Wasco County and Q/Life Broadband Strategic Plan

Q/Life

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Wasco County and Q-Life Network
Broadband Strategic Plan

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Community Development Sector	Organization
Keith Mobley	QLife Network
Dave Karlson	Google
Bill Fashing	MCCOG
Chris Tamarin	Oregon Business Development Department
Paul Ferguson	Wasco County
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Economic Development Sector	
Amanda Hoey	Mid-Columbia Economic Development District (MCEDD)
Joan Silver	Wasco County Economic Development Commission
Carrie Pipinich	MCEDD
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Education & Healthcare Sector

Brian Ahier	Qlife, Mid-Columbia Medical Center
Laurie Miller	Columbia River Women's Clinic, Gorge Health Connect
C.S. Little	Dufur School District
Gary Peterson	Columbia Gorge ESD
Teri Thalhofer	North Central Public Health District (NCPHD)
Kathi Hall	NCPHD
Dan Spatz	Columbia Gorge Community College (CGCC)
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Timothy McGlothlin	North Wasco County School District 21
Cody Harman	CGESD
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Tom Cunningham	Mid-Columbia Medical Center

Resources & Utilization Sector

Scott Hege	Wasco County
Michael Weidman	LS Networks
Lynette Ranney Black	Oregon State Extension Service
Eugene Walters	Juniper Flat RFPD
Seth Reiter	Johnson NETwork
Clinton Johnson	Johnson NETwork
Wilfred Pinfold	Intel Corp
Dale Clark	PGE
Brian Adams	SawNet
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Wasco County & the Q-Life Network Broadband Adoption and Utilization Strategic Plan

Broadband Vision Statement:

We will leverage current technology planning efforts in our region, the region's broadband infrastructure and our investment in middle-mile fiber plant to enhance our region's economic vitality and quality of life.

Broadband Goals:

1. **Increase the number of new businesses entering the county and existing business retention and expansion by creating a technically fluent workforce.**

2. **Through digital literacy campaigns, increase adoption and utilization rates of broadband.**

3. **Improve health and education outcomes by leveraging tele-health and on-line learning modalities throughout the county.**

4. **Increase availability of high quality broadband service in ALL Wasco County communities by driving demand through education.**

Overview

Broadband is transforming and expanding our ability to communicate, participate, create, educate, inform and compete. Because of this transformation, access to adequate broadband resources and the ability to fully utilize broadband-associated tools and technologies are determining factors in the economic and civic vitality and of our communities.

Today, high-speed broadband is transforming the landscape of America more rapidly and more pervasively than earlier infrastructure networks. Like railroads and highways, broadband

accelerates the velocity of commerce, reducing the costs of distance. Like electricity, it creates a platform for America's creativity to lead in developing better ways to solve old problems. Like telephony and broadcasting, it expands our ability to communicate, inform and entertain. Broadband is the great infrastructure challenge of the early 21st century. But as with electricity and telephony, ubiquitous connections are means, not ends. It is what those connections enable that matters. Yet there are still critical problems that slow the progress of availability, adoption and utilization of broadband.

According to research cited in the National Broadband Plan published in 2010, nearly 100 million Americans do not have broadband today. Fourteen million Americans do not have access to broadband infrastructure that can support today's and tomorrow's applications. More than 10 million school-age children do not have home access to this primary research tool used by most students for homework. Jobs increasingly require Internet skills; the share of Americans using high-speed Internet at work grew by 50% between 2003 and 2007, and the number of jobs in information and communications technology is growing 50% faster than in other sectors. Yet millions of Americans lack the skills necessary to use the Internet. Electronic health records could alone save more than $500 billion over 15 years. Much of the electric grid is not connected to broadband, even though a Smart Grid could prevent 360 million metric tons of carbon emissions per year by 2030, equivalent to taking 65 million of today's cars off the road. Online courses can dramatically reduce the time required to learn a subject while greatly increasing course completion rates, yet only 16% of public community colleges—which have seen a surge in enrollment—have high-speed connections comparable to our research universities.

The Strategic Planning Process

In 2012, the Oregon Broadband Advisory Committee (OBAC) and the Oregon Business Development Department selected Wasco County and the Q-Life Network to participate in a broadband strategic planning process focused on identifying goals and strategies to increase broadband adoption and utilization in the community. Wasco County and the Q-Life Network is one of eight Oregon communities participating in the broadband planning process funded under a grant from the National Telecommunications and Information Agency's Broadband Telecommunications Opportunity Program (BTOP)[1]. The county formed four "community sector" groups (Community Development, Education and Healthcare, Economic Development and Resource Utilization) which have met in planning forums to develop the goals and strategies of this broadband adoption plan. This document presents the outcome of this process.

The County and Q-Life worked with the OBDD to develop its strategic planning process, using a planning template developed by OBDD for all eight participating cities. The planning template encourages wide participation from the community in a series of face to face facilitated planning workshops. In January 2013 the County and Q-Life brought individuals from key sectors in the community together in the first series of workshops to explore the following questions:

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[1] The grant is administered by the Oregon Business Development Department

- *Why are broadband inclusion, adoption and utilization important in our communities? What's at stake for the economic, social, educational and healthcare future of our communities?*
- *What parts of our communities are most affected by lack of broadband access, awareness, adoption, and utilization capabilities?*
- *What barriers prevent broadband access, awareness, adoption and utilization?*
- *What community assets and opportunities can be leveraged to overcome barriers?*

A draft report was distributed to all workshop participants in February, and a follow-up plenary planning session was held in March. In the Plenary session, participants reviewed the draft strategies and goals, and focused on identifying and prioritizing key actions. The planning participants identified **shorter term strategies** that would allow the community to achieve **early impacts** in broadband awareness, access and adoption, as well as **longer term strategies** that will improve broadband adoption, support economic development and education and health development goals, enhance the region's businesses, and eliminate digital divide and equity issues.

Findings

Discussion of the above questions by community members led to the following findings.

Inequities in broadband access, adoption and utilization

- Broadband and technology fluency are essential to a skilled and productive workforce, a connected citizenry, and equitable opportunity for all.
- Income, age, and lack of availability of broadband service contribute to inequities in broadband adoption and utilization.
- Technology can be an asset, but too often is a barrier for underserved communities that are without broadband access or economically disadvantaged populations who are without devices or the coaching they need to use technology.
- Closing these divides is essential to developing connected and productive citizens and a skilled, digitally-fluent workforce.
- There is a lack of awareness among many in the community of the impact or relevance of broadband in their lives. These may be people with the access and means to adopt broadband but are not motivated now to do so.

Opportunities for Innovation and Improved Healthcare and Education Outcomes

- New health care and education innovations and opportunities made possible by broadband are emerging in the county. These innovations can improve healthcare and education outcomes and reduce cost.
- All emerging healthcare opportunities are dependent on consumers' awareness and adoption of broadband.
- Lack of technology fluency will inhibit the entry of in-home healthcare programs and to patient access to health information.
- The connection between health and education is an important issue for planners now. New thinking about the healthcare/education nexus is putting the needs of the individual ahead of systems concerns. There is a new understanding of the child health requirements to support learning. As a result, education/healthcare silos (and silos

between school districts and between Pre-K-12 and higher education) are beginning to dismantle.

Role of Broadband in Economic Development and Community Vitality

- Broadband is an essential for 21st century economic development, including small businesses, the developing technology sector, the agriculture sector, teleworkers and the overall vitality of rural communities.
- Utilization skills among small businesses need to increase in order to have access to global markets.
- In order to keep and attract young people to our rural communities we must be able to offer technology-based economic opportunity.
- High capacity broadband service like that envisioned through the publicly funded Q-Life network can enable Wasco County to remain competitive. The fiber optic network established by Q-Life provides a strong foundation for the expansion of broadband access in our community. It has already made it possible to attract major new employers, such as Google.
- There is more to do to meet the goal of bringing robust, high capacity bandwidth to the region. Broadband service is lacking in most areas outside The Dalles, frustrating opportunities to make telework, health care, social services, and extended education opportunities more immediately and readily available.
- It may be possible to leverage existing fiber and other infrastructure resources, including Q-Life, to eliminate the broadband service inequities that plague the rural areas of the County.

Discussion of the Four Broadband Strategic Goals

The planning process produced four strategic goals that address economic development, community development, education and health, and utilization of resources in the community. The goals and associated strategies are discussed below and arrayed on the summary "Conceptual Broadband Strategic Plan" attachment.

Goal One: Increase the number of new businesses entering the county and existing business retention and expansion by creating a technically fluent workforce.

Adequate, high capacity broadband is essential to businesses large and small, to teleworkers and to the county's important agricultural sector. High quality, high capacity broadband service will enable small businesses to flourish, and attract skilled workers and entrepreneurs to the County. Quality of life is why people choose to live in Wasco County communities but many are prevented from building home businesses or telecommuting due to a perceived lack of broadband service. Service is improving in the region, but broadband needs to be ubiquitously available to optimize economic development. Wireless broadband sufficient for agriculture applications is unavailable. Agricultural uses require a "big/fast mobile pipe" that is "a threshold above the norm."

The region has broadband, cheap power and relatively cheap land. Google took note, and established a large presence in The Dalles. The County invested in the establishment of Q-Life, a fiber optic, high-capacity middle-mile network. Planning participants also want to incentivize Intel, Microsoft, Nike and other large employers to encourage employees would be looking for the quality of life and natural beauty the area has to offer to telecommute from the area. The area is also "home" to many "week-enders" and Portlanders with vacation homes. More of these part-time residents would spend more time (and money) here if broadband service were affordable and available to them.

Our Priority Action Agenda:

1. **Provider collaboration on increasing adoption rates by establishing access 'hubs'.** "Hubs" are single locations that have high speed broadband connections and that are open to the public. By establishing additional neighborhood access and business hubs, we can extend broadband to rural communities. A "one hub per year" strategy was proposed to create hubs in Maupin, Dufur, and Tygh Valley. It is important to involve broadband providers in the effort to increase adoption by working with them to establish the neighborhood hubs, along with education efforts on broadband benefits and skills.
2. **Recruit and support local entrepreneurs in technology fields to start or expand businesses in the county.** Develop partnerships to increase business awareness of broadband-linked opportunities, to assist with adoption and utilization skills, and to make technology more accessible to small business.
3. **Expand bi-state collaboration within Mid-Columbia Region on broadband training, adoption and rural access initiatives.** The most likely partnerships are between the City of The Dalles and Klickitat County because they are already partnering on major assets such as a regional airport.
4. **Assist fruit growers and other local businesses to adopt broadband-enabled strategies to compete in global markets.** Pilot projects can demonstrate the effectiveness of broadband partnerships. A suggested pilot between Q-Life and Polehn Farms could demonstrate the potential of global marketing.

Our Implementation Strategy:

- Explore partnership opportunities between Wasco, Hood River, and Sherman counties, as well as with organizations like the Gorge Technology Alliance, the Small Business Development Center at Columbia Gorge Community College, our agricultural groups, and the County Library System.
- Create a bi-state Regional Center for Innovation. Work with the states, the Federal Communications Commission and other federal, state and local agencies and companies to participate in better linking our educational institutions, workforce development entities, and local businesses to support development of a technically fluent workforce.
- Work with the Oregon State University Extension, business organizations, WyEast Resource Conservation Development Corp. and BPA on assisting fruit growers and others. There are already efforts to use high technology to report water content in soil and other applications, and there may be natural partnerships to be developed.

Long Term Strategies:

- Market the business and quality-of-life benefits of The Dalles and Wasco County as a "connected community" to large employers with a telecommuting workforce. Get CEO's to talk to CEO's to start the business to business conversation.

Goal Two: Through digital literacy campaigns, increase adoption and utilization rates of broadband.

There is a very real broadband opportunity divide between The Dalles and adjacent rural areas. Some rural areas have substandard service while others have limited broadband access. Broadband affordability is also a problem, in both rural and more urban Wasco County communities. Affordability and availability are significant issues, especially for economically disadvantaged individuals and families. But participants in this broadband planning process recognized that low adoption rates also indicate lack of public awareness of the benefits of broadband and its growing necessity. Barriers to adoption may include fear of technology, lack of familiarity with computers, concern about security and privacy, non-English speaking, and doubt about the relevance of the Internet. Even those who own computers may lack the skills to use the Internet to find a job, to pay bills, or find a product or service at a low price.

Our Priority Action Agenda:

1. **Develop and promote a policy for access to Broadband in the County.** Establish a "broadband access for all" principle, which will guide policy and determine actions that might provide both affordability programs and initiatives to incentivize or subsidize development of rural broadband infrastructure.
2. **Deploy an effective public awareness and outreach campaign that articulates broadband benefits and value proposition.** This outreach can draw on many sources for content, including the library system, community college, university extension and the Small Business Development Center (SBDC).
- **Establish partnerships to provide digital literacy training. Develop a community-based Technology Users Group with the mission of helping others, "neighbor-to-neighbor", with broadband/ technology utilization skills.** Develop agreements with service providers, device retailers, computer support service providers, coffee shops and others to distribute the outreach materials. These materials should include specific information (how to set a password, how to check e-mail, how to use a browser, etc.). Broadband literacy is cultivated by exposure to devices and fast networks. Develop skills centers within libraries, coffee shops, computer labs in schools, "after school" programs, and at other locations to offer access to devices and support for use of broadband technologies.

Our Implementation Strategy:

- Spread the philosophy to all organizations that interface with communities. Meals on wheels, senior centers, counseling centers, the Library, Churches and other service organizations can be recruited to assist with creating awareness of digital literacy and its benefits.

- Create a public awareness campaign using multi-media outlets (pamphlets, videos, on-line messages, social media, etc.) that publicizes where broadband access is available, what it costs, and what it can do to improve job skills, education and quality of life.
- Find funding to develop a mobile broadband awareness program (perhaps a "broadband van") that can visit communities, the homebound, schools and other community. "There is no substitute for one-on-one coaching" to enable the uninitiated to navigate broadband-enabled technologies. "Neighbor to neighbor" coaching is the best means of supporting broadband utilization skills.
- Involve community institutions to teach digital literacy and broadband skills. "Create an army" of mentors, involve families to raise digital skill sets for all generations in the family. Coaching can occur via teens to seniors, business-owner-to-business-owner, middle-school students to parents, and through after-school programs, library efforts or other formally or informally sponsored programs.

Goal Three: Improve health and education outcomes by leveraging tele-health and on-line learning modalities throughout the county.

Broadband is ushering in new modalities of education and health services. Health care services, including monitoring of vital signs, medication management, and face-to-face consultations between patients and doctors will be possible over a broadband link. Seniors won't have to travel to a doctor's office to be monitored. Consultations with major medical centers in other cities will be possible without leaving the local community.

On the education front, students will be able to take courses from educational institutions anywhere in the world over broadband. Virtual schools are developing and educating students today in Oregon, and throughout the country. Distance education is a significant part of the state's "40-40-20" educational goals, and Oregon State University wants to provide on-line courses in partnership with Columbia Gorge Community College.

Our Priority Action Agenda:

1. **Establish a policy to get broadband access to every address to support healthcare and education service delivery.** Work with the State, health care providers, insurers and others to actively promote service delivery via broadband.
2. **Establish a public/private consortium for collaboration and sharing best practices across the education and healthcare sectors.** Involve health care providers, educational institutions and state agencies to work together to address the policy/protocol issues holding back service delivery over broadband. These issues include federal privacy standards, lack of affordable broadband services and user devices, and lack of organizational skills and programs to offer on-line services.
3. **Initiate a pilot program to test assumptions and develop best practices for using broadband to improve healthcare and/or educational outcomes**. Establish a cross-sector pilot project to demonstrate the health and education benefits of broadband adoption and to advance demand for these services in the County.

Our Implementation Strategy:

- Involve Gorge Health Connect, Oregon Health Network, MCMC/MCGC, the County, Columbia Gorge Educational Service District, CGCC, Head Start and other service organizations and educational institutions in framing a regional access policy to insure service is available and affordable to all homes and schools.
- Convene Information Technology professionals from all of the agencies mentioned above as well as regional business IT professionals to identify best practices, standards and learning resources that can be put to use in promoting access to broadband.
- Develop demonstration pilot projects including:
    - Access your healthcare information at the school.
    - NORCOR (Juvenile Justice) adoption pilot project.
    - A community education guide for how to access healthcare information.
    - Pilot "loop technology" in public buildings and churches for hearing assistance.

Goal Four: Increase availability of high quality broadband service in ALL Wasco County communities by driving demand through education.

As a result of the presence of Q-Life in The Dalles Google constructed a major data center here, bringing new employment opportunities to a community that had suffered the loss of well-paying jobs in the aluminum industry. Q-Life now has a revenue stream that could create a portion of the funding to promote broadband to other parts of our community. There is strategic value in revisiting the Q-Life strategy to build additional partnerships that focus on rural connectivity, rural broadband education, provider partnerships and awareness of the potential of broadband for communities and individuals.

Our Priority Action Agenda:

1. **Drive demand for service through education and marketing the impacts and benefits of broadband.** Education is key to "unlocking" latent demand for service, that would help make the business case for extending more capacity and services in rural areas.
2. **Explore partnerships to focus on demand activation and last mile accessibility.** Leverage other infrastructure, such as fiber assets owned by local power companies, telecommunications carriers, and state and federal government, to reduce cost of deployment through smart partnering and incentives.
3. **Explore all possibilities for leveraging existing public and private infrastructure to bridge rural last mile gaps.** The rural access problem is not limited to Wasco County, but exists in all rural areas of Oregon and in many rural areas across the nation.

Our Implementation Strategy:

- Develop a statewide policy to address rural broadband equity, and engage with the Oregon Broadband Advisory Council, Oregon Public Broadcasting and Oregon Business Development Department to formulate a statewide strategy to overcome rural broadband disparities.
- Drive "high capacity utilization" by businesses through education about web conferencing, video sharing, use of social media and other "power" uses of the Internet for marketing and business development.
- Market "lifeline" services, such as the $9.95 low income options offered by carriers through meals-on-wheels or other in-home service delivery organizations.

- Form a cooperative effort between carriers to drive marketing and education on a public-private partnership basis to encourage adoption of broadband throughout the region.

Long-Term Strategies:

- Advocate for state or federal level policies or programs which extend rural broadband service. Participate in policy reform efforts focused on incentivizing rural accessibility.
- Partnership or pilot project with OPB, OBAC and OBDD to demonstrate a rural broadband project.

STRATEGIC OBJECTIVE

Leverage current technology planning efforts in our region, the region's broadband infrastructure and our investment in middle-mile fiber plant to enhance our region's economic vitality and quality of life.

STRATEGIC PRIORITIES

Economic Development	Community Development	Education and Health	Utilization of Resources

GOALS

1. Increase the number of new businesses entering the county and existing business retention and expansion by creating a technically fluent workforce.	**2. Through digital literacy campaigns, increase adoption and utilization rates of broadband.**	**3. Improve health and education outcomes by leveraging tele-health and on-line learning modalities throughout the county.**	**4. Increase availability of high quality broadband service in ALL Wasco County communities by driving demand through education.**

Strategies & Tactics *(strategies in bold are highest priority)*

a. Provider collaboration on increasing adoption rates by establishing access 'hubs'. b. Recruit and support local entrepreneurs in technology fields to start or expand businesses in the county. c. Expand bi-state collaboration within Mid-Columbia Region on broadband training, adoption and rural access initiatives. d. **Assist fruit growers and other local businesses to adopt broadband-enabled strategies to compete in global markets.** e. Market the business and quality-of-life benefits of The Dalles and Wasco County as a "connected community" to large employers with a telecommuting workforce.	a. Develop and promote policy for access equity in the County. b. Deploy an effective public awareness and outreach campaign that articulates broadband benefits and value. c. **Establish partnerships to provide digital literacy training. Develop a community-based Technology Users Group with the mission of helping others, "neighbor-to-neighbor", with broadband/ technology utilization skills.** d. Establish means of increasing service and device affordability, e.g. neighborhood hot-spots, equipment recycle program and grants or subsidies.	a. **Establish a policy to get broadband access to every address to support healthcare and education service delivery.** b. Establish a public/ private consortium for collaboration and sharing best practices across the education and healthcare sectors. c. **Initiate a pilot program to test assumptions and develop best practices for using broadband to improve healthcare and/or educational outcomes.**	a. **Drive demand for service through education and marketing the impacts and benefits of broadband.** b. **Explore partnerships to focus on demand activation and last mile accessibility.** c. **Explore all possibilities for leveraging existing public and private infrastructure to bridge rural last mile gaps.** d. Advocate for state or federal level policies or programs which extend rural broadband service. Participate in policy reform efforts focused on incentivizing rural accessibility. e. Partnership or pilot project with OPB, OBAC and OBDD to demonstrate a rural broadband project.