Building a successful smart home strategy

A guide for Communications Service Providers

Plume®

Introduction

Smart homes are no longer a technology of the future. They're here today, enabled by a wide variety of devices and services that consumers are embracing in growing numbers.

And that's bringing big changes—and challenges—for Communications Service Providers (CSPs) that have long offered standard, subscription-based bundles of voice, video, and data services to their customers.

Smart home technologies depend on access to fast, ubiquitous, and reliable connectivity. If CSPs can deliver this and build on that foundation with new digital and cloud-based services for the next generation of smart homes, they can transform their current businesses, defend their market position in the face of new competition, and remain vital into the future.

State of today's smart home tech

Over the past few years, many smart home technologies have gone from cutting-edge to mainstream.

Consider digital voice assistants, for example. Juniper Research[1] predicts we'll see 8.4 billion digital voice assistants—including smart TVs, wearables, and smart speakers such as Amazon Alexa and Google Home— in use around the world by 2024. That's an increase of 113% compared to the 4.2 billion devices in use at the end 2020.

A new study from global tech market advisory firm, ABI Research[2], forecasts that by 2026, the global smart home market will reach $317 billion, up from $85 billion in 2020 and up 5% over pre-COVID-19 forecasts.

People with such technology in their homes won't have just one or two devices, either—they'll average 21 in use. Plume data indicates that number will climb and exceed 38 by 2024. These devices will

include smart appliances, remote-enabled entertainment systems, control and monitoring systems for home security, smart thermostats, smart light bulbs, smart doorbells, and more.

More smart home devices are entering the market every day, with many more on the horizon. Among them: faster and smarter WiFi routers, health and sleep monitors, energy management systems, apps for monitoring emotional health, monitoring systems for the elderly, even smart toilets and smart paints. These next-generation devices will become mainstays of the future of the smart home ecosystem (what some call Smart Home 2.0).

In fact, the demand for connected home applications and devices is expected to dominate the Internet of Things market over the next few years, Cisco[3] reports. By 2023, it predicts the consumer segment will be nearly three times as big as the business segment. And the number of connected devices will be three times bigger than the number of people worldwide.

[1] COVID-19 Cuts Smart Home Growth by US$14 Billion in 2020, But Drives Future Change, ABI Research, August 2020 https://www.abiresearch.com/press/covid-19-cuts-smart-home-growth-us14-billion-2020-drives-future-change/
[2] Number of voice assistant devices in use to overtake world population by 2024, reaching 8.4BN, led by smartphones, Juniper Research, April 2020 https://www.juniperresearch.com/press/press-releases/number-of-voice-assistant-devices-in-use
[3] Cisco Annual Internet Report (2018–2023), Cisco, 18 February 2020 https://www.cisco.com/c/en/us/solutions/collateral/executive-perspectives/annual-internet-report/white-paper-c11-741490.pdf

Why this matters for CSPs

For established CSPs, all of these developments point to an inescapable conclusion: their customers' expectations are changing, and dramatically, accelerated by the pandemic-related lockdowns that began in 2020. Customers are discovering new ways to use networking and mobile services to monitor and safeguard their homes. They're using new kinds of devices to access voice, video, and data services. And they're rapidly adopting new technologies that will challenge the traditional business offerings of CSPs.

This creates new and heightened pressures for CSPs that have long operated in an environment where traditional barriers to entry and market boundaries have helped to keep would-be competitors at bay. That environment has enabled them to build sizable and relatively stable customer bases with reliable revenue streams.

However, in this emerging smart home landscape, as Accenture noted in a 2019 report, "incumbency is no longer an advantage[4]."

The infrastructure that CSPs have built their service offerings on can't compete with cloud-delivered disruption, and cloud-delivered service is what big technology companies like Amazon, Apple, and Google do best. These companies are entering the smart home era with favorable tailwinds, while legacy CSPs face increasing headwinds.

So CSPs are at a critical moment. Rather than simply looking for ways to save costs and optimize existing services to maintain their market position today, they need to invest in strategies that can ensure their future growth and stability. This will require transforming their current business model to offer new digital products and cloud-delivered services that are ready for the smart home era.

Fortunately, they have a strong foundation on which to build this new approach. Their customers, their networks, their local brands and existing expertise— all these can help support a transition to new ways of doing business.

Challenges for CSPs

While building a smart home strategy is vital, it poses several significant challenges for CSPs, especially independent ones with limited resources.
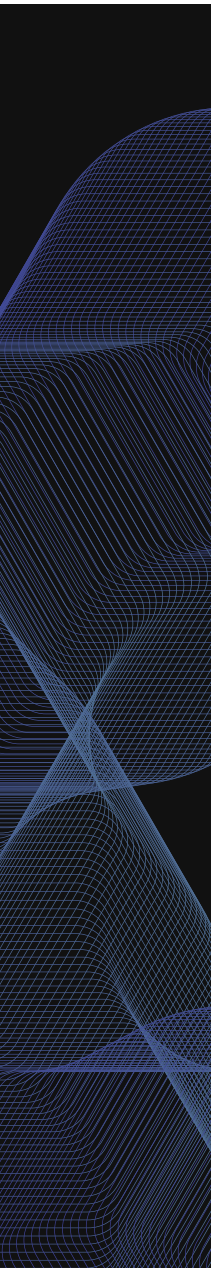
LEGACY SYSTEMS

Traditional CSPs have built their businesses on hardware and infrastructure, with the bulk of their workforce focused on installing, maintaining, and repairing those physical systems. Smart home technologies, by contrast, rely on software and engineering. CSPs' physical systems can't scale like software-defined platforms can, and they're not as flexible or agile either. The traditional CSP workforce also tends to lack the digital skills needed to compete with the likes of Google or Amazon.

THINK STRATEGICALLY

- Recognize that trust and familiarity make CSPs natural partners for customers who want to add smart services to their homes.

- Think beyond B2C and look for B2B opportunities as well. Digital disruptors like Amazon and Google have already tapped into such markets and are growing B2B revenues by as much as 30–50% annually, according to Accenture research[5].

- Beyond looking for new potential growth areas, also seek out ways to better monetize existing offerings.

- Focus on providing digital, customer-centric experiences driven by data that allows for hyper-personalization.

[4,5] Trash the Rulebook," Accenture https://www.slideshare.net/accenture/trash-the-rulebook-132815757

Meanwhile, customers are less interested in using legacy offerings such as landlines. In 2018, the National Health Interview Survey[6] found nearly 55% of homes in the US no longer had landline telephones. Those numbers were even higher among renters and 25- to 34-year-olds: 74.4% and 77.3%, respectively. The clear message is that CSPs must look for new services as a value add.

BUSINESS MODELS

Another core CSP service—video, or cable TV—is also seeing declining adoption rates as more and more consumers "cut the cord" in favor of digital streaming services. Trends like this mean declining profitability for traditional service providers, who now find themselves struggling to offset lower revenues through cost-cutting measures.

At the same time, regulatory changes mean many CSPs no longer enjoy the protections that kept their service areas free of competitors. This makes it harder for them to maintain the physical presence that was once their strength. Instead, today's business advantage goes to companies that excel at digital engagement.

The infrastructure that CSPs have built their service offerings on can't compete with cloud-delivered disruption. At the same time, cloud-delivered service is what big technology companies like Amazon, Apple, and Google do best.

DISRUPTOR COMPANIES

The digital engagement race is being led by big technology companies focused on software first. By building their services on software, these giants can scale quickly to meet the demands of thousands to millions of new customers. Their digital delivery model also makes it easier to quickly roll out new services on top of existing ones, enabling them to stay fresh and relevant for the modern consumer.

The tech giants have excelled at serving not just consumers, but businesses too. Their combination of B2B and B2C customers has helped to strengthen their market position even further compared to traditional CSPs.

And that has opened up new opportunities that they've been eager to exploit: streaming video services, voice-over-IP phone services, and a host of other new services that put them squarely in competition with legacy CSPs.

IMPACTS ON CSPS

For CSPs, all of these challenges have brought shrinking customer numbers, declining earnings, lower returns on investment, and a continual battle to control costs and optimize existing business systems rather than to upgrade for the digital business age. The result, as Accenture has noted, is a "race to the bottom[7]."

[6] National Health Interview Survey Early Release Program, 27 December 2018, National Center for Health Statistics https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201812.pdf
[7] Trash the Rulebook, 22 February 2019, Accenture https://www.slideshare.net/accenture/trash-the-rulebook-132815757

Looking for solutions

A real solution to these business challenges requires new models and strategies built on digital, smart home thinking. Such an approach demands putting a priority on technologies that can achieve the following:

- Improved business efficiency and innovation.
- Transformation with a new focus on software-defined services.
- Flexible, network-agnostic technologies for smarter and more reliable connectivity.
- Data-driven insights into networks, devices, and customer usage.
- Personalization of products, services, and customer experiences.
- Open-source software that can scale rapidly across both deployed and new hardware.

Achieving these goals offers obvious and dramatic benefits for CSPs:

- Better efficiency means more resources for building the business, rather than simply maintaining existing market position.
- Digital business brings flexibility, agility, and scalability.
- Smarter connectivity makes services easier for customers to deploy and use.
- Data-driven insights allow CSP workforces to identify and resolve technical issues more quickly.
- More data on user behavior and usage patterns also allows companies to target customers with more tailor-made, personalized offerings.

All of this enables CSPs to do more with less and to ease demands on customer service. At the same time, they can also improve customer satisfaction, reduce churn, and begin to grow revenues through new products, new services, and new customers.

Achieving these goals might have once been out of reach for companies without access to the newest digital technologies and the related in-house skillsets required for these.

However, thanks to the cloud and its many "as-a-service" possibilities, CSPs today have the potential to transform their businesses for the smart home age and be ready to compete with new models and disruptors.

What Plume offers

Plume empowers CSPs to compete and win in the smart home ecosystem by enabling them to deliver an entire suite of world-class Smart Home Services at scale, and to continue adding the latest services almost instantly. Our Consumer Experience Management (CEM) Platform provides SaaS-based access to back-end analytics, machine learning and artificial intelligence capabilities, and user-friendly dashboards and support tools that enable rapid troubleshooting.

Plume HomePass™, an award-winning Smart Home Services Suite, is managed by the Plume Cloud, a data- and AI-driven cloud controller currently running the largest software-defined network in the world.

With HomePass, CSPs are able to quickly and easily deliver a wide range of Smart Home Services to their customers:

- Adapt™. Flawless, self-optimizing WiFi that responds to usage patterns.
- Control™. Seamless guest access including custom passwords, parental controls, and the ability to freeze internet access when appropriate.

- Guard™. AI-powered cyber-security that monitors online activity in real time, protecting against hacks, filtering suspicious data, and automatically blocking and quarantining suspicious content.
- Sense™. Transforms network-connected IoT devices into home-based motion sensors for whole-home awareness.

Adapt provides the foundation for our suite of Smart Home Services.

Unlike traditional mesh WiFi systems, Adapt is deeply distributed throughout the home, and delivered as a cloud service that continuously adapts to the needs of the home and its occupants. Powerful and self-optimizing, it provides continuous monitoring to avoid interference with other nearby networks and uses multiple channels for increased network capacity. Routing algorithms also help to balance network loads and optimize the performance of applications on every device, in every room of the house.

As a cloud-based service, HomePass can deliver new features and upgrades to subscribers as soon as they become available. And our APIs mean that Plume can integrate seamlessly with existing CSP systems for operations, inventory management, billing, reporting, and other tasks.

THINK OPERATIONALLY

- While looking for cost-saving opportunities, make it a priority to re-invest savings in strategies that drive future growth.
- Seek ways to introduce more competitive cost structures that increase both flexibility and profits.
- Look for opportunities to reduce support costs by investing in proactive technologies that can resolve service issues before customers call.
- Think about platform economics and flexibility while making investment and capital allocation decisions.

The HomePass mobile app makes it easy for customers to get set up and enables them to monitor and control their home network and devices remotely. CSPs have the option to distribute Plume pods as advanced WiFi access points, or to deploy from their existing hardware through an open-source integration called OpenSync™.

Meanwhile, CSPs themselves gain access to comprehensive support for managing HomePass services. Haystack™ is a comprehensive back-end monitoring solution catered to Support, Engineering, and Operations teams. The Frontline application provides insights for Tier-1, -2, and -3 Support and Engineering personnel, coupled with Panorama dashboards to monitor the operational aggregate health of the network. Signal, a predictive analytics system, pinpoints unhappy customers and proactively generates outbound customer care contact to reduce calls and increase customer satisfaction, an industry first.

Finally, with Harvest™, customer device trends, usage behavior, and application patterns are captured with the ability to create and filter cohorts of your customer base. Network analytics help to drive marketing, promotional, and product decisions to take advantage of network trends and customer purchasing decisions.

All of this helps CSPs to overcome the many challenges facing them and to transform into smart home-ready digital service providers.

By gaining the ability to offer their subscribers a wide range of new services, and to track service issues with real-time monitoring and data analytics, Plume's partners have reported dramatic benefits, including:

- Up to 30% reduction in churn
- Average revenue increase of up to $15 per customer
- As much as 50% reduction in support calls
- Reduced truck rolls by up to 67%
- 67% increased services rollout velocity
- Up to 60-point increase in NPS

Deploying Plume's full suite of Smart Home Services is fast too: partners can go from contract to live service in as few as 8 weeks.

With our comprehensive solution, CSPs have access to all the tools and services they need to digitally transform and build a successful business strategy for the smart home era:

- Cloud-based software for agility and scalability.
- Network-agnostic technology for reliable customer connectivity.
- Dashboards for real-time insights into network performance and services.
- Integrated support and access to continuous upgrades and new services for customers.

And, importantly: a reliable, knowledgeable partner that's ready to help them become competitive for the digital business age.

Churn reduced up to
30%↓

ARPU increased by
$15↑

Support calls reduced by
50%↓

Truck roll rates (TRR) reduced by
67%↓

Services deployment timelines reduced by
67%↓

NPS increased by up to
60pts↑

THINK TECHNICALLY

- Look for open platforms, network-agnostic devices, and easy-to-deploy technologies that help overcome customer concerns about confusing devices or incompatibility.
- Make network quality, reliability, and speed a priority, as these create the foundation for future Smart Home Services.
- Focus on products that are software-driven and can be launched rapidly to meet customer expectations and demands.
- Employ robotic process automation, artificial intelligence, chatbots, and other technologies to improve customer service and agility.
- Enable transformation of costs and customer experiences through data-driven insights, orchestration, and software- defined solutions.
- Keep management of legacy infrastructure lean and efficient while also pursuing new digital offerings.

Conclusion

For CSPs, the time to digitally transform and become providers of Smart Home Services is now.

Consumers are embracing diverse smart technologies and increasingly moving away from the traditional voice, video, and data offerings that once dominated the market. They're also increasingly willing to change who they do business with to obtain the services they want if their current providers don't deliver.

The solution for CSPs is to partner with a company that can support their transformation quickly, seamlessly, and cost-effectively. Plume's cloud-based CEM Platform, our HomePass Smart Home Services suite and app, our flexible hardware options, robust support, and other tools make that possible.

To learn more, email us at partner@plume.com or visit plume.com today.

Plume ®