



**Testimony of Brian R. Mefford, CEO of Connected Nation
Before the U.S. House of Representatives
Committee on Small Business**

Subcommittee on Urban and Rural Entrepreneurship

**“Maximizing the Value of Broadband
Services to Rural Communities”**

**Wednesday, May 9, 2007 - 10:00 a.m.
Room 2360 of the Rayburn House Office Building**

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Rep. Heath Shuler, Chairman
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Chairman Shuler and Members of the Committee:

Thank you for the opportunity to speak with you today regarding the important issue of expanding broadband and related technology to the rural areas of the United States.

Connected Nation is a national non-profit organization dedicated to closing the digital divide. Connected Nation is the parent company of ConnectKentucky, our Kentucky-based organization that has served as the “demonstration project” for Connected Nation. It is the “Kentucky story” that I’m here to share with you today.

Four years ago, Kentucky faced the same challenges that are all too common in rural states and communities across the country. The Commonwealth was struggling to use technology-centered solutions to address traditional challenges related to education, healthcare, and government services.

On the economic development front jobs in manufacturing, farming, and mining were leaving the state at an alarming pace, with little evidence that lost opportunities were being replaced with new technology-centric ones.

The results of Kentucky’s technology troubles were not hard to identify. Kentucky consistently ranked low among states in terms of broadband availability and usage, as well as the number of high-tech companies doing business in the Commonwealth. Further, college graduates were leaving in droves, creating a troubling “brain drain” effect.

As we surveyed the landscape for answers, the reality of the situation was troubling indeed. We realized that the foundation of broadband infrastructure was not adequate for creating solutions that could address the challenges of a new day: not adequate to provide widespread access to telemedicine, distance learning and e-government; not adequate for growing or attracting entrepreneurs and industry; not adequate for providing more opportunities to our farm communities and their families where children were leaving their rural roots, never to return.

It was at this economic crossroads that Kentucky determined to become aggressive in addressing technology shortcomings to ensure that communities could come to thrive in this new environment – and ConnectKentucky, Kentucky’s tech-based economic development partnership was born. In an unprecedented alignment of public and private interests, ConnectKentucky, an independent non-profit organization has seized upon the promises of the knowledge-based economy.

Immediately, ConnectKentucky set out to identify the root cause that had resulted in a lackluster technology picture for the state. It was clear that the inadequacy of Kentucky's broadband infrastructure could be traced to much of the state's inability to compete in areas important in the knowledge-based economy. Broadband infrastructure had been built into the state's more populous areas, leaving more rural areas unserved. The lack of service not only created the well-termed "digital divide" for rural residents, it also made it impossible to develop statewide policies that depended upon access to broadband.

Further, it was discovered that broadband availability was only half the problem. The remainder of the challenge related to the actual use of broadband-related technology. Any resulting turn-around strategy had to be comprehensive in nature: addressing both sides related to broadband *availability* and the *use* of broadband and related technology.

Next, the organization identified the barriers that were inhibiting broadband availability and use. In terms of availability there were a series of issues that needed to be addressed. First, very little data existed to allow us to identify the true extent of the broadband gaps in Kentucky. Providers didn't know, policy makers didn't know and communities themselves didn't know. Second, the regulatory environment was creating uncertainty among the provider community and causing a pull-back effect that ensured that investments weren't being made in more risky areas. Third, the cost of entry into rural communities was prohibitive for telecommunications providers of all types.

Challenges related to the use of technology included: lack of appreciation for the value of technology at the household level, lack of cohesive interest in technology at the local level, and lack of state initiatives to encourage awareness and build interest in technology at the state level.

Under the structure of a public-private partnership, ConnectKentucky developed a plan to address Kentucky's broadband challenge. The plan provided the direction for:

- 1) Gaining a better understanding of where we were – in the form of broadband inventory maps. The maps would help promote current service while also identifying the gaps that existed. Data layers would provide additional household information while identifying existing public assets, such as water towers, that could be used to extend broadband coverage;
- 2) Creating market intelligence at a local level to help providers identify investment opportunities and to effectively lower the cost of market entry. Household and business surveys would assist providers in better targeting rural investments;
- 3) Establishing grassroots technology leadership teams at the county level to create local technology strategies across multiple sectors including: local government, business and industry, education, healthcare, agriculture, tourism, libraries, and community-based organizations. The local teams would generate and aggregate demand by identifying ways to better leverage technology in local communities; and
- 4) Developing public-private initiatives that could promote the value of technology, improve technology literacy, and drive adoption among households.

Working in conjunction with Kentucky Governor Ernie Fletcher, the plan was fully developed, funded and launched as Kentucky's *Prescription for Innovation* in October 2004. The plan called for full broadband availability by the end of 2007; dramatically improved use of computers and the Internet; the creation of a meaningful online presence for all local communities; and the establishment of eCommunity Leadership Teams in all 120 counties.

As a result of the implementation of the *Prescription for Innovation*, Kentucky has experienced a technology turnaround. Due to the public-private approach and the very tactical nature of the plan, we have been able to bring all parties to the table to ensure that Kentucky could leapfrog its previous poor standings.

Through the work of ConnectKentucky and its partners, Kentucky's *Prescription for Innovation* has led to the following successes during the last two years:

- Kentucky is recognized as the **national leader** in technology acceleration with the *Prescription for Innovation* repeatedly acknowledged as the national model for states;
- Broadband inventory maps have been created for the entire state, promoting current coverage and allowing providers to better target unserved areas;
- **Broadband availability has increased from 60 percent to 92 percent** of households able to subscribe (on track to reach 100% by the end of 2007), representing 504,000 previously unserved households and more than 1.2 million residents that can now access broadband;
- **Broadband use at home has increased 73 percent**, a rate that has led the nation;
- Broadband use among Internet connected businesses rose from 65 percent to 85 percent;
- **Home computer ownership grew by 20 percent** while the national average rose by 4 percent;
- More than **\$650 million in private capital has been invested in Kentucky** (unprecedented);
- Nearly **2,000 home computers have been distributed** to the homes of underprivileged Kentucky students through the No Child Left Offline program;
- **eCommunity Leadership Teams have been established in every Kentucky county** creating grassroots technology growth plans across nine sectors;
- More than **70 percent of Kentucky counties now operate or are in the process of constructing a meaningful web presence** for e-government and online citizen services, up from about 30% just two years ago;
- **22,000,000+ positive media impressions** have covered Kentucky technology growth; and

At an increasing rate, companies are locating to Kentucky, entrepreneurs are developing businesses in Kentucky, and jobs are growing in Kentucky because the Commonwealth now has the technology infrastructure and an increasing technology-savvy workforce to support business growth.

Over the last two years, more than 14,500 total technology jobs have been created in Kentucky¹. Perhaps the most appropriate place to isolate and measure the direct employment impact of broadband expansion efforts is in the Information Technology (IT) sector. During the same two year period, **in the IT sector alone, Kentucky jobs have grown at a rate 31 times the national growth rate: 3.1 percent for Kentucky versus 0.1 percent nationally.**

¹ Bureau of Labor Statistics (BLS) for two year period beginning January 2005 through December 2006. Includes jobs created in the following NAICS sectors: information; finance; professional, science, and technical; management; and healthcare. Sectors are comprised primarily of high tech jobs and all jobs within these sectors are "technology based". Other sectors include additional technology jobs; however, these jobs are aggregated with other non technology jobs, such as in the manufacturing sector. As BLS does not disaggregate these jobs, they could not be included in the figure above, which results in an understatement in the reporting of technology jobs.

The closing of the digital divide is already yielding dividends in the quality of life for Kentuckians. Computer literacy has increased, the number of high tech jobs has increased, and Kentucky communities are enjoying the return of their children. Consider these developments in higher education related to how Kentucky has addressed the “brain drain” challenge that all states face:

- Today, 86 percent of all Kentucky graduates remain in Kentucky to live and work—a 18 percent increase since 2000;
- Since 2000, there has been a 50 percent increase in the number of out-of-state students who remain in Kentucky;
- For those graduates who came in as Kentucky residents, 95 percent of them now stay; and
- The percent of doctoral degree students who stay in Kentucky has nearly doubled (27 percent to 52 percent).

Today in Kentucky entrepreneurs are thriving; businesses of all sizes are finding an environment ripe for growth; rural communities are finding ways to diversify and provide attractive opportunities for their children; primary schools and universities are connected as never before, providing content and curriculum never before possible. Kentucky has developed a statewide eHealth plan that recently received federal funding as part of an aggressive Medicaid Transformation program. In short, as the broadband challenge has been addressed a strong foundation was established to allow for technology-centric solutions to flourish.

Kentucky as a microcosm has demonstrated the importance of the national broadband discussion and the relevance of technology to America’s ability to compete. Based on our experience in Kentucky, we know that technology diminishes the significance of distance. In the past, opportunities to thrive have depended largely upon one’s proximity to major markets. Technology has made the distance factor irrelevant. In other words, with the availability of cutting edge technology, entrepreneurs can thrive just as well in rural America as places such as New York or Los Angeles. Technology has become the great equalizer for individuals and communities alike – creating opportunities, fueling better education, higher quality healthcare, and better quality of life – regardless of where an individual or community happens to be located.

This same dynamic however represents both a huge opportunity and major threat for the United States. Other countries have invested in broadband towards achieving universal access – and like Kentucky, they have managed to leapfrog their previous standings to become a competitive force. It is the hope of Connected Nation that this Congress can call the country to arms on this issue by conveying the true sense of urgency for action. The nation needs a comprehensive approach that is good for our markets, our entrepreneurs and our communities. No doubt, it is a challenge of historic proportion. Just as previous times called for a national response to the needs for railroads, highways, electricity, and telephone service – the broadband challenge calls for an aggressive and comprehensive response to ensure that America remains the dominant leader in the global economy.

Thank you Mr. Chairman.

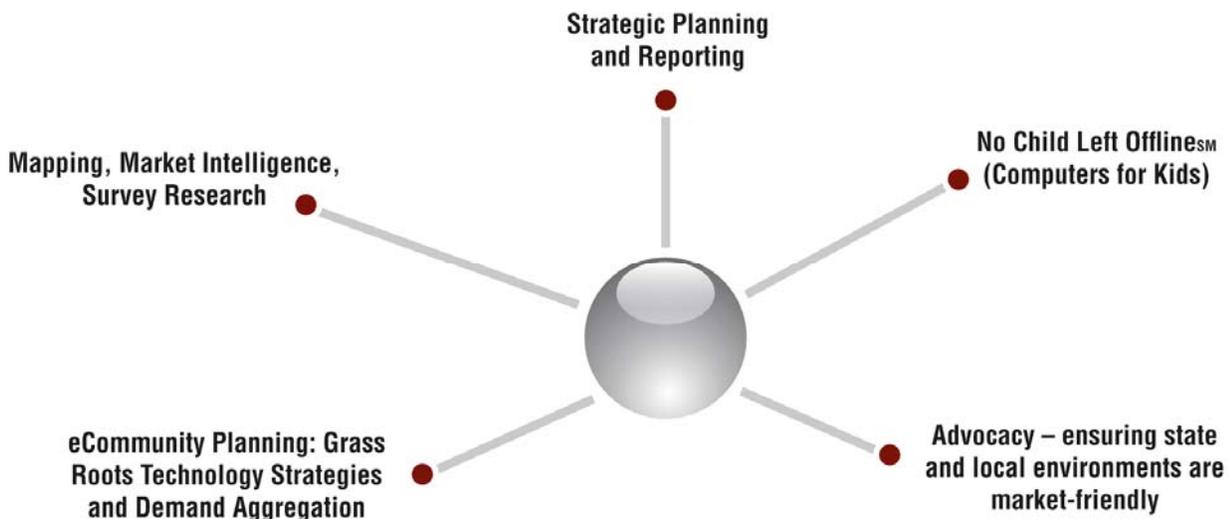
Background



Connected Nation, Inc. is a national non-profit organization known for its ability to close the digital divide. Through its partnerships, programs, and policies Connected Nation makes technology work for previously underserved communities and markets, improving community life and economic development while enhancing markets for technology providers. Connected Nation’s proven methodologies are delivering dramatic results that translate into more efficient public services and enhanced quality of life. Connected Nation’s work in Kentucky, ConnectKentucky, has been identified as a national model for the expansion of broadband.

Connected Nation’s proven methodologies enable comprehensive technology expansion efforts that effectively enhance the supply of available broadband while dramatically increasing demand through state and local grass roots awareness/adoption campaigns. Connected Nation specializes in increasing technology access and literacy towards greater digital inclusion for all. This technology expansion improves economic development, healthcare, education, and public safety; and provides a better way of life for Americans.

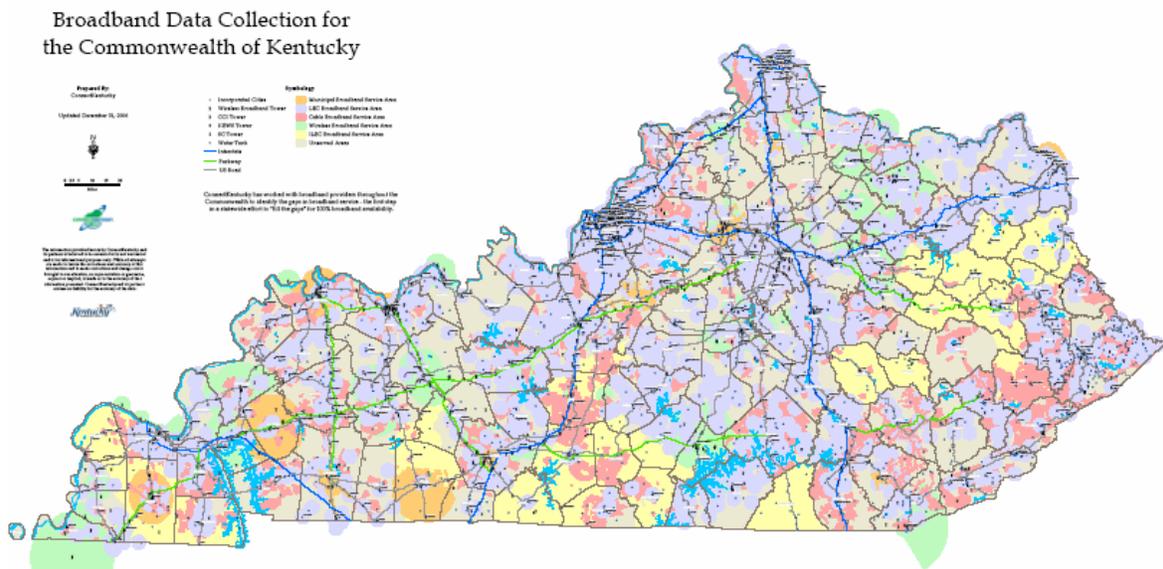
Charting the course for the United States’ technology-centric future, Connected Nation creates partnerships between the public and private sectors. These partnerships encourage cooperation for mutually beneficial purposes – making the cost of technology expansion go down and the demand for technology go up. Our comprehensive approach to technology expansion works for communities and markets.



Research and Mapping

Connected Nation's broadband inventory maps are industry leaders. These GIS maps create an inventory of existing broadband services based on provider deployment data. This analysis effectively helps broadband providers to more effectively target their build out resources. Connected Nation's market intelligence (maps, survey data and grassroots demand aggregation) benefits companies by causing the cost of doing business to go down and the ease of doing business to go up.

This broadband inventory map is publicly available and based on provider deployment data.



Beyond accurately measuring the inventory of broadband services, Connected Nation's research measures other important items related to the expansion of broadband. For example, What are the consumer barriers to broadband? Or, How do businesses use broadband?

Based on these findings, programs can be developed that encourage digital inclusion. For example, our research indicated that while industry assumed that the monthly fee was a primary barrier to the adoption of household broadband the lack of a computer at home ranked even higher. We developed No Child Left Offline as a partnership based solution. No Child Left Offline has facilitated cooperation among private partners, corporate foundations and state governments to place computers and printers into the homes and schools of disadvantaged children.

Connected Nation's Impact

Connected Nation's model is based on a simple premise that technology can be good for communities and markets. Comprehensively engaging both supply and demand realities is the best plan for success. The results from ConnectKentucky confirm the strength of Connected Nation's model.



Launched in 2004, Kentucky's *Prescription for Innovation* is a comprehensive plan to accelerate technology statewide, particularly in the areas of broadband availability and computer literacy and use. ConnectKentucky is implementing this initiative which maintains four key objectives for impacting statewide technology-based economic development:

- Full broadband deployment;
- Dramatically improved use of computers and the Internet by all Kentuckians;
- A meaningful online presence for all Kentucky communities, to improve citizen services and promote economic development through e-government, virtual education, and online healthcare; and
- Local technology leadership teams in every community to develop and implement technology growth strategies for local government, business and industry, education, healthcare, agriculture, libraries, tourism, and community-based organizations.

As identified by the *Prescription for Innovation*, technology can dramatically expand economic development opportunities and improve the quality of life for Kentuckians. With expanded technology, opportunities are within reach, such as:

- Developing a competitive economic advantage for attracting today's high-tech jobs to replace the decline of traditional manufacturing jobs;
- Residing in one of Kentucky's rural communities and succeeding in a career that formerly required moving to a major metropolitan area;
- Better and less expensive healthcare; and
- An education that prepares Kentucky's children to prosper in a globally networked world.

To fully address each of these opportunities and to ensure that Kentucky provides an increasingly attractive environment for technology expansion, ConnectKentucky employs a comprehensive approach that has been identified as a national leader and a model program for the rest of the country to follow.² Last year, ConnectKentucky received the U.S. Economic Development Administration's 2006 Excellence in Innovation Award.

² ConnectKentucky has been cited as a national best practice by: the US Economic Development Administration, the U.S. Government Accountability Office of Congress, the White House Office of Technology, Federal Communications Commission, Appalachian Regional Commission, USDA Rural Utilities Service, Congressional Research Service, Center for Digital Government, Southern Growth Policies Board, Communications Workers of America, Rural Telecommunications Congress and numerous states across the nation.

What Is ConnectKentucky?



ConnectKentucky connects people to technology in world-altering ways: improving the lives of the formerly disconnected; renewing hope for previously withering rural communities; driving increases in the number of tech-intensive companies and jobs; and nurturing an environment for lifetime learning, improved healthcare, and superior quality of life. Through its partnerships, programs and policies ConnectKentucky makes technology work for previously underserved communities and markets, improving community life and economic development while enhancing markets for technology providers.

ConnectKentucky works with supply and demand realities in a manner that respects communities and gets results. ConnectKentucky is engaged with all 120 Kentucky counties, local business and community leaders, and private sector technology companies to facilitate comprehensive technology expansion efforts that both enhance the supply of broadband-related technology and create demand by catalyzing and delivering grassroots awareness, literacy and use of technology.

Impact of ConnectKentucky

Through the work of ConnectKentucky and its partners, Kentucky's *Prescription for Innovation* has led to the following successes during the last two years:

- Kentucky is recognized as the **national leader** in technology acceleration with the *Prescription for Innovation* repeatedly acknowledged as the national model for states;
- **Broadband availability has increased from 60 percent to 92 percent** of households able to subscribe, representing 504,000 previously unserved households and more than 1.2 million residents that can now access broadband;
- **Broadband use at home has increased 73 percent**, a rate that has led the nation;
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- More than **\$650 million in private capital has been invested in Kentucky** (unprecedented);
- Nearly **2,000 home computers have been distributed** to the homes of underprivileged Kentucky students through the No Child Left Offline program;
- **eCommunity Leadership Teams have been established in every Kentucky county** creating grassroots technology growth plans across nine sectors;
- More than 70 percent of Kentucky counties now operate or are in the process of constructing a meaningful web presence for e-government and online citizen services. Two years ago, only one-third of Kentucky counties had a website, and many of these were not functional;
- 22,000,000+ positive media impressions have covered Kentucky technology growth; and
- **Kentucky is on track to be the first state with 100 percent broadband coverage.**

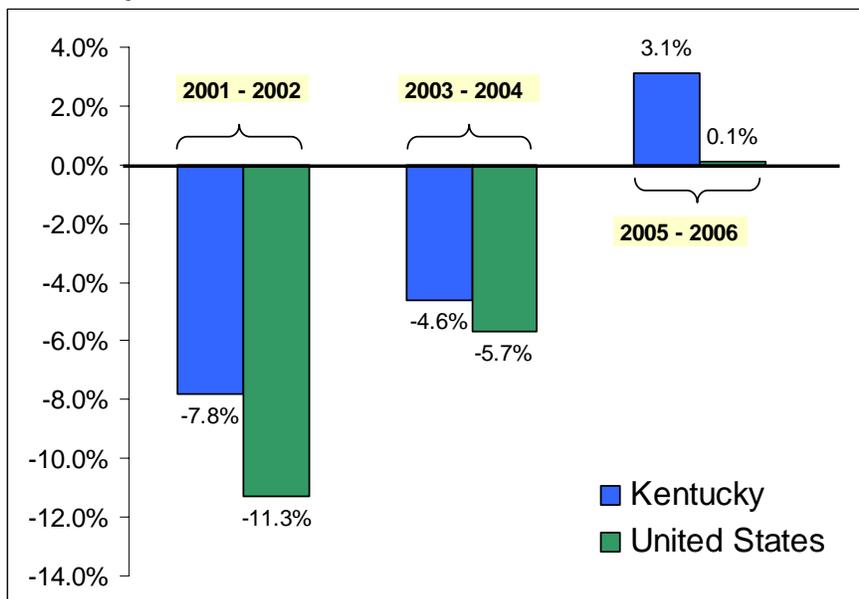
ConnectKentucky's Economic Impact: A Case Study

At an increasing rate, companies are locating to Kentucky, entrepreneurs are developing businesses in Kentucky, and jobs are growing in Kentucky because the Commonwealth now has the technology infrastructure and an increasing technology-savvy workforce to support business growth. **On track to become the first state with 100 percent broadband coverage with nation-leading increases in broadband use at home and work.**

Over the last two years, more than 14,500 total technology jobs have been created in Kentucky³. The most appropriate place to isolate and measure the direct employment impact of broadband expansion efforts is in the Information Technology (IT) sector. During the same two year period, **in the IT sector alone, Kentucky jobs have grown at a rate 31 times the national growth rate: 3.1 percent for Kentucky versus 0.1 percent nationally.**

Chart 1

Kentucky Growth vs. National Growth in Information Technology Jobs



During the first two years of the *Prescription for Innovation*, Kentucky IT jobs grew by 3.1 percent, outpacing national growth by 31 times.

Connected Nation's Kentucky engagement, ConnectKentucky, has been recognized as a national leader by: the U.S. Government Accountability Office of Congress, the White House Office of Technology, US Economic Development Administration, Federal Communications Commission, Appalachian Regional Commission, USDA Rural Utilities Service, Congressional Research Service, Center for Digital Government, Southern Growth Policies Board, Communications Workers of America, Rural Telecommunications Congress and numerous states across the nation.

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Reversing the “Brain Drain” in Kentucky

The closing of the digital divide is already yielding dividends in the quality of life for Kentuckians. By closing the digital divide, computer literacy has increased, the number of high tech jobs has increased, and Kentucky communities are enjoying the return of their offspring. Consider these developments in higher education related to how ConnectKentucky has helped Kentucky address the “brain drain” challenge that all states face:

- Today, 86 percent of all Kentucky graduates remain in Kentucky to live and work—a 17 percent increase since 2000.
- Since 2000, there has been a 50 percent increase in the number of out-of-state students who remain in Kentucky.
- For those graduates who came in as Kentucky residents, 95 percent of them now stay.
- The percent of doctoral degree students who stay in Kentucky has nearly doubled (27 percent to 52 percent).

Connected Nation’s Legislative Agenda

Connected Nation provides the leadership that delivers technology for strong communities and open markets. Our work is predicated on the notion that there’s no reason for anyone in America to be on the wrong side of the digital divide.

Here’s why:

- Connected Nation’s work has proven to be effective in state based engagements like ConnectKentucky.
- Each state has underserved communities that desperately need access to affordable and dependable broadband.
- National public and private entities are looking for a means of cooperating for our greater national good.

Therefore, Connected Nation encourages legislation that bridges the digital divide for all of America.



Connected Nation advocates a national legislative agenda that accomplishes the following:

- Provides solution for ubiquitous broadband deployment and increased adoption by encouraging and funding public-private partnerships at a state level;
- Establishes a grant program to enable each state to develop a comprehensive approach to broadband deployment while simultaneously driving broadband adoption and technology development at a local community level;
- Allows nonprofit organizations that have established a partnership with state government to apply for funding to:
 - Identify and map the gaps in broadband service – those areas without broadband availability – and then work collaboratively with all providers to fill those gaps in a manner that supports their business plans and works for communities;
 - Measure and track broadband and information technology use among citizens and businesses, investigate barriers to adoption at a local level, and provide market analysis for unserved areas;
 - Develop local technology planning teams with members representing a cross section of the community, including business, telecommunication labor, K-12 education, health care, libraries, higher education, community-based organizations, local government, tourism, parks and recreation, and agriculture;
 - Equip and facilitate local technology planning teams with the tools and resources to improve technology use within each sector; and
 - Establish effective programs to improve computer use and Internet access for disenfranchised populations.

This public-private partnership approach establishes the collaborative environment that encourages investment, drives technology adoption, and empowers grassroots-led community development and ultimately, strengthens America.





Technology for Strong Communities And Open Markets

Connected Nation offers valuable partnerships that enable technological and economic progress of historic proportion.

Please join Connected Nation as we close the digital divide in America.

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