Next-Generation Support: Building an Engagement Platform
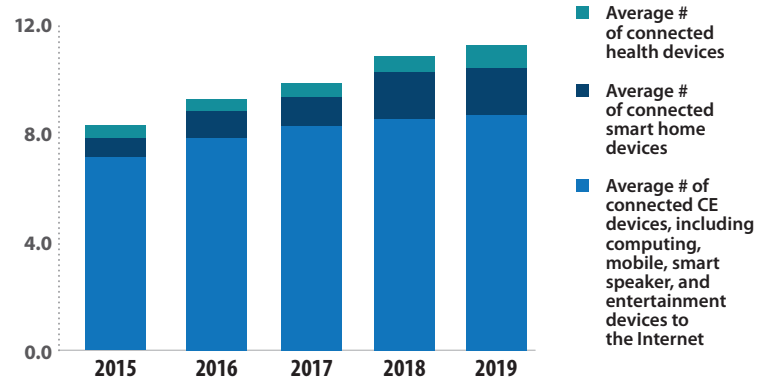
Growing Device Adoption

Technical support services are shaped by the quantity and types of technologies consumers adopt, the ways in which consumers use their technology, and the types of challenges that consumers encounter with their products.

The adoption of connected devices allows consumers to monitor and manage aspects of their personal lives more efficiently and effectively. The data generated by connected devices also helps brands and service providers identify new avenues to create value for consumers and generate new revenue streams. The pace of adoption varies across categories, but the average number of devices in US broadband households is increasing steadily.

Total Average Number of Connected Devices Per US Broadband Household
Total Average # of Connected Devices Per US Household

Legend:
- 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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US broadband households now have an average of 11.4 connected devices.

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Consumers and Connected Device Adoption

- **Nearly all US broadband households now own at least one computing device. These include computers, laptops, smartphones, smart watches, and tablets.**

- **64% have an internet-connected entertainment device.**

- **28% have a smart home device or appliance.**

- **35% own at least one connected health or wellness device.**

- **43% of US broadband households plan to purchase at least one smart home device in the next 12 months.**

- **54% of US broadband households plan to purchase at least one computing, entertainment, or network connectivity device in the next 12 months.**

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The rise of connected devices increases the likelihood of technical problems and poor product experiences:

- Emerging products such as those in the smart home and connected health categories utilize new technologies, many of which are immature and vulnerable to technical problems.

- The rise in the number of connected devices in homes increases the burden on home networks and the likelihood that consumers will encounter lapses in device connectivity.

- Consumers' lack of familiarity with new products drives the need for more comprehensive tech support services that include product setup and usage guidance. This lack of familiarity also increases the likelihood and frequency of user-error as well as remorse returns.

Many use cases for connected devices in the home are multi-dimensional and require a variety of platforms to work together. For example, a smart lock may require the lock hardware to communicate with a home Wi-Fi network, connect to home broadband, and ultimately an authentication server in the cloud. There are multiple unrelated opportunities for failure.
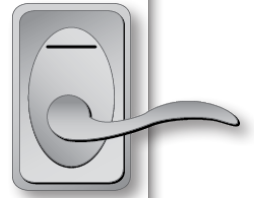
The increasing technical complexity in the home demands new support strategies and tools that can efficiently identify the root causes of technical issues and address them efficiently.

Providing efficient and effective support to consumers requires an understanding of how consumers interact with their products. Knowledge management strategies that facilitate the availability and easy access of a broad range of support-related information create superior support experiences.

> A customer's experience with a brand's product is no longer influenced only by that product but by the entire ecosystem in which that product operates.

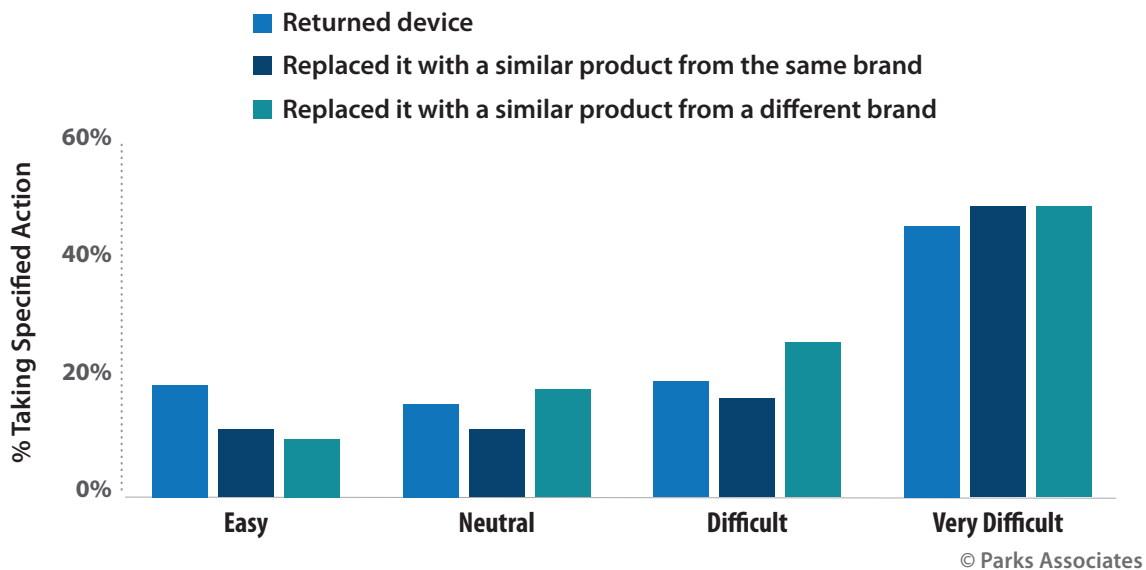## Improving Customer Relationships and Loyalty

Solid customer relationships can help maintain market share and brand loyalty in a crowded field. Positive experiences with brands, including products and customer service, drive solid customer relationships.

Winning over consumers in early interactions is important, as they can be quick to switch to a different brand if their experience is not optimal.

> 29% of consumers who indicate their devices were difficult to set up ended up switching to a different brand. Brand abandonment shoots up to 49% when consumers reported setup was "very difficult."

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Smart Home Devices: Actions Taken After Experiencing Setup Problem by Difficulty of Setup

Among Smart Home Device Owners Setting Up One or Two Devices Themselves and Experiencing Specified Level of Difficulty

Legend:
- ■ Returned device
- ■ Replaced it with a similar product from the same brand
- ■ Replaced it with a similar product from a different brand

Y-axis: % Taking Specified Action (0% to 60%)

Difficulty	Returned device	Replaced same brand	Replaced different brand
Easy	18%	10%	9%
Neutral	14%	10%	17%
Difficult	18%	15%	25%
Very Difficult	45%	48%	48%

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Over 50% of consumers who set up smart home devices on their own experience a problem.

Over 33% of CE device owners report experiencing problems with their device over the past year.

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Problems with connectivity are the leading issues among connected device owners. This is especially problematic for emerging device use cases that maintain security, safety, or health, where reliability is critical. Dependable products will create higher dependence on the product and loyalty to the brand.

Proactive identification and resolution of problems are the first step to maintaining device functions and keeping consumers satisfied. Service providers and device manufacturers can leverage connected device data to develop AI-driven predictive models that proactively identify problems.

While these models often have learning capabilities that improve over time, they will never identify all issues. When customers need additional support with device or network issues from a professional technician, positive support experiences will also help drive brand loyalty.

Only 47% of US broadband households that received technical support services over the past 12 months are very satisfied with the speed at which their problem was resolved and the resources available to the agent to address their concern.

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Evolution of Support Services

Support services are instrumental for building and sustaining valuable customer relationships. As brands seek to leverage support to build better customer relationships, they must transform these services in several ways to address issues more proactively and make it easier for consumers to access and receive support.

Proactive Support Solutions

Providing proactive support solutions is an increasing focus for device manufacturers and service providers. A core strategy to sustain consumer engagement with products is preventing service interruptions. Primary proactive support mechanisms used by technology brands include auto-configuration software, self-healing solutions, and device health checks.

Auto-configuration software — Device manufacturers and internet service providers (ISPs) have been adding software to devices that enable automatic configuration of connected devices to the home network. Automatic configuration eliminates the need to manually connect devices to the home network—a process which can be unintuitive and challenging. It also optimizes device settings for specific features. For example, auto-configuration technology can be used to allow a new smartphone to automatically adjust its settings to optimally transfer photographs and other content from an old device.

Self-healing technology — Self-healing technology automatically detects misconfigurations and device processing failures, along with other performance issues. It then automatically remediates the issues or failures before they disrupt the functioning of the device, often before the user is aware there was an issue. Self-healing solutions are often applied to home networks and traditional computing devices such as laptop and desktop computers. The use of self-healing solutions for home networks have reduced incoming calls to call centers by 15-30%.

Health checks — Some device manufacturers have provided applications for consumers to proactively assess device health. These are often branded as device "health check" applications and typically work by having consumers use the software application to scan their devices to identify configurations that can lead to known problems.

Device optimization alerts/notifications — Device manufacturers and service providers may leverage data collected about customers' devices and how they use the device to proactively push content that optimizes device functioning. For example, the device manufacturer may identify that a customer's device battery is not lasting as long as it did previously. From there, the manufacturer may identify the cause as an issue with the battery itself, or perhaps an application on the device, and push the necessary steps to correct the issue to the consumer.

Spotlight asurion

User is streaming Netflix on their Samsung TV

While scanning in the background, the network monitoring service notices that the home Wi-Fi configuration is incorrect. This is the root cause of poor streaming

now

Radio Channel Configuration
Your router Wi-Fi configuration is causing Netflix streaming issues. Open Support app to resolve.

TIPS 2

Some devices are on the slower network.

Make sure your 5GHz compatible phone, tablets, computers, and streaming devices are on the faster 5GHz network Wi-Fi in your gateway. Please check the Devices screen for the list.

Congested airwaves are slowing communications with your router.

Wi-Fi auto channel selects the fastest Wi-Fi channel available for you. We recommend enabling WiFi auto-channel-selection to increase speeds

ENABLE 5GHz AUTOCHANNEL

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Key Requirements: Proactive Solutions

- Quick identification of data patterns is key. Machine learning and AI can be used to automate pattern recognition from available data sets.

- Effective proactive support solutions require large, diverse databases of information. These can include data from devices, home networks, consumer profiles, and ISPs.

- Large repositories of data can identify root causes more efficiently and precisely. Regular updates and maintenance of data sets ensure that proactive support software remains relevant and serves as an effective tool for resolving problems.

High Appeal of Smart Home Support Services
Among Smart Home Device Owners
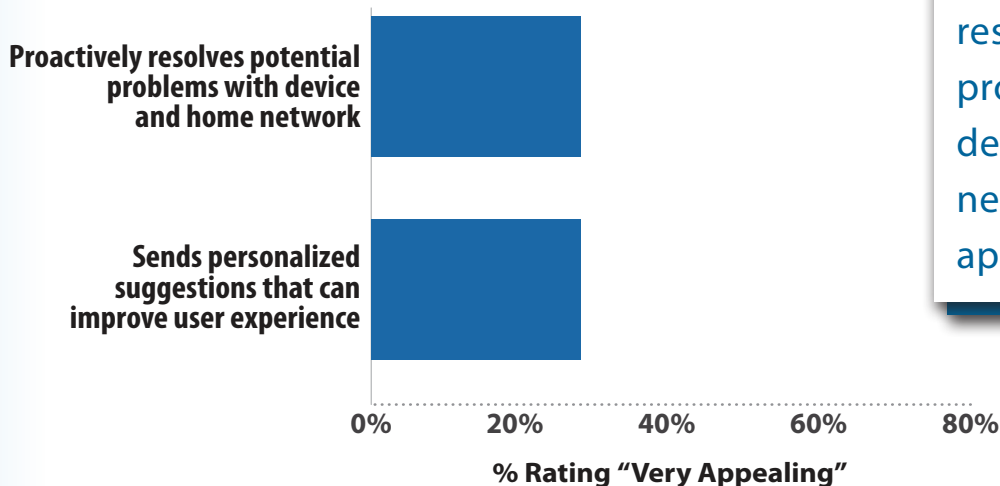
Approximately 33% of smart home device owners find a service that proactively resolves technical problems with their devices and home network highly appealing.

% Rating "Very Appealing"

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Sales of connected consumer devices will exceed 520 million units by 2022, including connected entertainment, smart home devices, networked cameras, security systems, and connected health devices.

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Process Improvement

For issues that are not resolved proactively, consumers use a combination of self-help and professional support solutions to diagnose and resolve technical problems.

Self-Help Solutions

Traditional self-help tools include FAQs on the company's website, product manuals, video tutorials, and support forums that use experts selected by the brand.

Primary benefits of self-help tools are that they are accessible to consumers 24/7, eliminate hold times for service, and reduce the volume of support calls to call centers. Some drawbacks include addressing a limited number of problems, often generating lower levels of support satisfaction and increased costs for device manufacturers to develop and maintain.

> Just over 50% of problems with smart home and CE devices are ultimately resolved by consumers, without professional help.

Self-Help Diagnostic Apps — Many consumers now have access to diagnostic tools, either through device applications or company-provided portals. The tools now provided by many support services empower consumers to perform basic troubleshooting on PCs, mobile devices, and home networks. Some apps leverage similar software as the health check applications previously described, allowing consumers to scan devices and diagnose potential problems. Other apps provide guided workflow that use automated wizards to guide consumers from diagnosis to resolution.

A second component of these applications is their ability to intelligently escalate consumers to a support center, if the device application is unable to identify the cause of the issue. Escalation to call centers throughout the app improves the support experience by saving consumers from the time and frustration of calling in and getting transferred multiple times to get to the right technician. These apps present a clear history of the activities performed on the device prior to escalation, which better equips call center agents to resolve issues efficiently.

Voice-based Inquiries — Use of voice control throughout the home has increased dramatically thanks to the popularity of smart speakers with voice-based personal assistant devices. Thirty-six percent of US broadband households report owning a smart speaker with voice assistant, and 56% of smart speaker owners use the device to request information. Voice-based technical support inquiries present an opportunity to improve convenience and customer service.
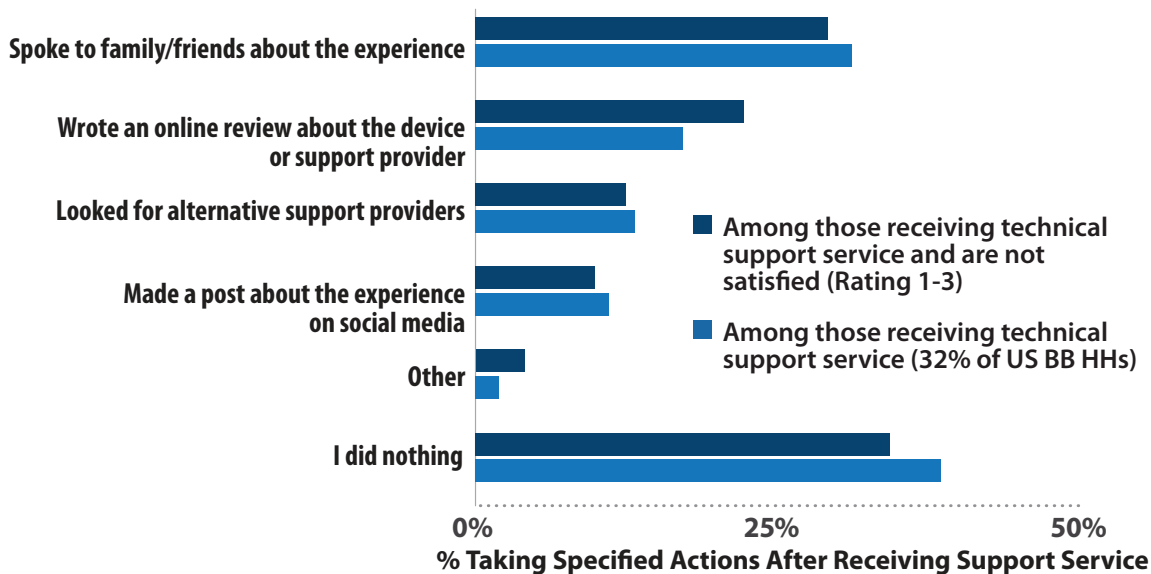
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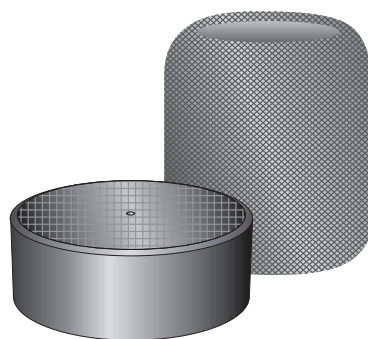
Professional Support

The support experience with a brand's tech support agent influences consumer likelihood to act in a way that can positively or negatively impact brand reputation. For example, a negative technical support experience can drive that customer to write a negative online review.

Actions Taken After Receiving Technical Support Service by Satisfaction with Service
Among US Broadband Households that Received Technical Support Service in Past 12 Months

Spoke to family/friends about the experience

Wrote an online review about the device or support provider

Looked for alternative support providers

- **Among those receiving technical support service and are not satisfied (Rating 1-3)**
- **Among those receiving technical support service (32% of US BB HHs)**

Made a post about the experience on social media

Other

I did nothing

0%   25%   50%

% Taking Specified Actions After Receiving Support Service

Call-center processes are evolving to minimize the level of effort consumers expend during the support process, improve agent visibility into consumers' technical environments, and drive efficient problem resolution.

Call-center interactions typically start with the consumer reaching out for support. A "Tier 1" agent collects information about the consumer, product, and issues at hand and may ask the consumer to make specific observations to assist with diagnosis. If an accurate diagnosis cannot be made at this initial stage of contact, several other steps can be taken:

- Escalate the problem to a more highly skilled technician
- Administer a truck roll to the consumer's home
- Have the consumer bring the product to the support provider for in-store services

Newer technologies that facilitate better support experiences include the following:

Remote Connection Technology — Devices being built with remote technology allow agents to take control and make the observations necessary for diagnosis without relying on the customer. Remote technology has revolutionized the technical support process for computers and home networks. However, the technology has not yet been extended to many other emerging devices, like smart home and connected health devices.

Visibility Solutions — Along with remote connections, other solutions allow agents to have visibility into the technical environment of consumers' homes, enabling faster and more accurate diagnoses.

- **Video streams** — While this is not yet widely implemented, technicians in the support industry are increasingly leveraging video streams to identify and troubleshoot hardware-related technical issues. The primary benefit is the reduction in truck rolls necessary to perform support onsite. Video solutions are designed primarily for hardware support and typically involve the activation of the back camera of a consumer mobile device (smartphone or tablet) to show hardware in the consumer's surroundings to a support agent. Video stream support solutions often allow agents to make annotations on the video feed that indicate specific actions that need to be taken to resolve problems involving hardware. Advancement in AI technology is helping support solution developers to improve video support efficiency by automating the identification of hardware in the video streams and recommending solutions for problem resolution.

- **Network visibility solutions** — Embedded software can provide the visibility necessary to help agents diagnose network-related problems that are not resolved through simple system reboots or self-healing technology. These solutions can also be used for network monitoring, where factors such as bandwidth capacity, bandwidth utilization, and connectivity status of devices are monitored to identify any changes that can lead to service interruptions.

Industry Examples

Companies across different industries have started to implement next-generation support strategies.

Healthcare

Forward, a primary care solution, leverages state-of-the-art technology and customer data to provide proactive alerts. Using AI, doctors process massive amounts of medical data to make better diagnoses. Forward's unique model also provides customers with 24/7 customer support to answer all healthcare questions and concerns.

Financial Services

American Express established their Amex Digital Labs team in 2017 and has invested in more than 100 different initiatives to deliver "service with a memory." American Express captures data across their mobile app, intelligent virtual assistants, and the web and utilizes that information to deliver personalized support based on the customer's last interaction with the company.

Consumer Tech

Asurion supports a wide range of customers from mobile and cable operators, to major retailers and OEMs. Asurion has over 10K tech experts nationwide and leverages data from 100s of millions of customer interactions, enabling them to utilize AI to rapidly resolve 97% of issues with one call. Investments in omni-channel customer solutions include: growing same-day, in-home replacement and setup service for smartphones; mobile techs for home visits; and a cloud based home scan engine that identifies root causes to solve complex multi-device problems.

Automotive

BMW leverages their omnichannel support solution to help customers when they have questions and to empower agents to drive sales. BMW created a Customer Interaction Centre and developed an "Online Genius." BMW uses learnings from the site to improve onboarding and training for sales agents. With their centralized knowledge repository, BMW ensures an accurate, consistent message every time the customer interacts with the brand.

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The Value of Support Process Enhancements

Reduces Support Cost

- **Reduces labor cost** - By employing software-based support solutions and reducing training time for employees.
- **Lowers average handle time (AHT)** - By using solutions such as remote connection and automated escalation solutions.
- **Minimizes dependence on call centers** - Call centers are one of the most costly elements of support.

Improves Support Satisfaction

- **Lessens human error** - By leveraging machine-based solutions, promoting first call resolution.
- **Reduces consumer participation in the support process** - Agent visibility tools reduce the need for consumers participation.
- **Gives consumers continuous access to their support services** - Through advanced self-help options.
- **Prevents services disruptions** - Through proactive support strategies.

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Improving Engagement

Support process enhancements create business value through cost savings and increasing customer satisfaction (CSAT).
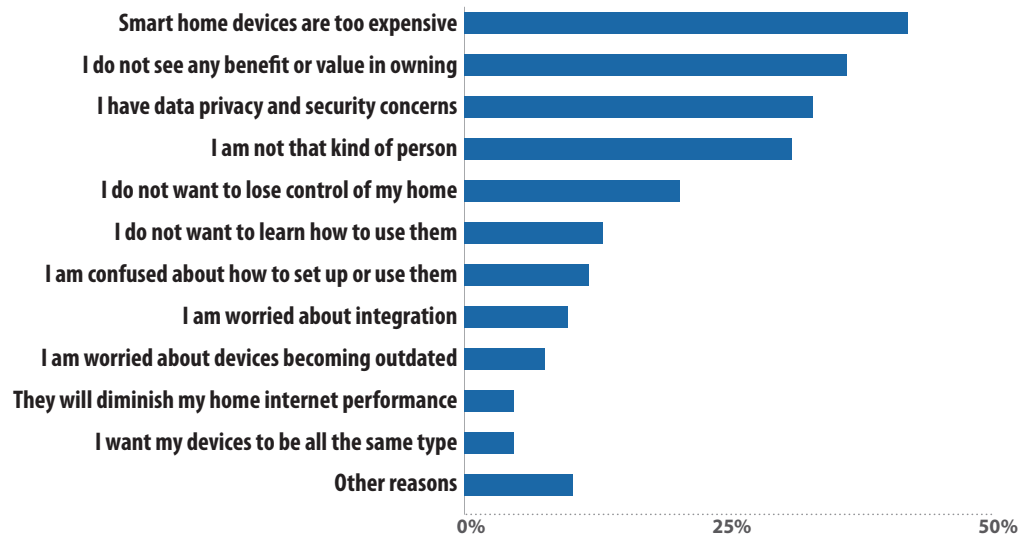
Proactive support services can be extended to build consumer trust, create brand loyalty, increase consumer engagement with products, and expand brands' ability to maximize customer lifetime value.

- **Extensive, proactive onboarding support services**, including same day / in-home onboarding that guide consumers through the purchase, setup, and initial usage for their devices.
  - This type of support leads to better product engagement. It creates business value by reducing churn on technology services and promoting long-term use of technology products.
  - Offering these services also increases consumer confidence in adopting new technology. Thirteen percent of consumers who do not own or intend to purchase a smart home device report that they will not purchase because they are confused about how to set up and use products. Providing extensive, proactive support for onboarding new technologies can help increase adoption of new products and services, driving value for the business.
- **Proactive measures** such as personalized content that shows consumers how to optimize use of their devices, prevent misuse, and improve product performance can drive ongoing customer interactions.
  - This type of engagement helps build consumer trust. A trusting relationship between a brand and its customers can lead to higher attach rates for products and services.

Frequent interactions with customers create more opportunities to provide product recommendations and create personalized, contextually relevant upsell offers for products and services, which will ultimately evolve the support platform away from being a cost center to a revenue-generating division of the business.

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Reasons for Not Owning & No Purchase Intention for Smart Home Devices

Among US Broadband Households That Do Not Own & Have No Intention a Smart Home Device

Reason	Percentage
Smart home devices are too expensive	~42%
I do not see any benefit or value in owning	~36%
I have data privacy and security concerns	~33%
I am not that kind of person	~32%
I do not want to lose control of my home	~21%
I do not want to learn how to use them	~14%
I am confused about how to set up or use them	~13%
I am worried about integration	~10%
I am worried about devices becoming outdated	~8%
They will diminish my home internet performance	~5%
I want my devices to be all the same type	~5%
Other reasons	~11%

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Summary of Engagement Improvement Strategies

Customer Engagement Support Strategy	Impact on Customer Relationship	Business Value Created
Proactive Onboarding Support	Increases consumer confidence with new product purchases	Drives adoption of new products
	Creates better long-term product engagement	Consumers keep products and services for longer time periods
Ongoing Interactions	Builds trust	Higher attachment rate for recommended products
	Creates more opportunities for product recommendations	Drives sales and revenue

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Conclusion

Competition in the markets for new and emerging connected devices requires purposeful management of customer relationships. At the core of good product relationships are seamless product experiences, and brands must invest in tools and resources that help them to provide these experiences. Emerging connected devices enable brands to create these experiences by leveraging real-time data to address issues that, if left unchecked, may lead to poor performance or device failure.

While advanced remote and automated support services improve the efficiency and effectiveness of support services, these technologies will not address all customer support needs. Robust reactive support strategies must be in place to address these issues.

Having a multichannel approach to reactive support (including in person, on the phone, chat, or video messaging) improves the support experience by allowing consumers to use their preferred method of interaction. Omni-channel solutions require coordination and training to ensure that the customer receives a consistent brand message and the same level of service regardless of what channel the help is being provided.

Brand interaction with customers through support services is an essential part of creating seamless product experiences. Though support services are costly to provide, strategic support services can drive brand value by fostering an expansion and extension of customer relationships. Device data also allows brands to capture insights into where they can develop products and services that provide better value for their overall customer base.

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Founded in 1986, Parks Associates creates research capital for companies ranging from Fortune 500 to small start-ups through market reports, primary studies, consumer research, custom research, workshops, executive conferences, and annual service subscriptions.

The company's expertise includes the Internet of Things (IoT), digital media and platforms, entertainment and gaming, home networks, Internet and television services, digital health, mobile applications and services, support services, consumer apps, advanced advertising, consumer electronics, energy management, and home control systems and security.

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Patrice covers smart home products and services and leads Parks Associates Smart Home Tracker product, keeping clients informed of industry developments and competitive shifts across more than 10 smart home product markets. She also leads digital home technical support services with a focus on market trends, business models, and provider strategies. Patrice manages custom research projects and strategy workshops that help companies understand the consumer experience in the connected home.

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This research is produced in partnership with Asurion.

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