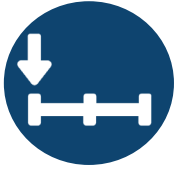


**Checklist for New
Broadband Providers:
Essentials for
Launching a
Successful
Broadband Business**



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INTRODUCTION

Broadband connects the world, and establishing a robust broadband network is crucial for meeting the demands of individuals, businesses, and communities. Despite the need, there are still many areas that do not have access to reliable broadband service. Fortunately, there is an abundance of Federal funding available for broadband deployment, and much more will be coming with the Broadband Equity, Access and Deployment (BEAD) program. In addition to the usual players in the broadband world, these funding opportunities are bringing forward new entrants who have never deployed or managed a broadband network, from private companies to municipalities and rural electric cooperatives.

If you are a new entrant to the broadband business gearing up to launch your service, it's essential to ensure that certain prerequisites are in place to guarantee efficiency, security, regulatory compliance, and subscriber satisfaction. It's not just about building the physical broadband infrastructure. This gearing up process involves critical components that providers must have in place before they sign up their first subscriber, along with key elements that ensure operational efficiency and subscriber satisfaction. The entire process should ensure a seamless user experience from device activation to subscriber support, which is paramount for retaining subscribers and building brand loyalty.

The IIJA, also referred to as the Bipartisan Infrastructure Law, is an infrastructure package that was signed into law in November 2021. It contains \$1.2 trillion in funding for infrastructure, with \$65 billion dollars of that to enhance broadband deployment, access and affordability. \$42.45 billion dollars of that money will be allocated through an IIJA a program called Broadband Equity, Access and Deployment (BEAD).

Launching a new broadband network also entails numerous challenges and complexities that can hinder its successful deployment. From technical hurdles like the continuing need for IPv4 addresses and cybersecurity threats to regulatory compliance requirements such as CLEA, broadband providers face a multitude of obstacles and decisions on the path to network launch.

The good news is that many of these services can be provided by third parties. There are also opportunities to provide additional services over your new network that will provide additional value for your subscribers and allow you to get a faster return on your network investment.

By identifying these challenges and opportunities early on, you can navigate the intricacies of broadband deployment effectively and deliver a reliable, high-performance and feature-rich broadband service to your subscribers.



BILLING SYSTEMS

Efficient and accurate billing systems are crucial for the financial health of broadband providers. A robust billing infrastructure ensures that services are correctly billed, payments are processed smoothly, and subscribers have a clear understanding of their charges. Here are the key components that broadband providers must consider for their billing systems before launching a new network.

Accurate Billing and Invoicing:

Accurate billing is essential for maintaining subscriber trust and avoiding disputes. Broadband providers should implement billing systems that can:



Automate Billing Processes: Automated billing systems reduce the risk of human error and ensure that subscribers are billed promptly and accurately. These systems can handle complex billing scenarios, such as prorated charges, discounts, and any promotions and specials that you may run.



Generate Detailed Invoices: Invoices should provide a clear breakdown of charges, including the subscriber's monthly service fees, any usage-based charges, taxes, and any additional fees such as equipment rental. Transparency in invoicing helps subscribers understand their bills and reduces the likelihood of disputes and calls to your office.



Support Multiple Payment Methods: Offering a variety of payment options, such as credit and/or debit cards, bank transfers, and online payments, provides the subscriber convenience and improves payment collection rates.

Real-Time Usage Monitoring:

Real-time usage monitoring is crucial for billing subscribers accurately based on their data usage and service consumption. Broadband providers should:



Implement Usage Tracking Tools: Usage tracking tools monitor data consumption and service usage in real-time, ensuring that subscribers are billed accurately for their actual usage. These tools should integrate seamlessly with the billing system to provide up-to-date information on subscriber accounts.



Provide Usage Alerts: Informing subscribers about their data usage through real-time alerts helps them manage their consumption and avoid unexpected charges. Alerts can be sent via email, SMS, or through a subscriber portal.

Flexible Pricing Plans:

Offering flexible pricing plans allows broadband providers to cater to different subscriber needs and preferences. Providers should consider:



Tiered Pricing Models: Tiered pricing models offer different service levels at various price points, allowing subscribers to choose plans that best fit their usage patterns and budget.



Usage-Based Billing: Usage-based billing bills subscribers based on their actual data consumption, providing a fair and transparent pricing structure. This model is particularly useful for subscribers with variable data usage patterns.



Bundled Services: Bundling broadband with other services, such as voice, TV, or home security, can create attractive value propositions for subscribers. Bundled pricing should be clearly outlined in the billing system to ensure transparency.

By automating the billing process, companies can send invoices faster and more consistently. This often leads to quicker payments from payers.

Subscriber Account Management:

Effective subscriber account management is essential for handling billing inquiries, managing subscriptions, and ensuring subscriber satisfaction. Broadband providers should:



Develop a Subscriber Portal: A self-service subscriber portal allows subscribers to view their bills, track usage, make payments, and manage their accounts online. This reduces the calls to your end user support reps and enhances the subscriber experience.



Implement CRM Integration: Integrating billing systems with Customer Relationship Management (CRM) systems ensures that subscriber information is consistent and up-to-date across all platforms. This integration helps support staff provide accurate and efficient assistance with billing inquiries.



Offer Subscriber Support: A dedicated billing support team should be available to assist subscribers with billing-related questions and issues. Providing clear contact information and responsive support channels ensures that subscribers can resolve their billing concerns promptly.

Revenue Assurance and Fraud Prevention:

Ensuring revenue assurance and preventing fraud are critical for maintaining the financial stability of broadband providers. Key practices include:



Regular Audits: Conducting regular audits of billing processes and systems helps identify discrepancies, errors, and potential revenue leaks. Audits ensure that billing practices align with company policies and industry standards.



Fraud Detection Systems: Implementing fraud detection systems helps identify and mitigate fraudulent activities, such as unauthorized usage and billing manipulation. These systems should continuously monitor billing transactions and usage patterns for anomalies.



Policy Enforcement: Enforcing billing policies and terms of service ensures consistency and fairness in billing practices. Providers should clearly communicate their billing policies to subscribers and enforce them uniformly.

Automated billing systems help track which bills have been paid and which are still outstanding, making it easier to follow up on late payments.

Conclusion:

Billing systems are the building block component of a successful broadband network launch. By implementing accurate billing and invoicing processes, real-time usage monitoring, flexible pricing plans, efficient subscriber account management, and robust revenue assurance practices, broadband providers can ensure financial stability and enhance subscriber satisfaction.

Billing Systems

How we can help

Our comprehensive billing and customer management system delivers flexible billing options, automated service provisioning, and seamless customer engagement, ensuring efficient operations and enhanced customer satisfaction.





IPv4 ADDRESS SPACE

While your new broadband network will almost certainly have full support for IPv6, this does not eliminate the need for IPv4 addresses. This is because IPv6 is not backward compatible to IPv4, and there will be “IPv4-only” content on the Internet for years to come. This means you must be able to assign a publicly routable IPv4 address to every subscriber so they can reach that content, which can get very expensive, especially as your subscriber base grows. A better way to do this is to use Carrier-Grade Network Address Translation (CGNAT), which allows you to oversubscribe a single public IPv4 address by 128:1 or more.

Deploying CGNAT enables multiple private IP or IPv6 addresses to be mapped to a single IPv4 address. This allows you to have a relatively small pool of IPv4 addresses to serve a much larger number of subscribers. With a CGNAT solution your subscribers can access IPv4 services and applications seamlessly without encountering disruptions or performance degradation.

To facilitate the transition from IPv4 to IPv6, modern networks typically implement a dual-stack approach, which means supporting both IPv4 and IPv6 protocols simultaneously. This allows devices and services to communicate using either protocol based on their capabilities and network configuration. However, even if you implement a dual-stack network, you still need to make a public IPv4 address available for every subscriber. CGNAT allows you to do this by having far fewer IPv4 addresses than subscribers.

IPv4 Space

How we can help

ZCorum has an affordable, software-based CGNAT solution that supports the smallest operators to the largest. It installs on standard, off-the-shelf hardware, so it scales easily and costs less than hardware-based solutions.



DEVICE ACTIVATION

Once your network is built, you need a system in place to authenticate the subscribers who will be using the network and that provides the necessary configuration for the customer premises equipment they will use to connect to your service. Device activation serves as the gateway for subscribers to access broadband services. A seamless activation process enhances the subscriber experience and reduces your operational overhead. Ideally this process includes:



Automated Provisioning Systems to Activate Devices Promptly

Automated provisioning systems can activate devices promptly upon subscription and should be integrated with subscriber management tools to support a smooth transition from subscription to service activation.

User-friendly Interfaces for Subscribers to Self-activate Devices

User-friendly policies or interfaces should be developed to let subscribers self-activate their devices easily. Clear instructions and intuitive interfaces can minimize the need for support staff intervention, which reduces wait times and enhances subscriber satisfaction.

Comprehensive Device Compatibility Testing to Ensure Seamless Integration with the Network

Comprehensive device compatibility testing is another critical aspect of device activation. You must ensure that a wide range of devices, including modems, routers, and other network equipment, are compatible with your network infrastructure. This proactive approach mitigates potential compatibility issues and accelerates the onboarding process for new subscribers.

Scalable Infrastructure to Accommodate a Growing Subscriber Base without Compromising Activation Efficiency

Additionally, scalability should be a key consideration in device activation systems. As your subscriber base grows, the activation infrastructure must be capable of handling increased demand without sacrificing performance or reliability. By investing in scalable solutions, you can future-proof your activation processes and accommodate the evolving needs of your subscriber base.

While you can purchase and configure the necessary equipment and software for device activation, another option would be contracting for managed provisioning services. This reduces your upfront and ongoing maintenance costs, speeds deployment, and eliminates the need for specialized technical expertise.

Device activation is a pivotal step in the process of connecting subscribers to your network. Whether you build it yourself, or use a managed service, it's important to have access to a robust and reliable system to facilitate smooth device activation for your subscribers.

Provisioning

How we can help

Our advanced broadband provisioning is a commercial-grade system that supports IPv6 Prefix Delegation, DHCPv6 Reconfigure, Temporary Address Allocation, CableLabs DHCP Options Registry and DDNS AAAA updates.





CYBERSECURITY

Given the growing number of cyber threats and their potential impact on your broadband business, a clear Cybersecurity plan and the technology that goes with it are paramount in safeguarding your network infrastructure and subscriber data. A breach not only affects your ability to provide your core service to subscribers, it can also have a negative impact on your reputation. In addition, it is now a requirement to have a cybersecurity plan in place if you will be receiving funding from certain federal programs, including the FCC's E-ACAM program, NTIA's BEAD program, and USDA's ReConnect program. And it is likely that all broadband operators will have federally mandated cybersecurity requirements in the future as they are considered providers of critical infrastructure.

Implementing a robust firewall solution is fundamental to protecting against unauthorized access and malicious activities. Firewalls act as the first line of defense, inspecting incoming and outgoing traffic and enforcing security policies to prevent unauthorized access to sensitive network resources. This is just a basic requirement, though. Consider a firewall like locking the door to your home. You still need robust security that will let you know if someone is trying to break in, or worse yet, has broken in and are looking around for something to steal or damage. It is critical that action be taken as soon as possible to avoid any loss or harm.

As the globe becomes more interconnected and reliant on digital technologies, cybercrime is surging. The year 2023 saw a notable increase in cyberattacks, resulting in more than 343 million victims. Between 2021 and 2023, data breaches rose by 72%.

In addition to perimeter defenses, you should deploy intrusion detection and prevention systems to detect and stop threats in real-time. The analogy here would be a home alarm system that alerts you of the breach. These solutions analyze network traffic patterns and behavior to identify irregular activities that are characteristic of security breaches or malicious intent. By promptly detecting and blocking suspicious traffic and bad actors, intrusion detection and prevention tools enhance your network security posture and minimize the risk of successful cyber-attacks.

While technology can do a lot of the work, you also need staff that can fully analyze what the technology has found and take action as needed. The home security analogy here is a 24x7 monitoring service that will notify you if your alarm goes off and contact authorities on your behalf.

Regular security audits and vulnerability assessments are also essential components of a proactive cybersecurity strategy. You should conduct comprehensive audits of network infrastructure and systems to identify potential weaknesses and security vulnerabilities. Vulnerability assessments help prioritize remediation efforts and ensure that critical security patches and updates are applied promptly to mitigate known risks.

Cybersecurity awareness and training programs are indispensable for empowering your personnel with the knowledge and skills needed to recognize and respond to security threats effectively. Regular training will also help keep other employees from falling prey to malware or phishing schemes. Rank and file employees are a common and effective vector for cyber criminals. It doesn't matter how secure your network, someone in customer service or accounting can inadvertently download ransomware or be tricked into providing access to sensitive information or root access credentials. By fostering a culture of cybersecurity awareness, you enhance the overall security posture of your organization.

Implementing Cybersecurity

Establishing an in-house SOC offers an increased measure of control and customization, but it also involves significant upfront investments in infrastructure, technology, and human resources.

Another option that will allow you to quickly and economically implement a robust cybersecurity plan is working with a provider of managed cybersecurity services. This offers several compelling advantages:

Cost-Effectiveness

You eliminate much of the upfront investment in infrastructure and staffing. Instead, you benefit from a predictable, subscription-based pricing model, making it easier to budget for cybersecurity expenses.

Expertise on Demand

Managed cybersecurity providers specialize in safeguarding digital assets against evolving threats. By leveraging the expertise of seasoned professionals, you can access latest security solutions without the need for in-house specialization. This allows your in-house technical teams to focus on day-to-day IT activities, and deploying, managing and maintaining the broadband technology that runs your business.

Scalability and Flexibility

A provider offering managed security services can scale their solution based on your initial needs and adapt to changing needs as you grow. Whether scaling up during peak periods or adjusting security measures in response to emerging threats, a cybersecurity provider will have the agility required to handle the ever escalating cyber intrusions.

24/7 Monitoring and Support

If you contract with a provider of managed cybersecurity services, make sure they offer round-the-clock monitoring and support, ensuring that potential threats are promptly identified and mitigated. This constant vigilance minimizes the risk of breaches and enhances overall resilience, as those who would try to breach your network can be from anywhere in the world and they do not stick to regular business hours.

Ultimately, the decision to build an in-house SOC or contract for a Security Operations Center as a Service (SOCaaS) will depend on various factors, including budgetary constraints, internal expertise, and strategic objectives. While building a SOC offers unparalleled control and customization, it requires significant investments, constant monitoring and ongoing maintenance. On the other hand, by partnering with a provider of managed cybersecurity services you will quickly gain access to the technology and expertise needed to protect your business in a scalable, and cost-effective format.

Whichever path you choose, prioritizing cybersecurity is paramount for your broadband business. Whether you're setting it all up internally or outsourcing to a trusted partner, investing in robust security measures is essential for protecting your assets and the trust of your subscribers.

Cybersecurity
How we can help

ZCorum offers a managed, cloud-based Security Operations Center as a Service that eliminates the complexity and heavy lifting needed for effective threat prevention and remediation. If needed, we also provide managed EDR and Endpoint Security for a complete security solution.





CALEA (COMMUNICATIONS ASSISTANCE FOR LAW ENFORCEMENT ACT)

As a provider of broadband services, compliance with the Communications Assistance for Law Enforcement Act (CALEA) is a legal requirement, obligating you to assist in a lawful intercept of communications when authorized by law enforcement agencies. Implementing CALEA-compliant intercept tools within the broadband network infrastructure enables law enforcement agencies to intercept and monitor communications data from one or more subscribers identified in a valid court order.

Before launching a new network, you must ensure that your infrastructure and processes align with CALEA requirements. A CALEA System Security; Integrity (SSI) plan must be filed with the FCC and describes your internal policies and procedures regarding how you will handle CALEA warrants. This plan must include who should be contacted at your organization in the event of a CALEA request, how you will protect the identity of those who are under surveillance, and how you will limit access to surveillance data to only authorized individuals.

Maintaining detailed records of intercepted communications is another key aspect of CALEA compliance. You must establish robust logging mechanisms to capture relevant metadata and communication content associated with intercepted communications. These records serve as evidence of compliance and may be subject to audit by regulatory authorities.

Providing training to personnel involved in the lawful interception process is critical to ensuring compliance with CALEA regulations. Your staff must understand their roles and responsibilities regarding lawful interception requests and adhere to strict protocols to safeguard the privacy and security of intercepted communications.

Furthermore, you should stay abreast of any evolving CALEA standards and guidelines to ensure ongoing compliance with regulatory requirements. Regular updates to systems and processes may be necessary to align with changes in regulatory frameworks and technological advancements affecting lawful interception capabilities.

CALEA is intended to preserve the ability of law enforcement agencies to conduct electronic surveillance while protecting the privacy of information outside the scope of the investigation.

There are several options to ensure that your infrastructure and processes align with CALEA requirements and will vary based on your level of staff expertise and the amount of time you can dedicate for set up and ongoing compliance.

First, and by far the most complex option, would be to develop your own in-house technical solution and compliance program. This involves: 1) Developing and maintaining the equipment necessary to capture and transmit the intercepted data in the required format; 2) Maintaining the staff and processes necessary to validate any lawful intercept requests received under CALEA, and 3) Setting up and configuring the equipment you've developed to securely capture and transmit the intercepted information to the requesting Law Enforcement Agency (LEA).

A second option is to purchase a vendor's technical solution (a probe or other form of mediation device) and then develop and maintain your own compliance program. In this case you will: 1) Maintain your own staff and the processes necessary to validate any lawful intercept requests received under CALEA, and 2) Set up and configure the purchased equipment to securely capture and transmit the intercepted information to the requesting LEA in their requested format and maintaining all of the associated records.

Finally, one of the best options for most operators is utilizing a turn-key CALEA compliance program from a Trusted Third Party (TTP). CALEA allows other entities to act as a TTP and provide the services needed to effectively and securely respond to a CALEA request. That includes handling verification of all CALEA requests, providing and configuring the equipment necessary to capture, mediate and transmit the intercepted information to the requesting Law Enforcement Agency (LEA), and maintaining the required records.

Deploying and maintaining an in-house CALEA compliance program will generally only make sense for larger providers who have the internal resources needed, and who would likely get more frequent CALEA requests due to a larger subscriber base. For smaller operators a TTP reduces the complexity and mitigates the risk associated with managing a comprehensive legal compliance program, while minimizing capital and operational expenditures.

CALEA

How we can help

We are a Trusted Third Party provider that will work with you to implement a cost-effective solution that simplifies the process and lessens the risk of your CALEA responsibilities not being properly managed. We ensure that all obligations imposed by law enforcement are met.





NETWORK AND BROADBAND DIAGNOSTICS

Fiber-optic and DOCSIS (Data Over Cable Service Interface Specification) networks represent two prominent technologies driving high-speed internet access. Diagnostic tools are available that are tailored for these distinct network architectures. Broadband diagnostics tools are essential for ensuring optimal performance and swift issue resolution for your subscribers. They should provide real-time visibility into network performance metrics, device status, and service availability, which will streamline troubleshooting individual subscriber issues and wider outages.

Tools can be developed in-house, which can be a significant challenge, or you can use tools that are already developed for you. Before developing diagnostic tools in-house consider the significant investment of your time, resources, and expertise. You also need to consider the ongoing maintenance of the application and keeping it up to date with any changes in technology.

If you are deploying fiber, several fiber equipment vendors provide their own diagnostics application for their equipment, usually for an additional cost. While this can be convenient, those applications are generally only compatible with that manufacturer's equipment. This can lock you into their platform overtime and reduce your options later.

You can also opt for a third-party diagnostics solution. These can be provided in a model where you pay upfront for the software, or in a Software as a Service (SaaS) model that will significantly reduce your upfront costs. The SaaS model is an especially good one for smaller operators who cannot afford to purchase the software outright.

When considering a third-party solution, look for one that supports more than one fiber equipment vendor. Obviously, it should support the platform you plan on initially deploying, but preferably also other popular platforms, since you may well decide to change equipment vendors in the future.

A diagnostics solution will resolve outages more quickly, reduce the number and length of truck rolls, improve the quality of new installations, and increase efficiency in the Call Center, all of which lead to lower costs and a better experience for your customers.

Outsourcing diagnostic capabilities allows you to focus on delivering high-speed internet services, without diverting resources to developing and maintaining diagnostic tools. Third-party solutions also offer scalability to accommodate the growth of your broadband network and subscriber base. This is especially true if you go with a SaaS model, where you only pay for what you need as you need it. You should also receive regular updates and improvements, ensuring that you have access to the latest features and enhancements.

Overall, a third-party diagnostics solution can offer you a cost-effective, scalable, and flexible solution that will help you ensure high network reliability and customer satisfaction.

Broadband Diagnostics

How we can help

TruVizion is a web-based application for fiber and cable operators that provides comprehensive diagnostics data to help you increase operational efficiency, reduce costs, and improve the subscriber experience.





ADDITIONAL VALUE-ADDED SERVICES

In addition to broadband connectivity, there are opportunities to provide additional services over your new network that will provide more value for your subscribers and allow you to get a faster return on your investment. traditional “Triple-Play of Data, Voice and TV service can enhance your value for subscribers and elevate you in a competitive market. You can offer a bundle of services at a discounted price, while increasing your Average Revenue per User (ARPU). In addition, the more services a subscriber receives from you, the less likely they are to move to a competitor.

Voice Service

Offering a Voice over Internet Protocol (VoIP) service leverages your high-speed internet connection to provide phone service for residential and business customers and offers your subscribers significant advantages over traditional telephone systems. You can generally offer more features for less cost with VoIP, including those that will enhance productivity and collaboration for business customers. Also, with the growing trend towards remote work and virtual meetings, VoIP offers the flexibility necessary to support the communication needs of modern businesses and individuals. By offering VoIP services, you can not only expand your service offerings and increase average revenue per user (ARPU), but also enhance customer satisfaction and your competitive standing in the market.



Building an In-House VoIP Service

There is a lot that goes into building and managing your own VoIP service, so you should consider this carefully. Depending on what you decide to do on your own, you could be responsible for the technology itself, encompassing managing phone numbers and number ports, E-911, CPNI requirements for protection of customer call records, and compliance with FCC regulations like STIR/SHAKEN for validating caller ID data and mitigating robocalls. VoIP systems are also susceptible to various security threats, so you will need to ensure you have fraud protection in place.



Partnering with a Third-Party VoIP Provider

Partnering with a provider of cloud-based voice services can remove most of the challenges mentioned above. You will significantly reduce your upfront and ongoing management costs and be able to offer a full-featured voice service for your residential and business subscribers much more quickly.

Be sure to choose a reputable provider that meets your requirements in terms of features, scalability, reliability, and cost. Some will provide white label service that allows you to brand the VoIP service so it aligns with your other services, improving brand recognition with your subscribers. Be sure that the provider you choose complies with all regulatory requirements, such as E911, CPNI, CALEA for lawful intercepts of phone calls, and STIR/SHAKEN.

Make sure the voice provider offers voice services specifically for business customers, including a hosted IP-PBX with features like auto attendant, extension-to-extension dialing, IVR, and unified communications features such as video conferencing, screen sharing and a mobile app. Finally, a VoIP provider that also offers subscriber support for their voice service is a plus. If you take on voice support that will mean additional skills and knowledge on top of supporting the subscriber's broadband connection.

Ultimately, the decision between building in-house VoIP service or partnering with a third-party depends on factors such as your organization's resources, expertise, scalability requirements, and strategic objectives. Large providers generally build their own service from scratch. For everyone else, a reliable, cloud-based voice provider can get you in the voice business much faster and for much less—both upfront costs and ongoing operational costs—and with little if any equipment in your network. You will also be better able to focus your efforts on providing your subscribers with the best broadband connection possible, while also offering them a key service that makes additional use of that connection.

Voice over Internet Protocol (VOIP) is an attractive option for businesses looking to improve the handling of phone calls, boost the management of messages and perform work remotely.

VoIP

How we can help

With ZCorum's VoiSelect Hosted VoIP you can quickly roll out affordable and reliable voice service with no capex costs and none of the headaches associated with managing a voice network.



TV SERVICE

Offering a TV option alongside your internet connectivity is a strategic move rooted in consumer demand and market competition. You may think that a traditional TV offering is no longer in demand, but there are still subscribers who prefer a linear TV experience as one of their options for video entertainment. The ability to watch local news and live sports is one key reason. You can add value to your broadband service by offering an IPTV service to your subscribers. Like VoIP, when you offer IPTV, you leverage your broadband connection to provide customers with a Pay TV service similar to what they would be used to with cable TV.

Yes, customers like the freedom and original content of Subscription Video On Demand (SVOD) streaming services like Netflix, Disney+, or HBO Max, but many are suffering from subscription fatigue as they add up the monthly costs of those services. With IPTV you can offer a consistent TV option with local and national TV channels that will supplement other streaming services they may subscribe to from time to time. This convenience factor enhances customer retention and loyalty, as subscribers prefer streamlined billing and support from a single provider rather than managing multiple accounts.

Also, in a competitive market, offering TV services allows you to differentiate yourself and attract a broader customer base. Even with today's streaming environment and cord cutters, by packaging internet and TV together, you can offer competitive pricing and value-added bundles, which are particularly appealing to households seeking cost-effective solutions.

Building an in-house TV service or partnering with a third-party provider involves various considerations. As before, unless you are a large operator, it may be best to partner with a provider of turn-key video services. Here's an overview of each option:



Building an In-House TV Service

You will need to secure content for your TV service. You could do this by signing licensing agreements with content providers on your own to offer a wide range of channels and on-demand content. This involves negotiating contracts and managing those rights over time. You can also work with aggregators of content that will provide packages of content for you.

You will need to invest in the necessary infrastructure to deliver TV content to subscribers. This includes content delivery networks (CDNs), servers, and set-top boxes (STBs) or streaming media devices.

You could develop a user-friendly interface for navigating channels, accessing on-demand content, and managing subscriptions. This may involve designing custom STB software or developing streaming apps for various platforms. However, you can also acquire an existing TV middleware solution, so you do not need to develop your own.



Partnering with a Third-Party TV Service Provider

Even if you acquire content and middleware from third parties, and do just the video technology on your own, that is still a heavy burden for many operators. You can instead work with a turn-key provider that also minimizes the equipment you will need in your network. Be sure to choose a reputable provider, and preferably one that also provides the content for you, with a comprehensive selection of channels, on-demand content, and advanced features.

Obtaining and maintaining your own content agreements can be a huge, ongoing headache. It would best to use a content aggregator, and even better if the third party providing the video infrastructure also provides the content and handles those agreements. Also, don't forget that your subscribers will want access to local stations, not just national content. A content or video provider that can get that set up for you is a plus.

In summary, when comparing the costs of building and maintaining an in-house TV service with the costs of partnering with a third-party provider, consider factors such as content licensing fees, infrastructure investment, and ongoing operational expenses. Unless you are a relatively large broadband provider, you will likely find it much more economical to use a good third-party provider.

TV Service

How we can help

Our fully-featured IPTV solution delivers national and local broadcast channels to your subscribers' big screens, PCs, laptops, or mobile devices in their home.





SUBSCRIBER TECHNICAL SUPPORT

Offering responsive, knowledgeable and friendly technical support is essential to the success of your broadband business. The quality of support you provide is a huge factor in customer satisfaction ratings and generating positive (or negative) word of mouth. As with other aspects of your new broadband business, you will need to decide whether it makes sense to build your own technical support organization, or to outsource that to another company. When comparing in-house broadband end user support to outsourcing support, there are several key considerations to keep in mind.

Setting Up an In-house Technical Support Organization

Even if you have a call center today for other services you offer, it's important to note that broadband technical support requires an expanded skill set well above and beyond what is needed for general customer service requests and billing questions. Agents will need to be ready to address subscriber questions regarding your broadband service, including diagnosing and resolving technical issues.

An in-house team provides you with direct control over the training, support processes, and the quality of support provided to end users. In-house support staff are typically located within the same organization, providing quick access to your entire team when issues arise.

An in-house team provides you with direct control over the training, support processes, and the quality of support provided to end users. In-house support staff are typically located within the same organization, providing quick access to your entire team when issues arise.

However, setting up a broadband support center can be a significant undertaking for new service providers. Your technical support organization needs to be in place from the very first subscriber, and if you want to offer support 24 x 7 x 365 you must start with a team big enough to effectively cover those hours regardless of the number of subscribers you have. You also need to be prepared to handle fluctuations in support needs, such as staffing during peak hours versus dead times, and handling support calls during service impacting events when call volumes will spike. Of course, your capital and operational expenses will continue to increase as your subscriber base does.

Outsourcing Technical Support

There is also the significant investment in initial recruitment and training of new representatives, their salaries and benefits, and ongoing training so agents stay sharp and on top of the latest technologies, applications, and devices. Finally, there are the usual facility costs, including space, power, agent workstations, call center software, and the phone system.

You will likely find that outsourcing technical support is much more cost-effective as it eliminates the need to set up and maintaining a full-time in-house team and all of the associated overhead costs that entails. Your first subscriber who calls will have access to a broad pool of talent with specialized skills on day one with no upfront investment. A support provider can also more easily adapt to changing staffing needs without the overhead of hiring and training additional agents. And as your subscriber base grows your support costs will be linear and predictable. There are various options available, so look for a provider that specializes in broadband services, including the technology and equipment that you are deploying.

If you will be outsourcing, it is critical to find the right support provider. While it might be tempting to go with the lowest priced provider, their performance will be a reflection of your service. A driving factor for low-cost support providers is often to get the customer off the phone as quickly as possible so they keep their costs down. A quality provider of support services will rate their agents on call resolution and will be less concerned about "Talk Time" if the agent is handling the call efficiently and effectively.

Call center outsourcing comes with a network of well-trained support staff that can handle customer needs. These agents are trained with the technical ability to enhance customer relationships and they can handle queries with speed.

Some support organizations can provide advanced support services, such as assistance with home networking. This can be important for customer satisfaction, as most connectivity questions and complaints from customers are related to their home network. Even if you are not providing the home router, subscribers will often blame their service provider for router and networking issues. Helping subscribers who have networking questions and issues can elevate your service above your competitors and boost subscriber satisfaction. Finally, choosing a provider that has support agents based in the United States is a plus if you are a U.S. based operator.

Ultimately, the decision between in-house and outsourced support depends on factors such as budget, organizational size, technical requirements, and strategic priorities. Some organizations may find that a hybrid approach combining elements of in-house and outsourced support offers the best balance of control, cost-effectiveness, and scalability. For example, you may decide to provide support during regular business hours with your own staff, and only use an outsourced support option for after-hours and/or weekends. Some can also provide overflow support at any time if your agents get too busy. Outsourced providers can offer flexible pricing models tailored to your needs.

End-User Support

How we can help

ZCorum has the experience, the team and the know-how to keep your customers happy and online. We help with the customer's connection, whether on a PC or mobile device, applications like web browsers and email clients, and we'll troubleshoot home networking and WiFi issues.



BROADBAND USAGE ANALYTICS

As a broadband provider, having access to comprehensive broadband usage analytics can help you make intelligent decisions related to your infrastructure expansion needs, which broadband speeds and packages you should be offering, and which of your subscribers would benefit from an upgrade.

Bandwidth usage analytics refers to the process of monitoring and analyzing data consumption on your network. This data can include information such as the volume of data transferred, the types of applications or services consuming your network's bandwidth, and peak usage times. By gaining insights into bandwidth usage patterns, you can optimize network performance, identify potential bottlenecks, enforce policies, and plan for future capacity needs.

Tracking overall bandwidth usage patterns over time will allow you to forecast likely future usage, aiding in your broadband infrastructure planning. Some usage analytics tools can associate your overall network traffic usage with individual subscriber usage and the broadband packages you offer, providing additional insight into which subscribers are good candidates for upgrades. For example, some tools will report on which subscribers are exceeding the configured bandwidth in their broadband plan, and who therefore would benefit from upgrading to a package with more throughput.

Some usage analytics tools leverage IP Flow data to provide real-time visibility into the traffic flowing through your network. These tools provide detailed insights into the packets traversing the network, including the source and destination, and the type of traffic, such as bandwidth-hungry applications like gaming, streaming, and social media, as well as specific services like Netflix and Facebook. By categorizing traffic and analyzing its origin and destination, you gain a comprehensive understanding of network usage. This allows you to monitor bandwidth activity closely so you can see which services are most important to your subscribers, and also helps you detect potential threats to your network.

By implementing bandwidth usage management in a “net-neutral” way by fairly enforcing bandwidth usage limits based on your pricing tiers and network use policies, you will reduce costs and provide opportunities for more revenue.

Bandwidth usage analytics are indispensable for maintaining optimal network performance, ensuring quality of service and right-sizing of customer packages. By leveraging a combination of network monitoring software and analysis tools, you gain actionable insights into your bandwidth use and make better informed decisions.

Usage Analytics

How we can help

Our cloud-based application collects and analyzes network traffic and resource utilization helping you gain insight into real-time usage patterns and behavior on your DOCSIS and Fiber networks.





MARKETING AND PROMOTION

You play a crucial role in ensuring seamless internet access for your subscribers, however, merely offering a high-speed internet connection isn't enough to thrive in the industry today. Effective marketing and promotion are essential for attracting and retaining subscribers in a competitive market. Even if you are entering a relatively unserved market without competition, it is still important to get the word out so potential customers will understand the benefits of subscribing to your broadband service. The more subscribers you sign up, the faster you will recover your investment, and the more revenue you will have to invest back in the network so you can continue to deliver a quality connection for your subscribers.

Developing targeted marketing campaigns allows you to reach specific subscriber segments and highlight the unique features and benefits of your network and services. By analyzing market demographics and consumer preferences, you can tailor your messaging and promotional offers for target audiences, increasing the effectiveness of your marketing.

Leveraging multiple channels, including digital advertising, social media, and traditional media, maximizes your visibility and reaches across different subscriber segments. By maintaining a consistent brand presence across multiple touchpoints, you will reinforce brand messaging and drive subscriber engagement and loyalty.

Offering promotional incentives, such as discounted pricing, bundled services, or free installation, can incentivize new subscriptions and encourage subscribers to switch from competitors. You should periodically launch promotional campaigns to capitalize on seasonal trends, events, and competitive opportunities. Additionally, loyalty programs and referral incentives can reward existing subscribers for their continued patronage and encourage loyalty to you.

Continuously monitoring and analyzing marketing metrics is essential to refine strategies and optimize return on investment. By analyzing data-driven insights, you can refine your marketing strategies and allocate resources more effectively to achieve your business goals and objectives. To effectively reach and retain customers, you'll need these marketing strategies.



Brand Visibility and Recognition: Effective marketing efforts increase brand visibility and recognition among potential subscribers. By highlighting unique selling points and benefits, you can differentiate yourself in a crowded marketplace.



Customer Acquisition: Marketing services help attract new subscribers by showcasing the value proposition of broadband services. Whether through digital advertising, social media campaigns, or targeted promotions, marketing efforts drive subscriber acquisition.



Customer Retention: Retaining existing subscribers is as crucial as acquiring new ones. Marketing services aid in nurturing subscriber relationships through personalized communications, loyalty programs, and proactive subscriber support, reducing churn rates.



Market Research and Insights: Marketing services provide valuable market research and insights, helping you understand subscriber needs, preferences, and competitive landscapes. This data enables informed decision-making and the development of tailored marketing strategies.



Product and Service Innovation: Feedback obtained through marketing channels facilitates product and service innovation. You can identify areas for improvement and introduce new offerings that resonate with target audiences.

If you find that you do not have the personnel to manage a comprehensive marketing effort, you can work with a marketing services company to provide supplemental assistance, or they can do it all for you. Look for a company experienced in marketing broadband services, and that is knowledgeable in traditional and new media.

Marketing

How we can help

ZCorum and PopSycle Digital can amplify your marketing efforts, whether you have an existing marketing team or are doing it all on your own. We will work with you to design effective campaigns that will bring in new customers, and that will maximize revenue from your existing residential and commercial subscribers.





CONCLUSION

As you prepare to embark on the journey of launching your broadband network, it's crucial to prioritize meticulous planning and execution across every facet of the deployment process. From device activation to cybersecurity, compliance with regulatory standards to delivering exceptional subscriber support, each component plays a pivotal role in your success beyond simply building a quality broadband network.

Now is the time to evaluate your current readiness and identify challenges, opportunities and areas where improvements are needed. Engage with your team, collaborate with industry partners, and leverage the expertise of professionals in the field to address any gaps and overcome challenges.

Remember, the goal is to provide your subscribers with reliable, high-speed broadband connectivity that meets their needs and exceeds their expectations. By focusing on the essentials outlined here, you can lay a solid foundation for the successful launch of your broadband service and position your organization for long-term growth and success in the competitive broadband market.

ZCorum is ready to help you build your broadband business. If you require assistance or guidance at any stage of your network deployment journey, please contact us. Our team of experts is here to help you navigate the complexities of broadband network deployment and ensure the success of your project. Together, we can turn your vision of next-generation connectivity into reality.



800-909-9441

ZCorum provides a suite of broadband diagnostics and managed services to cable companies, telephone companies, utilities, and municipalities. As broadband providers face greater complexity and competition, ZCorum continues to help operators increase operational efficiency and reduce costs, while improving subscriber experience. This is achieved through ZCorum's diagnostics solutions for DOCSIS, DSL and Fiber networks, plus managed services that include data and VoIP provisioning, residential and commercial VoIP service, branded email and Web hosting, along with 24x7 support for end-users. ZCorum is headquartered in Alpharetta, GA. For more information, please visit [ZCorum.com](https://www.ZCorum.com).

