2020: Value Beyond Connectivity

December 3, 2019
11:00 AM CT

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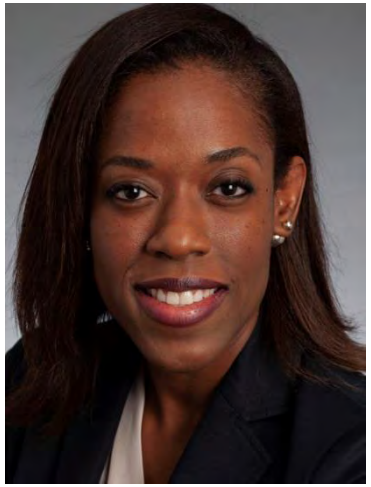
Webinar Goals

- **Understand** how connected products and services are evolving to offer consumers more value in 2020.
- **Get up to speed** about innovations in technologies and services foundational to connected living.
- **Hear** about device manufacturer and service provider strategies for generating new revenue through value-added services.
- **Learn** about initiatives from market leaders to grow their base of connected product users.
- **Gain** insights into new channels being explored to reach new connected living market segments.

Speakers

Jennifer Kent
Senior Director
Parks Associates

Brad Russell
Research Director
Parks Associates



Patrice Samuels
Senior Analyst
Parks Associates

Kristen Hanich
Senior Analyst
Parks Associates

Webcast Replay

Webcast Recording Playback

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Agenda

Introduction

Enabling the Connected Lifestyle

Value Beyond Connectivity

- Connected Home
- CE Devices and Entertainment

Analyst Q&A

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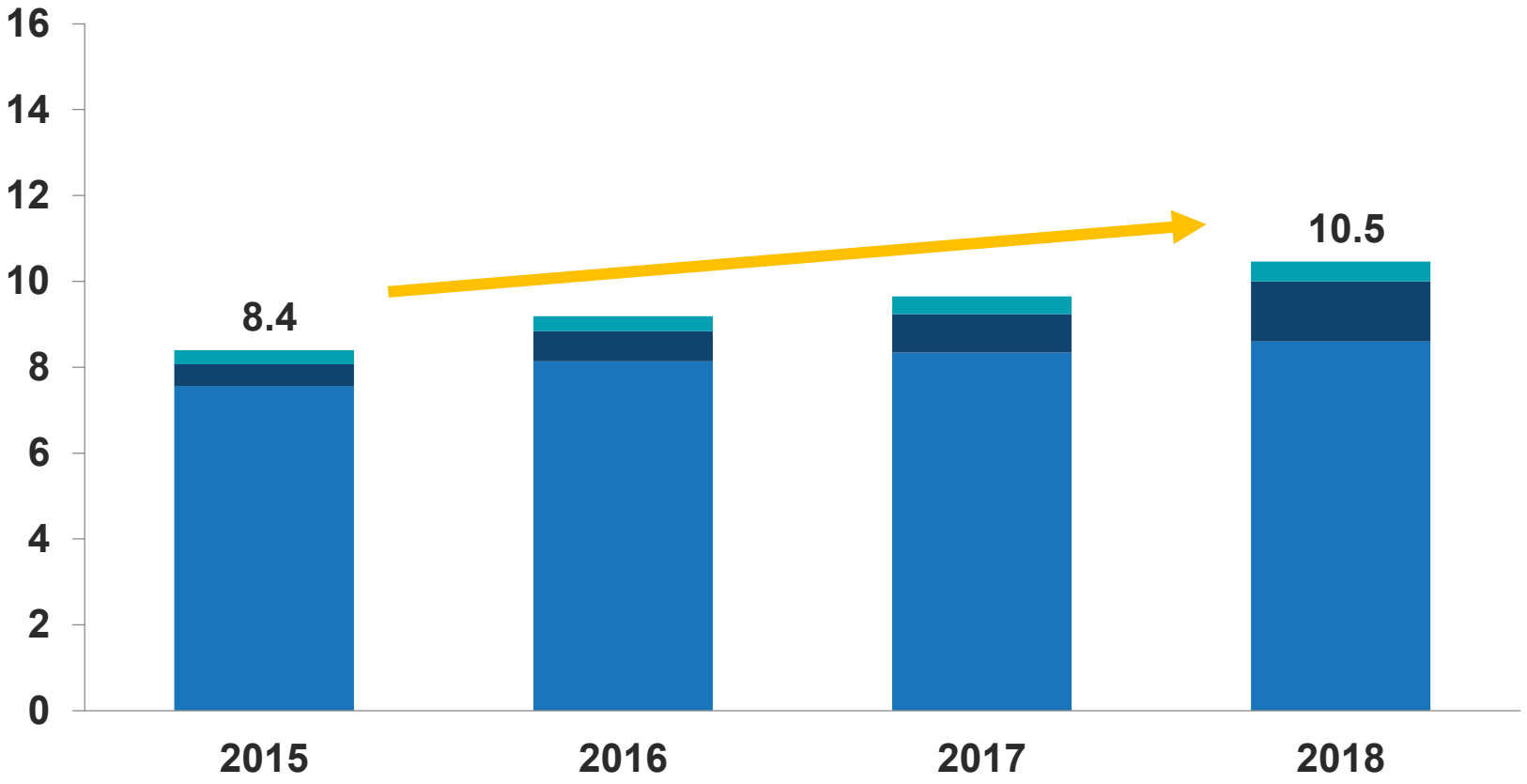
Connected Devices in the Home

Total Average Number of Connected Devices Per US BB HH (2015 - 2018)

Among All US BB HHs, Outliers Excluded



Total average # of connected devices per US HHs

- Average # of connected health devices
- Average # of connected smart home devices
- Average # of connected CE devices, including computing, mobile, smart speaker, and entertainment devices to the Internet

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Layers of Value in Connected Products

Information

- View status of device remotely
- Billing insights
- Product and behavioral insights

Convenience

- Remote control
- Integrated control
- Automation/routines
- Access to content across connected devices

Cost Savings

- Energy savings
- Insurance premium discounts
- Cord cutting

Lifestyle Enhancements

- Personal and family safety
- Personal and property security
- Health and wellness
- Personalized entertainment
- Cloud gaming

Looking for Growth in Connected Living

Connected Living Enablers

- Broadband and Mobile
- AI, Personal Assistants, and UI Innovation
- Cloud and Edge Computing
- Technical Support Services
- Privacy and Data Security Measures

Looking for Growth

- Value-Added Services
- Expanding the Base
- Exploring New Channels

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Enabling the Connected Lifestyle

Presented by
Patrice Samuels
Senior Analyst

Broadband and Mobile Trends

State of Market

- 88% of all US households have broadband
- 96% use a mobile service
- 75% own a smartphone
- Broadband is 4th utility in the home
- 29% growth in global household broadband access in past 5 years

Outlook

- Fiber network development
- Universal standards for access and speed
- Gigabit speed roll-out
- 5G networks emerge

AI, Personal Assistants, and UI Innovation

Artificial Intelligence

- Improves product value
- Drives product adoption

Natural Language Processing

- Drives smart speaker adoption

Smart Speaker Adoption

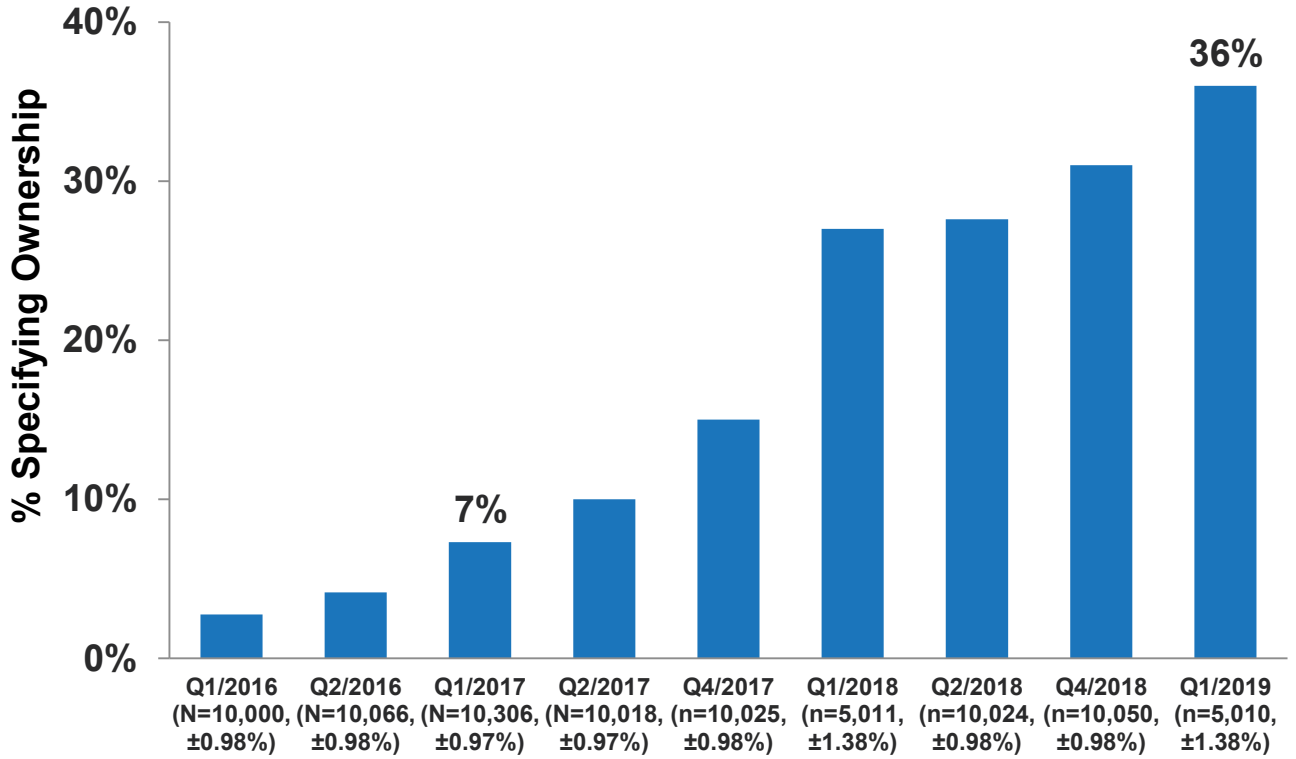
- 7% in 2017 to 36% in 2019

Smart Speaker Use Cases

- Listening to music
- Requesting information

Smart Speakers with Voice Assistant Ownership (2016-2019)

Among All US BB HHs



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AI, Personal Assistants, and UI Innovation

Smart Home AI Applications

- **Home Security**
  - **Video Analytics**
    - Distinguish among causes of motion
    - Track objects
  - **Audio Analytics**
    - Identify glass breaking, dogs barking, doors and windows opening, banging, alarms, screaming
  - **Overall benefits**
    - Facilitates more intelligent alerts
    - Reduces false alerts

- **Digital Health**
  - **Monitoring**
    - Health behavior
    - Vital signs
  - **Long-term benefit**
    - Creates predictive models for illness detection and progression

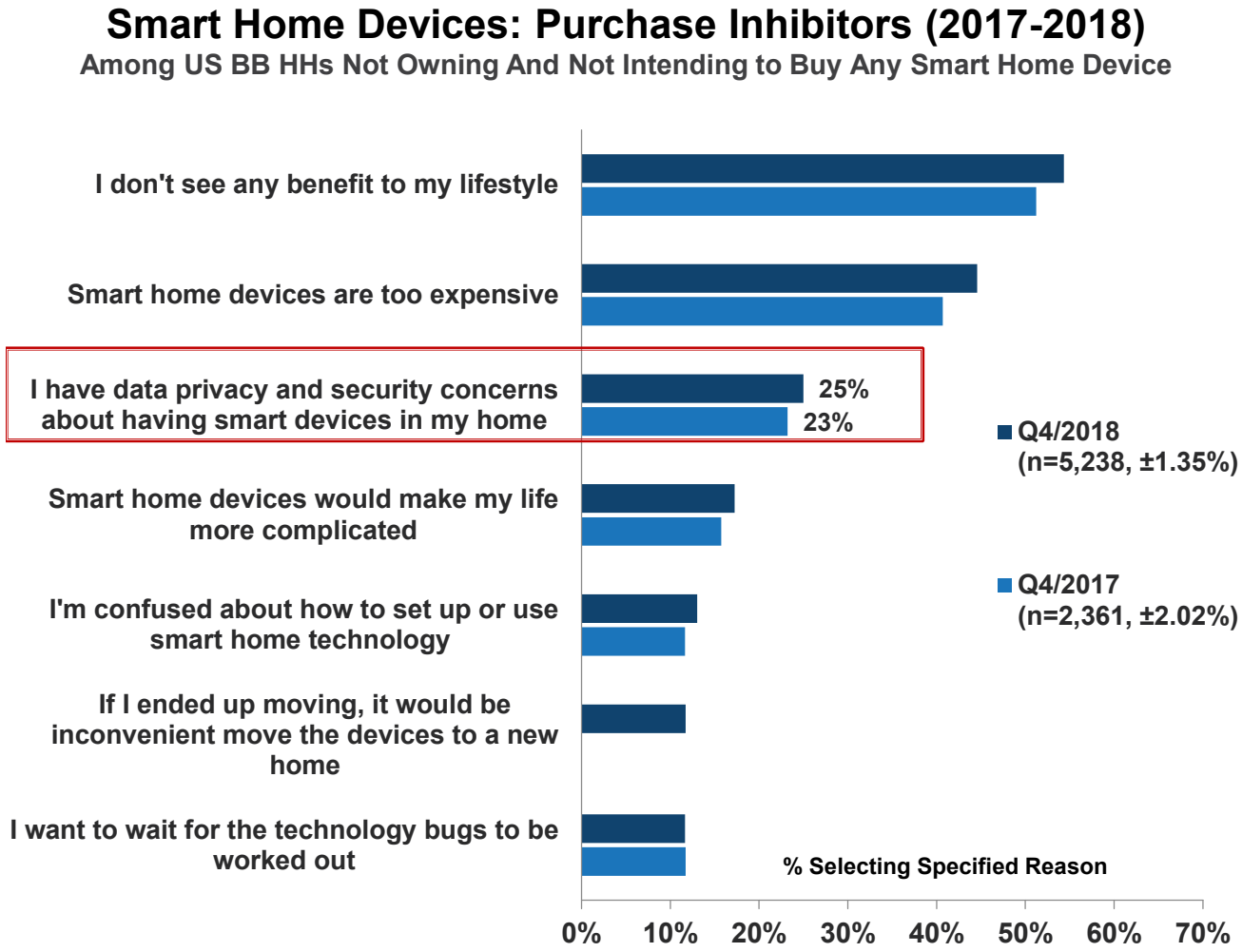
Data Privacy and Security

Data Security or Privacy Breach

- Risks increase with connected device adoption
- Consumers concerns increasing
  - 23% in 2017
  - 25% in 2018

Data Security and Privacy Solutions

- ISP network solutions
- Blockchain

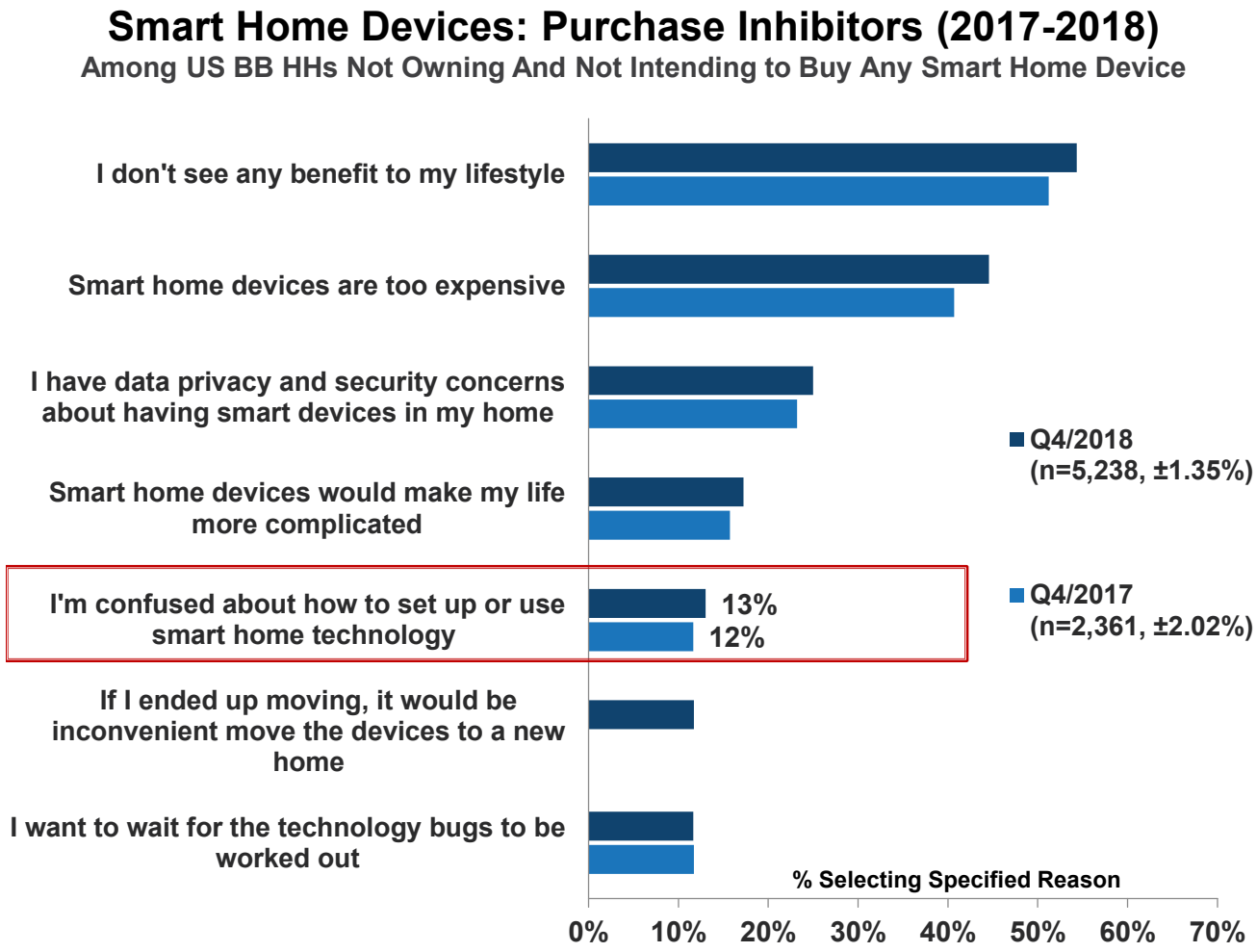


Technical Support

Technical support needs evolve

Support services can drive product adoption.

- **Setup and installation services**
  - Setup is a barrier for 13% of smart home non-owners and non-purchase intenders
- **Purchase consultation services**
  - 30% of smart home devices owners find services appealing
- **Post-Setup Services**
  - Loss of wireless connectivity is the leading problem affecting device owners



Cloud and Edge Computing

Cloud Processing

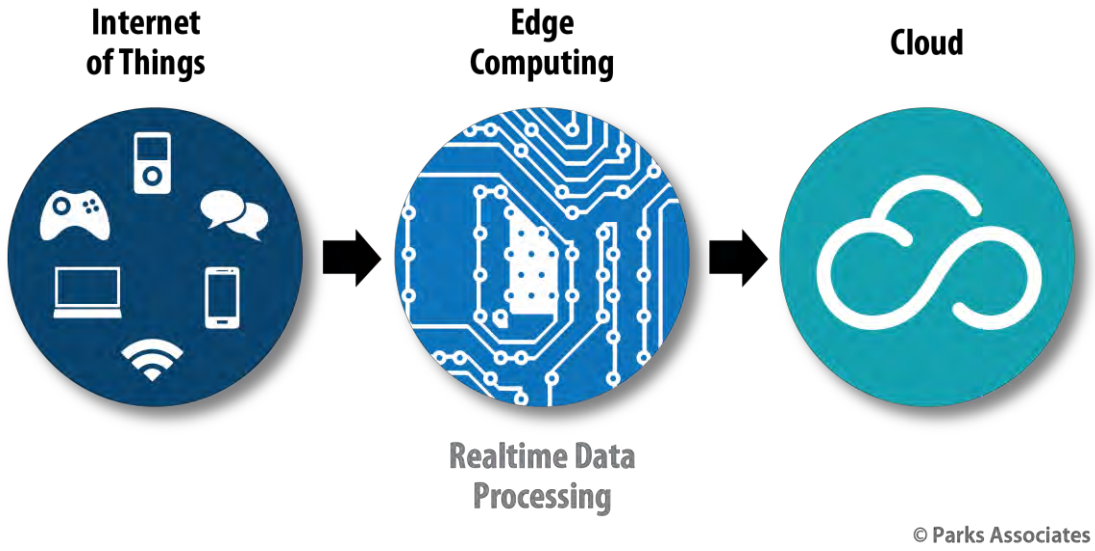
- Enables advanced data analytics
- Reduces hardware cost
- Facilitates over-the-air product updates

Edge Processing

- Lowers latency
- Helps maintain privacy and security
- Reduces dependence of bandwidth

Hybrid Edge-Cloud Processing

- Aims to provide best of both worlds



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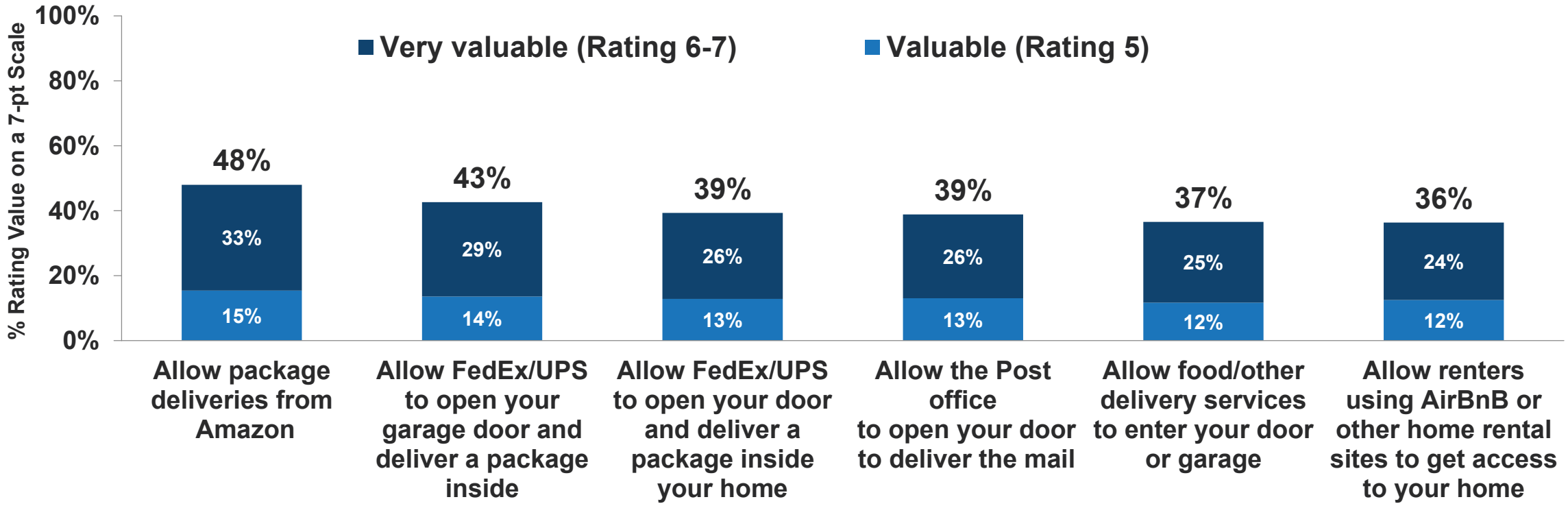
Value Beyond Connectivity: Smart Home Services

Presented by
Brad Russell
Research Director

Access Control + In-home Delivery Services

Value of In-Home Delivery Services (Q4/18)

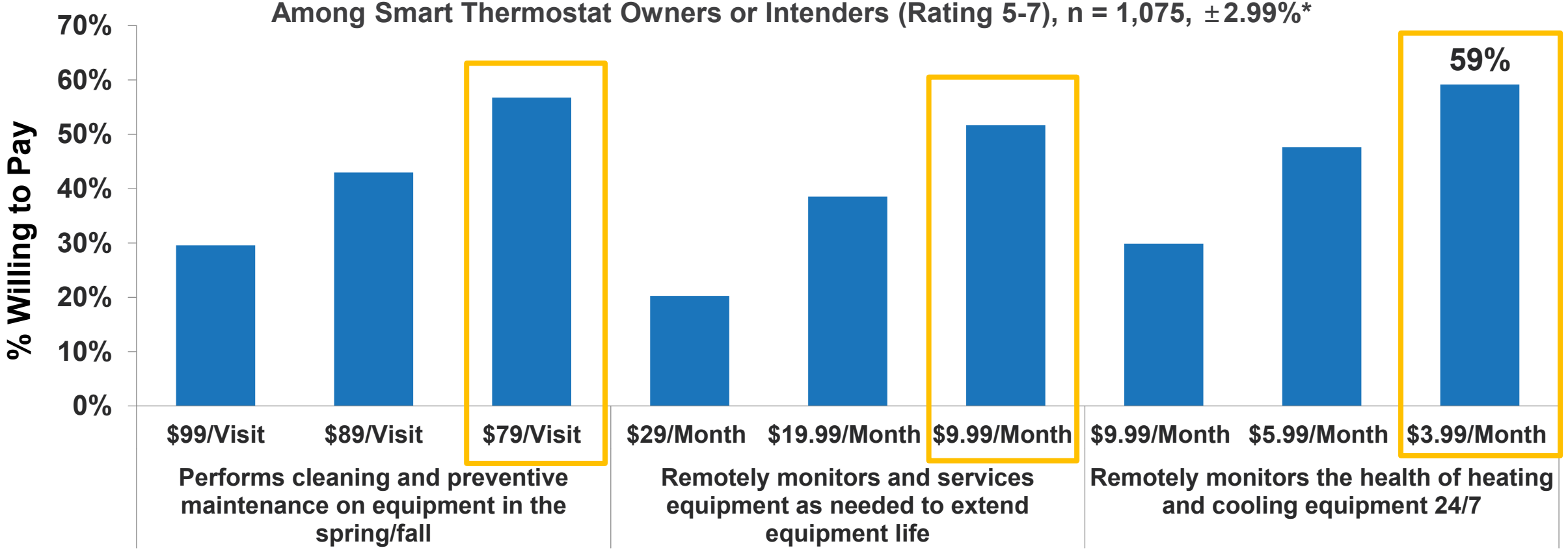
Among Consumers in U.S. BB HHs Who Own or Intend to Buy (Rating 5-7) a Smart Door Lock, Garage Door opener, or Video Doorbell, n = 1,058, ±3.01%



Smart Thermostat + Maintenance Service

Smart Thermostat: Willingness to Pay for Dealer Services (Q4/18)

Among Smart Thermostat Owners or Intenders (Rating 5-7), n = 1,075, ±2.99%*

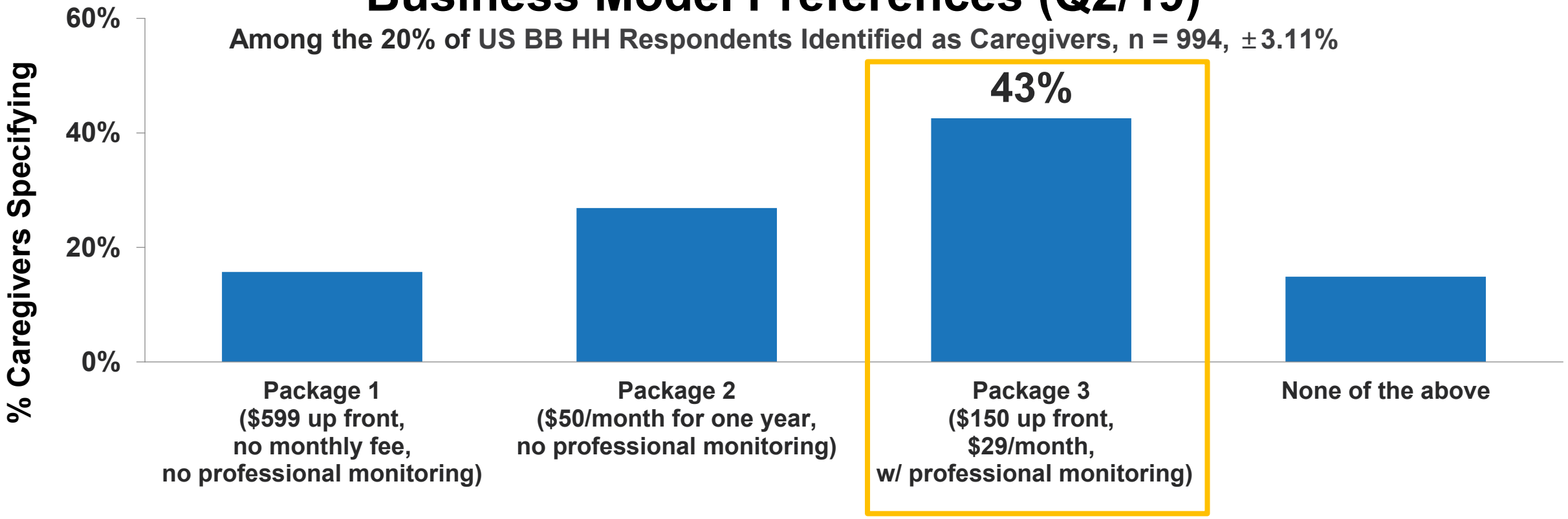


*Least fill logic used

Smart Home System + Independent Living

Caregivers' Independent Living System Business Model Preferences (Q2/19)

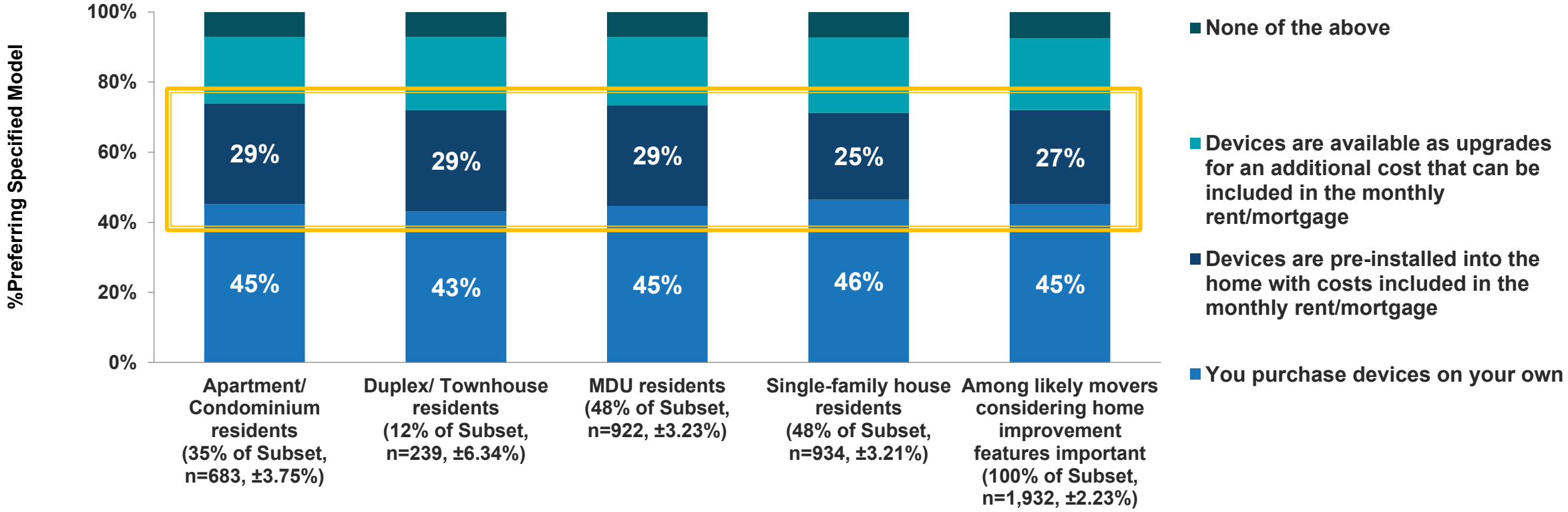
Among the 20% of US BB HH Respondents Identified as Caregivers, n = 994, ±3.11%



Housing Channel – Preference for Pre-Installed

Preferred Approach to Acquiring Smart Home Devices by Residence Segments (Q4/18)

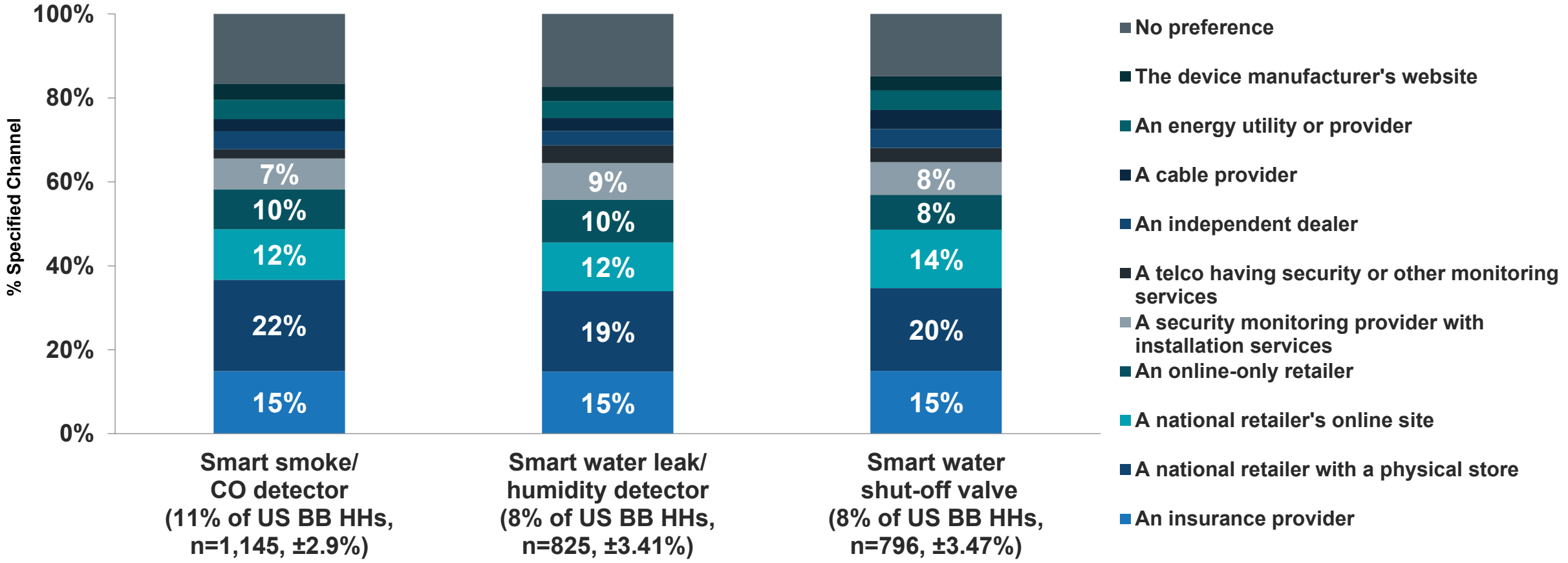
Among Likely Movers Who Value the Home Improvement Features Important by Specific Groups



Insurance Channel – Safety Devices

Smart Smoke/Water Device: Preferred Purchase Channel (Q2/19)

Among US BB HHs That are Specified Smart Smoke/Water Device High Intenders (High Intenders = Rating 6-7)



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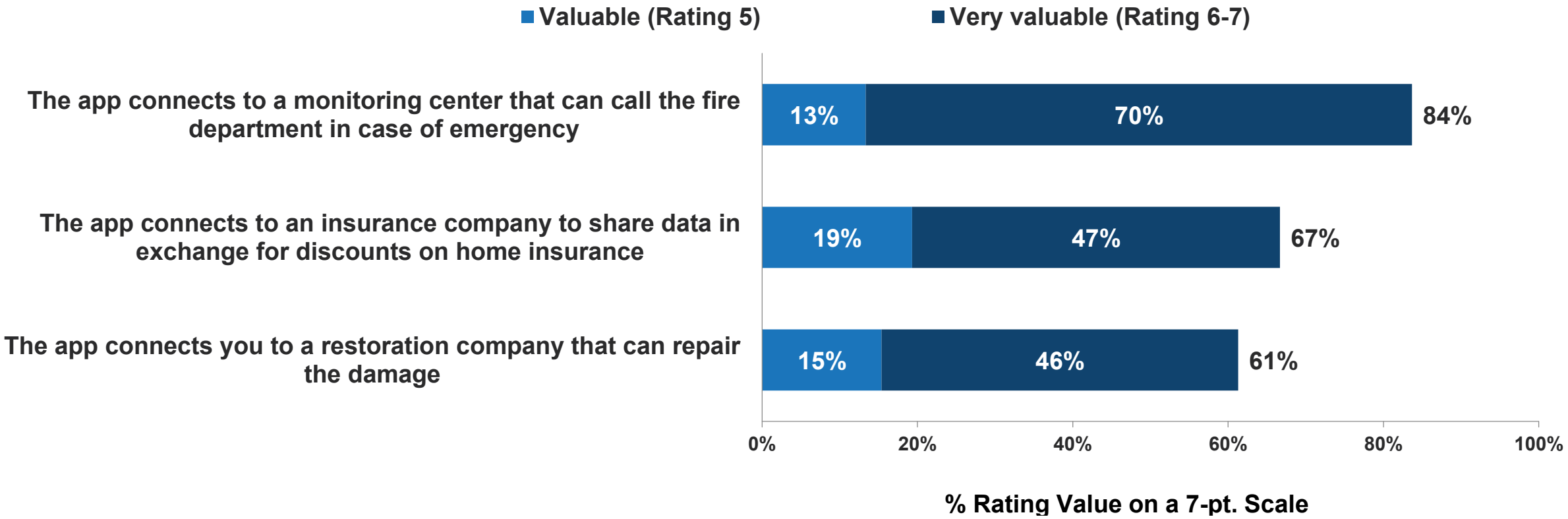
Insurance – Monitoring Services

Appeal of Additional Services for Smart Smoke/CO Detectors (Q4/18)

Among Smart Smoke/CO Detector Owners or Intenders (Rating 5-7), n = 1,041, ±3.04%*

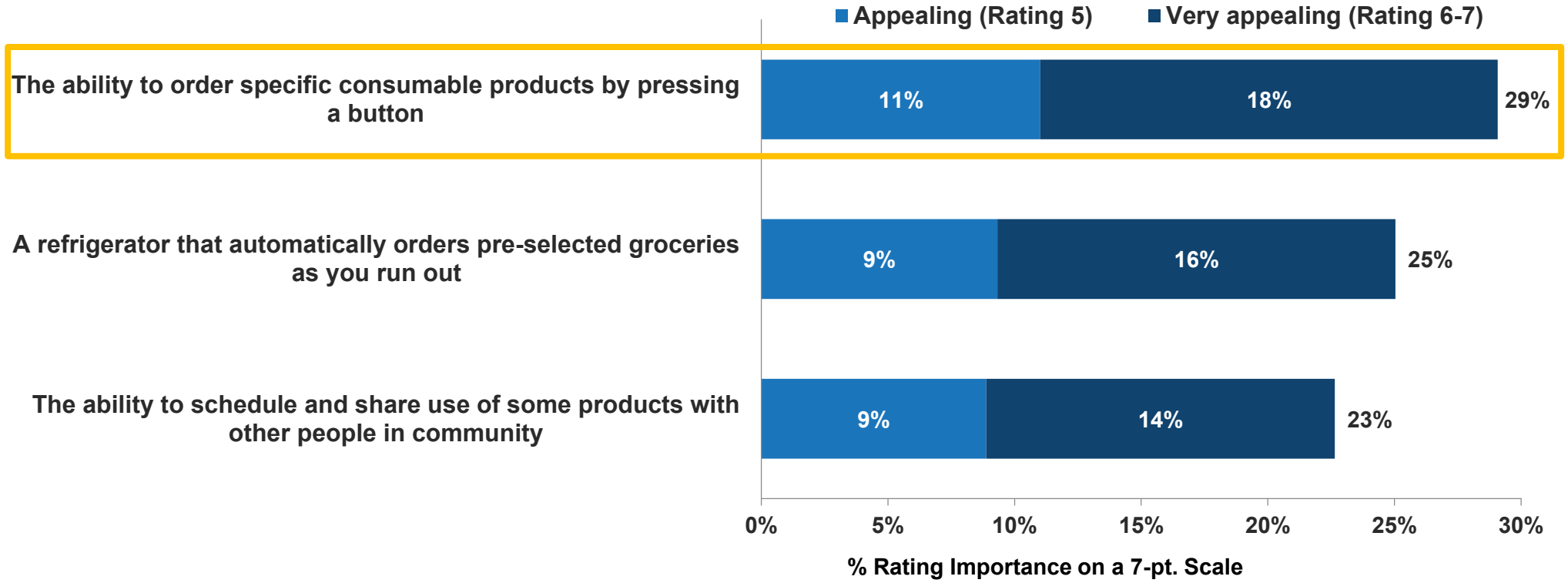


*Least fill logic used

Supply Replenishment Services

Appeal of Automated Smart Home Product Scenarios (Q2/19)

Among All US BB HHs, N = 5,000, ±1.39%



"ST2985. How appealing are the following scenarios that smart home products can enable?" | Asked of a Subgroup of 5,000 US BB HHs|
Source: American Broadband Households and Their Technologies Q2 2019 | N = 10,003, ±0.98% | © 2019 Parks Associates

Consumable Products

- Clothes detergent
- Dryer sheets, softeners
- Dish detergent
- Water filters
- Air filters
- Batteries
- Light bulbs
- Paper products
- Pet food
- Bottled water
- Coffee, tea
- Garbage bags, lawn bags

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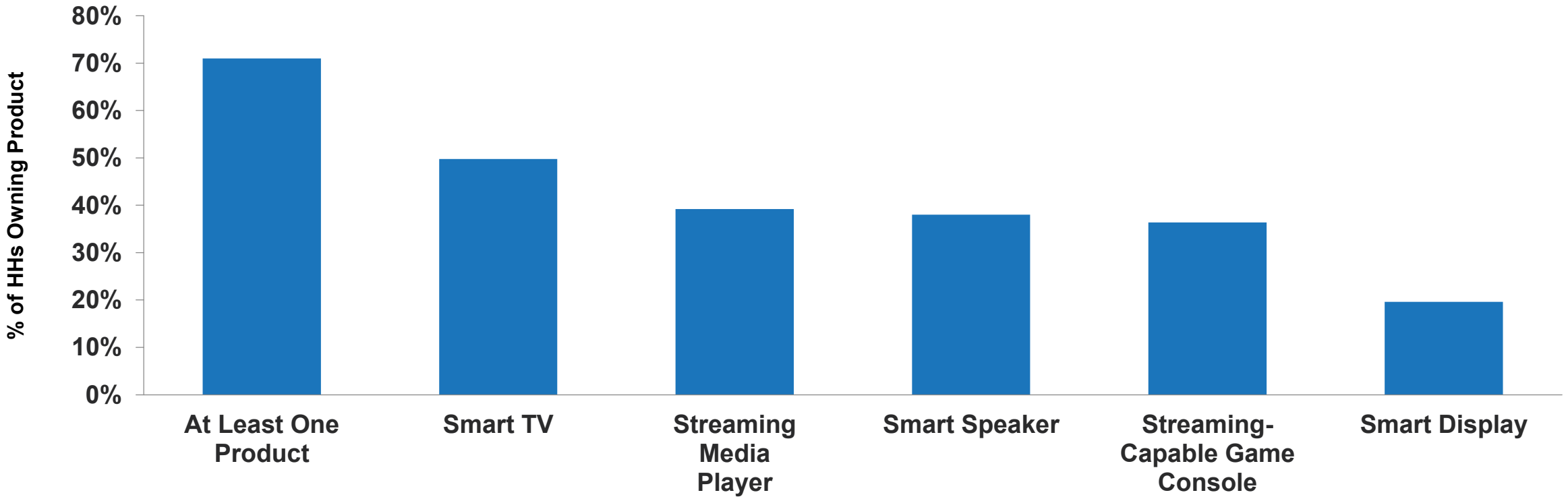
Value Beyond Connectivity: CE Devices and Entertainment

Presented by
Kristen Hanich
Senior Analyst

Most HHs own OTT-capable products

Adoption of OTT Entertainment Products (Q3/19)

Among US Broadband Households, N = 10,059, ±0.98%



"CT2005. How many of each of the following products are in use by anyone in your household?" "Q2405. How many of each of the following smart speakers with voice assistants do you own?" "Q2406. How many of each of the following smart displays with voice assistants do you own?" | Source: American Broadband Households and Their Technologies Q3 2019 | N=10,059, ±0.98% | © 2019 Parks Associates

Services and Advertising

amazon fireTV

prime video

IMDb

amazon channels

amazonadvertising

Roku TV

The Roku Channel

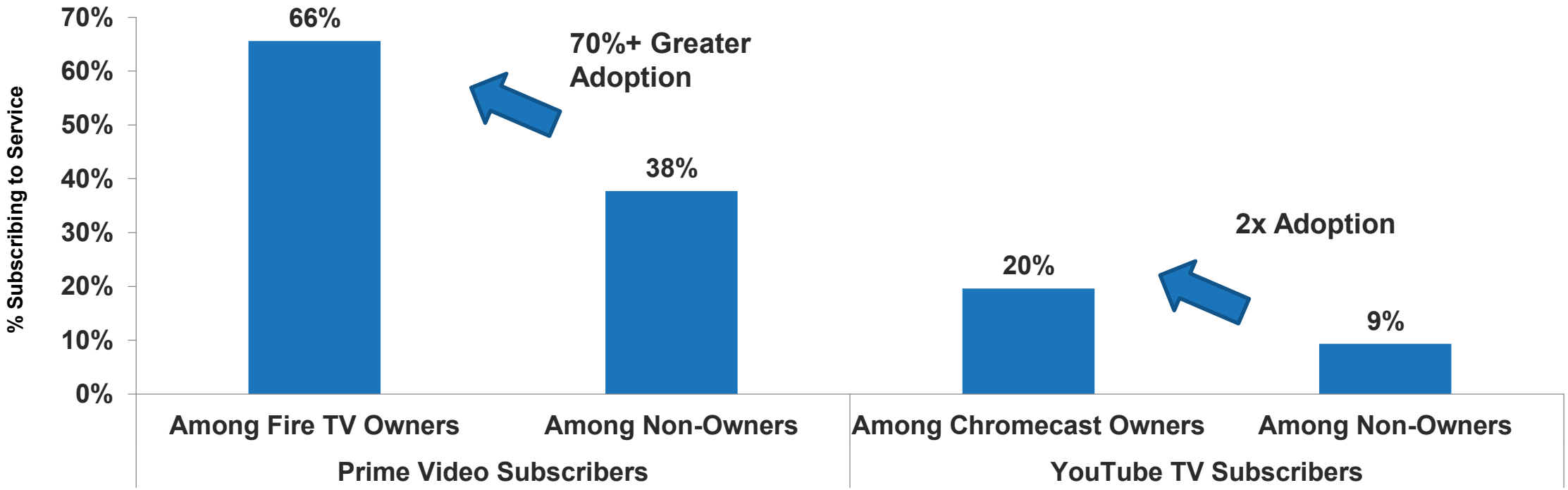
Premium Channel Subscriptions

Roku Advertising

Consumers like ecosystems

Use of Same-Company Services (Q3/19)

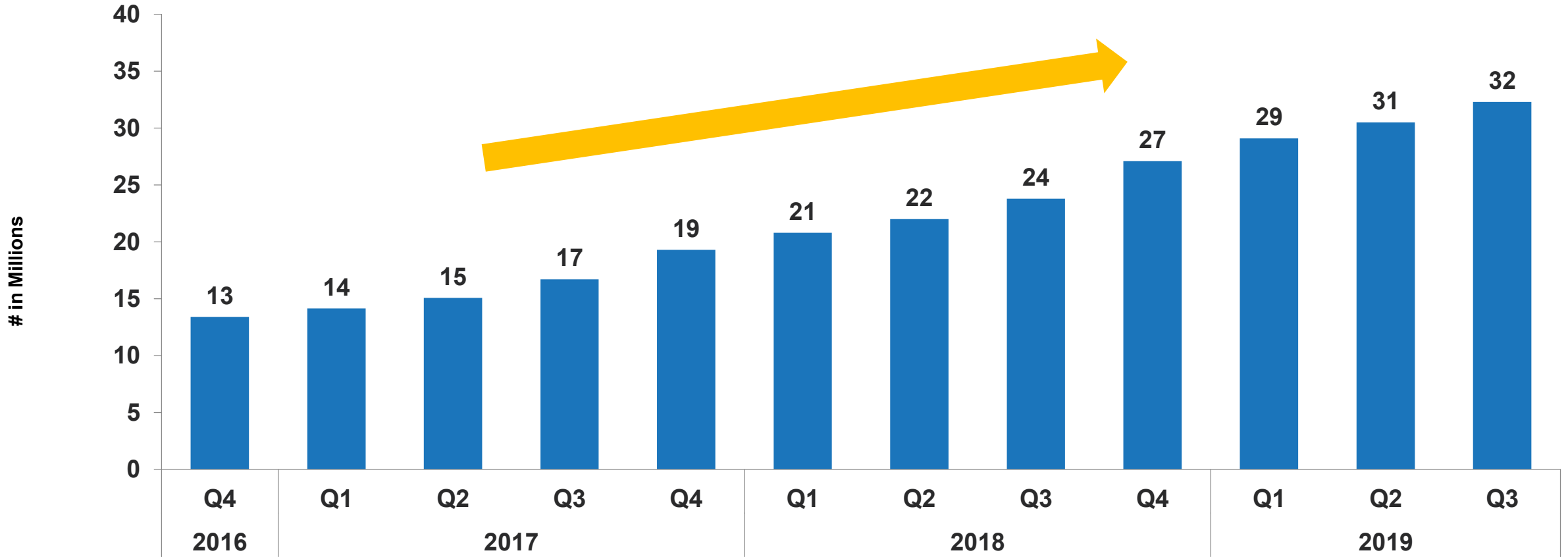
Among Product Owners and Non-Owners, n = 5,028, ±1.38%



"DM6005. To which of the following video services does your household subscribe?" "CT2090. How many of the following types of streaming media players does your household use?" | Source: American Broadband Households and Their Technologies Q3 2019 | N=10,056, ±0.98% | © 2019 Parks Associates

Next-gen platforms growing steadily

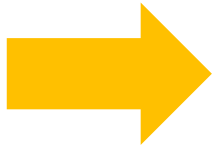
Roku Monthly Active Accounts (2016-2019)



Source: Roku SEC Filings, 10-Q and 10-K Reports, Analyst Estimates | © 2019 Parks Associates

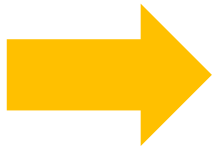
More eyeballs (& ears) is a top priority

Apple Music & Apple TV Apps originally only on Apple devices



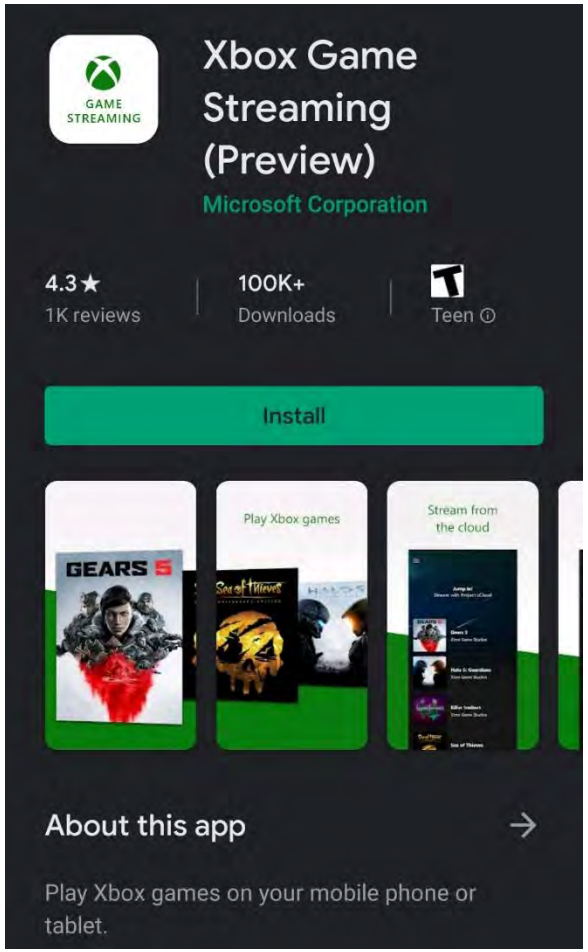
Now on Echo & Google Home/ Nest, Samsung TVs, Roku SMPs & Smart TVs, Fire TV Platform

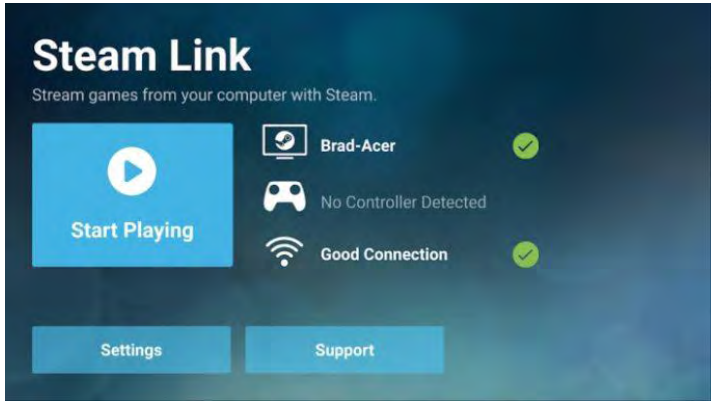
Google and Amazon did not support each others' services on their platforms



Now Prime Video is Chromecast-compatible, YouTube & YouTube TV apps available on Fire TV platform

Gaming transcends devices





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Join Parks Associates at Upcoming Events

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Future of Video: OTT, Pay TV, and Digital Media
December 9-11, 2019
Marina del Rey, CA

FUTURE OF VIDEO
OTT, Pay TV, and Digital Media

CONNECTIONS™: The Premier Connected Home Conference
May 19-21, 2020
San Francisco, CA

CONNECTIONS

CONNECTIONS™ Summit at CES: Consumer IoT and Smart Home
January 7, 2020
Las Vegas, NV

CONNECTIONS SUMMIT

Connected Health Summit: Independent Living & Wellness
September 1-3, 2020
San Diego, CA

CONNECTED HEALTH SUMMIT
Independent Living & Wellness

Smart Energy Summit: Engaging the Consumer
February 17-19, 2020
Austin, TX

SMART ENERGY SUMMIT
engaging the consumer

CONNECTIONS™ Europe: Strategies For the Smart Home and Consumer IoT
November 2020
Amsterdam, The Netherlands

CONNECTIONS EUROPE

CONNECTIONS SUMMIT

January 7, 2020
Las Vegas, NV

Smart Home Business Models and Strategies

#CES2019 @CONN_Summit

Join us in Las Vegas on the first day of CES 2020

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CES Consumer Technology Association

Agenda: 7 January 2020

CONNECTIONS SUMMIT

9:00 AM	Smart Home Platforms: Creating New Experiences
10:00 AM	Privacy and Security: Protecting Consumers
11:00 AM	Disruption in Home Security: Smart Home Convergence
12:15 PM	Independent Living and Wellness: Smart Home Tech
1:15 PM	Home Networks: Wi-Fi, 5G, and Mesh
2:00 PM	Energy Management Solutions: Smart Home Crossover
3:15 PM	Installation and Support: Next-Gen Smart Home Services
4:15 PM	Distribution: Builders, Broadband, Security, Retail, and Insurance
5:30 PM	Networking Reception

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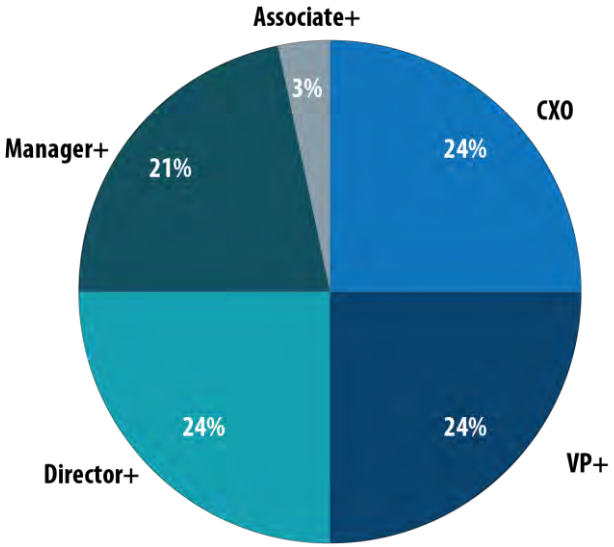
Attendee Demographics

CONNECTIONS SUMMIT

Parks Associates research analysts present consumer and industry research and moderate interactive discussions with IoT industry leaders on trends and crossover opportunities among these ecosystems, including insights on voice, connected cars, machine learning, AI, and security.

Attendee Title Levels

CONNECTIONS™ Summit 2019 Registered Attendees



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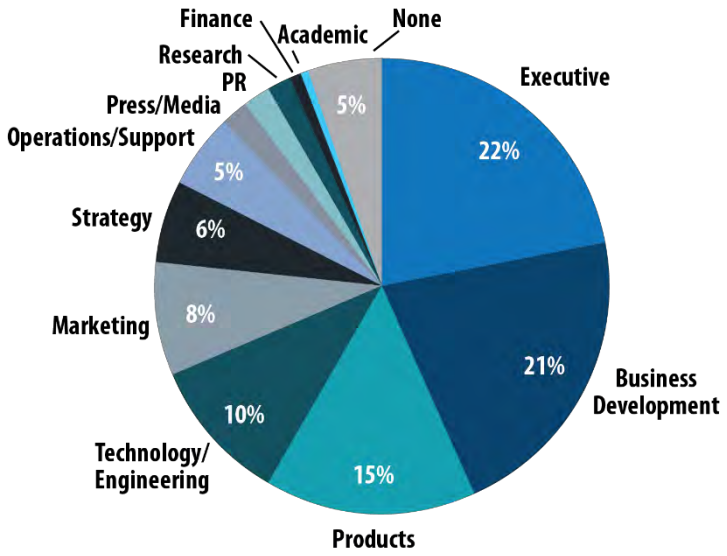
Attendee Title Function

CONNECTIONS™ Summit 2019 Registered Attendees



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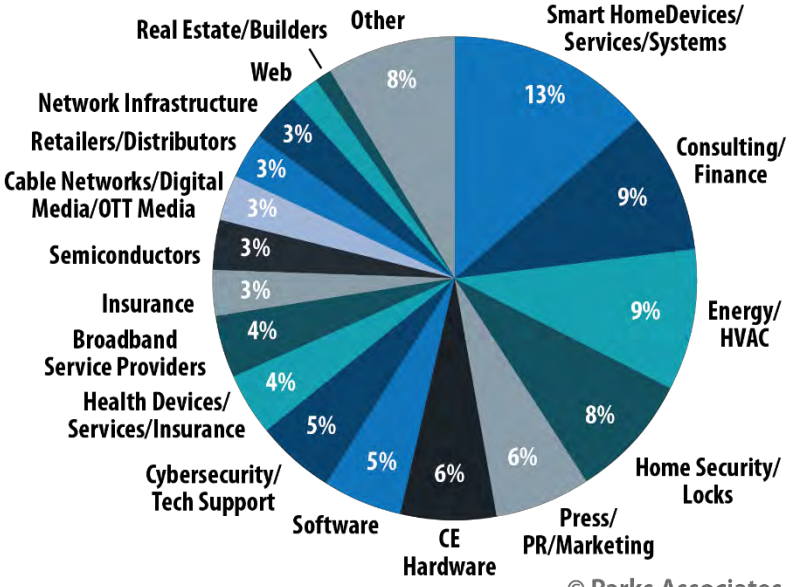
Attendee Industry

CONNECTIONS™ Summit 2019 Registered Attendees



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Questions?

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Thank You

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