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FUTURE OF THE CONNECTED HOME: STANDARDS "MATTER"

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Future of the Connected Home: Standards "Matter"

This report is a Parks Associates Research Report commissioned by ESA and sponsored by Resideo to deliver the latest facts and trends to help you make informed decisions on capturing new customers through careful business strategy evolutions.

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FUTURE OF THE CONNECTED HOME:
STANDARDS "MATTER"

The smart home market is evolving with new products, new developments in use cases, technologies, distribution channels, and business models. Since 2015, the number of connected devices in US internet households has nearly doubled, from 8.4 devices per household to 15.5 in 2022.

While security systems are an important channel for smart home devices, most smart home devices are purchased as stand-alone point solutions at retail (in-person or online), and most are self-installed. This can exacerbate several impediments plaguing the smart home and frustrating customers with their devices, including problems with device set-up, device connectivity, and device interoperability. Resideo is one of the companies driving the development of the Matter standard. "Matter is the industry's opportunity to improve interoperability and break down the consumer confusion caused by 'walled garden' ecosystems," Dave Kaufman, Resideo's director of strategic initiatives.

Parks Associates research has found that one of the most desired features of IoT devices is interoperability, meaning devices are able to communicate with each other, even across different brand ecosystems. Smart home device owners want their devices to work with their smartphones, their smart speakers/displays, smart home devices already owned, and their security systems. Unfortunately, ecosystem fragmentation, plus the numerous

competing communication protocols, make seamless device-to-device interaction difficult to achieve. Consumers are frustrated: 44% of smart home device owners who have had technical problems with a smart home device report having difficulty getting the device to interact with other connected products in their home.

In fact, security dealers increasingly report that their customers are asking for their help to integrate smart home devices that consumers purchased separately into their security systems. This is generally not an easy process. Nearly three-fourths of dealers who integrate consumer-owned smart home devices into security systems find it difficult, and nearly half find it very difficult.

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44% of smart home device owners who have had technical problems with a smart home device report having difficulty getting the device to interact with other connected products in their home.

73% of dealers who integrate consumer-owned smart home devices into security systems find the integration of these devices difficult, with 45% finding it very difficult.

Consumers Want a Unified App

A unified smart home experience is the holy grail of convenience and value for consumers. Though most consumers buy smart home devices in a fragmented way, some level of unified control is available via smart home hubs, security providers, internet service providers, high-end custom installments, and even the master smart home apps on common smartphone operating systems. Nearly all (86%) of smart home device owners want a unified app for their devices. However, consumers are divided on which industry player they prefer to provide that unified smart home experience. The tech giants—offering both smartphone OS applications and voice assistants—have an edge, but consumers are split fairly evenly across options overall, with 16% preferring a security provider specifically.

Industry Moves on Interoperability: The Matter Initiative

To help alleviate the frustration of interoperability issues for both the consumer and manufacturers, major industry players, including Apple, Amazon, Google, Resideo, and others joined with the Connectivity Standards Alliance (formerly the Zigbee Alliance) in December 2019 to launch Project Connected Home Over IP (Project CHIP). Project CHIP, which is now known as Matter, is an open source, IP-based standard designed to increase interoperability and compatibility among IoT devices in the home. The initiative aims to expand the number of smart devices that can work together. It aims to simplify the buying experience by providing a unified and more connected experience to consumers and to make connected products easier to produce for manufacturers and developers.

The Matter protocol expects to establish a common basis for controlling smart home products, meaning that one device can work in any Matter-supported ecosystem. For example, a smart door lock that listens to Apple Siri will also work with Google Assistant, Amazon Alexa, Samsung

SmartThings, or other supported solutions. With the Matter function called "Multi Admin" users will be able to operate a Matter-supported device with the smartphone app or digital assistance of their preference. In addition, Matter is attempting to address device set-up issues. Matter-supported devices will have QR codes that can be scanned to help users with device set-up, and all devices that are Matter-supported will be able to be set up through a single Matter app. In 2021, Matter made several announcements about how the technology will be implemented, which included:

■ **Specific device types will receive Matter support first:** Initial target device types include smart lights and plugs, blinds/shades, smart thermostats, TVs, access control devices like garage door openers and smart locks, safety and security devices and systems, and access points and bridges. This means that appliances, water management devices, connected health products, and connected entertainment products (beyond TVs) will have a longer roadmap ahead of them. Scoping exercises are underway for additional device types, and backward compatibility and upgradability to Matter may also be available for certain existing smart home devices in the future.

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■ **Matter will leverage blockchain to enhance security:** Matter requires standard industry security protocols, such as AES 128-bit encryption of data between devices, and between devices and the cloud, as well as ongoing software/firmware updates to patch security vulnerabilities. It will also leverage blockchain to establish the provenance of the device – that is, confirm devices are who they say they are.

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■ **Wi-Fi, BLE, and Thread get Matter support:** Matter is based on Internet Protocol (IP) and built on the Thread network, and will initially support Thread, Ethernet, and Wi-Fi local networks allowing connectivity and communication between devices using any of these three technologies. Because Matter is based on IP, cellular may also be in scope in the future.
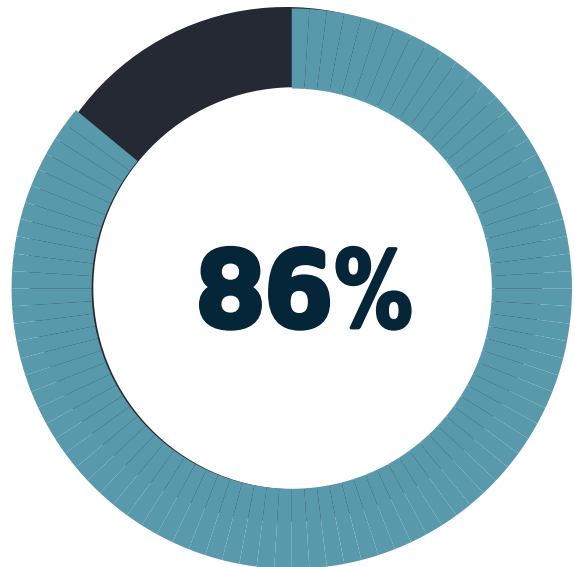
86%

86% of smart home device owners want a unified app for their devices.

■ **Matter sets its sights on commercial applications:** Matter's foundation at the core is the connected home. However, target device types have immediate applications in the commercial space as well. As such, Matter's Commercial Groups are working on professional commercial use cases to be deployed in the future.

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The pursuit of interoperability in home automation has been long, predating the current generation of smart home devices that emerged 8-10 years ago. However, the participation of nearly all major smart home players in Matter makes this effort very alluring. Should the effort be successful in truly removing the responsibility of interoperability from the consumer, the vision of the connected smart home will have taken a meaningful step forward. New customers will gain confidence to acquire smart home devices knowing that they will work together while

existing customers will receive more benefits from their existing devices based on their new ability to work together and better automate tasks.

Though Matter is not yet well known, Matter-supported devices will all display a logo to indicate to the user they are a supported product with interoperable capabilities. Parks Associates research finds that consumer interest is high, with 73% of smart home device owners and intenders rating a mark of interoperability certification (such as the Matter logo) to be an important consideration when purchasing a connected device.


Recommendations and Implications for Security Dealers

Matter has captured the attention of the smart home industry with the promise to simplify development for smart home products brands and manufacturers while increasing the compatibility of the products for consumers. The industry's feelings on Matter are not uniform. Some players are taking a wait-and-see approach, as Matter delays have pushed product rollout timeframes, and some manufacturers are wary of added product costs.

Despite the delays, Matter has continued to add important smart home players to the alliance. Currently, there are over 250 companies in the Matter Working Group of the Connectivity Standards Alliance. Amazon, Google, Apple, Resideo, Comcast, ADT, Arlo, and Brinks Home Security are just some of the security or security-related players that are pledged participants for Matter integration.

Matter's impact on security dealers may be a mixed bag. An application-layer protocol that eases device integration will make technician's jobs easier as incorporating devices that consumers purchase on their own into security systems may become much easier. It may also bring down ongoing support costs associated with device interoperability. On the other hand, the unified smart home experience is one core element of distinctive value that professionally curated, installed, and supported security systems offer consumers today. If Matter succeeds in lowering the barriers to a much better unified smart home experience without a systems-based approach, dealers will need to lean on or develop other parts of their offerings to show that distinctive value.

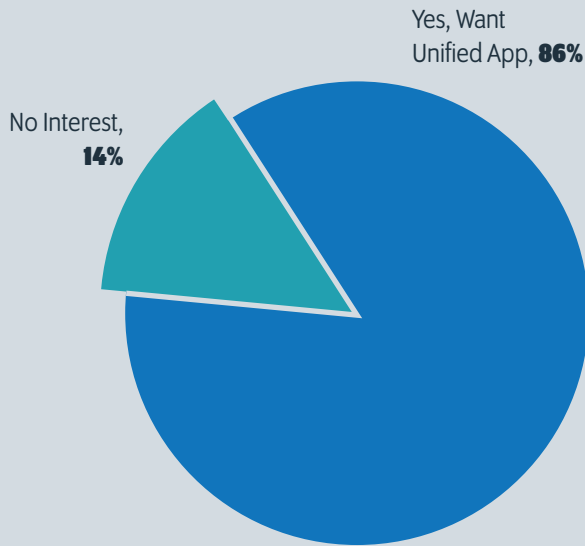# Total Average Number of Connected Devices Per US BB HH
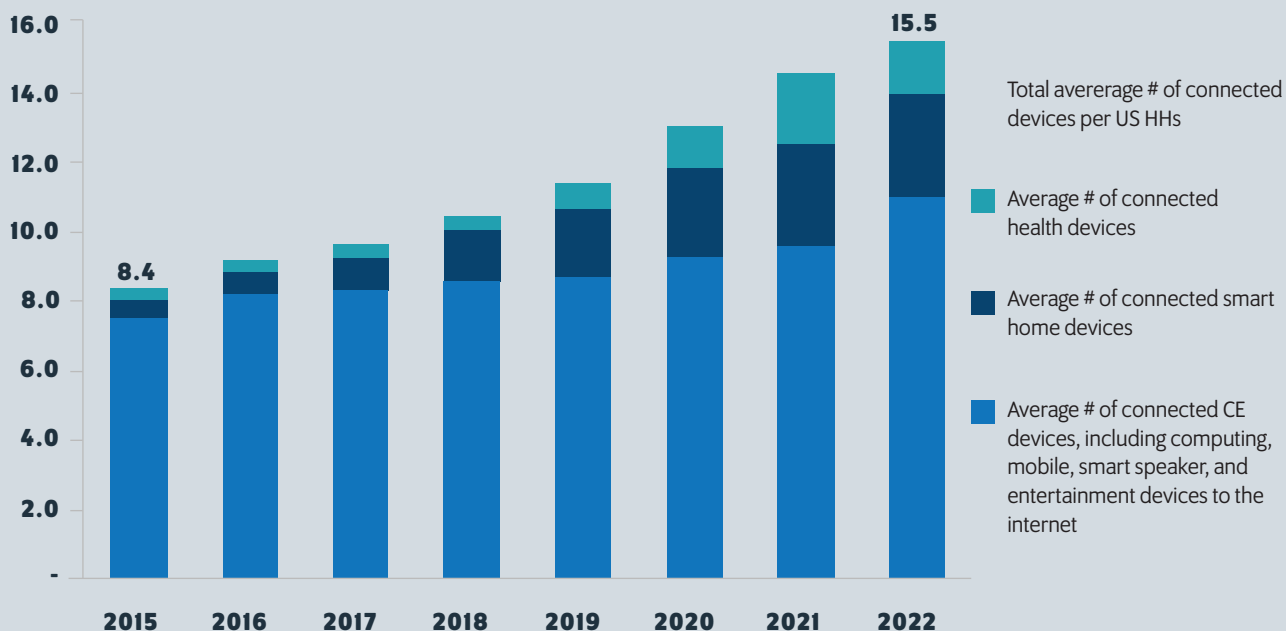
Among All US internet HHs, Outliers Excluded | "Note*: CT2005. How many of each of the following products are in use by anyone in your household? | Q2204. How many of the products that you own are actually connected to the Internet. ST26601. Numbers of Smart Home devices owned

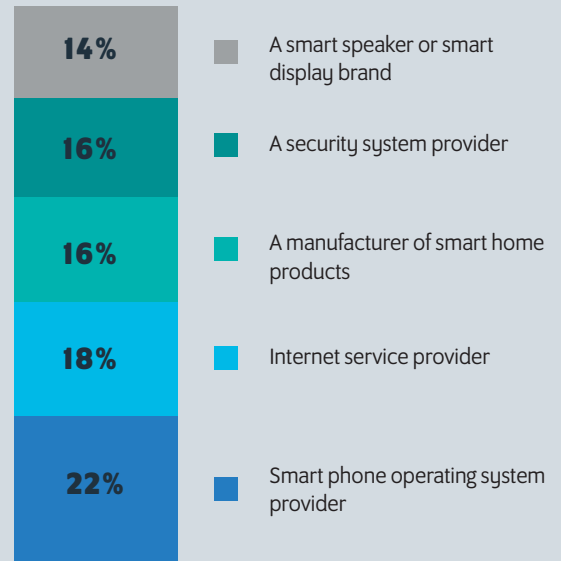# Difficulty of Integrating Consumer-Owned Smart Home Devices with Security System
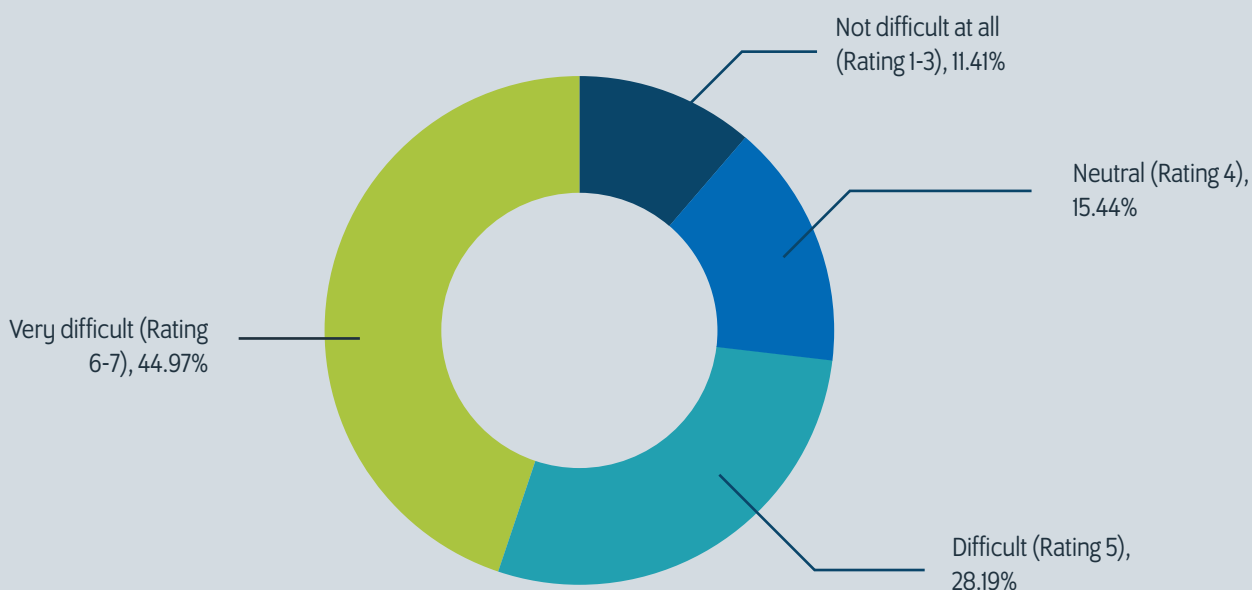
Among Security Dealers who Integrated At Least One Customer Owned Smart Home Device, n=149, ±8.03% | "Q219. How difficult is it to integrate smart home devices THAT CONSUMERS ALREADY OWN into the security system at install?"| Source: Security Dealer Perspectives: Views from the Front Line| © 2022 Parks Associates

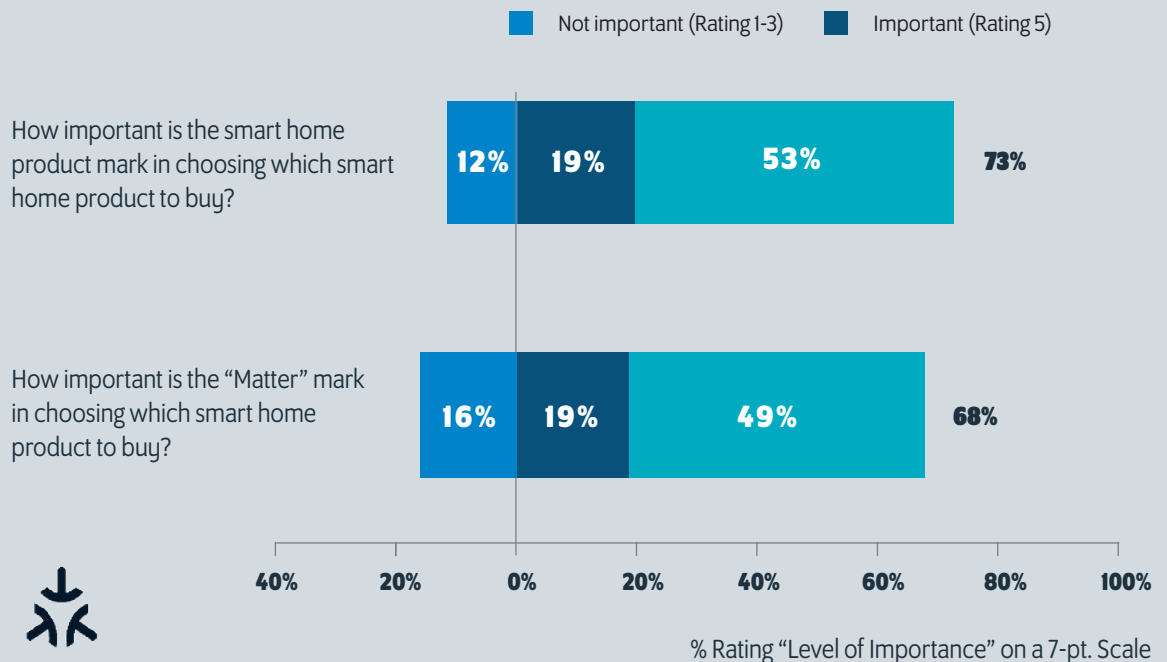## Smart home device owners interested in getting a single unified control app

Yes, Want Unified App, **86%**

No Interest, **14%**

Preferred Provider of Unified App

14%	A smart speaker or smart display brand
16%	A security system provider
16%	A manufacturer of smart home products
18%	Internet service provider
22%	Smart phone operating system provider

Among Smart Home Device Owners, n=2,209, ±2.09% | © 2022 Parks Associates

Importance of Smart Home Device Integration for Future Purchase

■ Not important (Rating 1-3)   ■ Important (Rating 5)

How important is the smart home product mark in choosing which smart home product to buy?
12% **19%** **53%** **73%**

How important is the "Matter" mark in choosing which smart home product to buy?
16% **19%** **49%** **68%**

40% 20% 0% 20% 40% 60% 80% 100%

% Rating "Level of Importance" on a 7-pt. Scale

Among Smart Home Device Owners or Intenders, n=3,085, ±1.76% | "Q2678.A group of companies have come together to ensure their smart home products will work together. Products from this group will carry a mark. How important is this mark in choosing which smart home product to buy? Q2679. Again, with this in mind, how important is this mark to you in choosing which smart home product to buy?" | Source: American Broadband Households and Their Technologies Q2 2021 | © 2020 Parks Associates

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