



Gigabit Coast

Taking Control of Our Own Broadband Future

2015 Gulf Coast Masters

Making the Case for Fiber Infrastructure

Overview:

In order to compete in today's connected world, the MS Gulf Coast needs an ultra-high-speed fiber network which produces speeds of 1 Gigabit or higher (200 times faster than conventional home speed) for all of its citizens, businesses, and education institutions.

Several communities are building ultra-high speed fiber networks on their own and producing revenue streams for themselves.

Benefits

- Communication
 - Like the interstate system revolutionized the way we travel, high speed internet will revolutionize our connectivity, community, and commerce. Imagine all the competitive advantages I-10 brought to the MS Gulf Coast.
 - ***A Must have for instantaneous communication***
- Jobs
 - More jobs, better jobs, and better paying jobs
 - Necessary to compete in the global economy
 - Unleashes innovation - inspires entrepreneurship, attracts residents, innovates businesses
 - Necessary to address Innovative jobs, industries, and economies
 - Will reverse the "brain drain"
 - ***A Must have for future development***
- Education
 - Gateway to 21st century educational opportunities including distance learning
 - Foundation for students to compete globally
 - Attract students currently outside of the State and retain ***our*** best and brightest
 - ***A Must have for students***
- Quality of Life
 - Better healthcare access (tele-medicine)
 - Better and new work opportunities (tele-commuting)
 - Better education, better access to global educational institutions (tele-education)
 - Overcoming the digital divide
 - Increased One Coast collaboration
 - ***A Must have for future lifestyles***

The Chattanooga High Speed Fiber Experience

In 1969, Chattanooga was named the “Dirtiest City in America” by Walter Cronkite. It was a national embarrassment and a wake-up call for city leaders. Leaders knew that to clean up the environment, their economy, and their image, they would need to diversify local business to have an even distribution of commercial and industrial jobs.

An effort toward revitalization was made with the creation of the Tennessee River Park Master Plan. The revitalization of the riverfront area which had been a major community endeavor culminated in a 120 million dollar public private investment which became the catalyst for major economic development in the city.

City leaders had a vision of branding the entire metropolitan area to attract business, workers, tourists, and new residents. Their tag line became, “Educated people with good jobs living in a great place.”

Chattanooga has created a “one stop shop” for permitting. This includes permitting for the entire county and cities within the county. This also includes most state and federal permitting. They boast that you can open a business in one day.

COLLABORATION

The Chattanooga Metropolitan Area has remarkable collaboration among government leaders, business leaders, organizations, and the general public. Whether you are listening to a non-profit group speaking, having a one on one talk with a city leader, or sitting down in a restaurant for a meal, everyone has the same message. They seem to know their history, the path to the present, and that Chattanooga is a place within which they are proud to live, work, and play. There is a strong sense of pride with whomever you come in contact.

Amazingly, the collaborative area consists of 3 states (Tennessee, Alabama, and Georgia), 16 counties, and 84 communities. Working together at that large scale is a true testament that change can happen. Area leaders said they did have some resistance at first from some of the more rural outlying communities to the banding together idea, but with change came new mind sets. People began to see improvements in amenities, the economy, and opportunities while the big picture began to emerge.

The revitalization and rebirth seemed to set a common goal and vision for people and brought them closer together. One of the major projects was the revitalization of one of the historic bridges in town. The bridge was slated for demolition, but the community came together and raised millions of dollars of private funds to save the bridge. The bridge is now the beautiful centerpiece of the Riverfront Development. It is open only to pedestrians and is enjoyed by sightseers, outdoor enthusiasts, walkers, and runners every day.

An advantage that the Chattanooga area has is the generous corporate sponsors that have local ties to the area such as Coca Cola, Ford Automotive, and Chattem Chemical.

These large companies have subsidized many of the revitalization projects and events. Additionally, these large corporations continue to act as Venture Capitalists to provide opportunities for new start-up companies to succeed.

This community pride, vision, corporate sponsorship, change in mind set, venture capitalization, and spreading the same story would not be possible without constant and continued communication amongst leaders, organizations, and citizens.

SYNERGISTIC OUTCOMES

Due to the Chattanooga area's forward thinking, vision, and collaboration, Chattanooga has become a very "cool" and vibrant community with lots of opportunity. Below are a few of the new endeavors that have been sparked by the changes.

- **NEW INDUSTRIAL OPPORTUNITIES** - In 2008 Volkswagen announced Chattanooga as the site for its new 1 billion dollar assembly plant. The president of Volkswagen Group of America cited the "civic spirit" in Chattanooga that made the difference. Chattanooga's spirit of collaboration was captured in the new mantra "Working together works".
- **BROADBAND** - In parallel with the riverfront revitalization and the return of major industry the city's publicly owned utility authority Electric Power Board (EPB) embarked on a strategy to significantly upgrade the electric power distribution of the city. EPB had a long term goal to make the power grid a community asset that would aid in economic development.

EPB installed 1,200 IntelliRupter switches, 170,000 Smart Meters, and a comprehensive fiber optic network (9000 plus miles of fiber). The upgraded power grid reduced power outage duration by more than 40% and services a 640 square mile area. A smart grid management system was installed capable of collecting up to 6 billion data points annually.

EPB worked closely with the community to take the upgraded power grid's ability to the next level. EPB's fiber infrastructure created the possibility of providing affordable publicly owned internet service with one gigabit per second speed to more than 150,000 homes over two states. The resulting service gave Chattanooga leverage to further develop technology based commerce for the area.

Today Chattanooga is using that leverage to further the development of industry, academia and the workforce. Public and private sponsored business incubators serve to nurture technology based industry while local universities and private investors take full aim at developing a work-force ready to provide the next generation of innovation. The results of high speed broadband implementation have stimulated a metro-wide enthusiasm for entrepreneurship and technology based commerce.

- **CO.LAB** – A think tank has risen from the technology boom in Chattanooga. Co.Lab was created to make Chattanooga a more creative and vibrant place that would attract and retain innovators and entrepreneurs alike. Walking into the CO.LAB center is what you imagine Google headquarters to resemble. CO.LAB is an incubator for inventors and entrepreneurs who have that idea for the next big thing. It is a 14 week intense collaboration that bring an idea forward into a working business plan. At the end of the session the idea is pitched to potential investors at a large launching event. According to the organizers, the events are like the Shark Tank television show except friendlier.
- **TECH TOWN** – An after school and summer learning environment for youths ages 7-17. TechTown is a technology and entrepreneurial learning center which is open year-round and offers exposure to the latest technology. They are dedicated to inspiring the next generation of innovators. Tech Town strive to provide exposure to all skill levels and demographics. They offer unique experience that the kids would not ordinarily be exposed to such as 3D printing lab, cinematography lab, gaming development lab, etc. The kids also developed life skills by developing their products, pitching their products to investors, and possibly having their products put into production.
- **CENTER CENTRE** – Stemming from the demand for User Experience Designers, Center Centre is a one-of-a-kind university setting. The privately funded school offers a two year degree and looks more like a think tank than a typical college.
- **BROADBAND DEPENDENT COMPANIES AND ACTIVITIES** – A large number of companies have popped up around Chattanooga due to the 1 GIG internet service such as: a 3D printing company that provides a 3D model of CAT scan images to assist physicians and surgeons with making more informed decisions and setting up appropriate protocols for patient care; and a shoe company that builds custom shoes to your specifications using 3D printing technology.

1 Gb service has also made it possible for students at local schools broaden their exposure to nationwide research facilities and allow on-call physicians to receive medical records and x-rays at their homes, minimizing after hours trips to the hospital.

- **VISION 2055** - A citizen-led, public-private endeavor to engage people from across the 16 county, tri-state region to make the most of their economic opportunities. The objective of their three-year process is to identify regional values and goals along with a consensus on strategies related to regional economic development, their region's natural treasures, regional transportation,

education, and training that can be implemented for the long-term prosperity of the region.

Summary

Extraordinary camaraderie between city government, regional partnerships, businesses, education, and the public is plainly evident in Chattanooga. There is a common vision, and all sectors share the same enthusiasm toward entrepreneurial and educational efforts made toward a technology based growth strategy. Chattanooga's journey serves as a model for modern day community revitalization starting with a vision translated into a community strategy and ultimately culminating into something greater than the sum of its individual parts.

Recommendations

- Encourage all 15 municipalities and Counties to enter into an inter-local agreement with equal voting power to establish Gigabit Coast.
- Establish an independent entity to facilitate ultra-high speed Internet on the Gulf Coast,
- Establish the Gulf Coast Fiber Ring as a public utility for at least the "1st mile
- Commission an economic impact study for ultra-high speed Internet investment

- Optimize private business investment in providing the “final mile” (trunk line extensions) of Internet service to homes and businesses
- Coordinate Gulf Coast strategies for public education, awareness and digital inclusion with concurrent statewide strategies already in place (For instance, “Connect Mississippi”)
- Affordable, Ubiquitous, Quality Customer Service

Background

Cities that have invested in infrastructure to support ultra high-speed Internet (1 gigabit or higher) have experienced an economic and cultural boon, ushering in new talent, new attitudes and an improved quality of life. Chattanooga, TN and Lafayette, LA have achieved this through establishing a public utility, while other cities like Urbana-Champaign, IL have successfully established a public-private partnership. These are cities the Mississippi Gulf Coast can learn from. While our circumstances are unique, we are positioned to take advantage of one-time funds from BP Oil Spill economic recovery settlements to invest in long-term strategies to make the Coast even better. The Gulf Coast should adopt approaches that have proven to create new revenue and drive growth in the technology sector, transforming the landscape for residents and businesses. Key steps to enable the Gulf Coast to adopt approaches taken in other cities include, but are not limited to:

Cooperation and Transparency

Before the Gulf Coast can achieve and surpass the transformation that other cities have seen with ultra high speed Internet connectivity, cooperation between municipalities and jurisdictions is essential.

Policy and Funding

To enable Gulf Coast jurisdictions to structure a meaningful partnership around developing ultra high speed Internet connectivity, freeing up the use of public funds is a critical first step. Gulf Coast private and public sector entities should partner to support:

- The introduction of state legislation to establish a trust fund for a portion of the state's BP Oil spill settlement, specifically the total \$750 million the state legislature has authority to appropriate, for the 3 coastal counties to invest as needed, with:
 - At least a \$150 million set-aside for investment in ultra-high speed Internet in the 3 coastal counties
 - A substantial set-aside for public education (pre-K to College) on the Gulf Coast to increase technological education designed specifically to benefit from greater access to ultra high speed Internet
- The creation of a mechanism to identify other sources of funding, private and public, for the development and improvement of ultra-high speed Internet infrastructure

Champion for the Cause

To achieve ultra high speed Internet connectivity and the many benefits it brings to all people and all sectors of business, The Mississippi Gulf Coast will have to build and sustain partnerships between the private and public sector. To guide such a partnership, the Gulf Coast must:

- Identify a champion from the private and public sector to take the lead in developing specific strategies to achieve Silicon Coast and once established, develop its capacity to attract private and public investment
- Partner with universities to leverage their already-established connectivity and their collective expertise around the many applications of ultra high speed Internet to attract additional private and public investment

Closing the Digital Divide

To ensure the transformative potential of ultra high-speed Internet for all Gulf Coast residents, access must be affordable and ubiquitous. That is, no child, no adult, no

family on the Gulf Coast should be denied the benefits of ultra high speed Internet due to unavoidable socioeconomic circumstance. Key steps include:

- Establishing affordable access to ultra high speed Internet for low and moderate-income families
- Incentivizing private and public entities making investments in and benefitting from ultra high speed Internet to support related educational and workforce development opportunities, thereby establishing an ecosystem between public schools, local institutions of higher learning and opportunities in new industry