

Communications & High Tech

Keys to a successful fixed-access broadband deployment

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Strong market forces are propelling today's network operators toward an all-IP or next-generation fixed-access network. Such an infrastructure represents a significant cost in a difficult economic environment, so effective planning, management and deployment are essential to achieving high performance.

Although some traditional operators are considering whether to try to eke out a few more years from their legacy copper networks, Accenture believes that for most providers, a fiber-based solution for a high-speed broadband network (referred to as "FTTx," meaning "fiber to the" home, or to buildings or to "x" other kinds of locations) will be most cost effective (and most revenue generating) in the long run. It can also support growth by helping operators make a better transition to an all-IP network architecture.

Given competitive and regulatory challenges, making the right deployment decisions in several key areas is critical to making the business case. Civil engineering and in-building cabling represent a majority of the costs and complexity when deploying FTTx technologies. Dealing with those challenges requires selecting a network architecture that supports cost-effective scaling over time as more customers switch to high-speed broadband services.

Just as critical is the right network strategy, as well as effective network planning and engineering. Industrializing deployment to keep costs low and mitigate risk will be essential to realizing an adequate return on a company's investments in high-speed broadband networks.

Assessing the impact

Accenture analysis and experience highlight the fact that fixed-access broadband deployment has wide-ranging effects on an operator's organization, process-

es and systems. Therefore, taking the time to assess readiness for change and the deployment itself can reduce risk, shorten deployment time and keep costs low. Network creation and service fulfillment processes will be severely affected, as will the workforce.

The faster pace of service creation and the proliferation of products and services enabled by high-speed broadband networks will have significant impacts on support systems, including CRM applications and other aspects of the business support system (BSS) and operations support system (OSS).

Mitigating these impacts requires several relevant activities on the part of operators:

- Network deployment plans that can be managed more flexibly and cost effectively, supported by appropriate tools for better network planning and engineering.
- Tailoring of management process flows (for example, fulfillment, assurance and billing) to the technical and business requirements of new technologies, products and services.
- Proper training for customer service agents, sales operators and, especially, the field service force. Field engineers must be equipped with new diagnostic, testing and troubleshooting tools.
- The development of more open OSS and BSS architectures to enable the ongoing incorporation of new technology and management systems.

Keys to success

Based on Accenture experience with next-generation network deployments for global operators, the following are important points to bear in mind to drive successful deployment at less risk and cost.

Work closely with regulators

Broadband deployment is usually a national project,

because it affects a country's entire communications ecosystem as well as the citizen services that the network supports.

If individual operators act without sufficient coordination, the risks of high costs, redundant efforts, long development times and other inefficiencies are very high.

Governments and operators must agree to common rules of the game before any companies begin fiber deployment projects.

Industrialize deployment wherever possible

Civil engineering and in-building wiring are some of the most expensive tasks in FTTx deployments. Reducing the costs of civil engineering and deployment at customer premises depends on improving automation and coordination to enable more industrialized, standard and lower-cost deployment.

Reuse and share infrastructures

Sharing network access infrastructure is one way to reduce installation costs and time to market. Multiple network operators can cooperate on infrastructure creation; in other cases, they can use existing ducts actually owned by gas or electric companies. This reduces the costs for civil engineering and cabling within buildings and also speeds time to market for new services.

However, operators must carefully manage the risks of infrastructure sharing. Different companies may have significantly different network designs, so it's important to work explicitly on how to bring those designs together in a shared fiber deployment.

One way to reduce risks is to create an oversight company, funded by multiple operators, that is responsible for operating and administering the infrastructure for all participants. Another way to mitigate risks is by creating a register of infrastructures. That is, governments will collect and make available on a shared database or register a record of existing infrastructures. This can speed network planning and reduce the costs of deployment.

Operators can also improve the efficiency of infrastructure creation by deploying more fiber at the start to anticipate demand and share costs. For example, Swisscom is using a multiple fiber deployment approach, sometimes using up to four fibers. The company uses two, and two others are left for the

partners contributing to the digging—municipality or local Internet service providers. The partners directly manage their own deals with the landlords for the cabling within the building.

Use simulation tools for pre-launch testing

Mitigating risks involving service quality and capacity on the new network can be accomplished through simulation tools. By simulating customer usage within a computer model of the network, companies gain the ability to test and optimize the network prior to launch. Initial impressions that customers receive of high-speed broadband services stay with them a long time, so it is vital that the first impression be a positive one.

Work with marketing and branding from the beginning

Next-generation network deployment is so engineering-intensive that it is easy to forget that the fiber itself is just the medium for the ultimate value to be delivered—innovative and differentiated services to customers. Therefore, network and IT groups must engage from the beginning with marketing experts to ensure that not only the technical dimensions but also the processes and business capabilities are in sync. And fiber deployment must be accompanied by innovative thinking about the service offerings that will run over the network—another reason to involve marketing from the start.

Have robust customer service capabilities ready to go

Customer service is another capability to develop or augment in parallel with technology deployment. The rollout of new, high-speed broadband services will result in a spike of customer contact calls, so companies must be ready. Lower-cost options for contact centers need to be considered, including outsourcing options and customer self-care capabilities over the Web or via next-generation interactive voice response systems.

Use outsourcing providers as a source of skills and high-quality delivery

Labor also represents another significant cost of network deployment, so operators must ensure that they are getting the best return on their workforce investment. Companies must carefully assess the skills and capabilities they have in-house, and use qualified outsourcing providers and other contractors as necessary to shore up areas of capability

deficits. Experienced field workers can make a significant difference in terms of cost and time to deploy. Coordinating multiple vendors and players, as well as internal and external processes, typically requires specialized expertise to limit costs and improve efficiency.

Managing a successful broadband journey

Although some skepticism remains in the marketplace about the possibility of generating profitable growth in the short term with high-speed broadband networks, most operators realize this is a journey they must undertake.

New services and devices are demanding higher bandwidth. The loss of customers to providers offering higher speeds is a considerable threat, because winning those customers back will be extremely difficult. Government incentives also play a role, as officials now realize how essential national broadband capabilities are to global competitiveness.

Careful planning and industrialized approaches leveraging proven deployment techniques will be essential to generating profitable revenues more quickly, and to realizing the broadband business case in the long run. Skills and experience also matter. Together, these capabilities can advance an operator down the path to high performance in the exciting and challenging broadband years ahead.

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