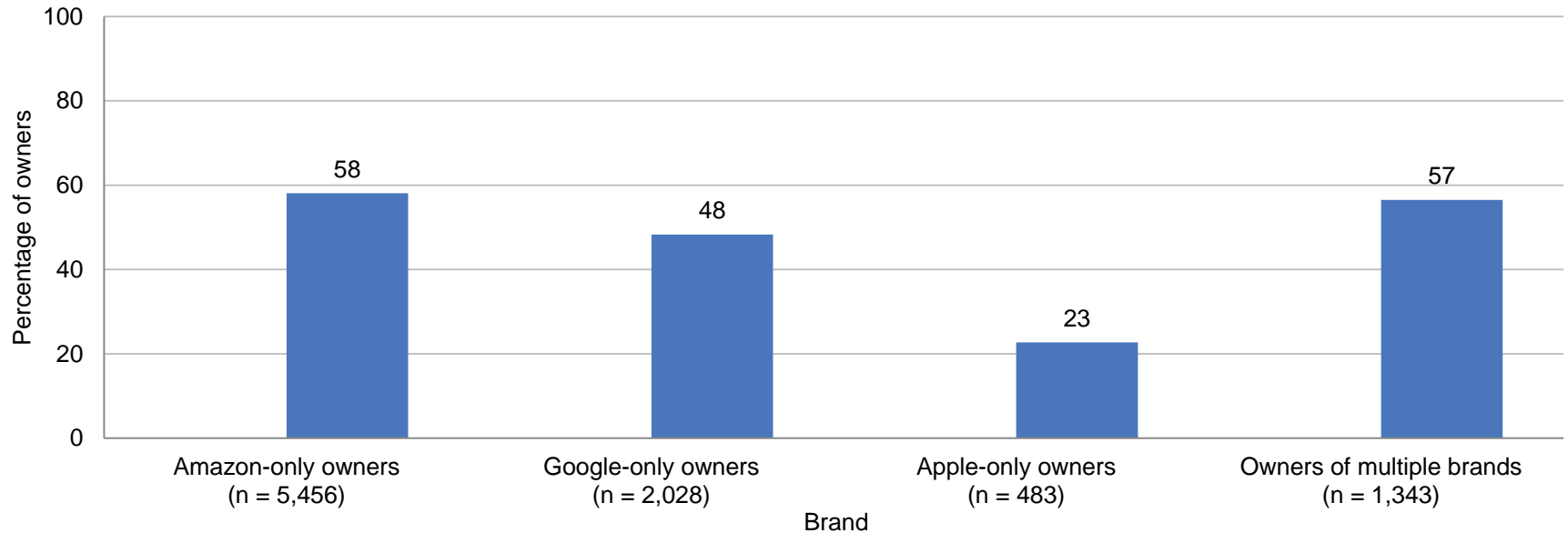


**Base:** All respondents (n varies). **Question F1:** Do you own any of the following devices? Please select all that apply.

© E Source; data from the 2018 and 2019 Claritas Technology Behavior Tracks

# Smart speaker usage rates

Weekly usage patterns mirror adoption rates.

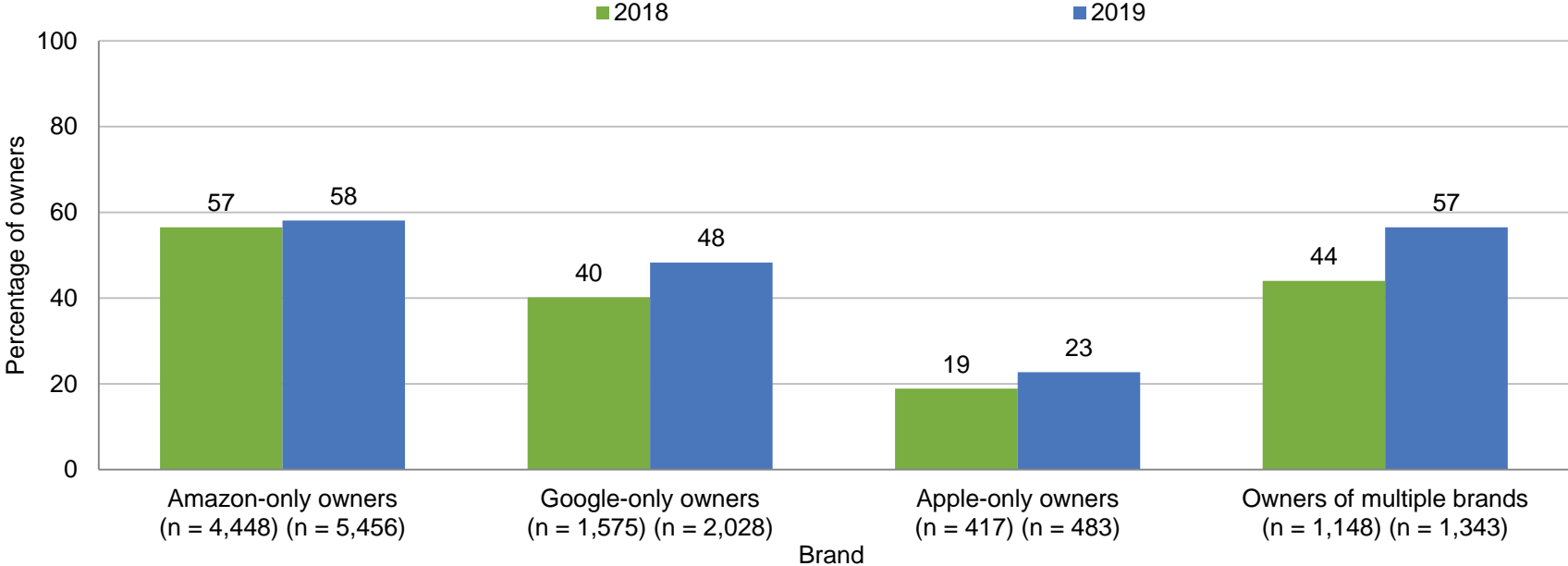


**Base:** Smart speaker owners who reported home internet service type (n varies). **Question B7:** What activities do you or anyone in your household do in a typical week using the Internet? Use virtual assistant (Amazon Echo/Alexa, Google Home, Apple HomePod) **Question F1:** Do you own any of the following devices? Please select all that apply.

© E Source; data from the 2019 Claritas Technology Behavior Track

# Smart speaker usage rates: year over year

Google's usage rates increased at the highest rate.

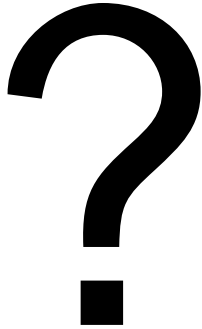


**Base:** Smart speaker owners who reported home internet service type, n varies as shown. **Question B7:** What activities do you or anyone in your household do in a typical week using the Internet? Use virtual assistant (Amazon Echo/Alexa, Google Home, Apple HomePod) **Question F1:** Do you own any of the following devices? Please select all that apply.

© E Source; data from the 2018 and 2019 Claritas Technology Behavior Tracks

# Skills versus actions

Skills



Actions



Source: Voicebot.ai, January 2019

# Skills versus actions

Skills

58,595

Actions

?

Source: Voicebot.ai, January 2019

# Skills versus actions

Skills

58,595

Actions

4,253

Source: Voicebot.ai, January 2019

# Google gains ground

Google shipped more product than Amazon in Q1 2018.

Worldwide smart speaker market Q1 2018

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%

Source: Canalis ([Google Beats Amazon to First Place in Smart Speaker Market](#))



# Google gains ground

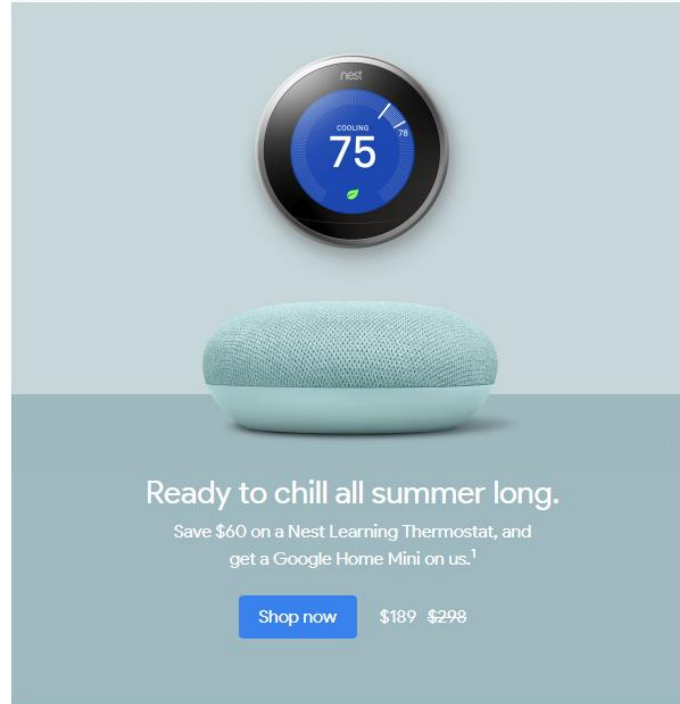
Google Home Mini shipments exceeded those of its Amazon analog in Q2 2018.

Smart speaker model	Q2 2018 shipments (millions of units)	% share
Google Home Mini	2.3	20
Amazon Echo Dot	2.2	18
Amazon Echo	1.4	12
Alibaba Tmall Genie	0.8	7
Google Home	0.8	7
Rest of total market	4.3	36
<b>Total</b>	<b>11.7</b>	<b>100</b>

© E Source; data from Strategy Analytics ([Google Home Mini Accounts for One in Five Smart Speaker Shipments Worldwide in Q2 2018](#))

# Google gains ground

Google promotional email sent ahead of Prime day:



A promotional email graphic featuring a Nest Learning Thermostat and a Google Home Mini smart speaker. The thermostat is circular with a blue display showing '75' and 'COOLING'. The Google Home Mini is a small, teal, fabric-covered speaker. The background is a light blue gradient.

Ready to chill all summer long.

Save \$60 on a Nest Learning Thermostat, and get a Google Home Mini on us.<sup>1</sup>

[Shop now](#) \$189 ~~\$298~~

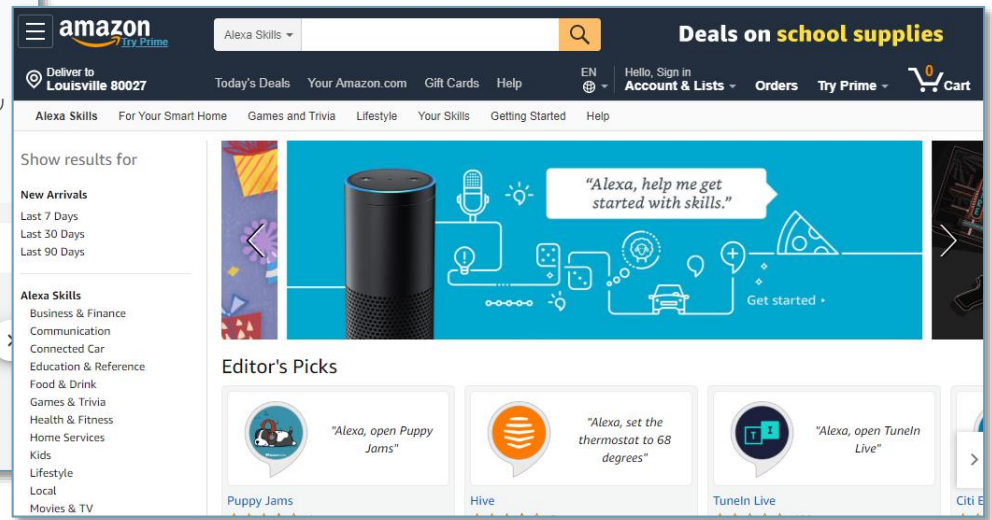
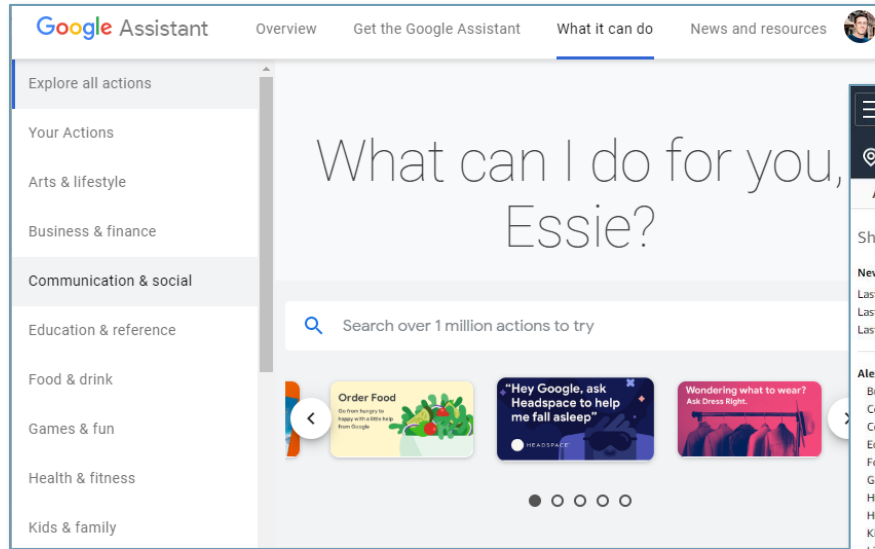
# Looking forward

- Useful new skills and actions would drive smart speaker adoption.
- As virtual assistant technology is incorporated into other spaces, the role of the smart speaker may change, but the technology will persist.
- A security breach or perceived violation of privacy would stagnate adoption and may also reduce owners' usage.



# What are utilities currently doing?

# We've been reviewing all public energy-related skills and actions



Sources: Google, Amazon

# Competition is fierce in the energy skills and actions space



The Daily Energy Reading

★★★★☆ v 9

FREE

Available instantly on your connected Alexa device.



Juicing Lifestyle

Juicing Lifestyle

FREE

Available instantly on your con



Strike Force Energy

★★★★☆ v 4

FREE

Available instantly on your connected Alexa device.



How to Get Six Pack Abs

★★★★☆ v 1

FREE

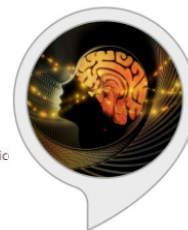
Available instantly on your connect



Joyful Manifestation Show

FREE

Available instantly on your connected Alexa device.



Remove Negative Energy

★★★★☆ v 15

FREE

Available instantly on your connected Alexa device.



Baby Fun Yoga

FREE

Available instantly on your connected Alexa devic



Ask Lord Phly

FREE

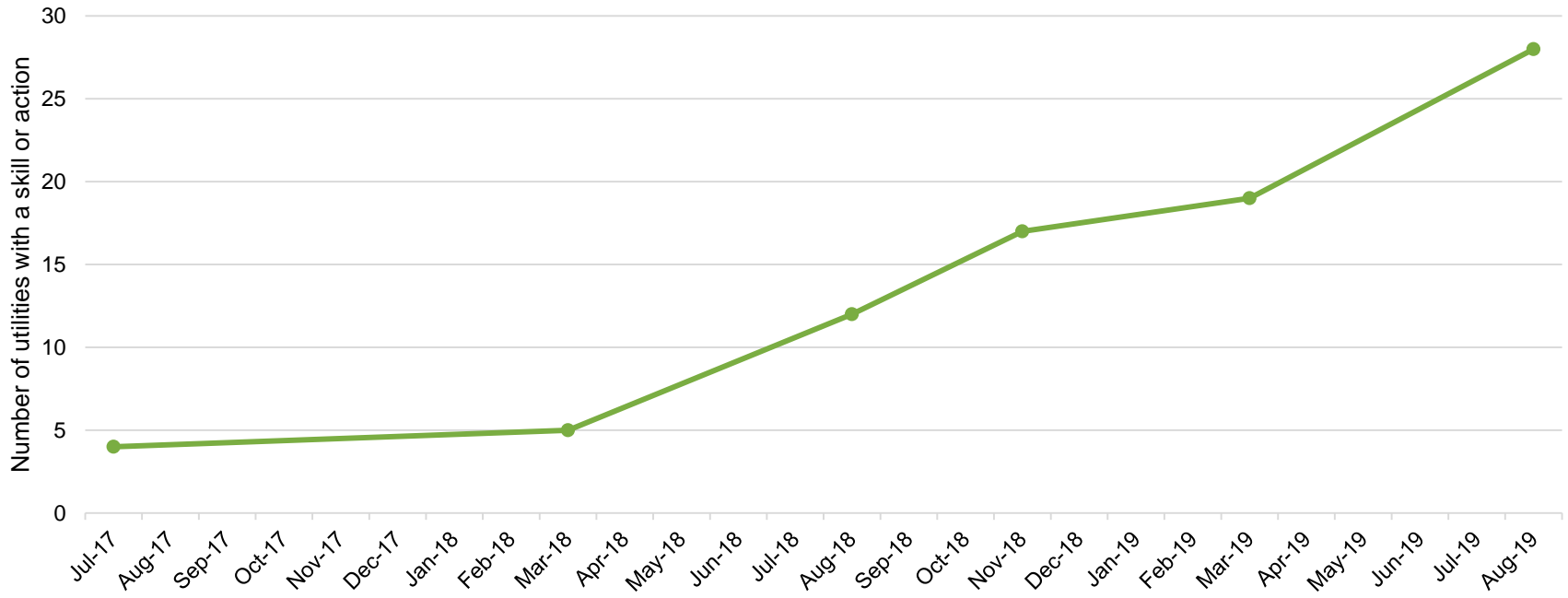
Available instantly on your connected Alexa device.

Source: Amazon

# Overall, nearly 30 utilities have created skills or actions so far



# The number of utilities with a skill or action has increased rapidly since 2017



© E Source

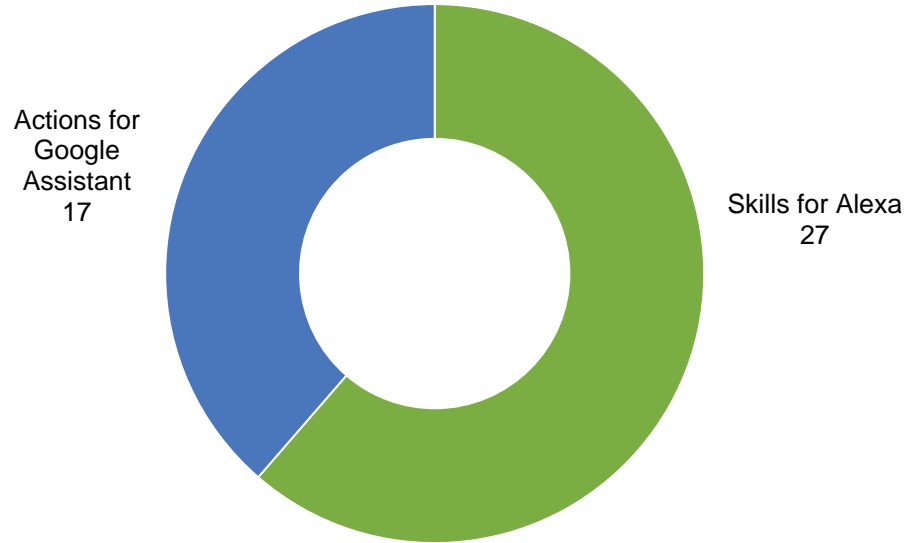




# Utilities have built more skills than actions to date

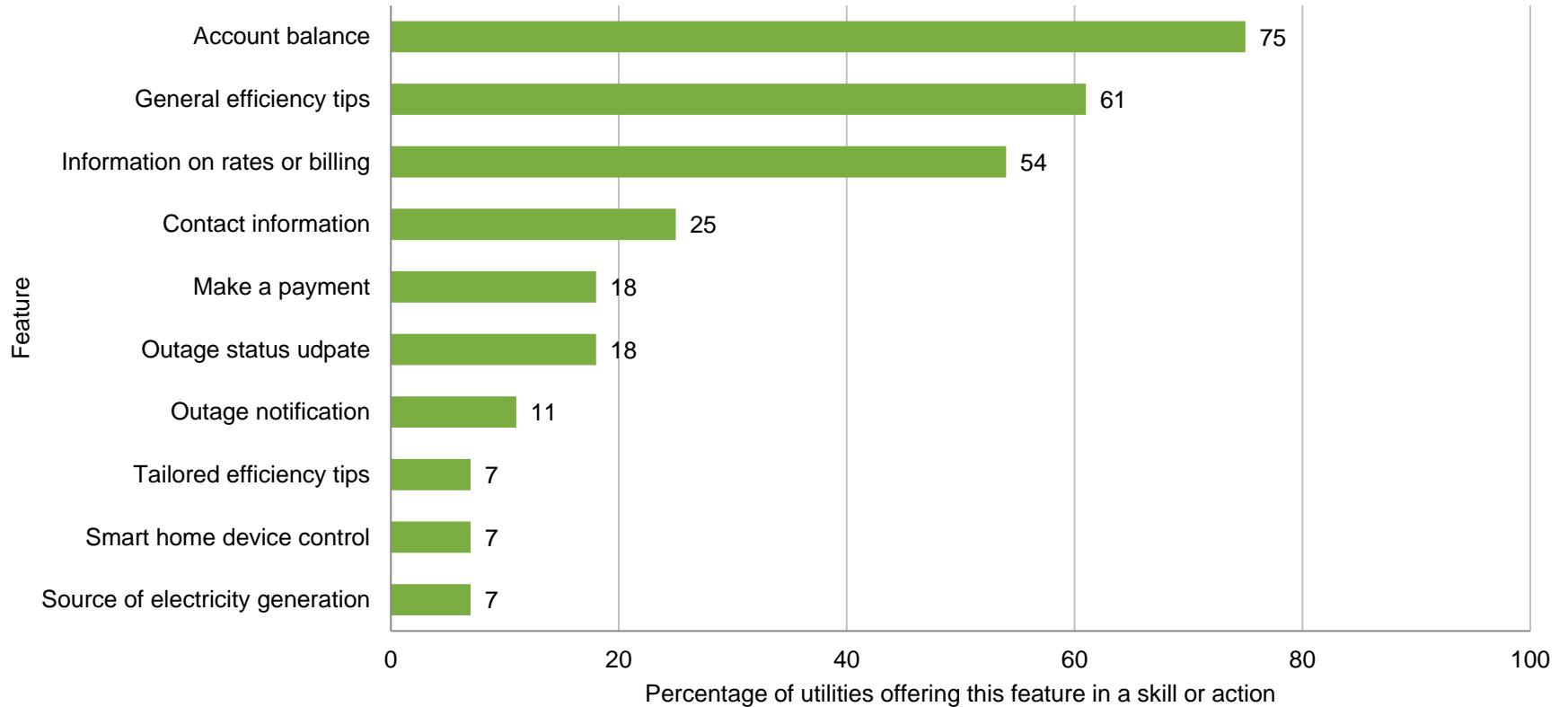
Alexa remains the top platform for utilities. Of the utilities working with voice:

- 96% have created a skill for Alexa
- 61% have created an action for Google Assistant



© E Source; data collected August 2019

# What features are utilities offering?



© E Source; data collected August 2019



A smart speaker, likely an Amazon Echo or Google Home, is centered in the background. The background is a solid blue color with various white icons floating around the speaker, including a map, music notes, a house, a thermometer, a padlock, an airplane, and a play button. The text "Amazon versus Google" is overlaid on the speaker in a large, white, sans-serif font, enclosed in a white rectangular border.

# Amazon versus Google

# Alexa and the Google Assistant dominate the market



Sources: Amazon, Google, ecobee, LG

# A few key differentiators

## Amazon Alexa:

- Designed to strengthen customer engagement, promote Amazon services, and ultimately help users buy stuff
- As a retailer, Amazon has very strong manufacturer relationships
- Current market leader on smart speakers

## Google Assistant:

- Designed to deepen Google's relevancy in users' daily lives and ultimately help Google sell ads
- Intended to be a true multimodal virtual assistant that could ultimately replace search
- More data-driven, with a stronger AI



**What do  
customers think?**

# When utilities get a skill or action right, customers love it

“It's nice to see a utility keeping up with technology. It's great to have multiple options to not miss a payment!”

“Love the skill to help me more sustainable.”

“Does what it says. Quick setup and I'm able to check my balance, make a payment, etc. Great skill!”

# When utilities get a skill or action right, customers love it

“Helpful and easy ... Linked it to my account and was able to ask Alexa how much I owed and when my bill was due.”

“It is great to be able to see what energy we are using in our own state—gas, coal, wind, etc. it is even better to then see how we stack up to other states and to discover which states have the most renewables versus those with the most coal or natural gas. Really interesting skill.”



# Account linkage is highly valuable

“It has no value if I cannot connect it to my account and get usage data.”

“I tried to check my bill balance, but the app didn't seem to know what to do and basically did nothing as far as a response.”

“The app seems like a good idea. But having a hard time getting Alexa to access the account info. She gets it about 30% of the time.”

“Energy tips are generic ... What's the point of the [skill] if it does not link into my [utility] account?”

# Customers really like bill pay

“Love it! Now I don’t have to get out my laptop or call to make a payment. Love it!”

“Really convenient. Super easy to pay my bill.”

“Works fantastic! I was able to pay my bill on time”

# Better than a contact center?

“I connected just fine with Alexa. I could not get information about my usage as I have only been a customer for a little over a week. It could be a real help though. I will try again after my first bill.”

“Pleasantly surprised. Was able to get a lot of info, much easier than calling or anything.”

“Great effort ... to give customers the freedom to choose their channel to communicate with their energy provider.”

# Outage reporting and notifications are often confusing

“Um. How can you report a power outage when Alexa needs power to run. Am I missing something?”

“I’d try out reporting an outage, but I have power. Not sure what the utility of that feature is, since not having power implies my Alexa devices and router don’t have power (unless I keep one of each on an UPS). Silly. I’ll just use their app.”

“Let me hook my generator up to my Alexa, router, and cable modem so I can report an outage!!! Haha.”

# Privacy concerns

“I think we are sharing too much info online already. I don't trust that this is secure. I also don't like being tracked by service providers. I don't have a problem paying my bills on time.”

# Quality control and ongoing support are essential

“I have been trying, over several days, to link my Alexa but I keep getting this error: The server returned a “500 Internal Server Error.” The skill is enabled but it will not link. I've tried different servers and search engines. Please advise ...”

“Keep getting an error 500 and customer service act like they don't know what you're talking about or how to fix the problem.”

“The app worked immediately when I linked it to my [utility] account ... The only problem I had it with it is it kept repeating the same information over and over again up to seven times before it accepted nothing further and stopped.”

“Couldn't get this skill to work. Was it fully tested before roll out?”

# Customers expect you to add new functionality over time

“They did a really nice job with their mobile app. Now, I’m having a little fun and learning a few new things with the [utility] Alexa skill. Looking forward to more functionality.”

“Really good first release of [my utility] integrating with cutting edge smart home technology. Looking forward to future updates.”

“Looking forward to getting some new and useful features in the near future.”

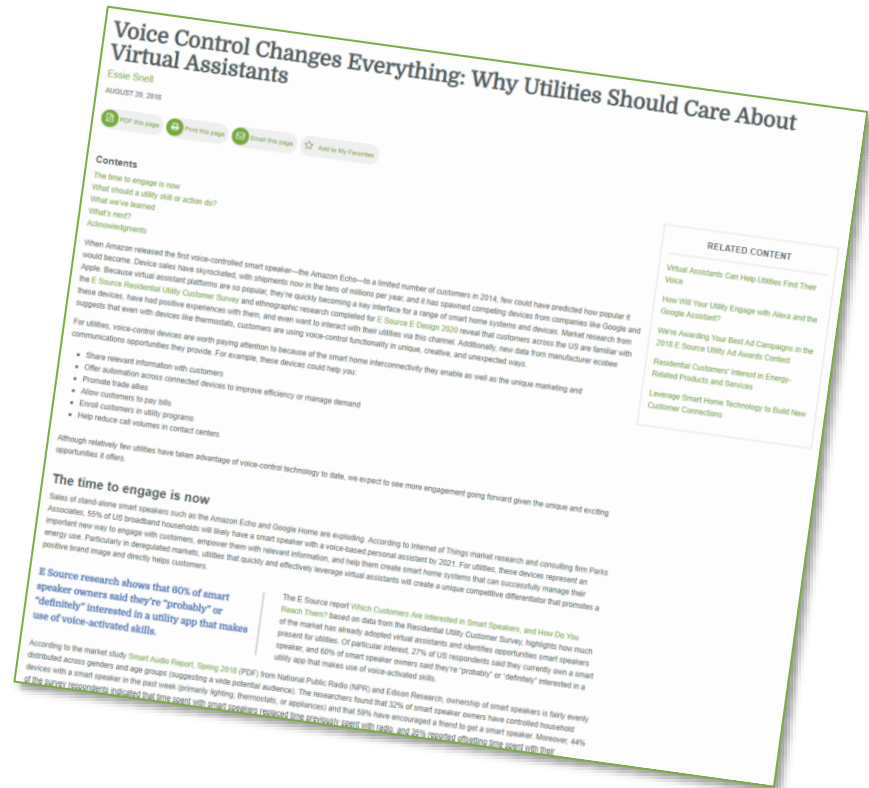
A smart speaker is centered in the background, surrounded by various smart home and utility icons such as a map, music notes, a house, a thermometer, a lock, and an airplane. The text "For more information" is displayed in a white box over the speaker.

**For more  
information**



# We have a whitepaper!

## Voice Control Changes Everything: Why Utilities Should Care About Virtual Assistants



# A few good resources for building skills or actions

## Amazon's [Alexa Design Guide](#)

### Alexa Design Guide

Collapse All | Expand All


- Alexa Design Guide
  - Introduction
  - Foundation
  - Design
  - Resources

See Also

- Alexa Presentation Language Overview

## Alexa Design Guide

When we communicate with each other, we use a series of nonverbal, verbal, and visual signs— sometimes on their own, sometimes in concert together. This can be as simple as an “mmhm” to let someone know we’re listening to them or layered with body language, such as lively hand gestures. As Alexa has developed, so too has her ability to communicate in these same robust ways. Alexa uses any available nonverbal, verbal, and visual means to communicate, whether it’s audio cues, her voice, a light ring, or a screen. As Alexa is integrated across a range of devices with different capabilities, her ability to communicate has only become richer because of it.



## Google's overview of [Actions on Google](#)

Build Actions for the Google Assistant with Actions on Google. [GO TO ACTIONS CONSOLE](#)

## Help users get things done across Google

Engage billions of users across the Google Assistant and soon Google Search, Android, and other surfaces by developing Actions and linking them with our ever-growing Intents catalog.

[START BUILDING](#) [LEARN MORE](#)

### Conversation developers

Design, build, and distribute fully-customizable conversational Actions across Google, using Dialogflow or one of our many templates.

[LEARN MORE](#)

### Smart home developers

Build smart home Actions allowing you to connect, query, and control IoT devices through your cloud infrastructure.

[LEARN MORE](#)

### Content creators

Make content you've already integrated in Google services (such as AMP news, recipes markup, and podcasts) more discoverable, by claiming and refining automatically generated Actions in our directory.

[LEARN MORE](#)

### Coming Soon! Android developers

Create an Action by adding an Actions.xml file to your Android app and improve its discovery and re-engagement across multiple, billion-user Google products.

[LEARN MORE](#)

# User insights and design best practices

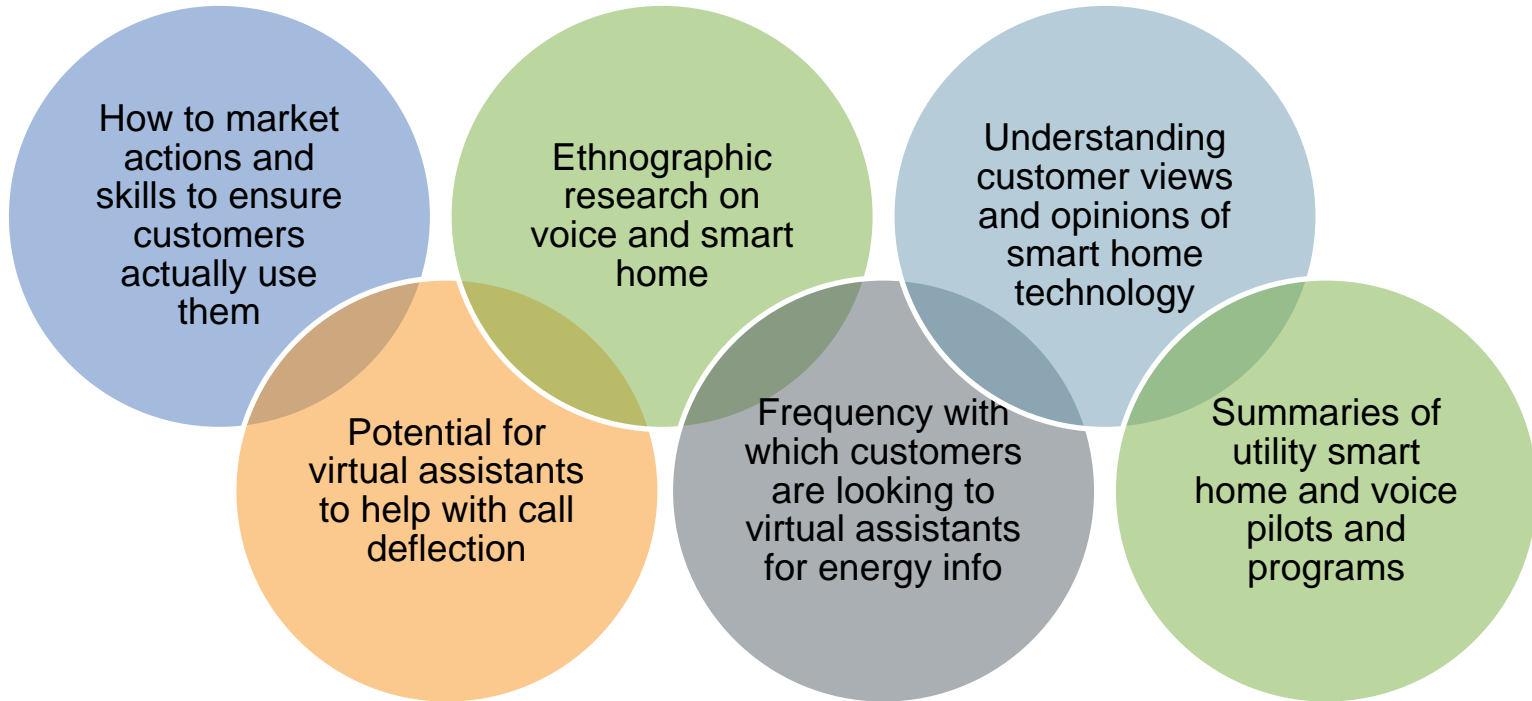
NPR and Edison Research have an ongoing [Smart Audio Report](#) series:

- Published twice a year
- How customers are using smart speakers
- Customer opinions on voice
- Various other relevant issues (e.g. security concerns)

[Voicebot.ai](#) has a plethora of resources on:

- Designing for voice
- Multimodal design considerations
- Voice search engine optimization (SEO)
- Smart speaker adoption and usage

# More E Source research in the works!



# New E Source multiclient study: voice assistants

## You'll learn:

- How to develop and design effective utility skills and actions for Alexa or Google Assistant
- Customer adoption and preferences in your region
- Actionable insights on next steps with voice development
- Specific suggestions on features you should prioritize



## How to participate:

- Talk to Essie Snell this week!



[essie\\_snell@esource.com](mailto:essie_snell@esource.com)

- Register and join our overview web conference on October 17
- Join the study by October 31, 2019

Source: Amazon

# Thank you! Questions?



Essie Snell  
Senior Manager, Customer Energy  
Solutions, E Source  
303-345-9140  
[essie\\_snell@esource.com](mailto:essie_snell@esource.com)

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Arthi Padmanabhan  
Analyst, Market Research, E Source  
303-345-9210  
[arthi\\_padmanabhan@esource.com](mailto:arthi_padmanabhan@esource.com)

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