

## **Sustainable Rural Technology Market Development**

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Today I would like to share with you ideas and perspectives on our approach to the rural telecommunications market in Alaska and to discuss some of our strategies in creating a successful—and hopefully sustainable—marketplace. While this presentation depicts our work in Alaska, I believe other companies can adopt similar strategies to achieve comparable results.

My experience in two very different roles helped shape my perspective on rural technology development. For ten years, I was the technology director in the North Slope Borough School District in Barrow, the most northern community in the United States. As the technology director, I developed and deployed a successful, award-winning distance-learning and technology program. That significant and worthwhile experience in one of the most rural communities in the nation led to my current work for an Alaskan-based integrated telecommunications provider. As the vice president of broadband services, I direct our major rural initiatives, bringing leading technology to remote villages. Having experienced the challenges in rural Alaska at first hand, I find my current work extremely rewarding.

### **CHALLENGES IN RURAL MARKETS**

The high cost of providing services in rural markets can daunt the most stable company. There often is a poor existing infrastructure, which hinders even basic business operations. As a telecommunications provider, we know quite well the high costs required to build and maintain telecommunications infrastructure in rural areas. In addition to challenging infrastructure issues, there is a limited customer base, making sales, installation, and maintenance costs prohibitive, with few corporate customers bankrolling the community.

### **MEET COMMUNITY NEEDS, CREATE SUSTAINABLE PROGRAMS**

But despite the challenges, technology companies can successfully provide services to rural communities without breaking the bank. To deploy infrastructure in small, rural markets, companies need to view the market comprehensively. In other words, they cannot just set out to serve the few large customers and expect

to develop a sustainable program. Most of the large customers in rural communities—governments, school districts, and health providers—are controlled by local boards, made up of local residents. If companies want to provide services in these markets over the long term, they cannot ignore the overall needs of the community.

In order to create sustainable markets, you must first create stable markets. First, you need to address the high turnover rate of technology staff that confronts small communities. While it is difficult to attract solid technology staff in any market, it is especially challenging in rural villages that rely mostly on imported labor. Technology workers often think they are heading to a backwater that will only stagnate their careers. Therefore, the entity with the most technical depth and stable technical workforce is the telecommunications provider. So, how do you take advantage of that? Develop comprehensive products.

One approach embraced by GCI is to develop managed services and internal programs to support them. While we have several examples of managed services, our managed Internet program for K-12 schools—SchoolAccess—generates the most revenue and attention. SchoolAccess is a comprehensive, bundled product designed particularly for K-12 schools that includes Internet content filtering, e-mail and e-mail filtering, web hosting, security, network services, 24-hour help desk support and just this year, live, two-way communication distance-learning tools.

Our comprehensive, managed service products such as SchoolAccess have enabled us to develop strong relationships with key customers and anchor tenants, including schools. Our customers often view us as their partners in their technology endeavors.

## **PARTNERSHIP DEVELOPMENT**

Developing strong relationships with anchor tenants helps companies build trust and ensure reliability. Customers and companies can work together to seek funds from public agencies. In the United States many federal, state, and local government agencies have a responsibility to promote equity between rural and urban communities. Many view telecommunications—especially access to the Internet—as a core requirement. Providers must recognize that they need to develop products and services that enable customers to leverage the funding, and consequently their buying power, within the scope of the funding agency's mission.

For example, in 1997 the United States Congress enacted a law that provided discounted Internet service for K-12 schools and public libraries. This Universal

Services Fund—or E-Rate—provides up to 90% discounts for rural schools across the U.S. However, the program funds more than just Internet access; it also pays for bundled Internet services delivered as a managed service product. With E-Rate in particular, the provider needs to understand the funding agency's program and create products and services that permit the school districts to maximize their funding.

SchoolAccess allows school districts to leverage their E-Rate funding and purchase comprehensive, completely managed Internet and distance learning services. SchoolAccess enables school districts to concentrate on integrating technology and distance learning into their classrooms to expand educational opportunities for students, rather than implementing and supporting technical infrastructure. What would be the alternative option for schools? To hire a technical staff person to design, build, and support the infrastructure and, in all likelihood, watch the program fail when that technology coordinator left to make more money working for a company. Unfortunately, this has been the fate of many Alaskan schools over the years.

### **LOCAL TRAINING AND RECRUITMENT**

But while managed services help to sustain technical programs in rural communities, they are not an end-all solution. They just provide a solid platform on which to build more advanced services. In order to provide ownership and sustainability of more advanced applications and to reduce the turnover rate, companies must work to recruit and train local technical personnel.

The Maniilaq Association, a health corporation located in the northwest Alaskan town of Kotzebue that serves 12 villages, provides an excellent example of how local training and recruitment can lead to the successful implementation and expansion of technology in rural communities. Seven or eight years ago, leaders of the Maniilaq Association started to discuss the important role telehealth could play in their region; however, they did not have the telecommunications infrastructure or the experience to deploy such a program.

In the late 1990s, the Maniilaq Association purchased a managed communications service from GCI, and began an aggressive recruitment and training program of local high school and middle school students who expressed an interest in technology. While the health corporation obviously did not hire the middle school students, Maniilaq leaders established solid relationships with these students and hired them as they graduated. A couple of the students have gone on to college, and return each summer to work. Many expect to return to Kotzebue after graduation to live and work in their home community. Today Maniilaq has a

staff of 20 well-trained local technicians who have implemented the most advanced tele-health program in our state. While GCI still manages the telecommunications platform, Maniilaq owns the tele-health application and has made it successful with a well-trained staff that has virtually no turnover. The Maniilaq Association has evolved from a state of dependency on GCI to independence.

### **BEYOND THE BASICS**

You can implement all of what I have described so far in what my colleague from the University of Alaska calls “silos”—a single-purpose network for each customer. However, this shortsighted approach will not lead to a sustainable program. To be sustainable, the provider needs to design an efficient and flexible delivery platform to maximize the management and sharing of bandwidth. When you get that anchor tenant, you cannot just invest in the minimum amount of equipment required to deliver its services. You must invest in a platform that enables you to lower your incremental costs for additional services, especially if you expect to implement low-margin community services such as Internet access.

Finally, you should educate communities about the value of technology and of being connected to the outside world. Let local residents experience and learn how online technologies and participation in the worldwide Internet community can help improve their lives. At GCI, we provide low-cost broadband Internet service in the villages we serve, to help connect our customers. While not a profitable venture, it begins to build awareness and community support for technology and telecommunications services. And after all, those community members often sit on the boards of the anchor tenants you need to make this strategy succeed.