

THE CONNECTED CONSUMER: Top Trends in IoT

A Parks Associates Whitepaper

PARKS
ASSOCIATES

THE CONNECTED CONSUMER: Top Trends in IoT

2015 WILL BE A YEAR OF INTENSE EXPERIMENTATION IN NEW VALUE PROPOSITIONS FOR ADVANCED TECHNOLOGIES & SERVICES.

Multiple sectors within the connected home are facing new competition and an increased emphasis on differentiation strategies and expanded offerings.

This whitepaper examines the trends and future directions for business within Parks Associates' coverage areas:

- Access & Entertainment Services
- Connected CE and Platforms
- Connected Home Systems & Services
- Digital Health
- Digital Home Support Services
- Digital Media
- Home Energy Management
- Mobile and Portable

Each area presents its own unique challenges and value propositions.

The dominant leaders in these categories will be the companies that leverage consumer demand and expectations to provide a personalized and valuable user experience.

ACCESS & ENTERTAINMENT

- # **AMONG U.S. BROADBAND HOUSEHOLDS** the volume of Internet video consumption on a television doubled, from 1.6 hours per week in 2010 to nearly three hours per week in 2014.
- # **BROADBAND CONSUMERS UNDER THE AGE OF 35** average less than seven hours of broadcast TV viewing per week on a television. Young consumers are also far more likely to say that online video is just as good as pay TV.
- # **AVERAGE ARPUs IN THE U.S. MARKET CONTINUE TO INCREASE.** The average monthly amount paid by broadband households for a standalone pay-TV service has increased from \$74 to \$82 over the past three years. The average amount paid per month for a triple play package (pay-TV, landline voice, and broadband) has increased from \$146 to \$160 over the same period.
- # **IN 2010, 17% OF VIDEO VIEWING BY BROADBAND CONSUMERS** was on devices other than the TV. By 2014, that figure increased to over 31%.

BROADBAND SERVICES HAVE ACHIEVED NEW LEVELS OF PENETRATION WORLDWIDE.

Emerging markets in Latin America, Eastern Europe, and Asia are experiencing rapid growth as many homes gain high-speed broadband services for the first time. While penetration growth has slowed in mature markets in North America, Western Europe, and Asia, high competition is driving an industry push to ever-faster service tiers. Pay TV is experiencing a similar pattern in global growth—fast-paced adoption in emerging markets and heightened competition in developed markets.

Consolidation has been an important element of the competitive marketplace and will continue to grab headlines over the next few years. As markets mature, large players will continue to seek scale and cost efficiencies, including both vertical and horizontal consolidation.

Smaller players will increasingly struggle to match the budgets and service variety of larger, diversified players.

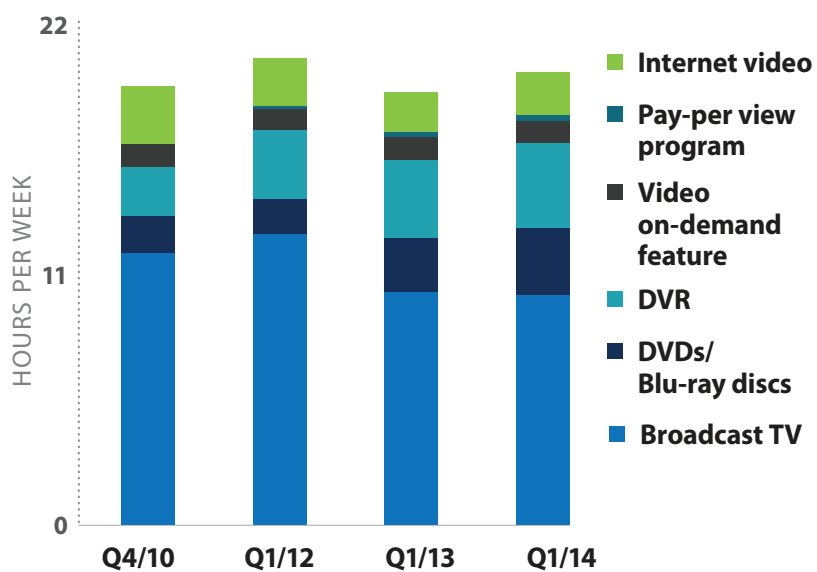
COMPANIES IN THE INDUSTRY CONTINUE TO STRUGGLE WITH THE ECONOMICS OF TV AND VIDEO SERVICES.

Content producers face increasing costs and are seeking higher licensing fees and international distribution to compensate for these operational expenses. These content costs are increasing more rapidly than pay-TV providers can increase their service fees, resulting in new standoffs, difficult decisions, and compromises.

Broadcasters, content producers, and pay-TV providers are expecting OTT services to help capture new revenues and new consumers.

Video Consumption on TV Sets by Source

U.S. Broadband Households



© Parks Associates

TRENDS

OTT VIDEO SERVICES

Players big and small will roll out new OTT services, each seeking a share of consumer video spending. HBO, CBS, and Sony have all announced new services that will launch in 2015, and other service announcements and deployments will also follow in North America, Europe, and Asia.

CORD-CUTTING FEARS

The introduction of new OTT service players will coincide with an increase in cord-cutting and cord-shaving activities among consumers. Consumers are becoming increasingly aware of pay-TV alternatives, and many will explore their options.

BIG DATA AND PERSONALIZATION

As many players bring new cloud-based products and services to market, they will use data analytics to drive new levels of personalization and enhanced user experiences. This trend in personalization of the user experience will extend well beyond services themselves and will include a variety of areas, ranging from advertising to call centers.

STRATEGIC RECOMMENDATIONS

Though many will roll out new OTT services, success will be a challenge. Several key elements are required for successful services:

- Unique content
- Access across devices
- High-quality, broadcast-standard video and audio
- An easy-to-use interface
- Low costs

Supplements to pay-TV can survive with supplemental content and low-cost or freemium business models. Any player that plans to replace the pay-TV experience must provide adequate content of good quality at a price that is less than pay TV. Missing one of these elements could be fatal.

In 2015, the ability to leverage usage and other data to provide an enhanced experience will become an important differentiator. Companies like Google and Amazon are pushing ahead while more traditional companies are just learning about the possibilities.

Companies that fail to leverage data to provide personalization will continue to struggle to match the services, features, and experiences of companies that are adept at data analytics.

CONNECTED CE AND PLATFORMS

✚ PARKS ASSOCIATES FORECASTS THAT 225 MILLION 4K UHD TVs will be sold through 2018, with 57% in Asia-Pacific.

✚ GOOGLE CHROMECAST HAS TAKEN OVER SECOND PLACE in streaming media device sales, bumping Apple to third place. As of September/October 2014, 20% of devices sold year-to-date were Google Chromecast, and 17% were Apple TVs. Roku retains the top spot.

Brand	% of Sales
Roku	29%
Google Chromecast	20%
Apple TV	17%
Amazon Fire TV	10%
Other	24%

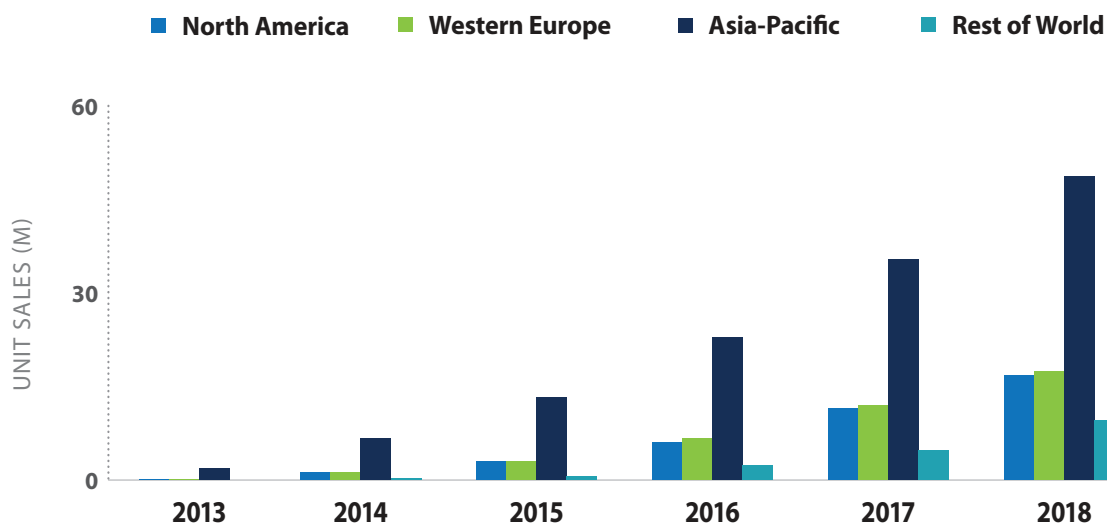
© Parks Associates

Streaming is now a feature on almost every connectable device, including smart TVs, smart Blu-ray players, gaming consoles and microconsoles, tablets, and smartphones. Pay-TV operators are evaluating entry into the OTT streaming market, which will increase the competition for OTT streaming viewers. Their entry also provides opportunities for streaming media device makers to stream video-on-demand (VOD) or linear TV through pay-TV apps on device interfaces.

With increased competition, strategies to differentiate offerings will carry increased significance. CE makers will differentiate through content selection and services as well as device features like innovative interface controls.

Music streaming services will be another area of growth, which will drive development and new competition in audio hardware.

Global 4K TV Unit Sales, by Region



TRENDS

ADOPTION AND PRICING FOR 4K TVS

CE makers are selling 4K TVs with low price points and special promotions despite the lack of 4K content available.

STREAMING MEDIA STICKS

The introduction of Google Chromecast, Amazon Fire TV Stick, and Roku HDMI Streaming Stick will boost the sales and adoption of streaming media players overall.

ADVANCES IN USER INTERFACES

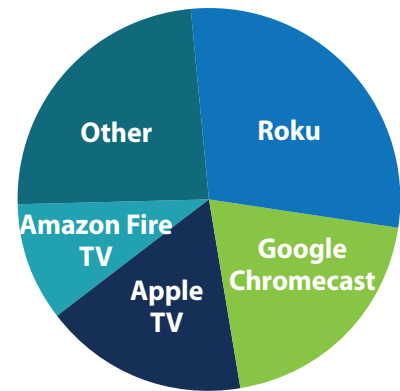
Innovation in interface interaction methods such as voice, natural language, and gesture continues.

GROWTH IN AUDIO HARDWARE

As streaming music services advance, so will development in audio hardware, such as soundbars and wireless speakers.

Streaming Media Device Purchase by Brand

U.S. Broadband Households That Purchased a Streaming Media Device



© Parks Associates

STRATEGIC RECOMMENDATIONS

Device categories and brands within categories need to be competitively differentiated to win new market share. Voice control needs to evolve to natural language communication, and gesture controls have to be intuitive.

Content is king, and streaming media devices will benefit by providing proprietary content or unique aggregations of content. Providing interface access to any type of content, including OTT, VOD, and linear TV, is also critical for growth. The winning solutions will also be able to manage personalized and targeted content recommendations without overwhelming or losing the viewers.

CE manufacturers can become content services aggregators and manage payment services for streaming content services, providing one place for consumers to add in personal and payment information and generate additional revenue through payment handling fees.

CONNECTED HOME SYSTEMS & SERVICES

- ✦ **INCIDENCE OF SELF-INSTALLATION** among new security system owners is increasing: among U.S. broadband households that purchased their security system in the last 12 months, 26% self-installed it, compared to only 6% of broadband households who have owned their security system for five years or longer.
- ✦ **16% OF NEW PROFESSIONAL MONITORING CUSTOMERS** bundled their security services with other services such as Internet, cable, and mobile phone.
- ✦ **37% OF U. S. BROADBAND HOUSEHOLDS INTEND** to buy one or more smart device in 2015.
- ✦ **SMART THERMOSTATS HAD THE HIGHEST** penetration of any smart device in 2014.
- ✦ **OF THE 37% OF ALL BROADBAND HOUSEHOLDS** that report a strong likelihood of adopting one or more smart home devices in 2015, 24% indicated that they will purchase a smart light bulb.

The smart home continues to grow due in large part to the massive advertising campaigns of service providers such as Comcast Xfinity, ADT, and Time Warner Cable. As a result of the new value proposition that smart features bring to the security environment, the professionally monitored security industry grew to 23% of all broadband households in 2014.

In 2014, smart home device penetration grew from 12% to 16% of all broadband households.

Installation methods are changing as consumers develop more confidence in installing their own equipment. Devices that are simple to install, such as smart light bulbs and smart plugs and power strips, are primarily self-installed, whereas the more complicated devices (that frequently involve electricity) are still professionally installed.

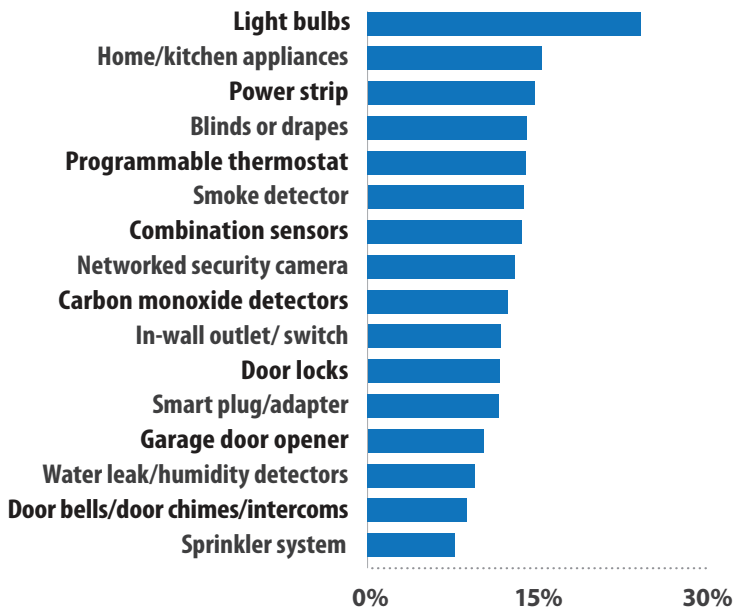
A growing trend is to self-install all types of smart devices as well as security systems.

Safety and security are still the leading value propositions for smart devices, although there is no single killer app. Energy management features are seen as a value-added benefit of smart devices such as thermostats and lights, while convenience and control remain the leading use cases.

As consumers adopt more smart devices, interoperability of the devices becomes more important. Nearly two-thirds of devices purchased in 2014 were part of a home controls or security system.

Intention to Buy Smart Home Devices in next 12 Months

U.S. Broadband Households



© Parks Associates

TRENDS

CONTINUED GROWTH in adoption of smart devices

INCREASE OF PROFESSIONALLY MONITORED security systems bundled with other services

SELF-INSTALLATION of smart devices and security systems

STRATEGIC RECOMMENDATIONS

There is not one winning value proposition for the smart home. Instead, different consumers identify with different use cases and adopt smart devices based on their current needs. However, as penetration increases, consumer needs will change, and the value of other smart devices will become more clear. Offering systems with the most flexibility with regards to interoperability, installation, and device services will attract and retain the broadest segment of consumers.

Service providers have the current advantage in smart home offerings due to their existing client reach, potential to bundle services, and large marketing budgets. Interoperability remains a challenge for the industry, and smart home service providers are the only solution that offers customers a broad range of interoperable products.

DIGITAL HEALTH

- # **PARKS ASSOCIATES ESTIMATES THAT THE U.S. CONNECTED HEALTH MARKET** generated almost \$5 billion in product and service revenues in 2013, and this market will hit \$21 billion by 2019.
- # **MORE THAN 600 ACOS HAVE FORMED SINCE 2012.** The total number of lives managed under ACOs or PCMHs exceeded 30 million by end of 2014.
- # **IN 2012, 24% OF CONSUMERS IN BROADBAND HOUSEHOLDS REPORTED** that their doctor offered online prescription refill capability; in 2014, this figure jumped to 47%. Appointment scheduling jumped from 23% in 2012 to 46% in 2014. Email communications with doctors was available to 42% of consumers in 2014, up from 19% in 2012.
- # **PARKS ASSOCIATES ESTIMATES THAT MORE THAN 40 MILLION** smartphone owners are active users of at least one wellness or fitness app, and about 15 million own a connected fitness and wellness device.

IN THE PAST FIVE YEARS, PROSPECTS FOR THE GLOBAL CONNECTED HEALTH INDUSTRY HAVE BRIGHTENED.

The healthcare IT infrastructure is now significantly stronger thanks to government-led initiatives and willingness among care providers to adopt IT. Technology companies, on the other hand, have become more pragmatic and focused on delivering value from their customers’ perspectives, instead of from their own, as in the past. They have also recognized their solutions’ limitations, hence tapping into low-cost, high-efficient alternatives. Tech companies have also forged constructive partnerships to penetrate the healthcare sector.

Connected Health Services & Market Segments



These strategic and tactical changes have gradually made an impact and fostered creation of new services and care models endorsed by care providers and health insurers. Although each country may have a different growth path and its own set of unique challenges, all are experimenting with collaborative approaches among the government/insurers, the care providers, and technology partners.

Among the nine nations assessed by Parks Associates, the U.S. is still the best connected health market measured by its size and growth potential, compared with other industrialized nations.



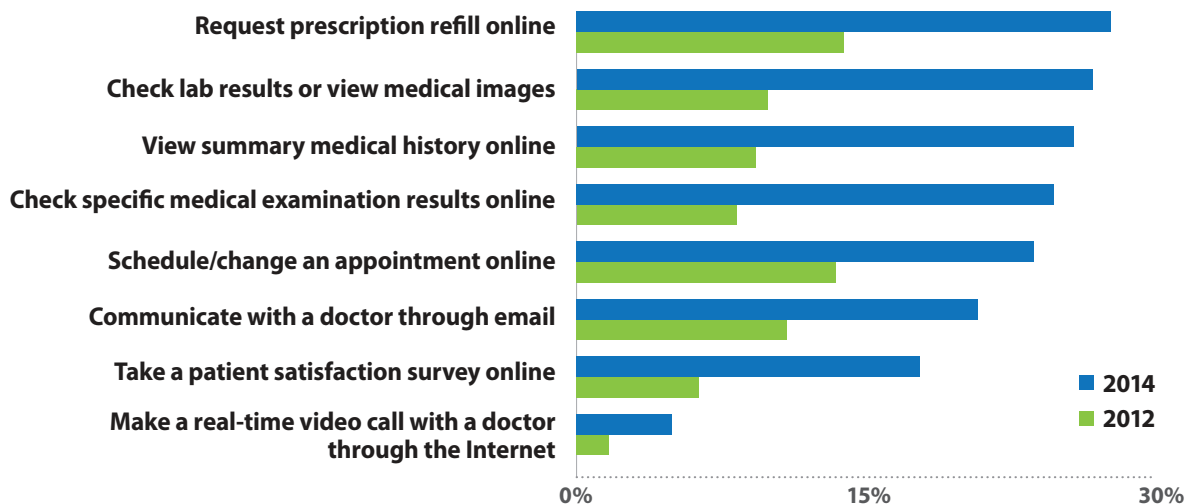
Spain, Germany, France, and Japan represent the next best opportunities for the digital health market. All of these countries have favorable health policies offered by their governments, and their care provider industries are embracing a coordinated care model and willing to receive additional payment to manage patients in a proactive way.

For the U.S. specifically, Parks Associates believes that the U.S. connected health market benefits from a favorable macro-environment, where government healthcare policy encourages innovations in technology and care models. The country has established a solid health IT infrastructure, and stakeholders are actively exploring healthcare models that align providers' interests with those of insurers and technology suppliers.

Of concern is the slow pace of physician participation in connected health, but the ACO model will help doctors overcome their reservations and lead to their acceptance and usage of more technology-enabled care services.

Growth of Online Health Service Adoption

U.S. Broadband Households



TRENDS

NEW CARE MODELS

New care models, such as Accountable Care Organizations (ACOs) and Patient-Centered Medical Home (PCMHs) in the U.S. and similar coordinated care models in countries like Spain and France, will continue to transform care delivery. They will also create needs for innovative care solutions that can help care providers improve patient care efficiency, drive better patient communications and engagement, and accomplish business goals.

TECHNOLOGY INNOVATIONS

Innovations inject new energy into the consumer health and institutional care markets—new product designs, the rise of smartphones/tablets/wearables, and rich features of health apps have invigorated the consumer health market. These innovations offer new means for care providers to engage their patients and assist consumers to better manage their health.

VIRTUAL CARE

The virtual care market will continue to be a rising star in the connected health market in 2015 because of care providers' interest and low technological barriers for the deployment of virtual care solutions. The overseas markets are ripe for virtual care solutions, especially in countries such as Spain, France, and China.

STRATEGIC RECOMMENDATIONS

The U.S. market is still the largest and most attractive marketplace for businesses. For companies harboring global ambitions (assuming they have no shortage of resources and local expertise), they should focus on Spain, Germany, France, and Japan first.

The connected health market offers plenty of growth opportunities for both product OEMs and service providers. These companies should pursue an integrated approach that blends hardware and services to maximize market gain. Device makers can use positive user experiences to drive replacement device sales.

Convergence of offerings will become a significant differentiator for care providers so that they can provide services for consumers along the entire care continuum. Consumers are learning to manage their healthy living needs collectively instead of individually.

An integrated approach that combines virtual care with chronic, wellness, and independent living solutions to address a family's diverse range of care needs is ideal for the market environment.

DIGITAL HOME SUPPORT SERVICES

- ⊕ **JUST OVER 50% OF SMARTPHONE AND TABLET OWNERS** in the U.S. are interested in services that replace/repair those devices if they are accidentally damaged.
- ⊕ **34% OF CONSUMERS IN THE U.S. ARE INTERESTED** in having a premium service that helps to manage their privacy online, and 31% are interested in a service that monitors their network to protect their personal data.
- ⊕ **APPROXIMATELY 70% OF SMART DEVICE OWNERS ARE CONCERNED** about unauthorized access to their home control devices as well as to the data generated by these devices.

AS A RESULT OF THE ENTRY OF CONSUMER TECHNOLOGY BRANDS INTO THE TECH SUPPORT MARKET, THE INDUSTRY HAS GROWN SIGNIFICANTLY OVER THE PAST FIVE YEARS.

For many of these brands, providing comprehensive technical support is a means of strengthening customer relationships in the face of intense competition and a rapidly evolving technology environment. Others enter due to the revenue-generating opportunity.

Increasing consumer adoption of technical products and services remains the primary driver of premium technical support demand. Broadband households in the U.S. and Canada have an average of seven and six connected devices, respectively.

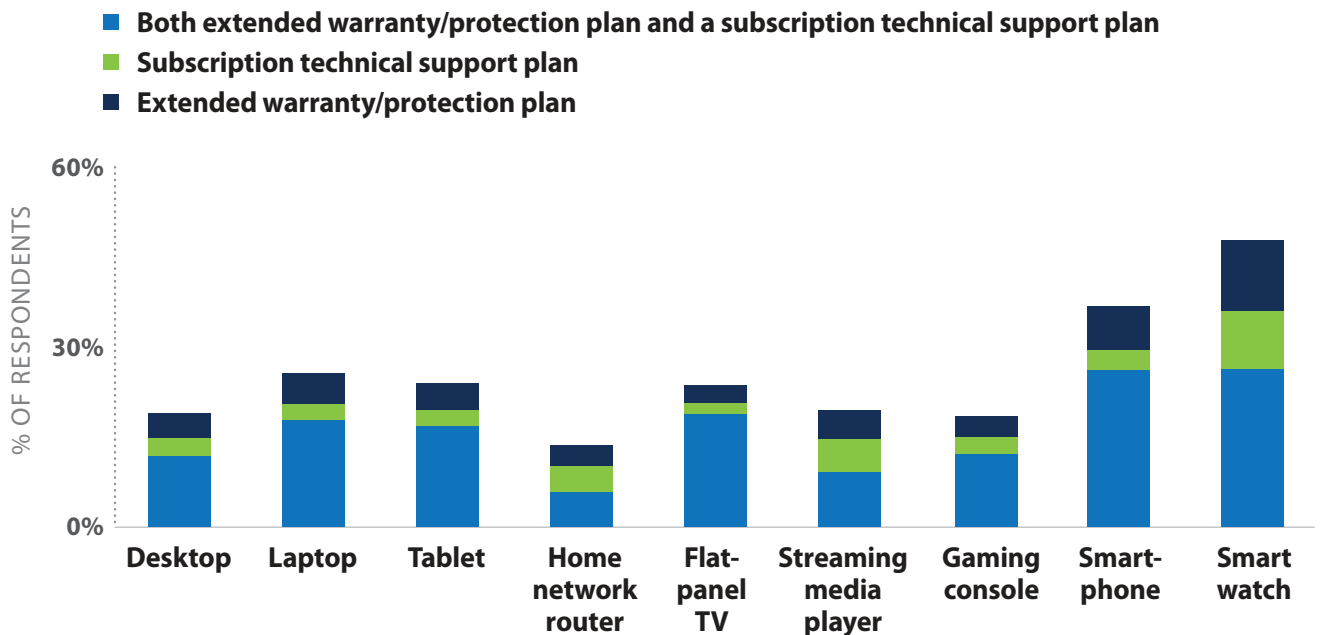
Approximately 30% of consumers in North America use premium support for device-related problems.

In Western Europe, despite having high broadband penetration and adoption rates of complex connected devices that are comparable to countries in North America, the market for premium technical support services has remained relatively small. In the U.K.—one of the largest and most developed markets for premium technical support—approximately 16% of broadband households report having a premium tech support subscription, up from 8% in 2012. The increase in uptake of support services in the U.K. is driven by initiatives of consumer technology brands like BT and Virgin Media, which launched premium tech support services in 2010.

Variations in the technical landscape of households in Asia and the Pacific create broad variations in the premium technical support opportunities in different countries of the region. While many countries in the region have broadband and PC penetration rates that far surpass North America and some countries in Western Europe, the premium technical support industry in this region is significantly less developed. Unique cultural factors and the presence of competing industries have affected premium technical growth in this region.

Use of Extended Warranty/Support Plans for Devices

U.S. Broadband Households with Specified Products



© Parks Associates

TRENDS

TECH SUPPORT & WARRANTY BUNDLES

Factors driving this trend include:

- A desire by providers to increase the value of subscription support packages. Increasing the value will likely increase close rates when selling these services.
- An attempt to leverage the higher demand for extended warranties to increase sales of support subscriptions.
- A tactic to improve the renewal rates of extended warranties, given that consumers are more likely to engage with technical support services and are also more likely to renew them.

PRIVACY & MALWARE SERVICES

50% of U.S. broadband households find malware protection to be very appealing.

SMART HOME SUPPORT

Smart home systems, with a wide range of safety and security features, hold the greatest appeal among consumers, and given that this market is in its infancy, it has multiple challenges, including interoperability and consumer awareness. Adopters will experience problems with their devices and the integration of different capabilities, creating new opportunities for technical support services that target devices, home networks, and complete smart home packages.

STRATEGIC RECOMMENDATIONS

While providers have been interested in tech support and warranty bundles for some time, most have yet to launch these services. The main hurdle in entering this space is the difficulty of designing services that present a high value proposition to consumers while remaining economically viable for providers. Support providers must leverage the high demand for accidental damage and other extended warranty/protection services to sell more support subscriptions for mobile and other connected devices.

Consumer concerns about privacy and the safety of personal information opens opportunities for support providers to differentiate their service portfolios by adding protection services to give consumers peace-of-mind when using connected devices and services.

The smart home is the next major opportunity for premium support. Opportunities for smart home support include setup and enablement services, services related to device malfunction, and security and privacy protection services.

Providers also need to design services that stay top-of-mind to consumers. For example, among tech support subscribers planning NOT to review their service, 44% felt that they would renew if offered monthly “tune-ups” for their device(s).

These types of services provide an ongoing proof of value to consumers who might otherwise question the monthly costs of a tech support service that operates largely in the background.

DIGITAL MEDIA

- ✚ **AMONG U.S. BROADBAND HOUSEHOLDS IN 2014**, linear viewing on a television set barely had a slim lead on non-linear viewing at 51% and 49%, respectively. In 2015, non-linear viewing will be the majority of content consumed on the TV.
- ✚ **ON AVERAGE, BROADBAND HOUSEHOLDS WATCH 3.4 HOURS** of Internet video per week on a television, just over 14% of total hourly viewing on a television set.
- ✚ **AMONG BROADBAND HOUSEHOLDS, 15% SUBSCRIBE** to Amazon Prime compared to 11% that subscribe to Hulu Plus. 43% of broadband households subscribe to Netflix.
- ✚ **79% OF BROADBAND CONSUMERS HAVE LITTLE TO NO FAMILIARITY** with 4K/Ultra HD TVs. Only 11% were very familiar with the technology.

THE VIDEO CONTENT MARKET IS SEEING A FUNDAMENTAL SHIFT IN HOW VIEWERS WATCH PROGRAMMING, REQUIRING A NEW DEFINITION OF WHAT IS CALLED "TELEVISION."

For the past few years, non-linear video has claimed larger percentages of consumer viewing hours.

Discovery Networks and FX Network have signed new streaming deals with Hulu, bringing such popular shows as *Deadliest Catch* and *You're the Worst* to the network TV streaming vehicle.

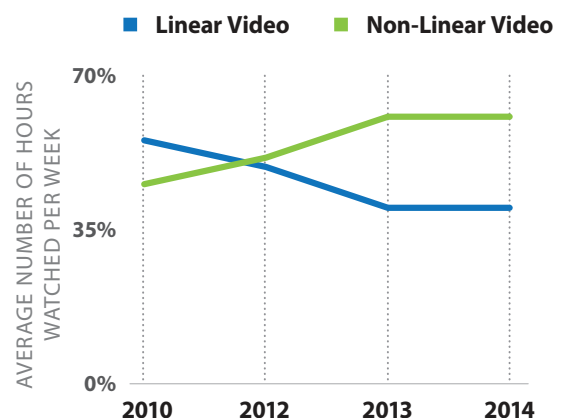
Online original series have gained legitimacy both in popular and critical appeal. Netflix programs such as *House of Cards* and *Orange is the New Black* paved the way for other OTT video providers to distribute high-quality episodic content. In 2013, Amazon Studios commissioned political satire program *Alpha House*, and in 2014, the retailer-gone-producer released the critically acclaimed series *Transparent*.

As online video providers stake their claim in the content space, providers seek to further redefine the experience with 4K Ultra HD video. Media Rights Capital produces *House of Cards* for Netflix in 4K. While Amazon planned to offer its originals in 4K, it was pushed off to late 2014.

Content providers have been in limbo with 4K as 4K televisions have not yet made it to the market en masse, but the uncertainty toward the technology is beginning to wane.

Linear vs. Non-Linear Video Consumption: Percentage of Hours Watched per Week on All Platforms

U.S. Broadband Households



© Parks Associates

TRENDS

4K ULTRA HD ENTERS THE MARKET IN FORCE.

TV providers in Japan and South Korea have begun 4K video service, and DIRECTV in the U.S. is poised to follow. As more consumers become familiar with the technology behind 4K Ultra HD video and appreciate the higher resolutions and frame rates that accompany it, more households will buy the sets. In anticipation, content producers are updating their production workflows to handle the necessary data to bring Ultra HD into the home.

INTERNET VIDEO WILL BEGIN TO STANDARDIZE.

As content producers begin to see the value of Internet viewers, there will be a shift toward more traditional Hollywood content over the Internet. Other technology players will follow the lead of Netflix, Amazon, and Hulu by creating or commissioning their own content. For example, Yahoo! will distribute the Sony Pictures Television program *Community* online, similar to Netflix's earlier resurrection of the cancelled show *Arrested Development*. Players like Google and Apple will attempt to further redefine the television viewing experience with bids on major events like sports league carriage.

TELEVISIONS STAY AS STANDARD, BUT VIDEO VIEWING INCREASES ON MOBILE DEVICES.

Mobile devices are playing an increasingly important part in on-demand video viewing. However, the television remains king in the video screen space, including Internet video, thanks to smart TVs and TV-connectable devices like Roku devices, Apple TV, and Google Chromecast. While viewers enjoy the convenience of being able to watch on their smartphone or tablet, most viewers will continue to turn to the "traditional" big screen to watch their shows.

STRATEGIC RECOMMENDATIONS

Video providers must have a clear monetization strategy. Netflix caught lightning in a bottle with *House of Cards*, and several OTT video providers are trying to repeat their success. Original content is expensive to produce, requiring a clear recoupment in order to make production worthwhile. As more video providers flood the OTT space, the competitive environment will lead to a surge in suppliers with little rise in demand. Different monetization models will be required, including targeted advertisement, which is evolving in quality and capability.

4K is gaining momentum, but much needs to happen before the technology is really viable in the home. Broadband infrastructure in most markets cannot yet handle 4K video streams, with the exception of developed Asia/Pacific markets like Japan, South Korea, and Hong Kong. As consumers buy their televisions and content providers distribute 4K content, consumers will need the delivery mechanisms in place to receive the content. 4K distribution over-the-top is underway, but linear service will not be too far behind.

Given that one 4K feed uses the data of four HD feeds, negotiations for network bandwidth will intensify even more over the next few years.

HOME ENERGY MANAGEMENT

- ⊞ **ROUGHLY 10% OF U.S. BROADBAND HOUSEHOLDS OWN A SMART ENERGY DEVICE.** Smart thermostats are the most commonly owned smart energy device—adoption increased from 5% in the first quarter of 2014 to 8% in the third quarter of 2014. Smart lighting products are similarly popular with an adoption rate of 6%.
- ⊞ **THE TOP TWO MOST APPEALING SMART ENERGY MANAGEMENT FEATURES** are the ability to use sensors to automatically turn off lights and appliances when a home is unoccupied (34% of broadband households) and to receive alerts when energy usage is high (34% of broadband households).
- ⊞ **ONE-THIRD OF U.S. BROADBAND HOUSEHOLDS FIND AT LEAST ONE** smart energy management feature appealing.

CONSUMERS ARE BECOMING MORE AWARE OF SMART DEVICES THAT HELP THEM MANAGE THEIR HOME’S ELECTRICITY USAGE.

Adoption of smart thermostats is on the rise, and Honeywell and Nest smart thermostats account for 40% of all brands purchased in the past 12 months.

Smart Home Devices: Top Three Brands Most Recently Purchased U.S. Broadband Households with Specified Device

Product Name	1st Brand	2nd Brand	3rd Brand	Market Share of Top 3 Brands
Light bulbs	GE	Philips	My security provider	59%
In-wall outlet/switch	GE	Belkin	My security provider	42%
Power strip	Smart Plug	My security provider	Monster	48%
Smart plug/adapter	My security provider	GE 45605 Z-Wave Wireless Lighting Control Duplex Receptacle	Iris Smart Plug	32%
Programmable thermostat	Honeywell	Nest	My security provider	49%
Home/kitchen appliances	GE	LG	Whirlpool	47%

Highly differentiated smart products are capturing a significant slice of the overall market—42% of broadband households that are likely to purchase a smart thermostat are willing to pay a premium for a thermostat with advanced features.

The majority of broadband households that want a premium thermostat are also likely to proactively replace a working thermostat. For utilities, this finding means that the traditional model of selecting partners and piloting products will not be successful, as the pace of change in the smart product market is out of sync with the pilot process.

Consumers view energy management services as interesting and even desirable, but when bundled together, these value-add services become attractive enough that a significant percentage of consumers are willing to pay for a package of services.

TRENDS

UTILITY PROGRAMS that allow consumers to bring/use their own thermostat(s).

FURTHER ADVANCEMENT OF SMART DEVICES with advanced home energy management value propositions.

ENERGY MANAGEMENT as a bundled service.

STRATEGIC RECOMMENDATIONS

Consumers are emphatically more receptive to smart energy services than devices—approximately two-thirds of U.S. broadband households are willing to pay for a smart energy service. Utilities and smart home service providers should oblige consumer preferences and position their offerings as services rather than devices.

Smart energy devices are naturally priced at a premium compared to “dumb” devices; however, even within the smart category, there is space for premium products. Many consumers will pay more for smart energy devices with greater functionality. Early adopters in particular are good candidates for robust solutions charging healthy premiums over traditional devices.

MOBILE & PORTABLE

- ✚ IN 2013, 34% OF U.S. BROADBAND HOUSEHOLDS PURCHASED A TABLET vs. 22% during the first 10 months of 2014.
- ✚ 57% OF VERIZON POSTPAID SUBSCRIBERS WERE ON A SHARED DATA PLAN (“More Everything”) at the end of 3Q 2014, up from 42% in 3Q 2013.
- ✚ 32% OF U.S. MOBILE SUBSCRIBERS PREFER BUYING A SMARTPHONE AT A DISCOUNTED PRICE and paying a higher monthly service fee with a two-year contract; 68% of mobile subscribers prefer buying a smartphone at full price and paying a lower monthly service fee and having no contract.

DEVELOPED COUNTRIES HAVE REACHED SATURATION LEVELS IN SMARTPHONE ADOPTION, SO VENDORS ARE TURNING TO EMERGING MARKETS FOR NEW OPPORTUNITIES.

Major smartphone vendors are focusing on mid-range and entry-level smartphones to cater to first-time buyers in Asia, Africa, and Latin America.

There is also a growing demand for “phablets,” which are smartphones with screen sizes ranging from five to seven inches.

The larger screen size makes phablets convenient for productivity tasks as well as other digital activities, including video viewing. Most leading mobile devices manufacturers have launched a phablets worldwide, including Apple, which introduced the iPhone 6 and iPhone 6+ in the second half of 2014.

Revenue growth from mobile data plans is decelerating. Mobile operators in the U.S. have thus far succeeded in arresting the decline of the traditional voice and text messaging average revenue per user (ARPU) by offsetting it with mobile data, but the smartphone and LTE “dividends” are almost exhausted. Many carriers in Europe are already in a downward spiral, hit by both regulators’ tariff reduction requirements and fierce competition. The North American market has begun to feel the same kind of pain because competition has cranked up, best characterized by T-Mobile’s “uncarrier,” initiatives.

This phase of growth, through new revenue models, capitalizes on the pervasive use of smartphones on fast fixed and mobile broadband networks (Wi-Fi and LTE services). The mobile sector is entering an era where the smartphone is a consumer’s constant companion with a role deeply integrated in their digital life and offering an endless supply of apps to accomplish almost any conceivable task. For the industry, the smartphone is part of what is now called the Internet of Things (IoT) or the Internet of Everything (IoE).



In this era of app-defined digital life, operators are still trying to figure out their roles. The OTT market, on the other hand, is filled with entrepreneurs and money seeking the “next big thing.” Operators can work with OTT providers to launch B2C apps and services or play an enabler’s role to stay behind the scenes.

No matter their role, operators must recognize that usage-based revenue models will no longer dominate.

TRENDS

WEARABLES & PHABLETS extend the mobile hardware market, helping refine and improve a mobile-centric digital life.

INNOVATIONS in the mobile app market will continue, disrupting existing industries with better, more convenient, and more personalized experiences.

MOBILE OPERATORS will continue to invest heavily in the IoT/loE sector for growth, forging relationships with OTT players across all industry sectors.

STRATEGIC RECOMMENDATIONS

The smartphone is firmly established as a digital life agent. For mobile hardware and solution providers, continuous innovation and advanced functionality are the keys to success. Mobile solution providers must meet consumer demand with innovative designs and personalized functions in order to survive and prosper. Versatility in a consumer’s life means that even a potent digital agent like a smartphone needs an ecosystem of complementary solutions to get jobs done.

Mobile carriers need to continue to experiment with device and data sales and pricing models while also leveraging relationships with subscribers and business partners. In the U.S., the traditional device subsidy model for driving smartphone sales is falling apart. The initial uptake of installment and early upgrade plans, introduced initially by T-Mobile, is strong. The long-term success of these plans will depend on how the carriers adjust and optimize these plans to cater to a broader customer base.

Mobile carriers have steadily lost ground to OTT players, but all is not lost. To succeed, operators need to act like an OTT player by offering flexible business models, focusing relentlessly on consumer experience, and getting ready to pivot as the market changes.

Carriers can leverage their billing relationship with subscribers, and their deep network knowledge can benefit OTT players through connectivity and integration services. Because these opportunities vary by industry, operators will benefit from a courteous relationship with OTT players and the development of industry-specific solutions.



Parks Associates is an internationally recognized market research and consulting company specializing in emerging consumer technology products and services.

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.

For more information, visit parksassociates.com or contact us at 972.490.1113 / info@parksassociates.com

ATTRIBUTION—Compiled by Jennifer Kent. Authored by Glenn Hower, Tom Kerber, Barbara Kraus, Patrice Samuels, Brett Sappington, and Harry Wang. Published by Parks Associates. © Parks Associates, Dallas, Texas 75248. All rights reserved. No part of this book may be reproduced, in any form or by any means, without permission in writing from the publisher. Printed in the United States of America.

DISCLAIMER—*Parks Associates has made every reasonable effort to ensure that all information in this report is correct. We assume no responsibility for any inadvertent errors.*

PARKS ASSOCIATES

INTERNATIONAL RESEARCH FIRM

Research & Analysis *for Digital Living Technologies*

Access and Entertainment Services

Advertising

Connected CE and Platforms

Connected Home Systems
and Services

Digital Gaming

Digital Health

Digital Home Support Services

Digital Living Overview

Digital Media

Home Energy Management

Internet of Things

Mobile and Portable

App Ecosystem

Smart Home

SMB Market

European and Worldwide
Consumer Research

Back your venture *with accurate consumer data and strategic analysis.*

Discover Parks Associates Today.

www.ParksAssociates.com