



Universal Broadband Strategy for the State of New York

“Connecting New York to the World”



Prepared by:
NYS Office of the Chief Information Officer
NYS Office for Technology

Contributing Partners:
New York City Department of IT and Telecommunications
NYS Department of Agriculture and Markets
NYS Department of Public Service
NYS Division of the Budget
NYS Education Department
NYS Education and Research Network
NYS Foundation for Science Technology and Innovation
NYS Empire State Development Corporation
NYS Office of Temporary and Disability Assistance
New York Library Association
NYS Local Government IT Directors Association
Rensselaer Polytechnic Institute:
Computational Center for Nanotechnology Innovations
University at Albany:
College of Nanoscale Science and Engineering

December 2007
(Updated: March 2009)

“In an age when our competitiveness depends on fast and easy access to information, too many communities in New York State still lack sufficient broadband access. Improved broadband technologies can spur economic development, increase learning opportunities and connect more New Yorkers to the wide array of resources available online, including government services. The Council will provide strategic oversight as we work with these partnerships to ensure all New Yorkers have access to high-speed Internet and the skills necessary to get the most out of online tools.”

■ Governor David A. Paterson

Thank you to everyone who contributed to developing this strategy document and who will help continue to advance New York’s vision to ensure every New Yorker has access to affordable universal broadband.

TABLE OF CONTENTS

| | | |
|----------|--|-----------|
| 1 | PURPOSE OF THE STRATEGY | 4 |
| 2 | GLOSSARY..... | 7 |
| 3 | DID YOU KNOW ... BROADBAND FACTS..... | 8 |
| 3.1 | THE U.S. AND AROUND THE WORLD | 8 |
| 3.2 | IN NEW YORK STATE | 8 |
| 4 | UNIVERSAL BROADBAND STRATEGIC GOALS AND PRINCIPLES..... | 10 |
| 4.1 | STRATEGIC GOALS..... | 10 |
| 4.2 | PRINCIPLES OF THE BROADBAND STRATEGY | 11 |
| 5 | GOVERNANCE STRUCTURE TO IMPLEMENT THE STRATEGY | 14 |
| 5.1 | GOVERNANCE STRUCTURE | 14 |
| 5.2 | NEW YORK STATE COUNCIL FOR UNIVERSAL BROADBAND | 15 |
| 5.3 | TACTICAL FOCUSED ACTION TEAMS..... | 16 |
| 6 | GRANT ADMINISTRATION AND FUNDING..... | 18 |
| 6.1 | GRANT ADMINISTRATION | 18 |
| 6.2 | FUNDING | 18 |
| 7 | MEASURING BROADBAND COMMUNITY IMPACT | 21 |
| 8 | UNIVERSAL BROADBAND IMPLEMENTATION..... | 23 |
| 9 | NEW YORK STATE UNIVERSAL BROADBAND FACT SHEET | 24 |

1 PURPOSE OF THE STRATEGY

Paramount to the successful implementation of a universal broadband program for all New Yorkers is a solid strategy which guides decision making. The New York State Council for Universal Broadband is an advisory group that has developed recommendations for implementing a broadband strategy for the state and to coordinate key stakeholders input from both the public and private sectors to assist with suggestions for policy development. For purposes of developing New York State's broadband strategy and policy, broadband is not just about infrastructure, but rather, what that infrastructure can do for the state -- its citizens, its businesses, and its visitors.

In the 21st century, access to affordable high-speed Internet service is no longer a luxury, but a necessity for economic competitiveness, homeland security, health care access, educational and social opportunity and equity.

Ensuring broadband capability is universal or ubiquitous is but one component of the state's overarching broadband strategy. If broadband is available, but not affordable, its full value to New Yorker's is not achieved. Similarly, if broadband is available and affordable, but citizens do not to subscribe to the broadband services because they have not been exposed and educated to the capabilities and benefits of the Internet, the state's vision cannot be realized. Technology adoption and cultural barriers also need to be overcome. Having a robust broadband infrastructure in place is only half the work. Applications and immediate uses to engage citizens, businesses and visitors to use the Internet must be advanced. Given these considerations, an effective broadband strategy must include all of these key components.

To be a full participant in both the Information Age and the Information Economy, access to affordable, high-speed broadband Internet service is critical for individuals and businesses. Although broadband infrastructure has been deployed throughout New York State, there are still communities where access to broadband is either unaffordable or unavailable to citizens and businesses. The Council will advocate for providing universal access to affordable broadband to New York's citizens, businesses, and visitors.

Bridging the digital divide wherever it may exist in the state requires participation and investment by the public sector (local, county, and state levels), as well as the private sector (broadband providers, businesses, and labor) through the development of public/private partnerships. For people who have not participated in the Information Age, obtaining broadband is only half of the solution; the other half relies on teaching people to use the tools of the Information Age -- computers and the Internet.

*"The USA trails other industrialized nations in high-speed Internet access and may never catch up unless quick action is taken by public-policymakers, a report commissioned by the Communications Works of America warns."
--Leslie Cauley,
USA Today, 6/26/2007*

“Universal broadband is a very important factor in the quality of life of our citizens as well as a significant economic development issue. It is my expectation that the New York State Broadband Council will focus on the entire spectrum of broadband issues from the backbone infrastructure all the way to the residential customer who may need assistance with using the broadband access. Public/private partnerships will ensure infrastructure is available to assist businesses overcome the current difficulties in competing in both the national and global marketplace. This is an exciting time for our state.”

**–Ed Hemminger,
President, NYS Local
Government IT
Director's Association;
Chief Information
Officer, Ontario
County**

The state’s broadband strategy is based on the principle that competition and consumer choice are paramount to sustaining an effective broadband program into the future. To achieve our broadband strategic objectives, service providers must work together in an open framework where each consumer may choose their broadband Internet Service Provider regardless of who actually delivers the service across traditional (wired or wireless) infrastructure. The State believes collaboration will ensure competitive rates and encourage providers to leverage broadband assets and resources to proactively and cost-effectively address bandwidth demands and other technological improvements or enhancements for future global competitiveness.

Increasing broadband coverage in municipalities and regional areas will have a positive impact on the local economy. Universal broadband capabilities enable state and local governments to provide better and more cost-efficient services. In addition, broadband access provides opportunities for more citizens, businesses and visitors to enjoy resources available through the Internet. Research has concluded¹ that expanding broadband penetration in communities increases the number of high-tech companies attracted to the area thereby creating more jobs.

Although broadband services are available to many New Yorkers, there remain segments of the population where citizens and businesses either do not have access to high-speed broadband Internet service and/or cannot afford it. To address the need, the Council will develop and recommend implementation of comprehensive statewide policy and program to accelerate access to and affordability of broadband services throughout New York State.

New York State lacks a universal broadband² policy that ensures New Yorkers have affordable access to the Internet and can be a full participant in the Information Age. In addition, universal broadband coverage has economic, educational and health related benefits and provides additional backup public safety communications capabilities in times of emergencies. Universal broadband service will improve the capacity to deliver public services more cost efficiently and effectively. Accelerating **availability**, **affordability** and **usability** efforts are high public priorities.

¹ Source: Carnegie Mellon and MIT, “Measuring the Impact of Broadband on Communities.”

² The FCC defines a broadband connection as one that exceeds data transmission speeds of 200 kbps in one or both directions. However, speeds three times faster are becoming common in most cities.

The purpose of this document is to:

- Present New York State's case, vision and strategic goals for universal broadband access
- Describe the major components of a statewide universal broadband policy
- Outline the governance structure to provide oversight for implementing the statewide universal broadband policy
- Describe a grant program to solicit public/private partnerships that will provide innovative solutions for achieving universal broadband access
- Present recommended next steps and an implementation timeline for development of a comprehensive statewide universal broadband access strategy

“The State Broadband Initiative will allow families to access information on a host of government programs at any time. Through this information system families will have the ability to screen themselves for potential eligibility for assistance programs and apply for assistance directly. OTDA is piloting this initiative with the Food Stamp program and hopes to increase enrollment by 100,000 new families by the end of 2008. If successful, OTDA will expand the initiative to other programs to help low-income New York families achieve their greatest level of independence and self sufficiency.”

**–David Hansell
Commissioner, NYS
Office of Temporary and
Disability Assistance**

2 GLOSSARY

- **Access** will mean last mile infrastructure, being the final leg of delivering connectivity from a service provider to a customer.
- **Broadband** will mean Internet access of at least one megabit per second (1 Mbps) for upload and download, as well as the infrastructure or means necessary to provide such Internet access.
- **Community Technology Centers** will mean programs that provide community access to information and communications technologies, and the education necessary to meet the social, economic, educational and cultural needs of community residents.
- **Low-Income** will mean an individual family's taxable income for the preceding year did not exceed 150 percent of the poverty level.
- **Network** will mean wired or wireless infrastructure used to connect or interconnect computer, telephony, electronic, or telecommunications systems.
- **Rural and Rural Areas** will mean counties within the state having less than 200,000 population, and the municipalities, individuals, institutions, communities, programs and such other entities or resources as are found therein. In counties of 200,000 or greater population, rural areas means towns with population densities of 150 people or less per square mile, and the villages, individuals, institutions, communities, programs and such other entities or resources as are found therein. [See NYS Executive Law §481(7).]

3 DID YOU KNOW ... BROADBAND FACTS

3.1 THE U.S. AND AROUND THE WORLD

“In an era of global competition, we need to be able to help remote villages and communities access information, easily and swiftly. The Universal Broadband Council will help increase digital literacy within those rural populations and will help farmers, agri-businesses and other local small businesses get on the same page as their urban counterparts, allowing them to take advantage of the opportunities technology offers to better serve New Yorkers.”

**--Patrick Hooker,
Commissioner,
NYS Agriculture and
Markets**

- Internet speeds are slower and prices are higher when compared to other industrialized nations in the world – United States broadband service is twice as expensive as in China, eight times more expensive than in South Korea, and thirty times more expensive than in Japan.
- The median U.S. download speed now is 1.97 megabits per second (Mbps) – a fraction of that enjoyed by consumers in Japan (61 Mbps), South Korea (45 Mbps), France (17 Mbps) or Canada (7 Mbps).
- For \$30 per month, Japanese consumers can get 50 Mbps, a speed which is not available to residential consumers in the U.S. For the same amount of money, U.S. consumers can only get up to 4 Mbps per month.
- Widespread adoption of broadband in the U.S. could add \$500 billion to the nation’s economy and create 1 million jobs.
- The cost of not establishing universal broadband could be \$1 trillion over the next decade.
- The U.S. is still the only industrialized nation without an explicit national policy for promoting broadband access.
- Canada, which has mostly rural communities, has a broadband penetration above 50%, which is twice the rate in upstate New York.

3.2 IN NEW YORK STATE

- Two-thirds of those living in New York City do not have affordable high-speed Internet access.³
- 4.1 million of the 7 million residential households (58.3%) in New York State currently subscribe to high-speed Internet service and

³ Areas like Hunts Point, Sunset Park and Red Hook do not even have affordable access beyond a dial-up connection and the State has not had a comprehensive plan to address this gap. “Universal Broadband Access” Speech by Eliot Spitzer May 15, 2006 at the Personal Democracy Forum Conference, New York, NY.

“The Department of Labor is proud to be a partner in this initiative. By bridging the digital divide and providing more technology training, we will develop a highly-skilled workforce that is better able to meet the needs of employer's competing in today's global economy.”
–Patricia Smith,
Commissioner, NYS
Department of Labor

broadband is currently available to another 40% of households or 98.3% total. However, 40% have not yet chosen to subscribe.⁴

- High-speed Internet use in New York State grew 55% between December 2005 and December 2006.
- Within New York State, digital subscriber line (DSL) service is available to 78% of the state's residential households, just below the national average of 79%.
- DSL technology serves 1.1 million of the 5.6 million total residential and commercial broadband customers in the State of New York.
- High-speed cable modem broadband Internet is available to about 96% of residential households in New York State. Cable modem broadband service accounts for 2.9 million of 5.6 million total residential and commercial broadband customers in the state.⁵
- New York is ranked 4th in median broadband Internet access speed, preceded by Rhode Island (1st), Kansas (2nd), and New Jersey (3rd).⁶

“Providing high speed broadband access will bridge NY's digital divide, increase digital literacy, and positively impact today's educational institutions (libraries, museums, schools, universities, and archives) and tomorrow's workforce.”
–Dr. Joseph Bowman, Jr.,
Member, New York State
Board of Regents

⁴ Source: NYS PSC and High-Speed Services for Internet Access: Status as of December 30, 2006, FCC Industry Analysis and Technology Division – Wireline Competition Bureau, October 31, 2007. Also note that FCC figures show a total of 1.5 million commercial broadband users within NYS in addition to the 4.1 million residential customers for a total of 5.6 million. Number of occupied residential New York State households (7.088 million) from U.S. Census Bureau – 2006 American Survey Data.

⁵ Source: NYS PSC and High-Speed Services for Internet Access: Status as of June 30, 2006, FCC Industry Analysis and Technology Division – Wireline Competition Bureau, January 2007. Also note that FCC totals for every state include other technologies such as traditional wire line, fiber, fixed wireless as well as satellite and wireless services that they do not enumerate separately on a state by state basis. However in the case of New York State satellite and mobile are significant and do account for approximately 900,000 of the state's broadband users according to the FCC.

⁶ Source: Communications of America (CWA) Communications Broadband Group, “Speed Matters” (June, 2007). A report of 80,000 broadband users which ranks United State on median download speeds, U.S.A Today. NYS download median speed is 3.436 Mbps.

4 UNIVERSAL BROADBAND STRATEGIC GOALS AND PRINCIPLES

4.1 STRATEGIC GOALS

The New York State Universal Broadband Strategy must accomplish the following strategic goals:

1. **Attract and retain New York's next generation** by ensuring every New Yorker has access to high-speed, affordable broadband.
2. **Provide all New Yorkers with access to high-speed, affordable broadband by implementing a statewide broadband program to:**
 - a. Provide affordable universal broadband Internet access for citizens and businesses **from Anywhere, at Anytime, by Anyone** throughout the State of New York
 - b. Achieve median statewide Internet speeds which are at least 10 Mbps downstream/1 Mbps upstream
 - c. Achieve national lowest price affordability for eligible rural and low-income households
3. **Close the digital divide** gaps which are so prevalent in underserved urban and rural communities with a low-income household Internet penetration of at least 95 percent statewide coverage of populated areas; and **increase the level of digital literacy** for all households at or below the poverty level by providing training and educational opportunities for New Yorkers enabling people to effectively use technology in ways that will enhance their quality of life.
4. **Foster economic development and build stronger public/private partnerships.**
5. **Increase availability of computers in schools, libraries, community technology centers** or any community based program offering digital literacy programs to close the digital divide.
6. **Increase the use of NYS e-Government services online** and reduce the costs of providing state services by leveraging online applications.

"New York's cities and villages will not be able to reach their full economic development potential without a concerted public/private effort to close the digital divide. The Conference of Mayors applauds Governor Spitzer's leadership in pursuing a strategic, statewide approach to bringing broadband to every New Yorker. We look forward to working collaboratively with the other members of the Council to achieve universal access to affordable broadband technology."

**–Peter Baynes,
Executive Director,
New York Conference of
Mayors**

The purpose of the universal broadband strategy is to increase speed to market of proposed collaborative networks that expand broadband coverage in unserved and underserved communities. The shared public/private strategy approach is intended to:

“Every State should be bringing together community technology experts, organizations, corporations and other public/private partner to support broadband initiatives as New York has done. Taking the time to ensure that they are including both corporate and community interests, by creating committees to address infrastructure build out, workforce development, and educational opportunities is important for sustaining success.”

**–Shireen Mitchell,
President of
Community
Technology Centers’
Network**

- Attract the greatest investment levels within the participating communities
- Encourage service providers to expand their infrastructure to penetrate deeper into the unserved and underserved communities
- Prompt the greatest geographic coverage areas by leveraging public and private infrastructure assets
- Foster more competition
- Encourage broader community participation through collaborative partnerships that address, among other things, educational/digital divide initiatives, research and development projects, health and human service issues, public emergency communications capabilities and community programming and technical training
- Ensure higher service levels for state services and productivity through expanded use of the state’s current or emerging e-Government applications

4.2 PRINCIPLES OF THE BROADBAND STRATEGY

The universal broadband strategy will adhere to a set of guiding principles to guide decision making and ensure the strategy is effectively implemented to achieve the desired outcomes. These principles include:

- **Increasing the level of digital literacy** for all households at or below this strategy’s definition of low-income by providing training and educational opportunities to enable them to effectively use technology in ways that will enhance their quality of life
- **Enhancing citizen access to affordable technology solutions** for their homes and businesses
- **Implementing strategies to stem the tide of the brain drain** in upstate New York in support of the I Live New York initiative

Technology and the Internet drive economic development efforts across the globe. For our counties and communities to be competitive in retaining and attracting jobs, we need to provide access to the latest technological innovations. NYSAC is happy to partner with the New York State on this critical economic development and social issue. It is imperative to provide high speed Internet access to every corner of the state.

**–Stephen J. Acquario,
Executive Director,
New York State
Association of Counties**

“Bringing broadband network access to all corners of New York State, particularly to urban and rural communities that are underserved by robust telecommunications, will go a long way to closing the digital divide and will enhance digital literacy that is essential to the state’s economic growth.”

–Dr. Don Jacobs, Co-Chair, University of the State of New York Technology Policy and Practices Council

- **Reducing costs of providing state services** by leveraging online applications over the Internet
- **Establishing a residential personal computer refresh/recycle program** where organizations or individuals may donate existing, fully functional computers to be refurbished and recycled to eligible low-income households as an entry level PC rather than ending up in a landfill
- **Providing incentives for private companies to partner** with local government entities to build, deploy, and manage broadband infrastructure and programs to increase the level of digital literacy, close the digital divide gaps and provide broadband services to every household
- **Ensuring Minority and Women Owned Business Entities (MWBE) are full participants** in state procurements of goods and services related to the universal broadband access initiative
- **Leveraging previous investments** in the existing community broadband infrastructure and related resources
- **Promoting information sharing among government entities** by deploying applications, such as e-food stamps or the Home Energy Assistance Program (HEAP) applications from such agencies as the NYS Office of Temporary and Disability Assistance (OTDA) that enable interdepartmental and intergovernmental collaboration throughout a region
- **Driving economic development** by designing broadband infrastructures that distinguish communities, create competitive advantage and encourage innovation, entrepreneurship and business growth for communities
- **Fostering research and development of new technology applications** through collaborative efforts of private and public organizations by leveraging a broadband network

- **Encouraging local municipalities to adopt broadband strategies** necessary to make high-speed Internet access affordable and competitive by providing a clear mandate that permits local leadership and encourages competition from all providers -- private and public -- to participate in broadband solutions
- **Identifying and recommending** incentives that would expand access to affordable broadband services
- **Increasing availability of computers** in homes, schools, community based computer training centers and libraries
- **Measuring performance** and impact of the universal broadband access strategy and policy implementation
- **Generating sustainable economic development**, job growth and productivity
- **Transforming the delivery of public services** around the needs of citizens, while increasing the efficiency of public services
- **Enhancing democracy through improved citizen engagement and civic participation** in the democratic process through the expanded use of Internet solutions
- **Increasing broadband access and household Internet penetration** levels through legal, regulatory, or fiscal policies
- **Reviewing public service law** related to regulations to determine whether any provisions may impede private or public broadband expansion or can accelerate expansion of broadband networks

5 GOVERNANCE STRUCTURE TO IMPLEMENT THE STRATEGY

The Office of the New York State Chief Information Officer and Office for Technology (CIO/OFT) has primary responsibility for developing and implementing the statewide universal broadband access strategy. This will be done in collaboration with state agency partners, local governments and other private and not-for-profit partners, such as commercial broadband providers, subject matters experts, community organizations and other key stakeholder groups.

To provide overall strategic oversight for implementing the broadband strategy, the stakeholder groups will be represented on the New York State Council for Universal Broadband. The Council will be chaired by the New York State CIO. In addition, the CIO/OFT will administer the broadband grant program. Grant awards will be made using objective evaluation criteria.

5.1 GOVERNANCE STRUCTURE

The following broadband governance structure will be implemented to engage the broadest group of public and private stakeholders.

1. **The NYS Council for Universal Broadband** was created as an advisory group of key state agency departments, legislative representatives, academia, public and private partners to develop and deploy innovative approaches to increase broadband penetration and digital literacy in underserved and unserved rural communities. This group will provide strategic guidance for successfully implementing the broadband strategy. In addition, this group will effectively assess and provide recommendations from the various action teams to accomplish the broadband access strategic goals.
2. **Action Teams under the direction of the Council, consist of public and private stakeholders and subject matter experts, who work collaboratively** to develop innovative strategies to deploy broadband, and increase the level of digital literacy throughout the state. The action teams will be accountable to the Council. Each action team will have a chair and at least one co-chair and will be no less than 8 members and no more than 20.
3. **The Council will launch the NYS Discussion Series for broadband providers and other broadband experts** to assist the state in mobilizing private, academic and public resources to

“As we continue to make government more customer-focused by increasing the number of services available online, the role of broadband cannot be understated. The Universal Broadband Access Strategic Council will explore ways to enhance public access to this vital service—ideas that will be instructive to New York City as we complete our own broadband feasibility study.”

—Paul Cosgrave,
Commissioner,
New York City Dept. of
Information Technology
and Telecommunications

“I have a particular interest in improving wired and wireless broadband access in the State’s rural areas, and in exploring how ‘open access’ models can spur competition and serve as a platform for innovation and job growth. Expanded broadband infrastructure and enhanced digital literacy will enable our communities to be competitive in the global economy and help us retain and attract the young professionals so crucial to community vitality.”

**–Howard Lowe,
Director of the Technical
Assistance Center,
SUNY Plattsburgh**

design and deploy innovative solutions to achieve the goals of the broadband strategy. The discussion series will be undertaken to foster an open dialogue with broadband providers on how to successfully implement the statewide broadband strategy. The broadband discussions will be held as needed to provide feedback and advice to the Council.

- 4. The Universal Broadband Program Management Office (PMO) will be established within NYS CIO/OFT** to provide technical programming, program management, project management, grant administration and governance support. The PMO will be tasked with developing and implementing the overall project plan, action plans and results-oriented timelines agreed to by the NYS Council for Universal Broadband for soliciting public/private partnerships via broadband grant RFPs, reviewing grant award recommendations to the Council, and evaluating and measuring the impact of the awards on local communities.

5.2 NEW YORK STATE COUNCIL FOR UNIVERSAL BROADBAND

To implement the broadband strategy for the state, the NYS CIO will chair the **New York State Council for Universal Broadband** and may select a vice chair from either a public or a non-profit private organization dedicated to the purposes of the broadband. The Council may make recommendations regarding future broadband programs and policies that are most aligned with the overall broadband strategy. In addition to the chair, the Council will consist of the following members:

- Association of Towns of the State of New York
- Community Technology Centers’ Network
- Empire State Development Corporation
- Greater Southern Tier BOCES Regional Information Center
- Nassau County, New York State
- New York Conference of Mayors
- New York City Department of Information Technology and Telecommunications
- New York Library Association
- New York State Assembly
- New York State Association of Counties
- New York State Board of Regents
- New York State Department of Agriculture and Markets
- New York State Department of Correctional Services
- New York State Department of Labor
- New York State Department of Public Service
- New York State Division of the Budget

“New York has a proud history of seminal contributions to research-focused and commercial networking dating back to the birth of the public Internet in the eighties. With the broadband initiative the State has committed to bringing the benefits of this ever-enriching resource to every citizen.”

**–Dr. Tim Lance,
President and Chairman,
New York State
Education and Research
Network**

- New York State Education and Research Network
- New York State Education Department
- New York State Local Government IT Directors Association
- New York State Office of the CIO and Office for Technology
- New York State Office of Temporary & Disability Assistance
- New York State Foundation for Science, Technology and Innovation
- New York State Senate
- Rensselaer Polytechnic Institute: Computational Center for Nanotechnology Innovation
- State University of New York at Plattsburgh
- Suffolk County, New York State
- University at Albany: College of Nanoscale Science and Engineering
- University of the State of New York Technology Policy and Practices Council

The chair may add such other members to the Council as deemed appropriate to advance the strategic goals of the plan. The Council will recommend and provide the executive oversight for successfully implementing the strategy. The Council will produce an interim report due July 2008 and an annual report for the Executive and Legislative Leadership no later than the end of February each year beginning 2009.

5.3 TACTICAL FOCUSED ACTION TEAMS

To assist in developing and implementing the broadband strategy, the Council Chair will establish at least five action teams, i.e., workgroups, comprised of public and private stakeholders and subject matter experts. The Chair will establish or dissolve action teams as necessary to advance the broadband strategy and vision. The following action teams will be created.

- **Broadband Network Infrastructure Access Action Team**

One focus of this action team is to identify and map the State to baseline areas with and without broadband access infrastructures. This mapping effort will focus on unserved and underserved rural and urban communities. The mapping will include existing and planned state-owned networks. Also, this action team will mobilize private, public and academic expertise to implement innovative technologies for delivering cost-effective and reliable broadband Internet services. Finally, this team will develop recommendations and a plan to leverage current networks and infrastructures to accelerate statewide coverage.

“The New York State BOCES Regional Information Centers view statewide broadband access as an imperative and relevant need to provide seamless applications, content, and resources to enhance the learning experience. While we have had great success in just five years time connecting 63 percent of the BOCES and school districts statewide, we believe the state’s broadband strategy can become the catalyst to help us ensure 100 percent connectivity in the very near future.”

–Steve Manning,
Manager of Computer
Services,
Greater Southern Tier
BOCES Regional
Information Center

- **Personal Computing, Community Outreach, Communications, Consumer Education, Technology Procurement Action Team**
This action team will focus on programs to address affordability, computer ownership and adoption, digital literacy, and consumer education. It will focus on proficiency training and exploring computer procurement incentives for those trapped in the digital divide. Also, the action team will focus on raising awareness and educating citizens about the benefits of universal broadband use to improve their quality of life.
- **E-Government Applications for Low-Income Households**
This action team will focus on improving and increasing access to government services offered online. The team will promote the development of open, simple and secure online applications with measurable outcomes. An initial group of “early adopters” of government services have been identified to integrate into digital learning programs.
- **Economic Development and IT Workforce Development**
This action team will focus on building stronger economies, promote the economic growth of New York State by focusing on increasing business activity, identifying and implementing public/private partnerships, and strategies to create and maintain a skilled and professional workforce by leveraging broadband to accelerate job creation in unserved and underserved communities.
- **Governmental Initiatives**
This action team will focus on optimizing existing public assets and locally-based initiatives to increase broadband penetration and use through current or planned assets, and infrastructures. Additionally, this team will be charged with monitoring federal, state and local government initiatives and making policy recommendations relevant to advancing the broadband strategy and goals. This group will focus on recommendations for future policy, legislation, or other regulatory advocacy objectives which are aligned with the broadband strategy.

“The availability of intellectual skills and educational capabilities from New York’s top flight research universities is critical to accelerating broadband penetration, bridging the digital divide, and increasing digital literacy, particularly among remote upstate communities -- a necessary ingredient in Governor Spitzer’s Innovation Economy blueprint.”

**--Dr. Alain E. Kaloyeros,
Vice President/Chief
Administrative Officer,
University at Albany,
College of Nanoscale
Science and Engineering**

6 GRANT ADMINISTRATION AND FUNDING

6.1 GRANT ADMINISTRATION

The NYS CIO will administer the broadband access grant program through the Broadband Access Program Management Office (PMO). The NYS Council for Universal Broadband will make recommendations regarding evaluation criteria, measures of impact, and mechanisms to review and assess grant applications that are most aligned with the broadband strategy. The Universal Broadband Grant Program is designed specifically for increasing **accessibility** to, and addressing **affordability** of, broadband services through the formation of local, county or regional public/private partnerships to share critical assets for the design and deployment of broadband technology solutions and programs.

The grant program's objectives include, but are not limited to:

1. Providing universal broadband infrastructure coverage through state, local or federal matching investments to increase the penetration of broadband **accessibility** in unserved and underserved communities
2. Increasing New York's level of digital literacy, computer ownership and broadband **affordability** through stronger connected communities, both for the tech-related firms (e.g., risk-taking entrepreneurs, companies graduating from incubators) and for the tech-related labor force and recent college graduates
3. Enhancing New York's **competitiveness** by building a stronger tech-related labor force for tech-related firms and building stronger, connected communities to attract and retain tech companies to the state.

"Universal high-bandwidth Internet access is essential for New York to maintain its leadership position in the innovation economy. We live in a networked world, where instant access to information is critical for enhancing education, expanding research, and developing the technologies of tomorrow."

—John Kolb, Vice President for Information Services and Technology and Chief Information Officer, Rensselaer Polytechnic Institute.

6.2 FUNDING

The initial legislative appropriation of \$5,000,000 (\$2,500,000 for increased physical access to broadband Internet services statewide, and another \$2,500,000 to provide equal and universal access to broadband Internet services for underserved rural and urban areas, including schools and libraries), will be used to solicit broadband access grant applications using a competitive request for proposal (RFP) process.

The NYS CIO issued an RFP to encourage eligible local, regional and state entities to apply for the broadband access grant funds to address two separate purposes as outlined in the legislation, which are:

1. ***To fund services and expenses related to local, regional and physical access to broadband Internet services statewide***

Activities may include but are not limited to research, design, implementation, operations, management and administration of programs related to infrastructure initiatives to facilitate physical access to communities and entities that lack such access, in which a total of \$2,500,000 is available.

2. ***To fund services and expenses related to local, regional and state activities providing equal and universal access to broadband Internet for underserved rural and urban areas, including schools and libraries***

Activities may include but are not limited to research, design, implementation, operations, management and administration of programs to foster coordinated or cooperative service delivery initiatives among public, private, and/or not-for-profit organizations, and shared use of infrastructure or other resources, in which a total of \$2,500,000 is available.

As legislated, grant awards will be distributed in accordance with the competitive process and grant guidelines stated in the RFP. The NYS CIO will administer the competitive process to leverage additional funds by offering grants that match investments by private or other governmental entities. This will be accomplished through eligible grant applicants, who endeavor to partner with other public/private entities which may include schools, libraries, other not-for-profit community organizations or private partners.

Eligible agencies and local government entities will be solicited to apply for the grants based on their demonstrated attempt to mobilize partners of their choosing to build either “last mile” broadband infrastructures or implement programs that increase broadband access or enhance skills of eligible households in underserved urban and rural communities. This may include connecting households, small disadvantaged businesses, business districts or other relevant entities, such as community-based technology centers that provide digital literacy training.

In addition, local partners are encouraged to solicit other community partners, such as banks and computer hardware manufacturers or distributors to provide computing hardware and software for households to access the Internet.

Note: Eligible entities responding to the Broadband Access Grant RFP may apply for either or both broadband appropriations. The state will look most favorably upon public/private partnerships that take an integrated approach as a preferred model for closing the digital divide and ensuring access is available for New Yorkers.

“The importance of developing a statewide broadband strategy cannot be overstated. Through strong collaborative public/private partnerships we can create an environment across New York State that fosters innovation, life-long learning and economic growth through greater use of technology. Governor Spitzer has a clear vision to address our challenge and I look forward to working with the Council to develop cooperative, innovative solutions for the benefit of all New Yorkers.”

**– Dr. Melodie
Mayberry-Stewart,
Chief Information
Officer and Director
of the New York State
Office for Technology
(Council Chair)**

The NYS CIO, along with the state Division of the Budget (DOB), will monitor the grant programs. The NYS Council for Universal Broadband will assess overall impact and advise the NYS CIO on strategy implementation to assess progress on meeting strategic goals. The Council will recommend performance measures such as community impact, economic development impact and household computing penetration levels (as measured by the FCC and reported by the Department of Public Service), to assess results.

“Enhancing participation in world class research requires access to a world class telecommunications infrastructure. Technology must be an enabler. Geography can neither be an obstacle or an excuse.”

**–Edward Reinfurt,
Executive Director, NYS
Foundation for Science,
Technology and
Innovation**

7 MEASURING BROADBAND COMMUNITY IMPACT

The broadband strategy will be measured for community impact using a set of evaluation criteria based on objective national standards. These national standards will enable the state to compare its progress against other states and other countries.

The criteria will be developed and approved by the NYS Council for Universal Broadband and will measure progress in the following four areas:

- **Change in Statewide Broadband Speed**
- **Change in Broadband Coverage Rates Statewide**
- **Change in Computer Ownership and Adoption Rates of Communities**
- **Change in Broadband Penetration Rates**

The commitment to a connected, broadband infrastructure in New York is a continuum, with aggressive strategic goals for speed, coverage, adoption, and penetration by 2010, with the expectation this is just the beginning of placing New York State at the forefront. For acceleration of broadband penetration and increased network speeds, New York State divides roughly into two regions: the “Digital Corridor” that includes the greater New York City region and areas near the Thruway; and the rest of the state, in general more sparsely populated and, more importantly, distant from the main fiber right of way.

By the year 2010, our goal is to achieve an average network connectivity speed of at least 1 megabit per second in each direction. In the Digital Corridor, the goal by 2010 is to be at least 20 megabits per second in each direction.

Looking farther out, by 2015 our goal is to achieve an average network connectivity speed of at least 20 megabits per second in each direction, and 100 megabits per second in each direction within the Digital Corridor.

For some parts of New York, e.g. the Adirondack Park, environmental considerations will likely make wireless a necessary component of achieving 20 megabit per second speeds. The upcoming FCC auction of spectrum in the 700 MHz range, with portions set aside for such use, gives the state a rich new resource.

Computer ownership and network connection adoption rates of 100 percent are relatively easy in affluent communities. The challenge is to bring the benefits of this technology infrastructure, and the increasingly rich educational, health, government, training/retraining and entertainment

“Many of our correctional facilities are located in - and many of our staff live in - remote areas not currently served by high-speed universal broadband Internet. This initiative should help not only our employees, but also the communities that are home to state prisons and ultimately all of New York through technological improvements for prison programs essential to the rehabilitation of inmates.”

**–Brian Fischer,
Commissioner, NYS
Department of
Correctional Services**

capabilities to all New Yorkers. The evaluation broadband access grant criteria will favor proposals that are comprehensive, reaching the highest percentage of neighborhoods, and engaging partners to increase the number of households that own computers and connect to this ever more powerful broadband infrastructure.

Progress will be closely tracked in the early stages of the broadband access grant process. The expectation is that with increased penetration and adoption, will come increased benefit to the end user, and the penetration/benefit combination drives further adoption and strengthens business for the providers.

The NYS Council for Universal Broadband will look at these goals and prepare an annual report on the progress of achieving the strategic goals using the four measures described in this section. The actual measures will be benchmarked against other states and counties using the FCC data and other agreed to authoritative sources.

“A library without broadband access is like a library of stone tablets. Libraries need access to the most current technology available to keep up with society's insatiable demand for accurate and reliable information in all its forms. New York's broadband initiative will help libraries bridge the digital divide and enable all New Yorkers to access the information highway.”

**–Michael J. Borges,
Executive Director, New
York Library Association**

8 UNIVERSAL BROADBAND IMPLEMENTATION

The following table highlights critical tasks to launch and advance the broadband initiative.

| Universal Broadband Strategy Implementation (2007 – 2010) | |
|--|--|
| Status | Implementation Activity |
| Completed | Conduct RFI Discussion Session with Vendor Community to Validate Strategy |
| Completed | Announce NYS Council for Universal Broadband |
| Completed 12/07 Revised 03/09 | Finalize NYS Universal Broadband Strategy Document |
| Completed '07-08, ongoing annually | Issue Broadband Access Grant RFP to solicit grant applications from local communities to encourage public/private partnerships. |
| Completed 12/07 | Convene NYS Council for Universal Broadband |
| Completed | Convene NYS Council for Universal Broadband Action Teams |
| Completed | Begin Conducting Meetings of the Council and the 5 Action Teams |
| Completed | Each Action Team develops goals, deliverables and measures. |
| | Establish Universal Broadband Access Program Management Office (PMO) in the state Office for Technology |
| | Initiate process to inventory and document actual Internet penetration in rural and low-income areas and begin asset inventory of fiber and other assets required for broadband expansion, including determining "last mile" needs across the state and map on NYS GIS system. This may include working with providers to complete inventory and mapping activity. |
| | Implement deliverables identified by the Council and Action Teams. |
| | Evaluate Award Program for Effectiveness and Results Using Measures of Impact |

9 NEW YORK STATE UNIVERSAL BROADBAND FACT SHEET



Strategic Goal:

To increase the broadband infrastructure across the state to achieve coverage and penetration goals by working with the Governor's Council on Universal Broadband, and by 2010 to raise the State's ranking from 4th to at least 3rd among states in US state ranking to enhance the State's global competitiveness.

Background:

Increased access to affordable high-speed Internet service affects economic competitiveness, homeland security, health care access, educational, social opportunity and equity.

Broadband Action Teams have been formed to address specific strategic areas, comprised of public and private sector members. The Teams are: Broadband Network Infrastructure Access, Digital Literacy and Community Outreach, E-Government Applications for Low-Income Households, Economic Development and IT Workforce Development, and Governmental Initiatives.

2008 Major Accomplishments:

- Released the myBenefits web portal to increase access to government services such as food stamps and HEAP. Also, the Digital Literacy and Community Outreach Action Team developed a digital literacy standard.
- The Governor announced Round 1 of the Broadband Grants

2009 Major Actions:

- Issue broadband grants in accordance with annual appropriations and seek to leverage public/private partnerships at local community levels to close digital divide gaps and increase digital literacy
- Continue efforts to map the state to determine broadband gaps
- Monitor and track household broadband penetration, geographic coverage, and digital literacy
- Continue to increase the number of eGovernment state services available on the Internet (Food Stamps, HEAP, etc.)

Critical Success Factors:

- Availability of ongoing funding
- Forge effective public/private partnerships at the local and regional levels with matching funds to leverage state dollars
- Achieve cooperation among broadband providers for broadband asset information to complete state mapping initiative
- Propose legislation to drive policies which accelerate and incent provider participation and keep young professionals in Upstate New York

Implementation Timetable:

- On-going until gaps are closed
- Grants: \$5 million in grants have been awarded, \$7.5 million in grants will be awarded in 2009

