



Want To Drive Profitability in Your Residential and Business Broadband? Try a Platform Approach

6 Steps To Build an Integrated
Broadband Service and
Support Foundation



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Building the Foundation for Sustainable Broadband Growth

As a broadband service provider (BSP), evolving your business and delivering sustainable and profitable long-term growth are the keys to success. You must use customer acquisition and retention strategies to achieve this and build a competitive advantage through service differentiation, deployment flexibility, and operational efficiency.

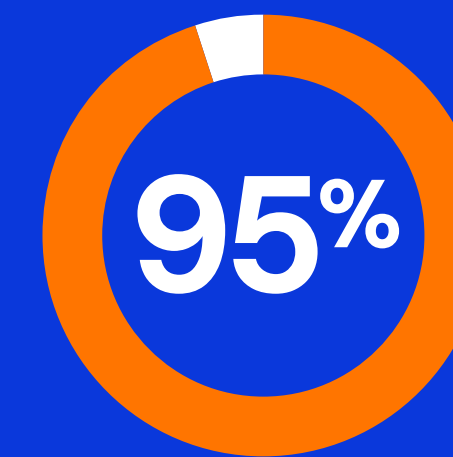
First, you need to advance and expand your foundational business model. This means finding new ways to add incremental value for subscribers, plus addressing different segments and use cases. BSPs can no longer rely on the fastest broadband speeds or lowest prices to win. Instead, your long-term value proposition must be based on delivering the best experience and on an ongoing commitment to launching services that open new markets and drive higher revenue.

To remain competitive, 95 percent of BSPs report focusing on operational efficiency to deliver a reliably consistent subscriber experience.¹ Adopting automation tools can help you operate and scale the network. Plus, leveraging solutions that integrate rapidly and work with existing support systems accelerates market readiness for new services and ensures quality control using pre-tested solutions.

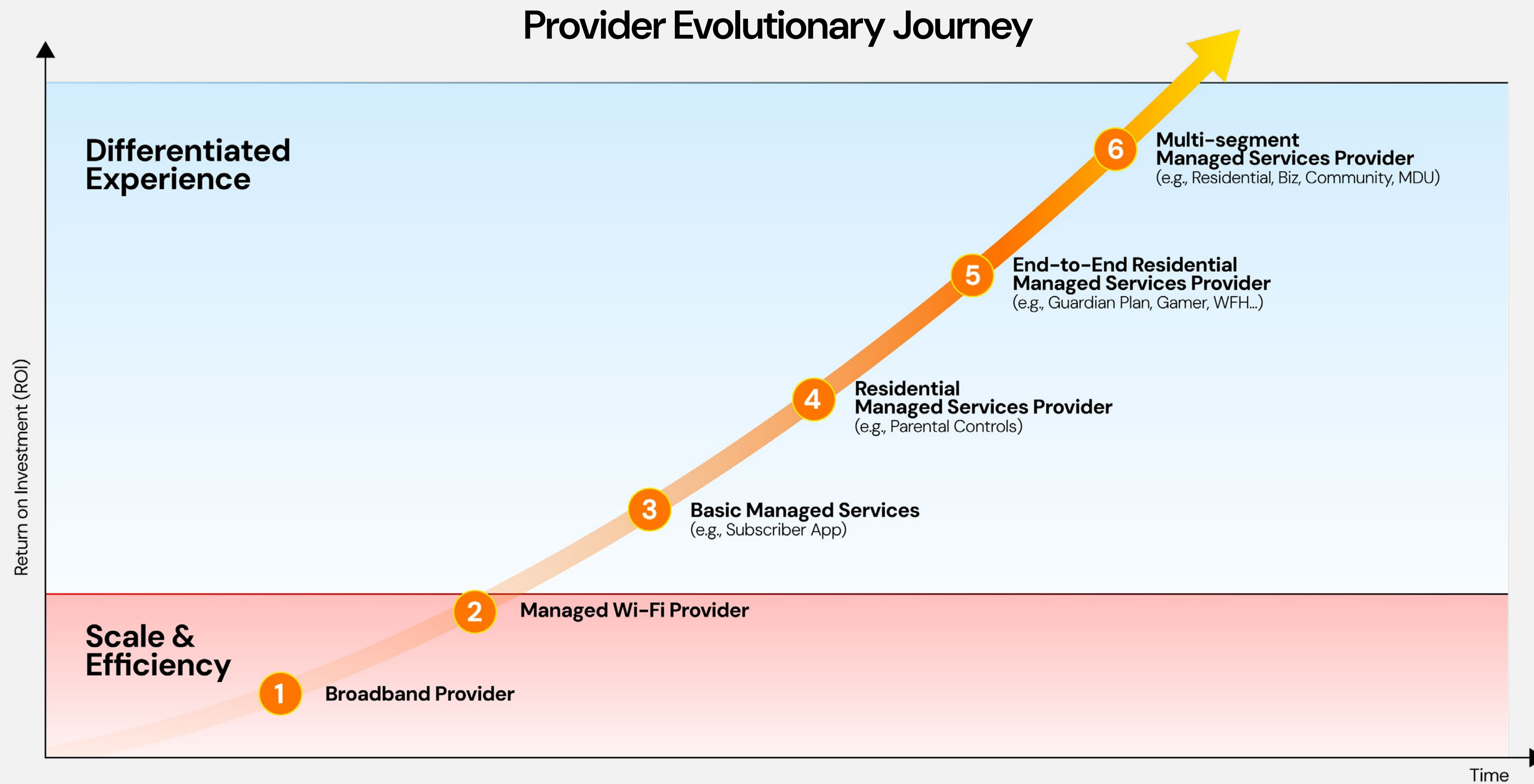
BSPs can deliver on these imperatives by adopting a flexible, foundational platform approach to providing broadband services that:

- ✓ Serve all customer segments
- ✓ Integrate systems and ease of management
- ✓ Enable the seamless delivery of ARPU-enhancing services to all segments
- ✓ Optimize and automate processes
- ✓ Increase operational efficiency

¹ Heavy Reading, State of the Broadband Service Provider, 2023



of BSPs report focusing on **OPERATIONAL EFFICIENCY** to deliver a reliably consistent subscriber experience.¹



With a platform approach, you can move from merely offering connectivity (as seen in stages 1 and 2 of the provider evolutionary journey) to becoming a provider that delivers experiences that satisfy the needs of residential subscribers, small businesses, multi-dwelling units (MDUs), and communities.




This eBook explores six steps that enable BSPs to deliver service innovation, sustainable growth, and long-term success by leveraging a foundational platform with integrated management and support.

Selecting the Right Subscriber Systems

The first step to building a sustainable foundation for growth rests on selecting the right equipment and deployment architectures to connect subscribers to your network. This includes the optical network terminals and units (ONTs/ONUs) and the Wi-Fi systems used by the end subscriber.

What To Consider When Selecting Subscriber Systems

BSPs should consider several factors when researching options for architecting premises solutions. Here are some questions to assess:

-  **What are your consumers' current and future needs?**
It would be best to have a portfolio of premises solutions that allow you to adapt quickly without going through lengthy integration exercises. Ensure you meet varying requirements for multiple use cases that optimize capacity, coverage, and performance.
-  **Can your infrastructure evolve with your business?**
Systems must be scalable, flexible, and future-proofed. Many systems today come in a box with no interchangeable parts. What will it take to upgrade the system in the future? Consider the tradeoffs and benefits when architecting the customer premises and equipping it for a diverse square footage range or supporting MDUs, retail spaces, outdoor areas, arenas, warehouses, or manufacturing facilities.
-  **How quickly can you get to market?**
How long will it take to integrate and operationalize equipment into your environment? Find out what integration steps are required and what time it will take. Seek to go live in days and weeks rather than months.





How do you select the optimal premises solution for indoor wireless service?

There are two deployment models to consider. The first is a single system integrated solution utilizing one piece of hardware for optical network terminal (ONT) functionality and residential gateway (RG) wireless functionality. The second is a two-system solution that utilizes one piece of hardware for the ONT functionality (or a DSL or cable modem) and one for the RG/wireless functionality. The one-system solution results in approximately one-third less CAPEX than a two-system solution while delivering more operational efficiency with only one SKU to standardize and install at the premises. The advantage of a two-system solution is the separation of ONT and RG functions, allowing greater flexibility for installing and mounting in different locations. In addition, you can change out RG/wireless devices without touching the ONT.



How do you want to support customer installations?

A [study by Parks Associates](#) revealed that, while the preference for self-installing home devices is evolving, 50 percent of consumers favor self-service approaches to installing home electronics. You'll need a solution that enables both self-service and technician-assisted installs. This requires simple installation processes and a high degree of automation in configuring and activating the systems at the customer premises to minimize calls for support and repeat technician trips. Also, look for solutions with [common operational models](#) that enable technicians to deploy systems quickly, require less training, and have less chance of error.



What is the ongoing impact on your operations?

After the installation, your customer support and operations teams will be responsible for keeping the systems running. Visibility into the premises system and service performance will be key to proactive operations and fast problem resolution.



What customer segments and use cases do you want to support?

Ensure the broadband solution can be easily replicated across new locations or market segments such as residential, multi-dwelling units (MDUs), retail businesses, or small offices. Select a premises system portfolio that supports indoor and outdoor coverage for residential, farm, and other business applications like golf courses, marinas, and RV parks. Look for systems [that offer templated and simplified processes for expansion](#).



What is the total cost of ownership (TCO)?

Consider more than just upfront pricing. Review [different network deployment scenarios](#) and the system's ability to reach new markets and support new systems.



Which solutions are leading the market and why?

Leverage industry peers for insights and experience with different broadband systems. Read customer reviews, case studies, and testimonials to develop use cases and gauge overall satisfaction and reliability.



Asking these questions during research will help you select the right systems to meet your subscriber and business needs.

Streamlining Subscriber Onboarding

Creating a frictionless onboarding experience for subscribers is vital. When subscribers sign up, they want their broadband service immediately. Moreover, it needs to be working as intended right from the start. Supporting this type of service velocity and agility increases the demands on service provisioning processes, where issues can quickly translate into poor customer experiences.

Simplify Workflows With Cloud-Based Automation

A manual approach to provisioning is no longer sufficient to address these challenges. Too many manual steps delay service and time to revenue—plus cause high failure rates and frustrated subscribers. It also creates additional costs and complexity when BSPs seek to streamline operations. This is why automating end-to-end service provisioning is becoming a strategic priority for BSPs of all sizes. Cloud-based automation enables BSPs to simplify workflows and processes, creating a framework for increased automation across broadband operations—including provisioning.

These capabilities enable operations teams, for example, to select an ONT, assign the correct subscriber services, and automatically push provisioning to the correct optical line terminal (OLT)—all using workflows that automate many of the repetitive manual procedures previously required. Leveraging the power of automated provisioning enables BSPs to:

- ✓ Focus skilled broadband operations personnel on more critical, complex tasks.
- ✓ Lower operating costs by streamlining provisioning processes and procedures, eliminating configuration errors, and accelerating revenue time.
- ✓ Enhance subscriber satisfaction by delivering a seamless, super-fast service activation.



Creating an Unforgettable First Touchpoint

The subscriber journey starts with the service activation experience. BSPs must consider all the customer touchpoints to create a frictionless onboarding experience, including:

- The ease of researching and identifying service options and selecting a package that fits the subscriber's needs.
- The simplicity of ordering and paying for a service.
- Communications for setting up the installation.
- The installation experience itself.

The installation process is a critical touchpoint, building the foundation for a positive subscriber relationship. The key to getting the installation process right is the ability to customize the service experience for different subscriber preferences.



Give Your Subscribers What They Want

You should tailor the installation process to meet your subscriber preferences, including DIY, guided help, or full-service support.



Do-it-yourself (DIY) option

Tech-savvy subscribers can take a DIY approach, using a mobile app (like the CommandIQ® subscriber app) to complete their self-install and immediately take advantage of advanced services. In addition to increasing subscriber satisfaction, the DIY route enables BSPs to reduce truck rolls and associated operational expenses dramatically.



Guided self-installation

Some subscribers will prefer a light touch over a full DIY approach. An assisted option gives subscribers the independence of self-installation with guided support from the service provider.



Full-service installation

For subscribers who are uncomfortable dealing with installations, field technicians can go onsite to set up systems, activate services, and educate them on their broadband service. This means your field service team plays an integral role in shaping the overall experience by delivering your subscribers' first interactions with their BSP. Ensure your technicians can leverage cloud mobile tools that integrate with your support systems and workflows, as well as provide real-time insights across subscribers, systems, and services to immediately validate the service experience. This provides peace of mind that everything is set up correctly for less tech-savvy subscribers.

By offering choices, BSPs can turn the installation process into a highly positive and customized first touchpoint for subscribers that builds trust and adds value. At the same time, this approach helps field technicians and support team resources be used as efficiently and effectively as possible.



Delivering Service Excellence Throughout the Subscriber Journey

Service excellence is holistic. An end-to-end subscriber experience is a key differentiator and competitive advantage. For many BSPs, the support organization drives this experience.

With a platform approach, customer service representatives (CSRs) have the tools to prevent issues proactively rather than resolve them. They can also act as brand ambassadors, helping subscribers get the most out of their broadband service and recommending products and services that enhance their experience.



Evolving to an Omnichannel Service Experience

Effective support rests on enabling subscribers to choose how they want to communicate with you. Most consumers today interact with brands across multiple channels, ranging from email and phone to self-service mobile apps, online chat, text messaging, and social media platforms. The objective is to evolve this multichannel support into an omnichannel experience, remaining consistent no matter the customer's preferred channel.





Enhancing Customer Service With Intelligent Support

Intelligent cloud-based monitoring and support solutions give support teams additional visibility into the network and the subscriber experience while freeing personnel to focus on more complex, proactive care. A recommendation engine, for example, can speed up issue resolution and offer CSRs real-time insights—enabling personalized and relevant interactions.

These advanced tools elevate your support team from providing a reactive service (the “break/fix” model) to providing a fully proactive service that enhances the subscriber experience as part of a customer service and support continuum. The result is lower costs (due to fewer truck rolls), faster troubleshooting, and the transformation of CSRs into brand ambassadors that drive subscriber loyalty and retention.



Validating the Subscriber Experience

The best way to gauge whether you deliver service excellence to your subscribers is to ask them! Surveying subscribers to establish a Net Promoter ScoreSM (NPS[®]), customer satisfaction (CSAT) score, and other types of feedback is critical to understanding subscriber sentiment.

The NPS provides a simple metric for assessing overall subscriber loyalty based on their likelihood of recommending the service to others. Meanwhile, CSAT measures immediate satisfaction after specific interactions. Conducting periodic surveys across the subscriber base can highlight trends, uncover service gaps, and identify opportunities to enhance the experience.

Any insights gained should be fully integrated into your strategy and workflows. When combined with data and insights from across the organization, BSPs can continuously validate service excellence while driving improvements.

Embracing Proactive Network Analytics

Previously, the first indication of a network issue often came from the subscriber. When faced with slow speeds, unstable connections, or outages, subscribers would contact customer support, which would then escalate the issue to network operations if needed. This scenario is far from ideal—customer support struggles to resolve issues, operations is inundated with urgent problems, and subscribers are dissatisfied. BSPs can leverage network and service analytics enhanced with machine learning (ML) to shift from a reactive, break/fix method to a proactive approach focusing on the subscriber experience.

Enhancing Operations With Machine Learning

Implementing advanced network analytics powered by ML enables operations teams to anticipate and tackle potential issues proactively.

This technological shift enables operations to enhance the subscriber experience in several ways:

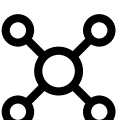
Proactively monitor light levels

By continuously monitoring ONT light levels and bit errors, operations teams receive alerts when light levels fall below certain thresholds or when ONT bit errors exceed limits. The system flags these ONTs for further investigation. While these ONTs may not yet be causing visible problems for subscribers, the operations team can predict potential failures and replace them proactively, resolving issues before service degradation occurs.



Understand the impact of subscriber traffic on network performance

With advanced traffic classification of flow data, BSPs gain insights into traffic trends and usage patterns. By pinpointing the specific applications subscribers use and their duration (such as how long they stream YouTube), operations teams can optimize network performance and measure the quality of experience (QoE) against individual applications.



Optimize the network based on usage trends

Enhanced visibility into ONT health and traffic flows allows operations teams to identify PON ports nearing capacity and at risk of exhaustion. By establishing capacity thresholds, they can pinpoint specific subscribers and usage trends that are (or may soon be) causing network strain. This information facilitates opportunities to re-engineer and optimize the network—such as reallocating heavy-use subscribers to different PONs to balance traffic or determining which subscribers might benefit from an upgrade.

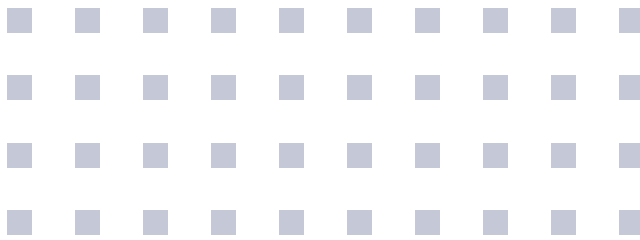
With ML-based advanced analytics, the operations team can move from reactive to proactive, often identifying and resolving issues before they impact subscribers. This enables a superior subscriber experience and limits the use of support resources.

Enhancing Customer Service With Analytics

Analytics can also streamline and enhance customer support services and equip CSRs to solve problems better.

By building up a complete picture of everything happening within the wide area network (WAN), within the local area network (LAN), and on the client devices—and having that information presented in an easily accessible dashboard—CSRs gain a holistic view of network health from the subscriber’s point of view. This can be as simple as monitoring call frequency and call types over time to get up to speed quickly on any long-standing issues without the subscriber explaining the problem again.

This information can also produce a Quality of Experience (QoE) metric that allows CSRs to identify, investigate, and resolve issues before they become subscriber-impacting. By proactively addressing issues, CSRs can play an active role in reducing the number of helpdesk calls while driving subscriber satisfaction.



Scaling Up and Monetizing

Once the key components are in place to launch, provision, and support advanced services, BSPs can set a growth strategy based on a clear vision for the future.

Transitioning from a basic broadband provider to an experience provider offering managed services to specific markets is crucial for long-term success. This shift allows BSPs to deliver tailored, value-added solutions that meet the unique needs of each market segment. Such solutions drive customer loyalty and retention and open new revenue streams.


Many BSPs begin by offering managed services that enhance the residential broadband experience—for example, tailoring specific offerings to remote workers, families with young children, or avid gamers and streamers. Further development of a managed services portfolio may extend offerings beyond residential, targeting new segments such as small businesses, MDUs, or community Wi-Fi.


BSPs can create beachheads in new market segments with a managed services strategy. Moreover, by using automation technologies to activate and provision new managed services at speed, BSPs can dynamically scale services in line with demand and shorten time to revenue.




Three Ways To Establish a Winning Managed Services Strategy

Here are three things that will set you up for success with your managed services strategy:

- **Collaborate**

Work with trusted partners to develop a success plan aligning with specific business goals and market needs. Integrate provisioning, customer support, and troubleshooting to ensure seamless service delivery and a superior customer experience.
- **Understand**

Make data-driven decisions based on actionable insights from service usage, network intelligence, and market trends. Build your business case and go-to-market strategy by understanding the needs of your target markets.
- **Learn**

Transform your workforce by closing any skills gaps through targeted training programs. Leverage training resources and ongoing support from partners to keep your team updated with the latest technologies and best practices.



Building a Foundation for Future Success Now and Into the Future

By focusing on enhancing the subscriber experience, driving operational efficiencies, and providing subscribers with experience-enhancing managed services offerings, BSPs can accelerate market and revenue expansion and look forward to a sustainable and profitable future.

Follow these six steps to create a solid foundation for long-term success:

1

Choose a Future-Ready System

Your systems must address the premises architectural needs of your target segments. Invest in subscriber systems that are adaptable, reliable, and scalable—and that provide a platform for future market expansion and service innovation.

2

Activate Quickly and Seamlessly

Map the subscriber journey and optimize the experience at each touchpoint for a frictionless experience. Automate as much as possible to reduce manual steps and ensure new services can be quickly launched and supported.

3

Create The Perfect First Impression

Make the installation experience a standout moment by offering flexible options tailored to subscriber preferences—setting the tone for a positive relationship.

4

Make Service Excellence a Differentiator

Using advanced tools and insights, provide consistent, personalized support across multiple channels, building a reputation for customer excellence. Regularly take the pulse of your subscribers to ensure you're meeting their expectations.

5

Take a Proactive Approach to Network and Service Management

Leverage predictive analytics to address potential network- and service quality-impacting issues before they affect subscribers, ensuring optimal network performance.

6

Expand and Monetize Via Managed Services

Shift from basic broadband to specialized managed services targeting new market segments, opening new revenue streams and growth opportunities.

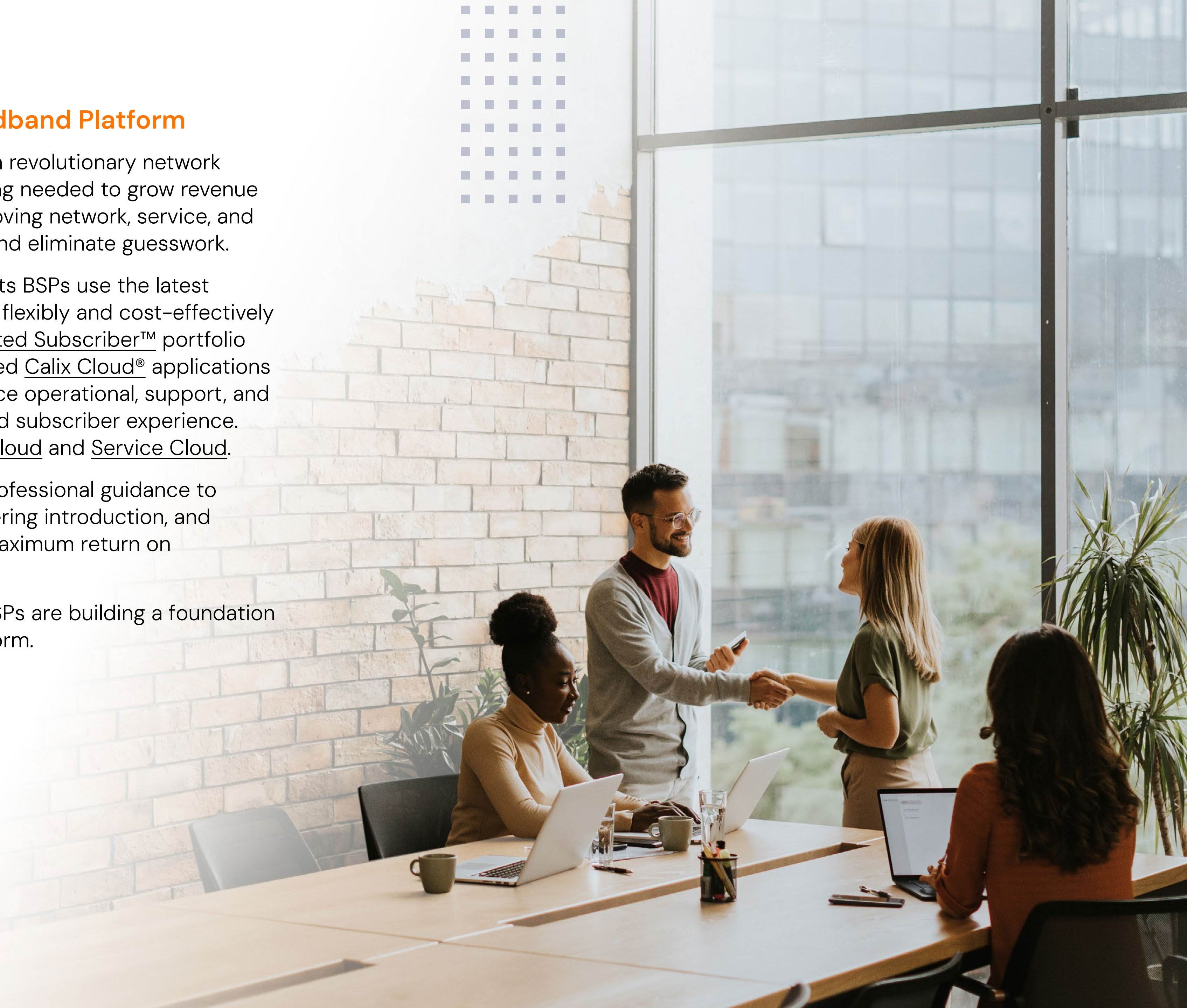
Get Started: Deploying on the Calix Broadband Platform

The Calix Broadband Platform empowers BSPs with a revolutionary network and management foundation that provides everything needed to grow revenue and simplify operations. By understanding and improving network, service, and subscriber performance, BSPs can lower expenses and eliminate guesswork.

The software-defined Intelligent Access™ solution lets BSPs use the latest broadband access innovations at software speed to flexibly and cost-effectively deploy anywhere and grow with demand. The Unlimited Subscriber™ portfolio provides a Wi-Fi system for every use case. Integrated Calix Cloud® applications deliver end-to-end insights and visibility that enhance operational, support, and marketing workflows for better team productivity and subscriber experience. This includes specialized tools such as Operations Cloud and Service Cloud.

In addition, Calix Success provides resources and professional guidance to achieve and exceed time to market, new service offering introduction, and broadband assurance objectives to help ensure a maximum return on investment.

Schedule a consultation today to discover how BSPs are building a foundation for sustainable growth on the Calix Broadband Platform.



Case Studies



Jade Transforms Customer Service and Boosts Efficiencies With a Platform

Jade Communications, a Colorado-based BSP, is leveraging the power of the [Calix Broadband Platform](#) to significantly enhance customer support using [Calix Service Cloud](#). The platform allows Jade's support teams to quickly identify and resolve issues with real-time network insights, shifting from reactive to proactive customer care. This transformation has led to a 40 percent reduction in call handle times and fewer truck rolls, boosting operational efficiency.

On the customer premises side, Jade uses [Calix Unlimited Subscriber](#)—including the GigaSpire BLAST® family of systems—to deliver unrivaled Wi-Fi performance and a growing portfolio of managed services.



Tipmont Reaps the Benefits of Proactive Broadband Operations

Tipmont, an electric cooperative serving rural Indiana, leveraged [Calix Operations Cloud](#) to revolutionize their broadband operations. Despite a small network operations center, Tipmont has seamlessly expanded its services, offering state-of-the-art fiber broadband and [SmartLife™](#) managed services without increasing operational complexity.

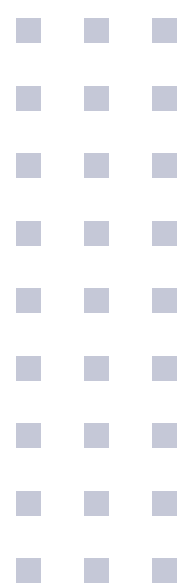
Using Operations Cloud, Tipmont shifted from reactive to proactive. Real-time alerts and geo-mapping allows Tipmont to quickly identify and address potential network issues, reducing support calls and the need for truck rolls. This efficiency has helped Tipmont prepare to offer specialized solutions for small businesses and community broadband through [SmartBiz™](#) and [SmartTown™](#).



MidSouth Pioneers Network Outages Detection System

MidSouth Fiber of Texas took advantage of the webhooks capability in [Operations Cloud](#) to introduce a revolutionary new system for detecting network outages. MidSouth integrated Operations Cloud with their existing customer management and billing system, so they receive real-time updates about line disruptions and impacted subscribers the moment they happen. This enables their internal teams to take swift action, dramatically reducing the volume of inbound calls to MidSouth's service centers.

Implementing such a system would have taken months for MidSouth to develop in-house. Instead, they were able to roll out the new system seamlessly on the [Calix Broadband Platform](#).



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