



Connected Home Council (CHC) Webinar Meeting will commence 12:05pm ET

November 29, 2023, 12 PM – 1:30 PM (ET)

CHC Chair: Ken Wacks (Ken Wacks Associates)

Vice-Chair: Charlie Derk (Legrand)

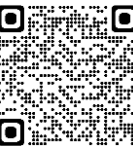
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1. Agenda

Ken Wacks (Ken Wacks Associates)

1. Agenda
2. Call to Order, Welcome, Introductions, About the CHC
3. Appointment of New CHC Vice-Chair
4. Administrative
5. Research Update
6. Keynote: **Next Stage of Growth for Smart Homes: Consumer Buyer Journey** - Elizabeth Parks of [Parks Associates](#)
7. ASHB Journal
8. ASHB Podcast
9. New Business
10. Announcements
11. Adjournment



2. Call to Order, Welcome, Intro, About the CHC

Ken Wacks (Ken Wacks Associates)



CHC Chair
Dr. Kenneth Wacks
Management &
Engineering Consultant
Ken Wacks Associates

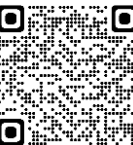
KENNETH WACKS, Ph.D.
Management & Engineering Consultant



CHC Vice-Chair
Charlie Derk
Vice President of
Strategy



Established in 2004, the ASHB Connected Home Council initiates and reviews projects that relate to connected home and multiple dwelling unit technologies and applications. The Council also examines industry opportunities that can accelerate the adoption of new technologies, consumer electronics and broadband services within the burgeoning connected home market.
www.ashb.com/chc



3. Appointment of New CHC Vice-Chair

Ken Wacks (Ken Wacks Associates)

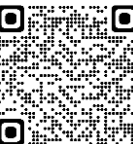
ASHB Welcomes Newly Appointed CHC Vice-Chair



Charlie Derk
Vice President of Strategy



Charlie Derk is the Vice President of Strategy for Legrand's Building Controls Division. His responsibilities include mergers and acquisitions as well as focusing on the strategic direction for residential and commercial lighting control products including Wattstopper, Encelium and Vantage. Charlie has been working with lighting and shading control products for the past 25 years holding positions in engineering, product management, marketing and sales at Lutron and Crestron. Charlie holds a degree in Computer Science and is currently based in eastern Pennsylvania.

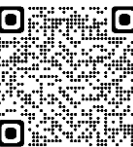


4. Administrative

Ken Wacks (Ken Wacks Associates)

4.1 Motion to approve past CHC Minutes July 25, 2023
www.ashb.com/chc

4.2 Call for CHC Vice Chairs



5. Research Update

Marta Klopotoswska (ASHB)

2023 CHC Landmark Research Smart Home Technology & Market Trends



6. Keynote

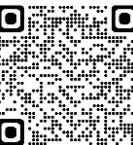
Charlie Derk (Legrand)



Elizabeth Parks
President & Chief Marketing
Officer

PARKS
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Next Stage of Growth for Smart Homes: The Consumer Buyer Journey





Next Stage of Growth in the Smart Home

Next Stage of Growth in the Smart Home

Transformation Underway

- Services
- Device Adoption
- Home Security as a Driver
- Energy as a Driver

The Future

- Health
- Multifamily
- Tier 2 + 3 Broadband Markets
- SMB



About Parks Associates

Our long-term understanding and insights into the connected home markets provide meaningful analysis to the diffusion of new products and services.



Elizabeth Parks

President and CMO
Parks Associates

USA TODAY • MONDAY, SEPTEMBER 22, 1986 • 11E

TOUCHING OUR LIVES: AT HOME

Computerizing all the comforts of home

By David Coursey
Special for USA TODAY

DALLAS — The television set shows a graphic outline of the home. Two doors are open, a car is parked in the driveway, someone is walking around in the rear upstairs bedroom. The air conditioner filter needs changing and an electronic voice announces, "It's 8 a.m."

This is Intellihome, the house of the future, where everything but the coffee maker is controlled by a central computer. And the coffee maker has a computer of its own.

"The house exists as a prototype and a lab," says Tricia Parks, vice president of Intellisys Corp., the home's creator. Inside are about 20 television screens and a half-dozen personal computers, all connected to various monitoring and control systems and to one another.

Among the home's features:

- Monitoring burglar and fire alarms, showing what doors and windows are open and where there is movement in the house.
- Audio and video capable of sending "anything to anywhere," according to Parks. Pressing the doorbell starts a video recorder and shows who is outside.
- Handling heating and air conditioning levels and diagnosing problems.

Building Intellihome took million. But it isn't as complex as it seems.

Televisions have used remote controls for years, as have stereos, air conditioning and heating systems, lighting and burglar alarms. It's nothing new when a clock talks or the sprinkler system automatically waters the lawn at night.

But it is new for the sprinkler to turn on the water 10 seconds after an electronic voice warns an intruder in the yard, "We know you're there" and every light in the house comes on at once. It is new for a homeowner to call from the office to start a VCR recording a movie off any TV channel.

While it takes some getting used to, controlling the house isn't hard to master.

It doesn't look complex, either, and Parks says it shouldn't. Programmers are working to simplify the house even further so as not to intimidate potential customers.

The key to the home lies in the computer software. Written in the BASIC computer language often taught schoolchildren, the software must make sure the home's features don't work against one another.

All is not perfect in the home of the future. The voice recognition system that allows the house to be controlled by telephone is still easily confused by some words and voices. And better remote-control stan-

appliance manufacturers would make it much easier to connect devices, Parks says.

Although Intellisys has no products now, the company hopes to market its knowledge of intelligent homes and design the software and devices to operate them. Other companies

Responsive Terminal Systems Inc. of Allen, Texas, sells computerized systems for heating and air conditioning, hot-water heaters, sprinklers, pool and spa equipment, inside and outside lighting, video equipment, appliances and telephone-dialing alarms.

General Electric Co., sell remote-control equipment, and still other companies are developing compatible products.

The home of the future is at least four years away, Parks says. When it arrives, it will probably come piecemeal, allowing better control but not to

By Layne Murdoch

SCREENING ROOM: With the touch of a light pen, Tricia Parks of Intellisys controls this home of the future from a computer monitor. Behind her is the media room.

Access & Entertainment

Pay TV & Digital Media

Fixed/Mobile Broadband

AR & VR

OTT Video

Wi-Fi & Home Networking

Data Privacy & Security

Connected Media Devices

Media Content

Smart Home & Security

Interactive Security

Insurance & Safety

AI & Voice Platforms

Home Automation

Connected Health

Managed Home Services

Smart Energy

Home Builders

Business

Small to Medium Business

Multi-dwelling Units

Commercial Buildings

Services: Shaping the Future

**\$340 Billion
Annual US Home Service
Spending**

across home phone, internet,
mobile, security, and video,
including pay TV and OTT



70% say it would be “**very difficult**” for me to be **without home internet**

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ASSOCIATES



The Intersection of Service-Driven Economies

Energy

- Changing energy consumption habits
- Growing electricity demand
- Grid resilience
- Renewable energy
- Distributed energy generation
- Smart home opportunity

Multifamily

- Bulk broadband
- Priority on network
- Resident experience
- Operational savings
- Investment management
- Energy as priority
- Safety as priority
- Access control services

Home Security

- Choice in everything
- Demand to monitor beyond access points
- Value in the integration of systems + devices
- Lower price points driving interest
- Tech giants providing mass-market marketing
- Specialty services coming soon

Health

- Senior living devices and systems
- Home healthcare
- Environmental quality and safety
- At-home fitness and wellness
- Remote patient monitoring
- Professional monitoring

Broadband

- Consumer expectations have changed
- Focus on connectivity and speed
- New demand for remote work needs
- Reemergence of value-added services
- Role of the network is critical

SMB

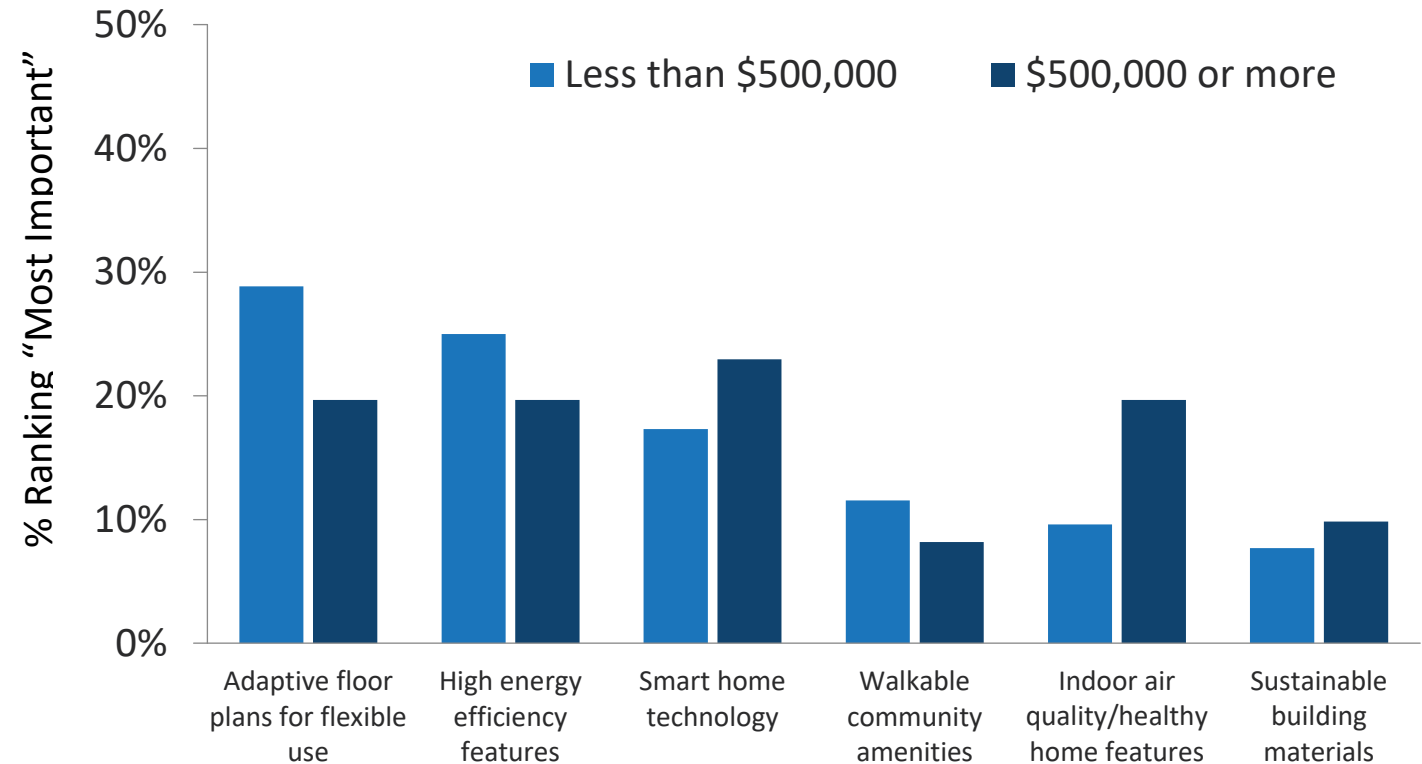
- New tech requirements
- Every company is a tech company
- Network is key
- New services in demand
- Remote work
- Remote diagnostics
- Safety and security
- Access control services

Home Builders Differentiating through Technology

1. Stainless Steel Appliances
2. Granite or Quartz Countertops
3. Hardwood or Premium flooring
4. Smart Speakers with Personal Assistant
5. Outdoor Upgrades (kitchen, fireplace)
6. Integrated Smart Home and Entertainment Control System
7. Security Systems with Smart Home Control
8. Pre-wiring for Entertainment Equipment
9. Smart Lighting
10. Extra Storage
11. Stone or Premium Exterior Features
12. Smart Door Locks and Smart Garage Door Openings
13. Smart Appliances
14. Premium Cabinetry
15. Networked Cameras
16. Smart Thermostats
17. Whole Home Networking and Wi-Fi

Most Important Value-Added Feature by Price of Home

Among Large-Scale Single-Family Builders

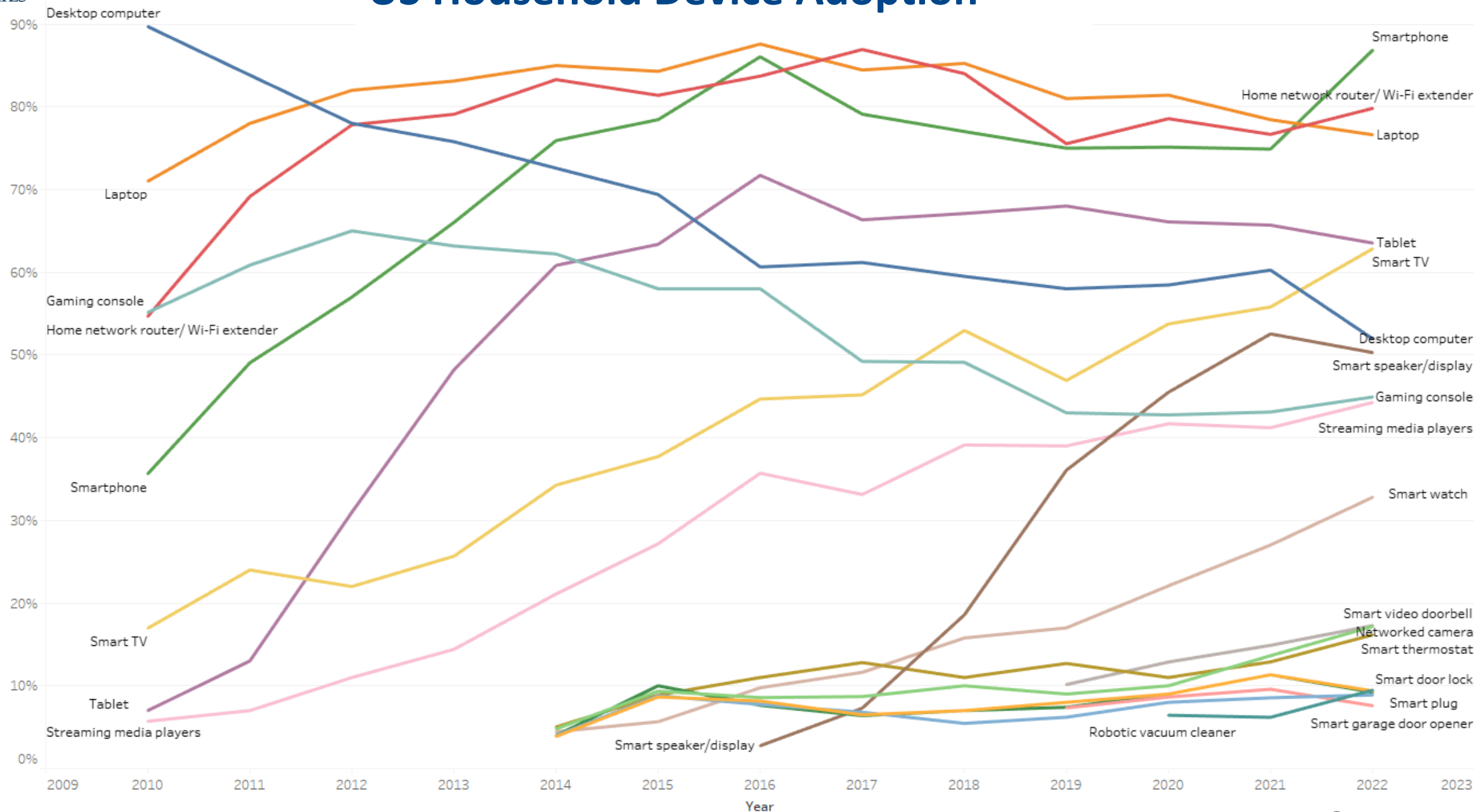


Device Adoption



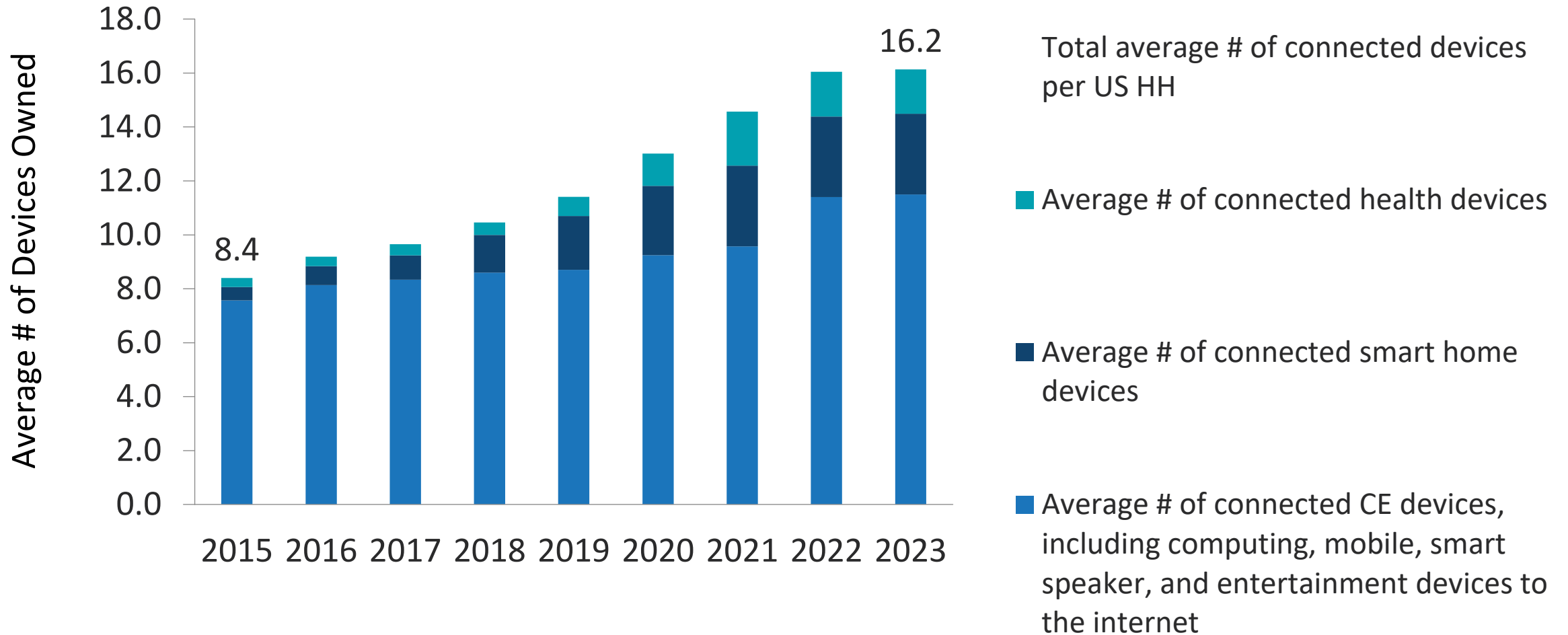
US Household Device Adoption

Device Adoption



Connected Devices in US Households

Average Number of Connected Devices Per US Internet Households



42% own a Smart Home Device

Smart Light Bulbs

Smart Outdoor
Lights With Video

Smart IP Cameras

Smart Door Locks

Smart Video Doorbells

Smart Water
Shut-Off Valves

Smart Thermostats

Smart Water
Leak Detectors

Smart Smoke/
CO Detectors

Smart Lighting
Control Systems

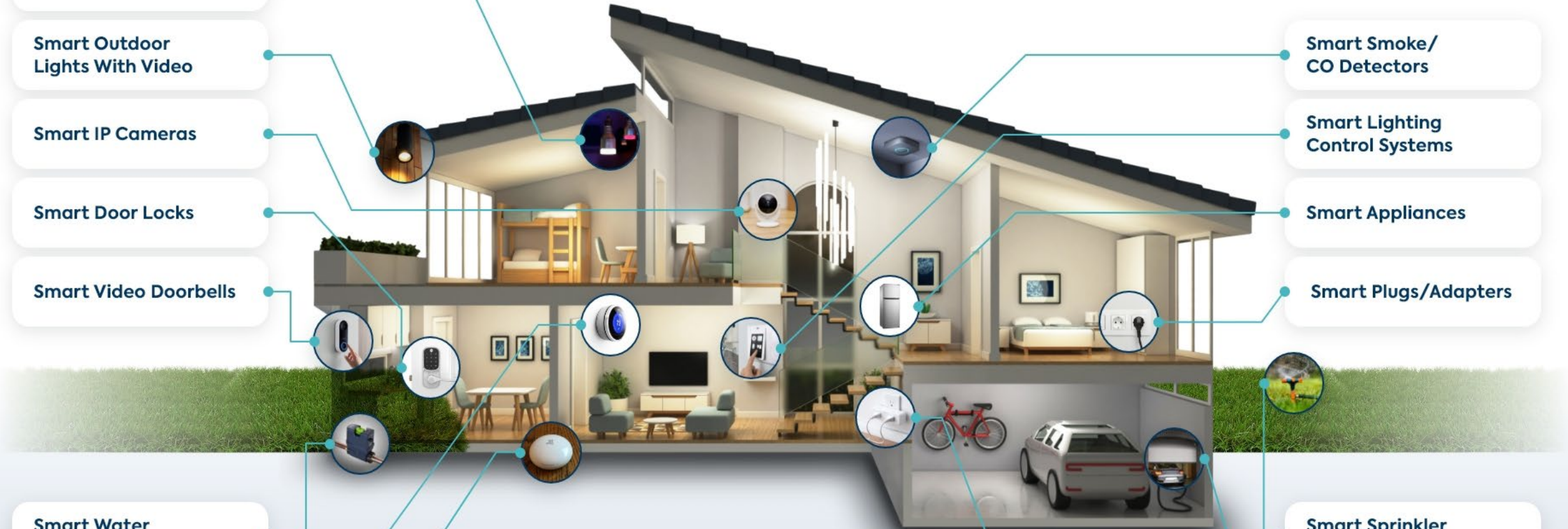
Smart Appliances

Smart Plugs/Adapters

Smart Sprinkler
Systems

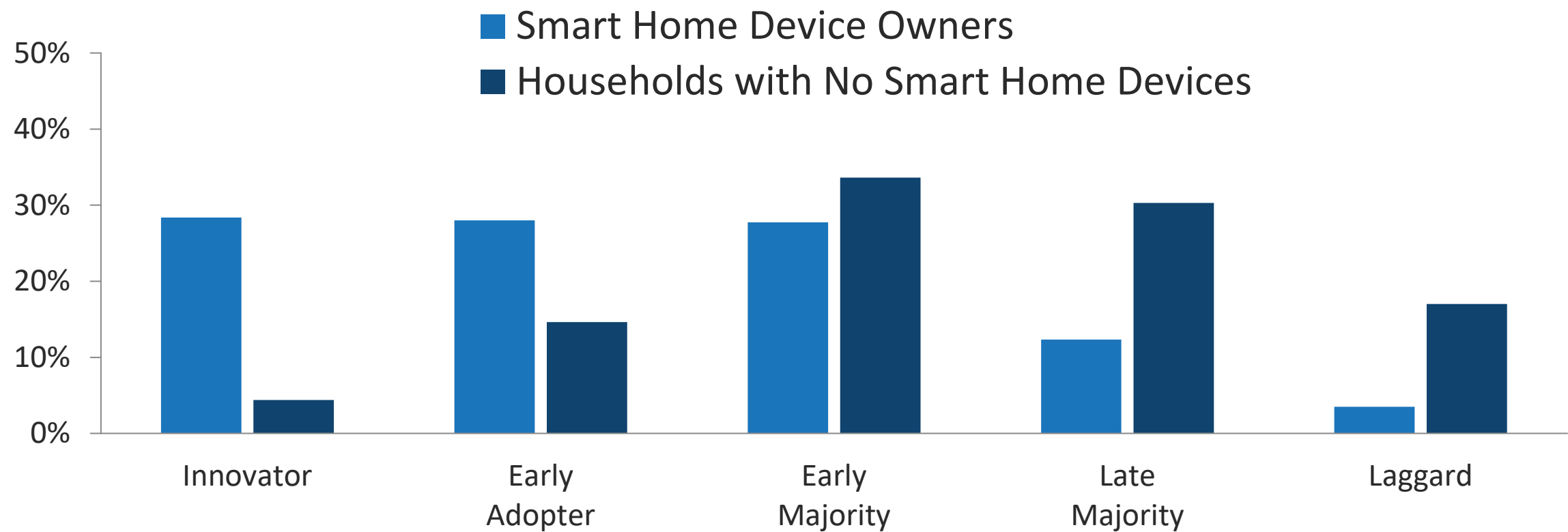
Smart Garage
Door Openers

Smart Outlets/
Switches/Dimmers



Smart Home Reaches the Early Majority

Tech Affinity, by Smart Home Device Ownership



Diffusion of Innovation: Meeting Customer Needs

	Innovator	Early Adopter	Early Majority	Late Majority	Laggard
Technology	<ul style="list-style-type: none"> • Techies 	<ul style="list-style-type: none"> • Quick to see benefits of new technology 	<ul style="list-style-type: none"> • Can relate to technology 	<ul style="list-style-type: none"> • Not comfortable with technology • Need aftermarket support 	<ul style="list-style-type: none"> • Somewhat fearful of technology • Technology needs be buried in the product
Motivation	<ul style="list-style-type: none"> • Looking for latest and greatest • Technology is chief • interest 	<ul style="list-style-type: none"> • Visionaries • Easily imagine compelling use-case, order-of-magnitude improvement 	<ul style="list-style-type: none"> • Practical, pragmatists • Buy for marginal improvement 	<ul style="list-style-type: none"> • Conservatives • Limited risk 	<ul style="list-style-type: none"> • Skeptics • Content with what they have • View connectivity as hassle, interruption
Pricing	<ul style="list-style-type: none"> • Low cost • Beta testers 	<ul style="list-style-type: none"> • Least price sensitive 	<ul style="list-style-type: none"> • Need ROI based on lower value expectations 	<ul style="list-style-type: none"> • Need low marginal cost for new capabilities 	<ul style="list-style-type: none"> • Commoditized market
Marketing	<ul style="list-style-type: none"> • They find you 	<ul style="list-style-type: none"> • Show compelling applications • Easy to sell • Hard to please 	<ul style="list-style-type: none"> • Need proof of value 	<ul style="list-style-type: none"> • Need proof of limited risk • Loyal, hard to win 	<ul style="list-style-type: none"> • Need to eliminate all risk, hassle

Video Doorbells at 20% Adoption in US Households



#1

Smart Video Doorbell



#4

Smart Lightbulb



#2

Smart Camera



#5

Robotic Vacuum Cleaner



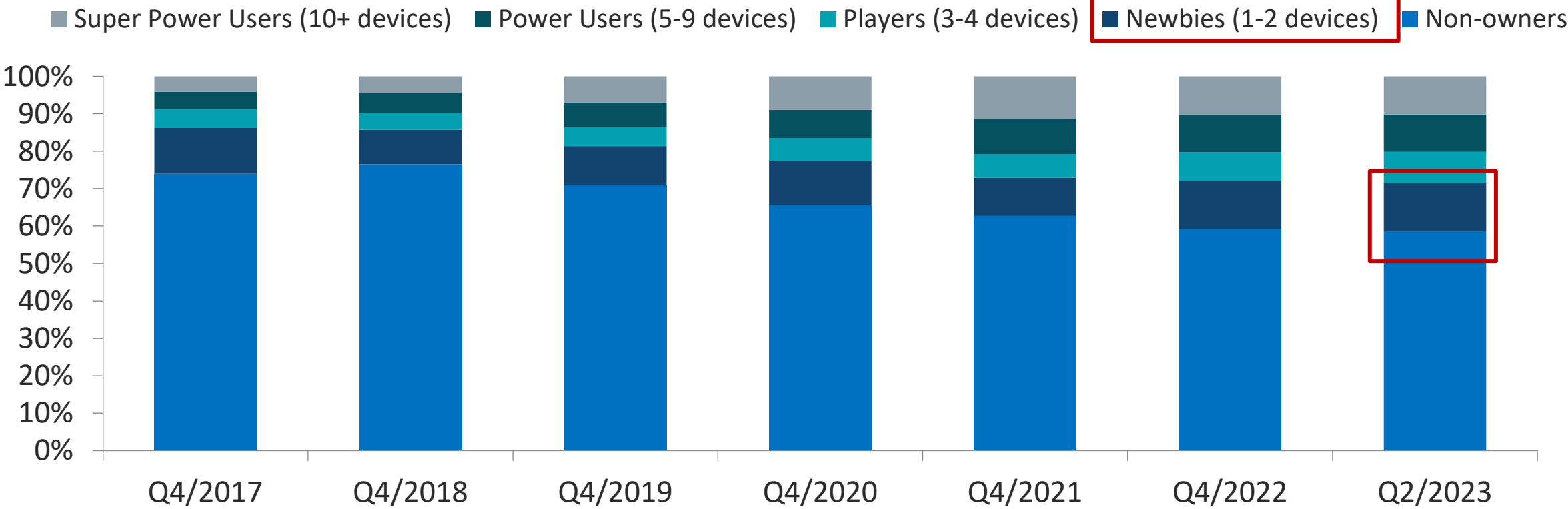
#3

Smart Thermostat

+ 50% of Smart Home Devices Bought at Retail

Households Building Their Smart Home

Number of Smart Home Devices



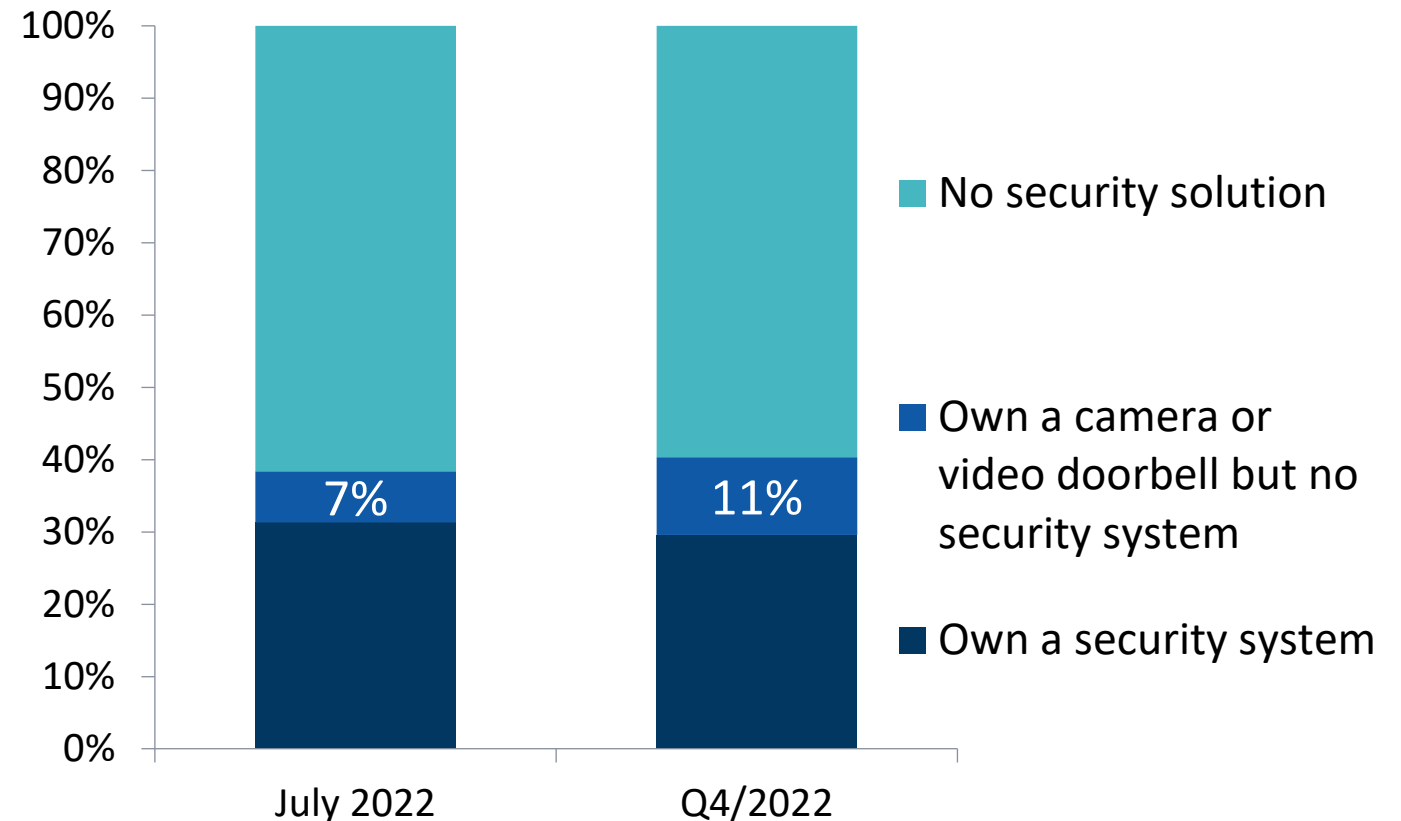
Home Security and Smart Home



~41% of US Households Own a Security Solution

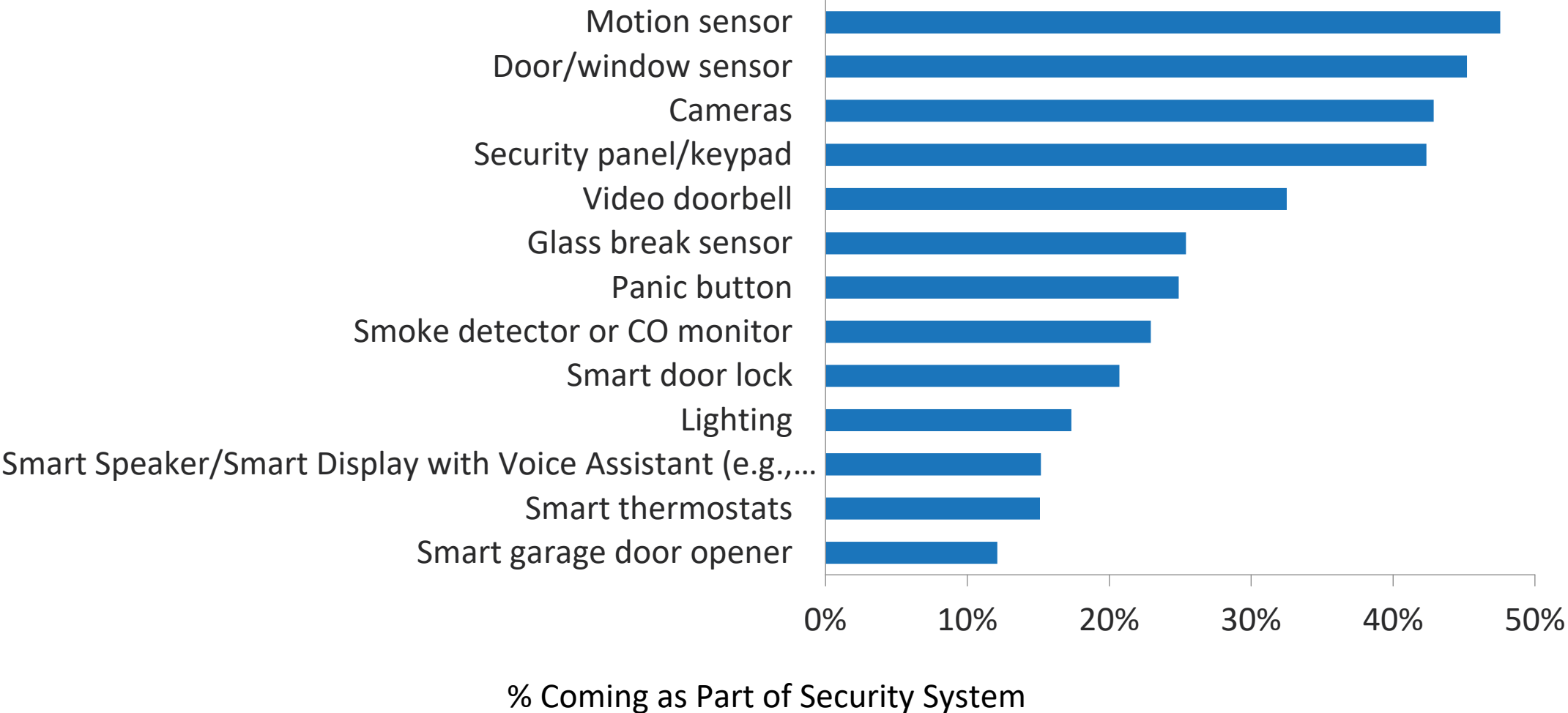
- **30%** of US internet households own a security system
- **11%** security device with no system
- **~1 in 5** internet households pay for professional monitoring of a security system

Security Solution Adoption



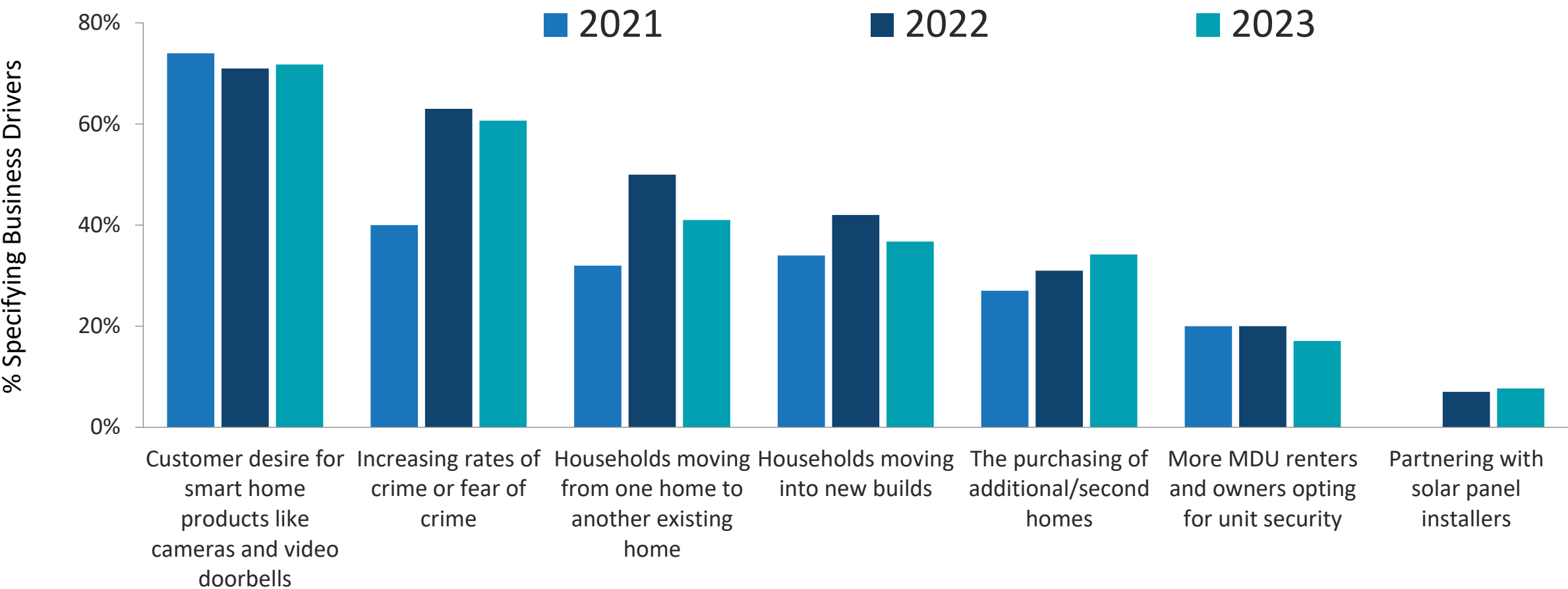
Connected Devices Attach to the System

Devices Acquired as Part of Security System



Smart Home Devices Drive the Security Dealer Market

Business Driver for Security Dealers



\$13 Billion in Annual Revenues by 2025

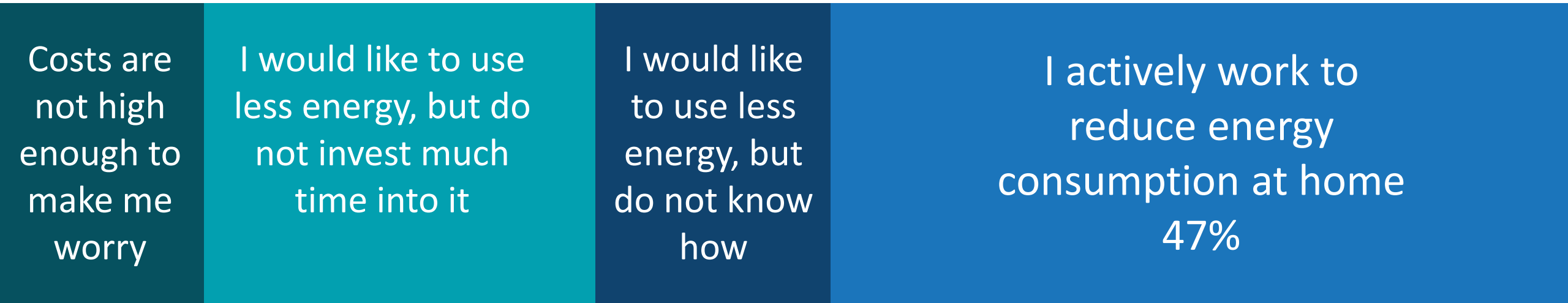
- Parks Associates Forecast

Energy as a Driver for the Smart Home



Consumers are Willing to Invest

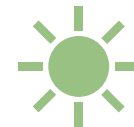
Agreement with Statements



**Smart
Thermostats**

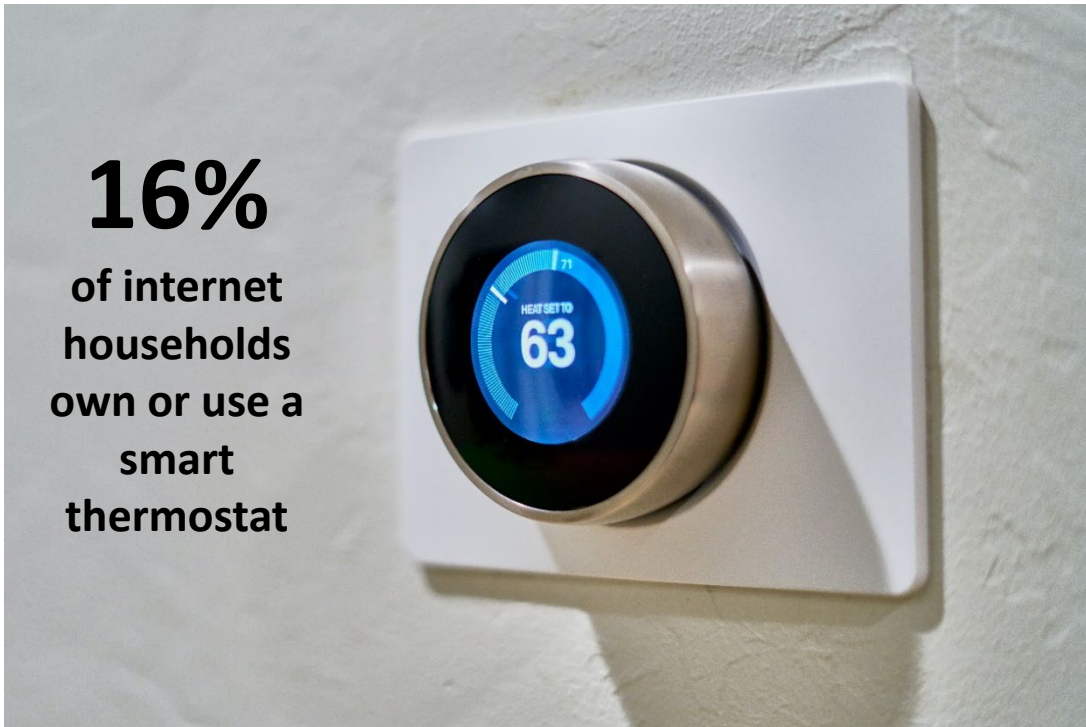


**Energy
Monitoring**

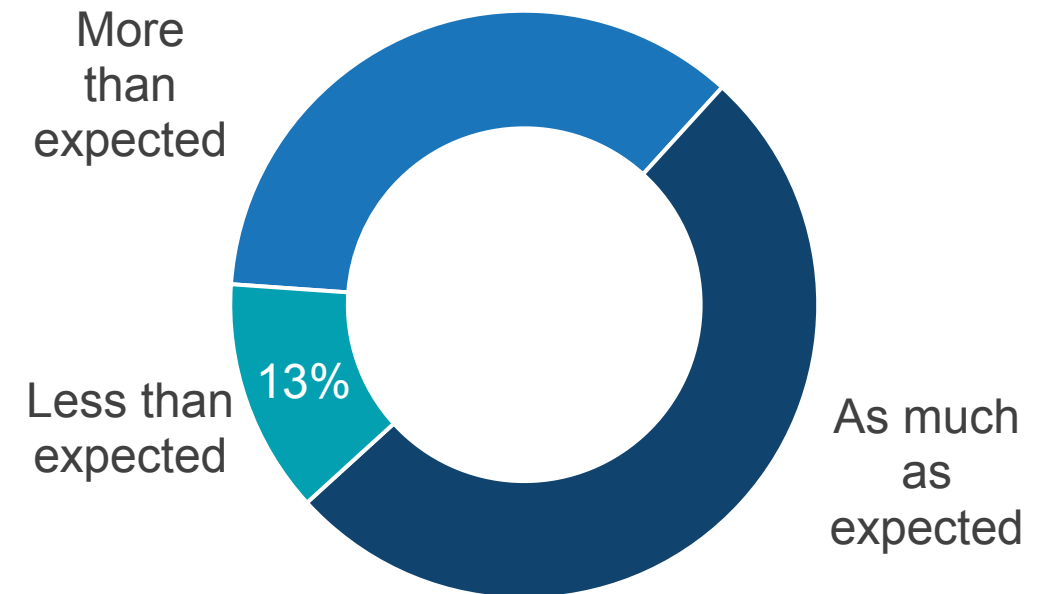


**Residential
Solar**

Smart Thermostat Perceptions of Savings



Most smart thermostat owners give favorable reviews of the savings



Willingness to Pay for Services

Appealing Home Energy Management Services



Whole home energy usage in real-time
Energy usage by device



Energy bill tracking throughout the month
Alerts when tracking over-budget



Alerts on poorly performing appliances
that need repair



Growth
Health
Multifamily
Rural
SMB



New Healthcare Solutions Enabled by Devices and Services

Senior Living

- General home & personal technology
- Smart home & home automation tech
- Home sensor solutions
- PERS

Home Healthcare

- Telehealth
- Remote patient monitoring
- Home health & private duty services
- Care provider house call services

Environmental Quality & Safety

- Detect CO, smoke, radon, gas, water pollutants, leaks
- Purify air — remove germs, dust, allergens; purify water
- Circulate air throughout home

At-Home Fitness/Wellness

- Home exercise equipment
- Wearables, health devices, & apps
- Access to outdoor spaces

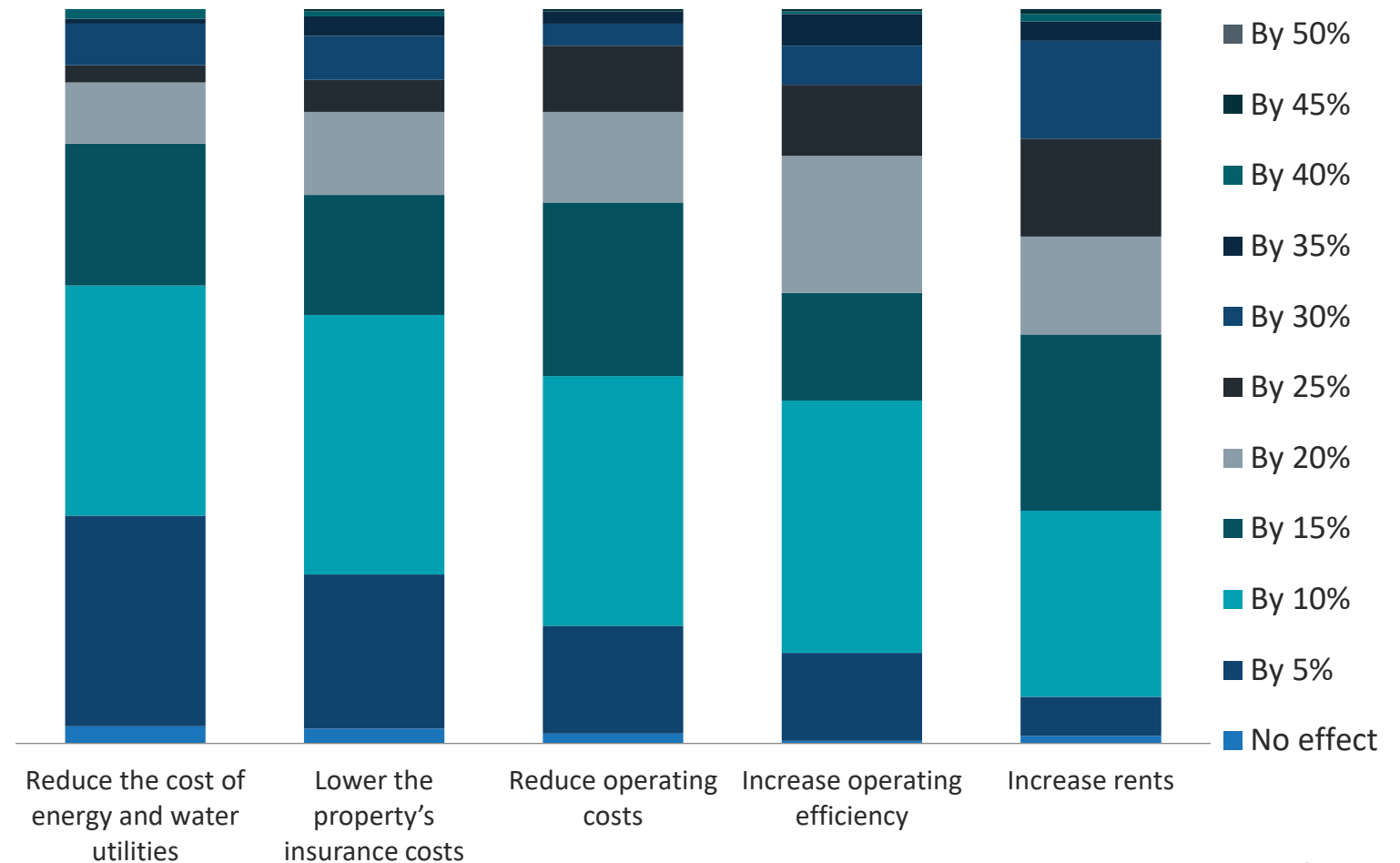


~30M Households Live in Multifamily Environment

Reduce Cost and Increase Rent

Vast majority say smart home devices can **increase rental fees** by 5% - 30%

Expected Economic Impact By Providing Smart Home Devices



Rural / Tier 2 and Tier 3 Broadband Areas



**Population
Movement**



**Vacation
Homes, 2nd
Homes**



**Remote Work
Options**

Result

- Remote and rural areas will increasingly have higher internet speeds, wider availability
- Smart home devices drive connectivity demands and so device landscape is important to help drive higher broadband speeds



39% of SMBs are Likely to Acquire Security/Safety Products

Top 5 Likely Security/Safety Related Purchases in next 6 Months

1. Monitoring Cameras
2. Professionally installed security System
3. Door locks
4. Smoke Detectors
5. Video Doorbells

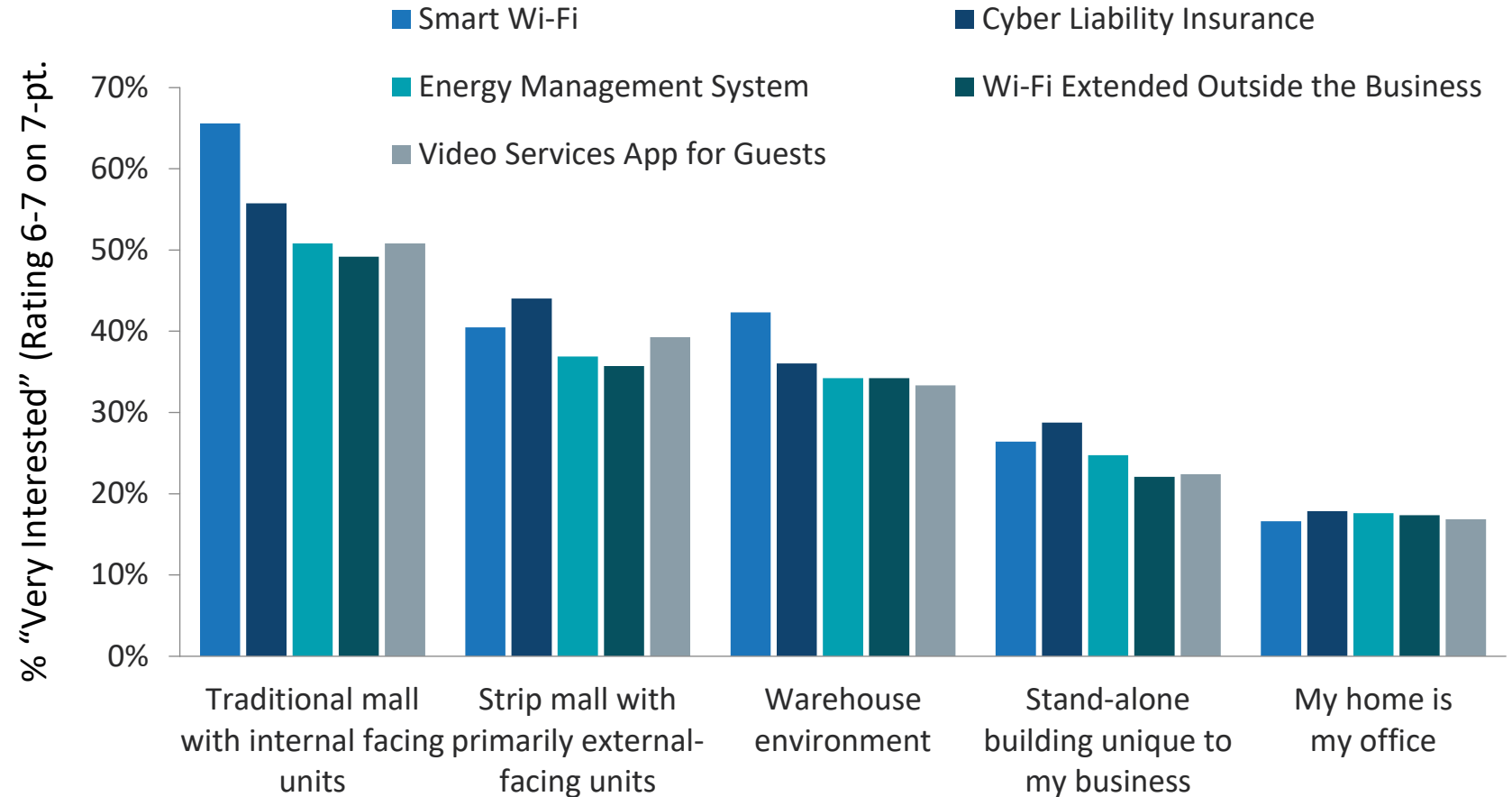
30.7M US small business

— Small Business Administration

99.9% of US business are small businesses

— Small Business Administration

Interest in Additional Technology Services



Slow and Steady Growth



Catalysts for Growth for Services



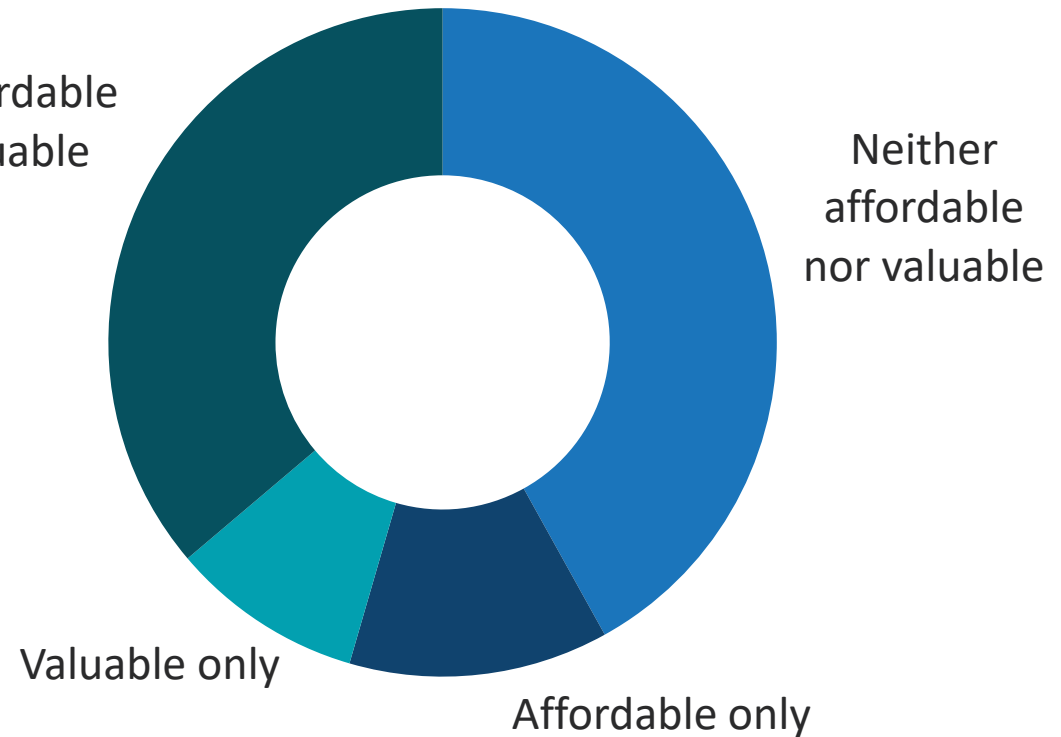
Top Barriers to Adoption of Smart Home Devices

#1 Value Proposition

#2 Price

#3 Privacy & Security

**Smart Home Device
Affordable & Value Groups**

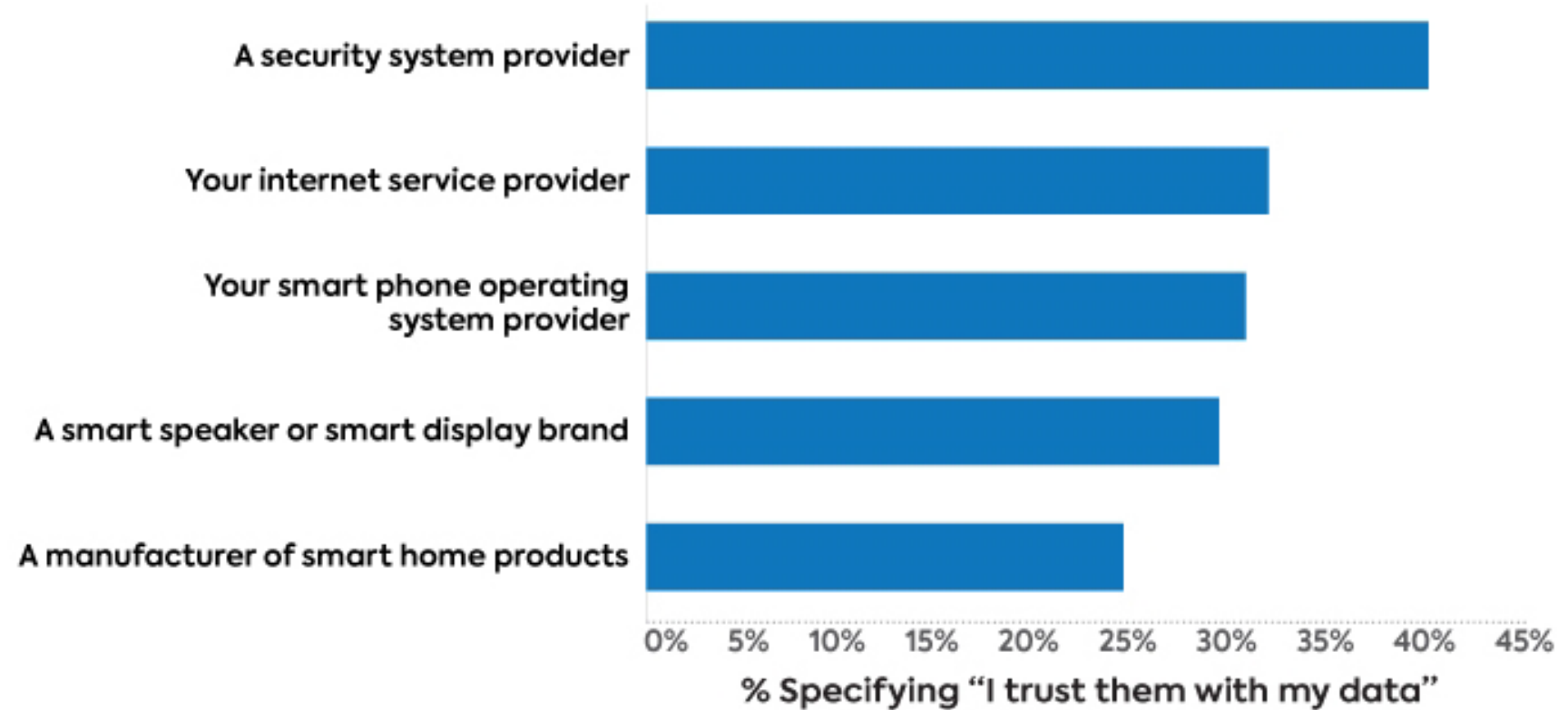


Trust is Key

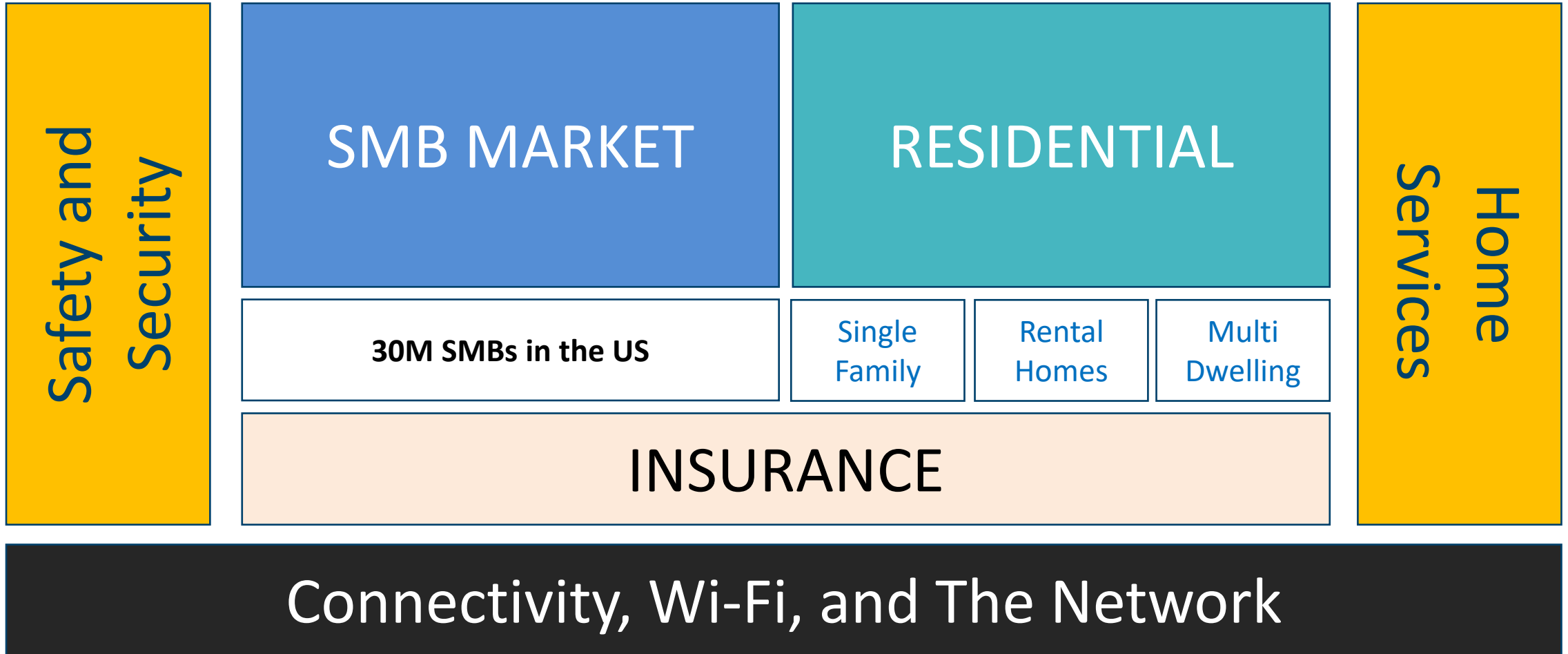
- Works with products and services
- Trust them to support the app
- App would likely be low cost or free
- I trust them with my data
- The app would be easier to use
- I have an established relationship with the company

Support and Integration Drive Trust

Trustworthy Company to Access and Manage App Data
US Broadband Households Interested in a Single Unified Smart Home Control App



Unlocking Billions in Savings: Devices, Systems & Services



CONNECTIONS SUMMIT

Performance and Profits: Smart Home Strategies

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9:00 AM PT	PropTech: Extending Value in Multifamily
10:00 AM PT	Enhancing Home Security: Protecting What Matters
11:00 AM PT	Energy Management: Sustainability and Efficiency
1:00 PM PT	Fireside Chat: Smart Home Innovations
2:00 PM PT	Building a Consumer IoT Business
3:00 PM PT	Privacy and Data Security in Smart Homes
4:00 PM PT	Smart Homes: Embracing New Users
5:30 PM PT	Networking Reception

Questions?

**Choose Parks Associates
as Your Trusted
Business Intelligence Partner**

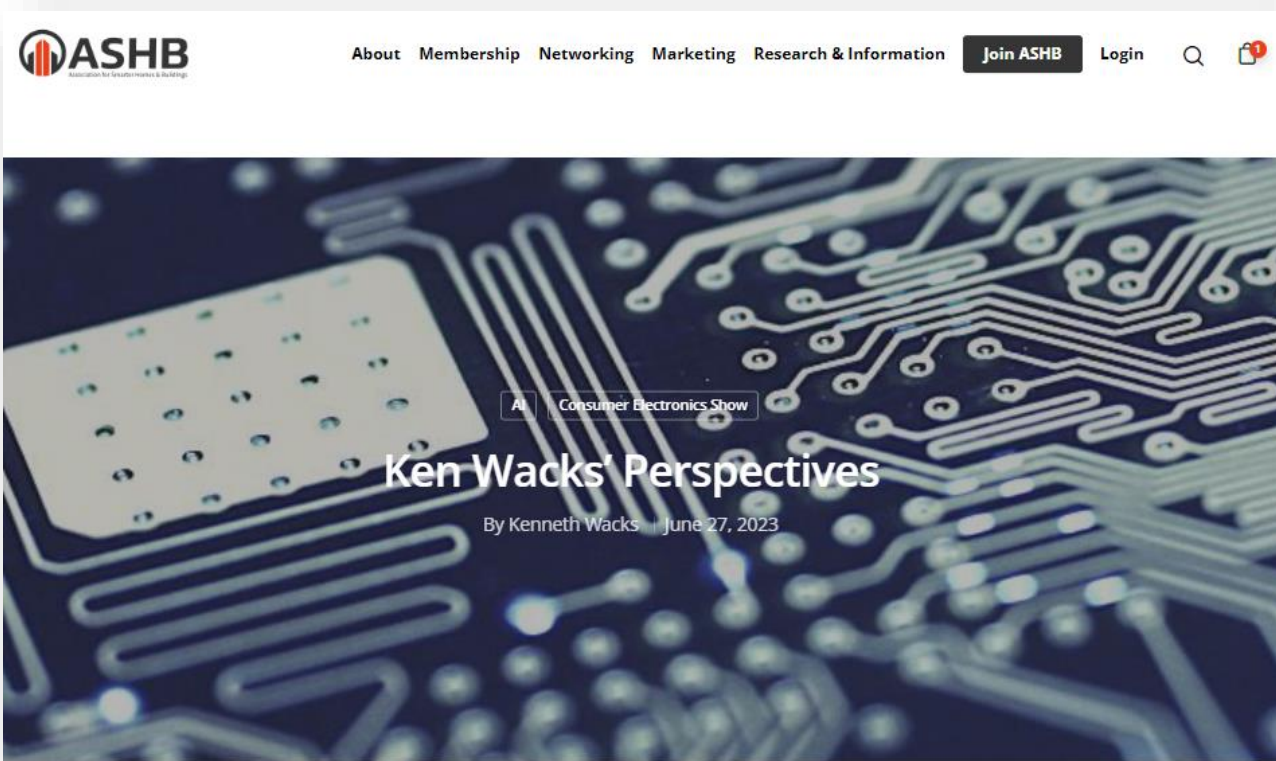
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7. ASHB Journal

Ken Wacks (Ken Wacks Associates)



The ASHB Journal aims to educate and inform the ASHB membership and industry at large on emerging research, issues, challenges, and opportunities in the intelligent buildings and/or connected home sectors.

New articles are posted to the ASHB website, included in the weekly NewsBrief, and circulated on Twitter and LinkedIn.

Send proposals to admin@ashb.com

Recent posts:

- **Ken Wacks Perspectives: CES 2023: The Expansion of Consumer Electronics**
- **Ken Wacks Perspectives: CES 2023: A Sampling of Product Diversity**
- **Facilio: The Relevance of Decarbonizing Goals During the Downturn**



8. ASHB Podcasts

Marta Klopotoska (ASHB)



Join industry experts and leaders from around the globe as they discuss everything smart home and intelligent buildings.



Apple
Podcasts



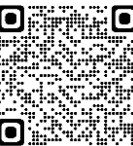
ASHB is looking for guests and hosts for future pre-recorded episodes. Contact admin@ashb.com for more information.



9. New Business

Ken Wacks (Ken Wacks Associates)

New CHC Business?



10. Announcements

Charlie Derk (Legrand)

Upcoming Events

Smart Spaces (Parks Associates)
November 30 | Virtual

CES
January 9-12 | Las Vegas, NV

Connections Summit at CES (Parks Associates)
January 9 | Las Vegas NV

IoT Evolution Conference & Expo
February 13-15 | Ft. Lauderdale, FL



11. Adjournment

Ken Wacks (Ken Wacks Associates)

Next CHC Meeting: February 2024

Association for Smarter Homes & Buildings (ASHB)

admin@ashb.com | www.ashb.com | www.ashb.com/chc

Connect to what's next™



ASHB

Connected Home Council

