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Executive Summary: Connecting to our Future Portland's Broadband Strategic Plan

City of Portland

Prepared by the Office of Cable Communications & Franchise Management

September 6, 2011

EXECUTIVE SUMMARY CONNECTING TO OUR FUTURE PORTLAND'S BROADBAND STRATEGIC PLAN

Why do a Strategic Plan for Broadband?

Broadband networks power access to global information, economic activity and politics in the same way that highways provided the transportation corridors for the old economy. Broadband is about keeping Portland competitive so that our workforce can continually innovate locally and collaborate globally. Just as electricity fundamentally and forever changed our society and economy in unanticipated and disruptive ways, the interconnected web of "the Network" is transforming our ability to participate, educate, inform and compete. A shortage of broadband capacity will cause Portland to lose ground in its economic future. So it is important for us to learn what the Network is and how it impacts society. We must proactively set a strategic course for our economic and social development. This Plan will inform other planning efforts at the City. The Broadband Plan lays the foundation for understanding, embracing and adapting to the digital economy. The Portland Broadband Strategic Plan is one of the first local government efforts in the nation to address the linkages between broadband and our local economy, sustainability and the environment, our educational and governmental institutions and our policies and industry responses. We recognize that the Network—and all of the technologies represented under the umbrella concept of the Network, are disruptive and game changing for society as a whole, and for the sustainability of our local economy and quality of life. Our plan recognizes that Broadband is Critical Infrastructure. The Network has become integral to both the working and personal lives of most households, families and businesses. The majority of job listings are online, education (K-12 and higher ed) has rapidly been moving online, economic development and jobs are demonstrably related to adequate broadband capacity to recruit and retain businesses in our community, critical health care functionality is rapidly moving online, e-commerce and home-based businesses need this critical access, and Portland's culture and policies promoting sustainability have a critical delivery element that has a strong correlation to adequate broadband infrastructure. This plan identifies strategies for developing our new economy in the broadband era, and defines our values for planning a safe, sustainable and equitable future with technology as a pervasive force in our environment.

The objectives of the Portland Broadband Strategic Planning Effort:

1. To positively affect how broadband infrastructure and service is likely to develop in Portland over the next ten years.
2. To plan for optimal broadband deployment for Portland.
3. To identify key short (3-year), mid (7-year) and long-term (10-year) broadband policies and initiatives that the City, and its partners, can put in place to guide broadband adoption and deployment.

Scope of the Broadband Strategic Plan

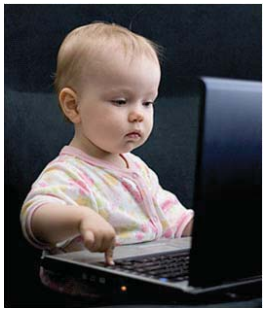
In 2010 the Federal government completed the National Broadband Plan. Our plan references many of the findings of the national plan, and benefits from the extensive research on broadband and its impacts. Our plan picks up where the national plan leaves off. We continue the planning effort by applying the vast research of the national plan to Portland's economy, and our livability, transportation, public safety and equity and inclusion concerns. The national plan clearly recognizes the role of local, regional and state government in the implementation of broadband policy and social change. Portland has taken the next step -- an inclusive approach to local and regional broadband planning, with specific recommendations for action. With leadership from each City Council Office, the Mayor and the City's Office of Cable Communications and Franchise Management, in partnership with the Portland Development Commission, the Bureau of Technology Services, the Bureau of Planning and Sustainability, and many participants from public safety, regional government organizations, industry, education, transportation and health care, Portland formed a series of strategic planning workgroups who deliberated on key issues related to broadband and their sector. These participants identified what the City's goals, key strategies and recommended actions should be to harness the power of broadband for our citizens.

Workgroup participants fleshed out the major issues and developed consensus concerning the impacts of broadband policy on the five sector areas studied (see the following table Impacts of Broadband Policy on Key Sectors). Industry was invited to participate in a roundtable which focused on the draft plan, and opportunities to partner, create incentives, develop policy actions and improve infrastructure and accessibility to broadband services. Ongoing efforts to engage the public and small businesses through other community input strategies continue under the leadership of the Office of Cable Communications and Franchise Management.

The Broadband Strategic Plan is **a vision for Portland's future** that recognizes the social, economic and political importance of Broadband in our livability, prosperity, sustainability, and equity goals.

The Portland Broadband Strategic Plan Vision Statement

IMPACTS OF BROADBAND POLICY ON KEY SECTORS	
Economic Development	• Economic and community development requires access to robust, affordable broadband services. • Business decisions to locate in the City are increasingly impacted by the quality and capacity of broadband availability. • The effectiveness of the City's workforce is dependent on broadband adoption.
Inclusion and Equity	• Without better Internet and telecommunications policies, poverty and disparity will grow. • Inequities in access to technology create a social and economic "digital divide". • The Network provides unprecedented opportunities to expand inclusion, express activism and create unity for communities.
Public Safety	• Advanced networked technologies can reduce response time in emergencies. • The public can truly become the "eyes and ears" of public safety. • Network security, privacy and standards issues are essential policy concerns. • Network reliability standards must exceed current commercial standards.
Transportation, Planning and Sustainability	• Intelligent transportation systems and telework will save fossil fuels and lower carbon emissions. • Intelligent buildings, intelligent communities and planned neighborhood access centers will foster equity and community while lowering costs. • Networks change the structure of communities and their needs for basic infrastructure.
Education and Health	• Getting a quality education in the 21st century increasingly depends on Internet access. • Modern K-12 education methods and goals depend on students and families having access to the Internet. • Internet use has become essential to health and aging. • Our Education and Health systems must modernize and adapt to the networked environment.



Key Themes in Portland

Portland and its partners must take bold actions to ensure the development of world class network infrastructure in the City.

Portland is currently in the "donut hole" – our City does not have fiber to the home (FTTH) available like our neighboring cities do. Our city is not among the first chosen for 4G wireless roll-outs despite the very high penetration of internet use and smartphones among our residents. Some small and emerging businesses have difficulty obtaining affordable high speed connections for business use in the City so they abandon plans to locate in a certain part of the City – or in the City at all! Portland must initiate bold policy, partnerships and incentives to ensure that our broadband infrastructure is world class in order to protect our economic future.

Affordability and ubiquitous availability are keys to adoption.

To build a community that offers all of the advantages a digital economy and digital future offer, Portland must first ensure that all residents, businesses and community organizations have access to broadband services at an affordable cost. Pockets of the city do not have affordable service today, and some areas are underserved. A key theme is that the City must work with Industry to identify underserved pockets, communities or populations and address the inequities.

Adoption across all age groups, cultures, races and economic classes is crucial to relieve social and economic inequities.

One in five Portlanders does not use the Internet at home. Even when they live in an area where service is available, many choose to remain unconnected. The reasons for this are discussed in this report, and in the "Your Voice: Our Communications Technology" initiative conducted by the Mt. Hood Cable Regulatory Commission. (mhcrc.org) Minorities, recent immigrant communities, the elderly and the poor are disproportionally included among those who do not have skills or access to the Network. For those that lag behind in adoption there is a real danger that they will fall behind in opportunity and remain or become marginalized. Access to the City for all sorts of information, transaction and participation is moving online. To look for or keep a job, one must be online. Our plan identifies the need to create inclusion policy and incentives in several recommendations and key strategies.

Economic and societal health depends on education, training and mentoring to create lifelong learners who can embrace rapid change and work and prosper in the new economy.

The digital age is upon us, and our educational institutions are challenged to adapt. The economy is only at the beginning of its transformational shift that will require workers who are online, who can think and reason without supervision, and who can embrace a work environment where employers and employees are not physically housed together, but who are empowered and connected by the "cloud" – a computer-based geography that is not physically present, but logically the center of the new corporation, university and economy.

Portland should become a technology-centered economy, attracting innovators, research and development centers and employers seeking a tech-savvy environment.

To attract jobs and employers, Portland's Network infrastructure must be expanded and modernized. Our community needs top flight research centers, innovative new companies and more technology entrepreneurs. To attract these, our City must modernize policies, local government institutions and approaches, and educational opportunities for residents.

Action Agenda

The Broadband Strategic Plan contains five goals and fourteen key action strategies. Within the key strategies are several recommended actions pegged to a timeframe or "roadmap" of short, medium and long term actions. Upon adoption of the Broadband Plan, the action roadmap will begin immediately. The success of the plan depends on a variety of partnerships within the region: with other local governments, educational institutions, transit and transportation, industry, non-profit groups and residents. Among the first actions the City will take is to foster these partnerships and align the efforts of the City with other strategic efforts region-wide.

BROADBAND STRATEGIC GOALS AND KEY STRATEGIES

STRATEGIC GOAL	KEY STRATEGIES
Strategically invest in broadband infrastructure to attract innovative broadband-intensive business and institutions that create knowledge jobs in Portland.	• **Prioritize "Big Pipe" Capacity:** Plan and incentivize very high bandwidth Broadband deployment through clustering and co-locating very large capacity users, and providing economic incentives to providers to serve these areas. • **Attract R&D:** Work with institutional partners, including OHSU, PSU, PDC, the State and others to attract at least one major research and development facility whose work requires very high capacity broadband infrastructure and globally-based research. • **Standards and Best Practices:** Partner with Education, Industry and Research Organizations to encourage involvement in standards development, open architecture and the evolution of work and markets
Eliminate broadband capacity, equity, access and affordability gaps so Portland achieves near universal adoption of broadband services for all residents, small businesses and community-based organizations.	• **Establish Neighborhood Broadband Hubs:** Create high-capacity access points within neighborhood community centers. • **Expand City Capacity to Address Digital Equity:** Improve equity through dedicated funding and staff resources and community partnerships. • **Facilitate Marketplace Competition:** Advocate for and facilitate robust competition in Portland's Broadband marketplace.
Develop highly technology-literate and employable residents, students, small businesses and workforce.	• **Create Broadband Centers of Excellence:** Create innovative alliances, partnerships and incentives to develop advanced services and applications locally. • **Promote Technical Literacy and Skills:** Leverage existing and support new investment in life-long technology education and training. • **Modernize and Adopt Telecommuting and Remote Work Strategies and Policies.**

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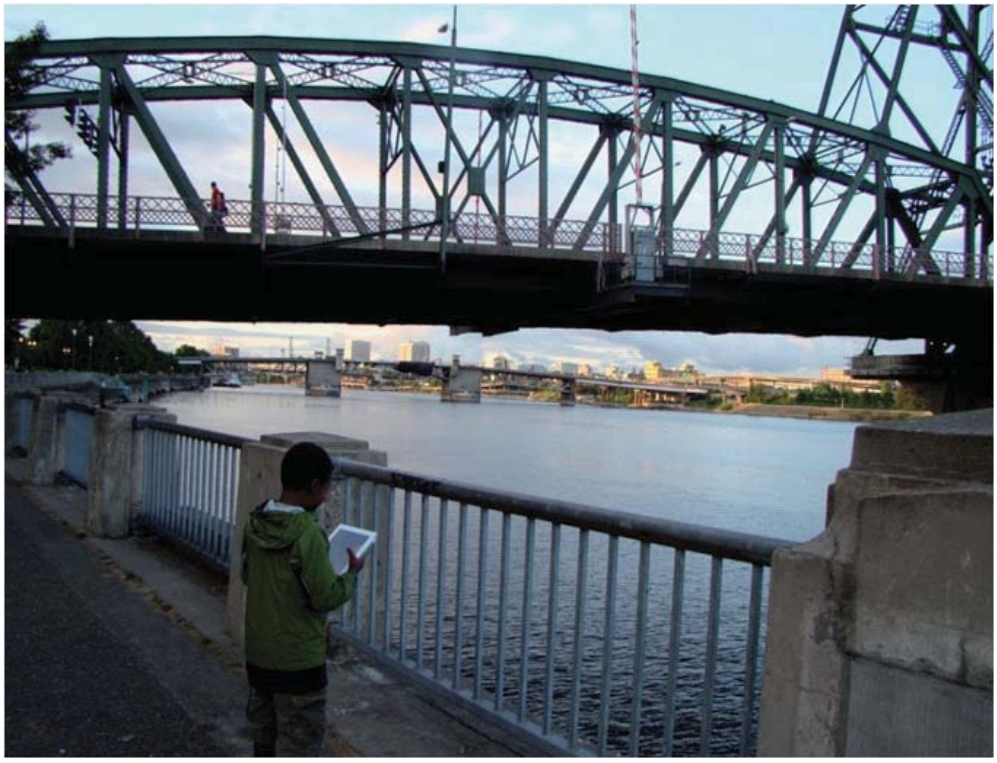
Promote and plan for the use and wide-spread adoption of broadband technologies in government, energy conservation, transportation, health, education and public safety.	• **Energize a Dynamic City Technology Culture:** Foster a change in the culture of City bureaus so that the use of technology and civic engagement is facilitated, embraced and cultivated. • **Adopt Information Technology Standards:** to improve the efficiency and effectiveness of the buildings, streets, parks and health services in the City. • **Adopt Regional Public Safety Standards for Wireless Networks:** that incorporate Public Safety's needs for reliability and ubiquitous coverage, interoperability and priority access.
Create future-oriented broadband policy, modernize government organizations and institutionalize digital inclusion values throughout the region.	• **Establish a Regional Task Force on Digital Inclusion Policy.** • **Advocate for legislation, regulation and adoption of open network platforms and open data standards.**

The City must recruit the help of key public sector partners, educational institutions, industry representatives and community organizations to accomplish the plan's goals. Effecting policy changes and transformation of the City government and its institutions requires strong and committed leadership. The Broadband Strategic Plan describes sweeping changes in government structures, relationships and technology. The steadfast commitment of the City's elected officials and top managers is necessary throughout the change process.



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IBI Group with affiliate NetCity Inc. provided consulting for the Portland Broadband Strategic Plan under the direction of the Office of Cable Communications and Franchise Management. Nancy Jesuale, NetCity Inc. and IBI Group, was the Project Consultant.