



# Klickitat-Skamania LTPT

LOCAL TECHNOLOGY PLANNING TEAM

*A planning project to increase broadband awareness, access and adoption in Klickitat and Skamania counties.*

## Community Broadband Report Klickitat and Skamania Counties

Klickitat-Skamania Local Technology Planning Team

August 2013

The Klickitat-Skamania LTPT is supported by:

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The KSLTPT (Klickitat-Skamania Local Technology Planning Team) project is a planning project to increase broadband awareness, access and adoption in Klickitat and Skamania counties. KSLTPT broadband planning team is led by MCEDD in partnership with CEKC and WSUE but also includes representatives from economic development, telecommunications, nonprofits, education, libraries, and local government. Project Staff Included: Monica Babine (WSU Extension) Amanda Hoey (MCEDD), Carrie Pipinich (MCEDD), Brian Wanless (CEKC), and Linda Williams (WSU Extension)

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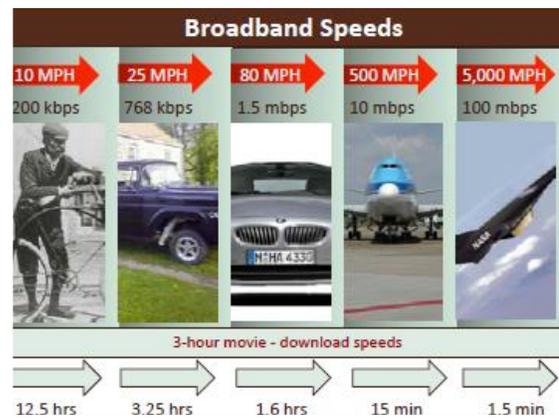
## Executive Summary

The Klickitat-Skamania Local Technology Planning Team (KSLTPT) project is a planning project to increase broadband awareness, access and adoption in Klickitat and Skamania counties. KSLTPT is led by Mid-Columbia Economic Development District (MCEDD) in partnership with Community Enrichment for Klickitat County (CEKC) and Washington State University Extension. It also includes representatives from economic development, telecommunications, nonprofits, education, libraries, and local government.

Between September and May 2012, the Planning Team (MCEDD, CEKC, and WSU Extension) held 16 Community Forums with over 200 participants and collected 80 business surveys and 280 resident surveys on broadband use, service, and needs. The Planning Team also brought together 10 Internet Service Providers (ISP), small and large, and 12 regional government representatives to talk about the service available and challenges to increasing access to high speed Internet. From these activities we have learned:

- Access varies greatly depending on where respondents live and work. Some continue to rely on dialup as the only option available to them, while some have high speed fiber connections. Most utilize DSL, wireless, or satellite.
- Residents and businesses are taking advantage of the Internet access they do have but are not satisfied with the speed and reliability of their connections.
- Businesses are interested in changing the way they utilize the Internet to support their work. They indicated developing websites and better using social media are two areas where they need more training. They also use e-commerce to some extent, but see it as another way to grow their businesses with more training on how to effectively use it.
- Many residents indicated they work from home, or have home-based businesses that could take advantage of additional broadband capacity.
- Information about broadband services, challenges, and approaches to addressing them is not readily available in communities in Klickitat and Skamania Counties.

**Broadband:** advanced communications systems capable of providing high-speed transmission of services such as data, voice & video over the Internet. Transmission is provided by a wide range of technologies, including digital subscriber line (DSL), fiber optic cable, coaxial cable, wireless & satellite.



**E-Commerce:** the marketing and selling of products online, either business to consumer or business to business. (SBA)

The KSLTPT built upon this planning effort by holding trainings identified by participants as highest priority, continuing to work with our ISPs, local and regional governments, and others to increase access to broadband in Klickitat and Skamania counties, and develop regional approaches to the challenges inherent to broadband service in rural communities. The KSLTPT will also continue to work with other LTPTs to share information, lessons learned, and best practices for increasing broadband awareness, access, and adoption.

The Community Broadband Report's purpose is to provide an overview of the information gathered during the initial phases of the project. For those that are broadband beginners, please see Appendix A for the Broadband 101 presentation, or see the sidebars throughout the document.

To learn more about the KSLTPT's efforts, read the full Community Broadband Report. Or, visit the project website at [www.mcedd.org/broadband.htm](http://www.mcedd.org/broadband.htm).

## Section 1: Introduction

The Klickitat-Skamania Local Technology Planning Team (KSLTPT) is a collaborative leadership group; representing economic development, telecommunications, nonprofits, education, libraries, and local governments. Today the KSLTPT includes a primary leadership group consisting of Mid-Columbia Economic Development District (MCEDD), Community Enrichment for Klickitat County (CEKC), Washington State University (WSUE) Klickitat and Skamania Extension, Klickitat County Economic Development, Klickitat County, Skamania County Economic Development Council, Skamania County, Fort Vancouver Regional Library System's local branches, and local telecommunications providers.



The KSLTPT builds upon efforts made over many years in the Gorge. These include the Gorge Teleconsortium and the Klickitat-Skamania Horizons Telecommunications Committee that focused on ensuring telecommunications advancements were accessible in our region. In addition, MCEDD, in partnership with USDA Rural Development and WSU Extension, led a regional planning process to update its Comprehensive Economic Development Strategy (CEDS) through the Stronger Economies Together Program during the first half of 2012. During this process, broadband was identified as a key strategy to support the Mid-Columbia's economy. These prior activities provide a foundation for our current planning effort.

From September 2012 through June 2013, the KSLTPT worked on a broadband planning project to support expansion of access to high speed Internet and to increase broadband adoption and use through education and training for businesses and community members. The planning team consists of MCEDD, WSUE, and CEKC. During the 11 month project time frame, the team was tasked with two phases of work. First, information gathering through surveying businesses and residents, hosting community forums, and working with ISPs to develop a better understanding of the broadband services available and challenges to increasing adoption and access in the two counties. And second, the planning team provided training and began implementing efforts to address challenges identified based on the above work.

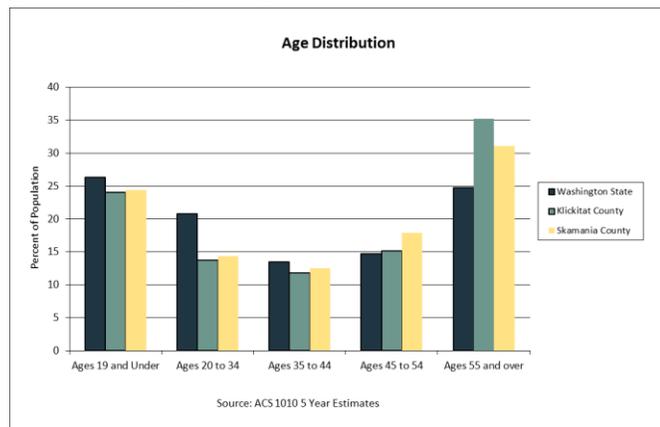
This report will provide the results of this initial information gathering in the context of our region's current demographic information and economic situation. Throughout the report, the project team also highlights our process in order to show the local technology planning team model that we hope will be useful to other communities facing similar challenges. This work will be the basis for a second phase of efforts that seeks to address specific access gaps and adoption challenges for residents and businesses.

## Section 2: Community Context

### Demographic Profile

The Columbia Gorge is a rural area with strong communities scattered throughout. The region consists of five counties, Klickitat and Skamania in Washington State, and Hood River, Wasco and Sherman counties in Oregon. Two of these counties are the focus of this project, but the others face similar challenges and have intertwined economies and populations. To clearly understand the needs in each area, the following section will go through additional information about the populations in Klickitat and Skamania counties. This will inform our understanding of the accuracy of our survey process and support identification of other concerns based on demographic information for those that might not have participated.

Klickitat County had 20,697 residents in 2011, which is an 8% increase over the population in 2000. Skamania County grew by 12.8% between 2000 and 2011 but still has 11,137 residents. Both counties continue to grow, but at a slower rate than Washington State as a whole. The two counties have slightly smaller percentages of younger residents but higher percentages of older residents than the state.<sup>i</sup> This



continues a trend in the growth of the older age group residing in these counties during the previous decade. Ensuring our older population has support for broadband adoption through training opportunities will be vital to the health of our communities as it will increase connections to family out of the area, telehealth services, and many other resources. In addition, increasing access for the younger residents could allow them to remain in the region while accessing more educational and employment opportunities.

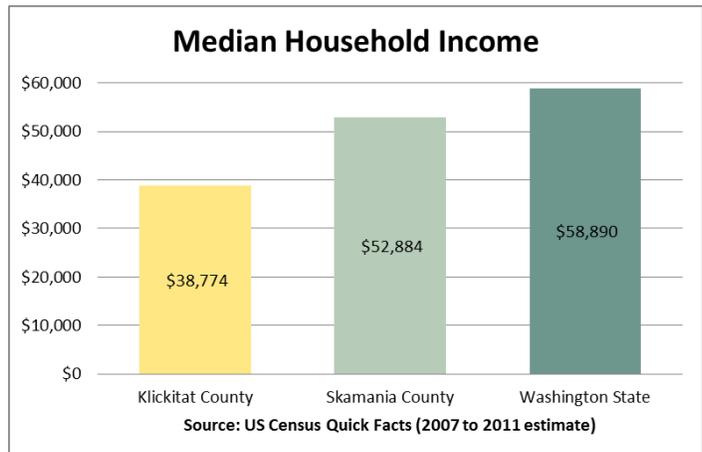
Klickitat and Skamania counties continue to be predominantly white. The largest, and growing, minority group in the two counties is Hispanic or Latino residents, who make up almost 11% of the population in Klickitat County and 5% in Skamania County. The second largest racial or ethnic group in the counties is Native Americans. Klickitat County is home to more Native Americans, both in absolute numbers and as a percentage of the population, than Skamania County, but this population is declining in Klickitat and growing in Skamania. These populations might require different outreach methods to talk about adoption of broadband technology and might bring different approaches and perspectives to enrich our efforts.<sup>ii</sup>

Another significant factor for broadband is that our region's overall income scale is skewed toward the lower end, with about 15% of households making under \$15,000 per year. Poverty, at 18% of the population in Klickitat and 14% in Skamania, has increased in the Mid-Columbia between 1999 and

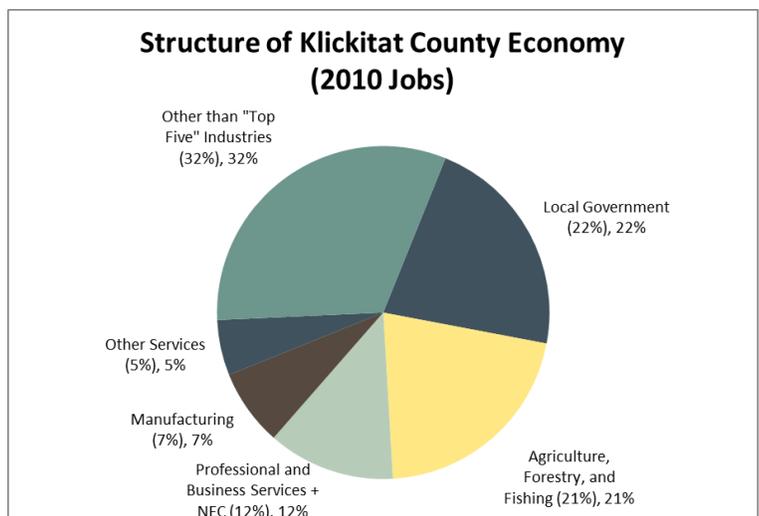
2010.<sup>iii</sup> Among children, the poverty rate is drastically higher than the population as a whole. These numbers point toward a continued, growing need for employment, workforce training, housing and transportation services. Increasing broadband availability and outreach to these groups could improve the understanding of the services available and provide greater access to services and opportunity. They also point toward some affordability concerns when it comes to accessing broadband services.<sup>iv</sup>

### Economic Profile

The economies of Klickitat and Skamania are intertwined in many ways, but also have some differentiating characteristics. Our region has seen a growth in the professional and business services sector in terms of wages as well as the number of jobs. The wage presence has grown more quickly, as these tend to be higher paying jobs, but they are continuing to add more employment as well. In addition to this sector, health services has been increasing, likely in response to our growing senior population.<sup>v</sup> With this as regional context, the next several paragraphs will look at the two counties individually.



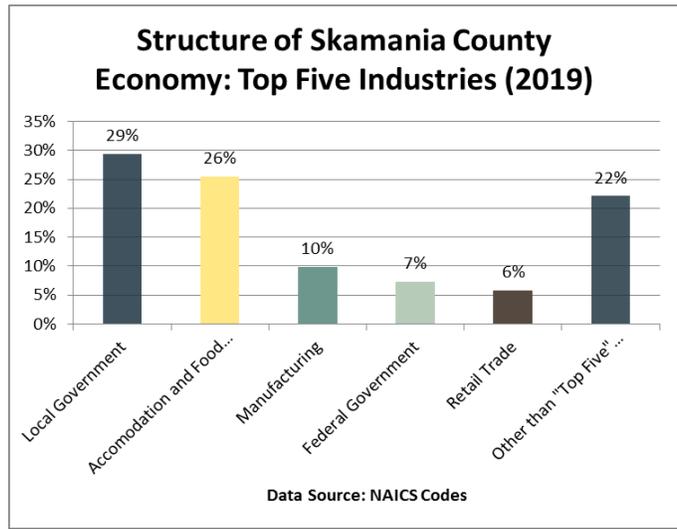
Klickitat County has a diverse economic base from orchards to forestry to high tech and value-added agriculture. Klickitat County's top five industries by number of jobs are: local government; agriculture, forestry, and fishing; professional and business services; manufacturing; and other services. The top five industries by wage earners differ and include: professional and business services; local government; agriculture, forestry, and fishing; manufacturing; administrative; and waste services. This difference, and a lower median income level, could indicate that there are fewer high wage earners in the county. This county has added back jobs in non-farm employment, and professional and business service since the recent recession. However, the unemployment remains fairly steady at slightly above 10%.<sup>vi</sup> The strong professional and business service and manufacturing sectors rely heavily on broadband availability and use in the current technology environment. Increasing access to broadband service could



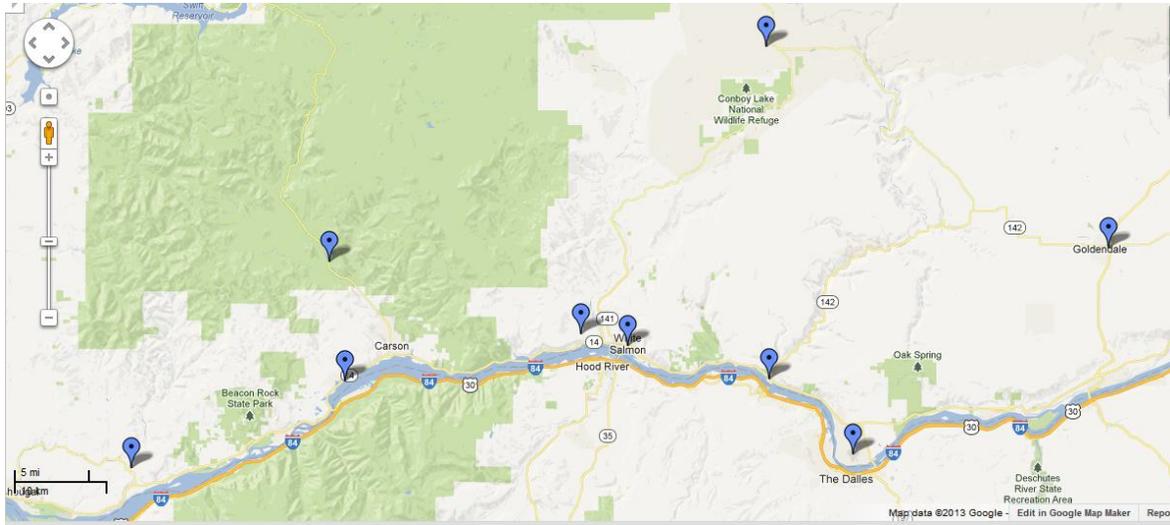
support addressing some of the unemployment challenges in Klickitat County in conjunction with the adoption and technical training we will need to remain competitive as our companies' workforce requirements change.

Skamania County has an abundance of natural, scenic and recreational resources that support its local economy. Almost 90 percent of Skamania County is timberland, but since the early 1980s the timber industry has declined. For the past two to three decades, the county has slowly replaced the timber industry with key sectors that include: high-tech, light manufacturing, and value-added agriculture (wineries, orchards, organic farming). In addition, the tourism and recreation industries have also flourished.

Local government layoffs were a major part of the recent economic downturn for Skamania County, but this sector continues to provide 30% of the jobs, while accommodation and food services (AFS) make up another 30%. While AFS provides many jobs, it only represents 16% of the wages. This results in a significant lower income population, struggling to afford basic necessities. However, over half of the residents commute to work outside the county, so the picture presented above is not complete.<sup>vii</sup> The high level of commuters provides an opportunity to explore telework. Social media and web-based services are also increasingly critical to the success of the tourism industry.



## Section 3: Community Broadband Access

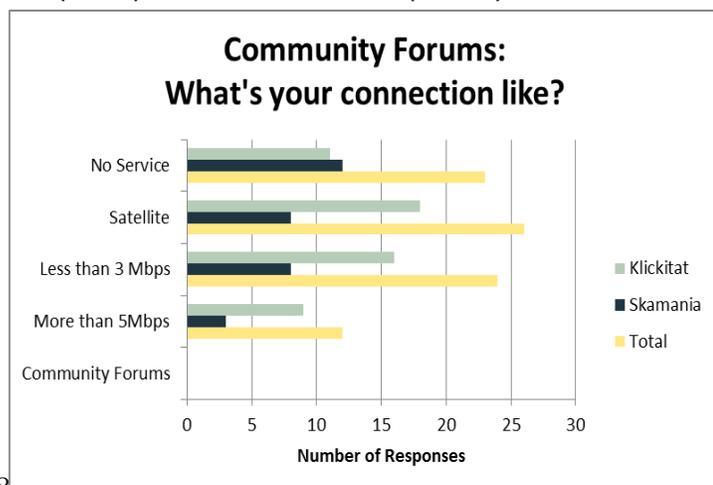


This section will bring together information from our Community Forums, ISPs, and anchor institutions to describe broadband conditions specific to certain communities. It will highlight significant gaps in service as well as areas where we heard from a community that their service was adequate.

### Community Forums

The KSLTPT held 11 Community Forums during October and November of 2012 to gather information about broadband awareness, access, and adoption in the two counties. The communities were chosen to allow easy access to at least one forum for most residents. The locations were: Bickleton, Dallesport, Lyle, Glenwood, Underwood, Goldendale (Community and Chamber), Stabler, White Salmon, Upper Washougal, and Stevenson. CEKC and its partners provided local newspapers, radio, community news sources, and listserves with information about the forums to spread the word. 157 individuals attended the forums, with between seven and 24 attendees per forum.

At each of the Fall Forums, Brian Wanless (CEKC) and Linda Williams (WSUE) gave a presentation covering broadband basics, led a discussion on its role in communities, provided an overview of the KSLTPT's planning project, and asked residents to do a mapping exercise. Materials used during the forums are provided in Appendix A. Attendees participated in conversation throughout the presentations and were also asked to report on the current state of broadband in their communities and



their vision for service. All were encouraged to take the relevant broadband survey (business and/or residential) distributed during the project, complete the WSBO speed test, and spread the word to their neighbors about the project and surveys.

During the mapping exercise, each community member was asked to place a dot at their home's location representing the type of service they had available as well as their satisfaction with that service. Their options were: red dots representing no service or dial-up; yellow dots representing DSL but slow and needing improvement (less than 3mbps); blue dots representing satellite only; and green dots indicating good to great Internet speeds (over 5mbps). For information on each Forum, please see Appendix B.

As this round of community forums finished, the project team felt it was important to go to several communities that had been visited during the Fall Forums but also some others who expressed interest. This was a result of continued engagement on the part of specific communities. The communities visited in the April of 2013 included: Snowden, Carson, Mill A, Glenwood, and Bickleton.

The Spring Forums had two goals. First, to share information gathered from surveys, community forums, telecommunication providers, and regional governments. And second, to provide another avenue for input from local residents on their broadband service while encouraging them to take the WSBO speed test and post comments or stories on the WSBO Broadband Map.

### **Internet Service Providers and Anchor Institutions**

In addition to these exercises, the KSLTPT asked our ISPs to give us updates on broadband access in Klickitat and Skamania Counties in order to better understand service available and provide information on any changes to communities and businesses. These updates were provided at each quarterly KSLTPT meeting throughout the project and are reflected below. The providers were also able to meet with one another, discuss projects, and learn more about areas that were unhappy with their service through feedback from the community forums and surveys.

While the KSLTPT Broadband Project was taking place, an additional asset was added to our local infrastructure. Sawtooth Technologies supported NoaNet Washington's 2010 application to increase funding for fiber optic networks in Washington State and received \$3.7 million of the \$84.3 million in funding provided to further build fiber backbones locally. They built approximately 50 miles of middle mile fiber optics in Skamania County and 35 miles in Klickitat. In Skamania County the fiber connects Washougal to Skamania, North Bonneville, Stevenson, and Willard/Mill A. In Klickitat County the backbone connects White Salmon to Snowden and Klickitat. A second segment reaches from Goldendale to Centerville to Maryhill. SawTooth has been a strong partner with the KSLTPT as well as other ISPs in

our region and continues to be engaged in the conversation about increasing service to underserved communities.

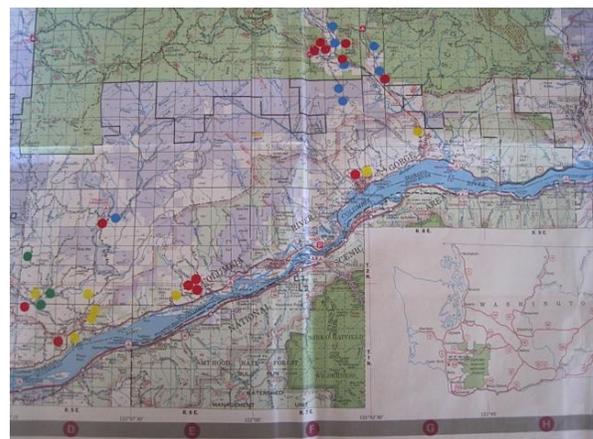
This fiber project was focused on building out additional connectivity to community anchor institutions like schools, libraries, hospitals, and government offices. The KSLTPT project team also reached out to these institutions to find out if they were able to utilize this resource. The results were mixed, with some able to improve their connections and others in progress. These institutions include: the Fort Vancouver Regional Library local branches, Skyline and Klickitat Valley hospitals, and the two county Department of Health offices.

**Mbps:** Megabits per second; a measurement of how much data can be transmitted through a connection

## Results

The summary results from these activities are as follows:

- **Dallesport** attendees reported great broadband near the center of the community, with mostly good service. However, those residents that live farther away from the town center reported service declines quickly. Some attendees expressed concern about affordability creating a barrier to using the services available.
- **Glenwood** has expressed challenges surrounding broadband access for several years, and getting access was previously the focus of a Klickitat Horizon's project. The community has been serviced with satellite and dialup as they have no access to fiber and limited cellular service. In March of 2012 GorgeNet extended up to 5Mbps service to the Glenwood area for those that have line of site to the wireless located at the Fire Station. In addition, CenturyLink deployed up to 10Mbps service in early May in the Glenwood area. There are still areas within the Glenwood Valley that have challenges reaching the services available, as is indicative of many rural areas.
- **Upper Washougal** had a lot of variation. Residents living near fiber have great service but many are still dependent on satellite and dialup for access. Many attendees noted that data caps with satellite were an issue. This area could potentially be affected in the future by leveraging fiber connecting to a cellular tower in the area.
- **Underwood** had many attendees who posted yellow dots on the map. They had DSL but were not satisfied with the reliability or speed of their service. Attendees reported that this negatively affected their ability to conduct business. CenturyLink is working to increase capacity by addressing network exhaustion concerns in the area.



**Bandwidth:** the maximum throughput of the communication path

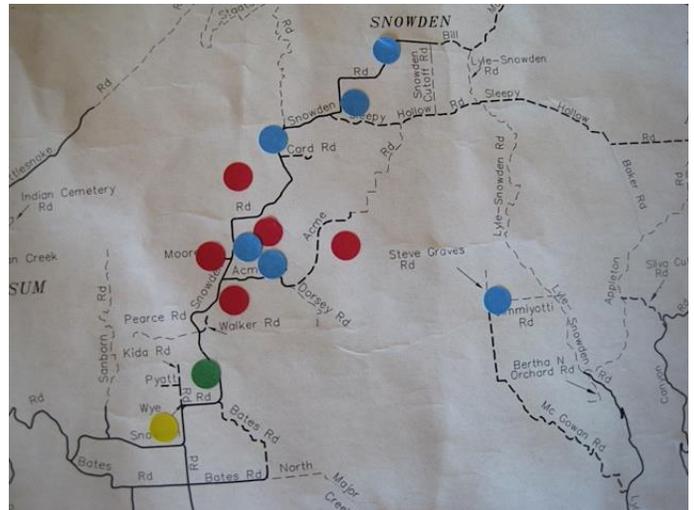
- **Lyle** residents reported limited access with many relying on satellite service where available. The canyons around Lyle prohibit satellite use for some however.
- **Stevenson's** forum included residents who said that they have DSL but were not satisfied with the reliability or speed of their service. They also commented that often in Skamania County satellite can be a challenge because of the forests. The attendees expressed concerns over the ability to conduct necessary activities such as job searches, online banking, education, and staying connected with the speeds available to them. CenturyLink worked to increase its capacity in the Stevenson area during the spring. In addition, the Stevenson FVRL Local Library Branch was connected to the new fiber backbone in May.
- **North Bonneville** was not visited by the project but several service updates occurred during the duration. CenturyLink worked to increase the available service to 10mg for the town. The FVRL Local Library Branch was also connected to the new SawNet fiber backbone in May.
- **Goldendale**, like many of the other locations, has stronger service in town, with some reporting lack of speed and bandwidth. Upload speeds were an issue reported by some of the businesses attending the forum hosted by the Chamber of Commerce. Those living outside of the city limits were more likely to report slow DSL or satellite service only and issues with cell coverage. CenturyLink is working to improve its service in Goldendale as its current capacity is being reached in this community as well. For Goldendale's FVRL Local Library Branch, they have been connected to the SawNet fiber optics, but have not yet seen increased speeds as a result.
- **Bickleton** residents stated that their service mostly consisted of relatively slow, unreliable DSL access. Residents outside of the city center only have satellite or dial-up options. Those with service often have to utilize extenders to get it to their homes. Attendees felt that residents in rural areas were taking advantage of the services available to them but want to see improvement to support access to education, business, and telework opportunities. The project team learned that the school in Bickleton has two T1 connections to meet their needs currently.
- During the Fall Forums, **Stabler** residents reported dialup only. They let the project staff know that they had no fiber access, and because of challenges with terrain they could not access satellite coverage or good cell service. Educational and the ability of young residents to access opportunities without leaving the community were the major issues discussed. Project staff learned in February that several service upgrades were planned or would be executed. US Cellular is looking at ways to serve the Stabler area in order to address their mobile connectivity concerns. In addition, CenturyLink has increased their

service to the Stabler-Rickshaw area to 10Mbps, so dialup is no longer the only option as it was when we visited this community in October.

- **Carson:** Residents in Carson have struggled with slow download speeds and bandwidth challenges and expressed these concerns during a Spring Forum. Service had been limited to 1Mbps for service providers available in the area. They also shared challenges with cellular service availability. The increases in service to communities along Wind River Road affected them as well as Stabler, and many residents left the forum interested in finding out what new opportunities were available.
- **Mill A/Willard:** Many residents expressed challenges getting service to their homes in this area. They noted that there were many homes that would be interested in upgraded service if it were available. A service provider in attendance informed them that there were several wireless providers that might be able to increase their speed if they were in the line of sight of the towers. These providers include SawTooth as well as GorgeNet. Residents expressed the need to increase availability of information about service throughout the two counties.

“When I came tonight, I had dialup. Now I have two more options.”  
-Willard Resident

- **White Salmon/Snowden.** Within White Salmon, dots mainly showed good service. However, most of the attendees were from the Snowden area, where there is mainly dialup or satellite access that does not meet their needs. Several attendees at the Spring Forums were looking for non-traditional opportunities to connect, like cellular coverage. As in other areas, there are concerns with terrain that create obstacles to service.
- **Trout Lake.** While our project did not have a chance to visit Trout Lake, the Trout Lake Community Council conducted outreach and surveyed some of their residents to gather additional information for that area. They found that 13 of 85 respondents did not have cellular coverage at their homes. In addition, 9 of the respondents only had access to dial up connections for Internet.<sup>viii</sup>



There were several overarching trends gathered from the Community Forums as well as community specific data. The team learned:

- While there are many areas that still have no access to broadband services, those that do have access to more options for service are often seeing demand outpace the bandwidth available resulting in reliability and speed concerns.

- Residents are increasingly depending on these services to stay informed, for entertainment, education, work, connecting with family and friends, banking, and much more.
- Many attendees also indicated that they had home-based businesses that require a high-speed connection to be successful.
- Attendees from communities along the Columbia River or in larger towns tended to have better service while those in other areas had poorer service.
- Service updates are occurring in our communities to address some of these connectivity issues, but often word does not reach residents or businesses about these new options.

These broader issues will affect the approach the KSLTPT takes moving forward.

### **Next Steps**

The planning team will continue to reach out to communities in Klickitat and Skamania counties during its upcoming efforts in 2013 and 2014. The information gathered from the forums and telecom providers supports several important actions:

- The KSLTPT will work with local and regional government entities and ISPs to find creative solutions through public-private partnerships to increase access throughout the two counties.
- Identifying effective approaches to disseminate this information could empower communities further to take advantage of resources available currently and express their future needs. To start with this effort, a listserv of engaged and interested community members has been formed to keep communication open. The project website will also be overhauled to enable clear presentation of local, regional, state, and national resources to support broadband access as well as adoption.

## Section 4: Community Broadband Assessment Survey

The Klickitat-Skamania Community High Speed Internet Survey was developed to assess residential high speed Internet availability and use in Klickitat and Skamania counties. To create the survey instrument, a team comprised of staff from WSU Extension Division of Governmental Studies and Services (DGSS), WSU Extension Klickitat County and Community Enrichment for Klickitat County (CEKC) read national broadband reports from PEW, NTIA and the FCC. In addition, the team reviewed residential/household broadband surveys from the states of Nebraska, Mississippi, Wisconsin, as well as Klickitat, Jefferson and San Juan counties in Washington. The KSLTPT community assessment drew significantly from the University of Nebraska–Lincoln “Internet Connectivity and Use in Nebraska: A Household Survey” (2011).

The survey included thirty-one questions and was designed to learn what residents in Klickitat and Skamania counties knew about Internet services available in the region, if they had Internet service in their homes, how they use the Internet, and for those who do not have high speed Internet, what would motivate them to obtain service in the region. Dr. Season Hoard, WSU DGSS, served as the research coordinator, producing both hard copy and online versions of the survey (Appendix C). Dr. Hoard also assisted with initial data analysis.

Residents were informed about the survey primarily through the eleven community forums held in the fall of 2012. Additional promotion included announcements using various forms of media – flyers, press releases, radio interviews, emails, community calendars, and school newsletters. The survey was available for completion from October 10, 2012 until November 9, 2012. During this time period, 280 individuals in Klickitat and Skamania counties completed the survey, with only six using the hard copy version.

It is important to note that due to project budget and time limitations as well as the method of distribution (primarily through community forums), surveying of all, or even a random sample of, households in the region was not feasible. The result is that the findings cannot be generalized to the entire population. Although not statistically valid, the data does provide important insight into broadband access and use for the 280 residents who participated in the survey.

## Who Responded

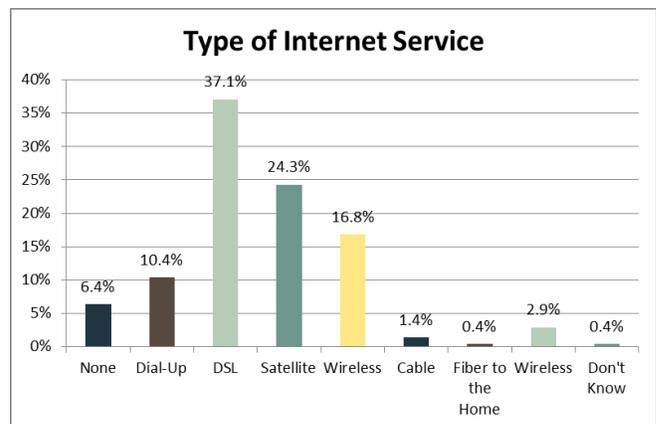
When compared to Census and other data sources about the region, those who chose to complete this survey were older, had completed more education, were from higher income brackets and less ethnically diverse than the median population of the region. This table summarizes demographic information about the survey respondents.

Respondents also represented a variety of communities in Klickitat and Skamania counties including Goldendale, Carson, White Salmon, Snowden, Underwood, Lyle, Glenwood, Trout Lake, High Prairie, North Bonneville, Stabler, Stevenson, Skamania and Bickleton. The highest number of respondents indicated they resided in or near Goldendale (20.6%), Stabler (8.4%), Snowden (8%) and Carson (7.6%).

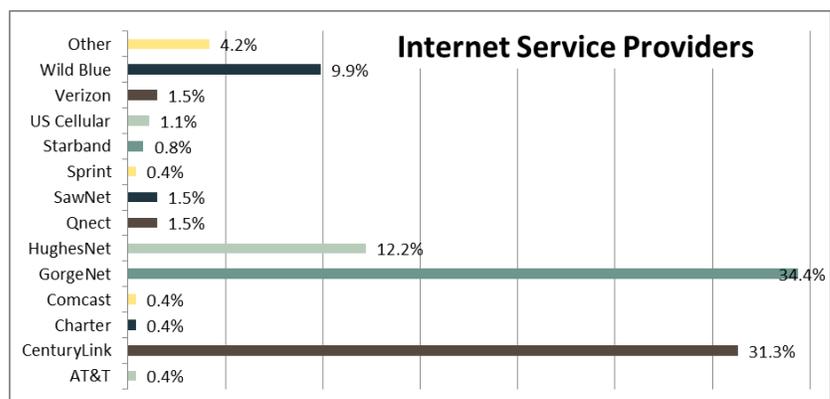
Community Respondents Demographics	
Age	60 or over (43.2%)
Sex	Female (54.3%)
Race	Caucasian (93.4%)
Ethnicity	Non-Hispanic (99.6%)
Adults in household	2 (74%)
Children in household	No
Highest level of education	Bachelor's Degree (32.5%) Graduate or Professional Degree (24.56%)
Income	100,000 or more (22.2%)
Employment Situation	Employed (46.8%)
Occupation	Government (15.4%) Education (15.4%)
<b>N=280</b>	

## Service

Several questions were asked about Internet service. The majority of respondents (93.6%) have Internet service in their home. Of those most have DSL (37.1%), satellite (24.3%) or wireless Internet (16.8%); but 10.4% only have dial-up service. There were sixteen companies reported as providing service with most subscribing to Gorge Network (34.4%), CenturyLink (31.3%), HughesNet (12.2%) and Wild Blue (9.9%).

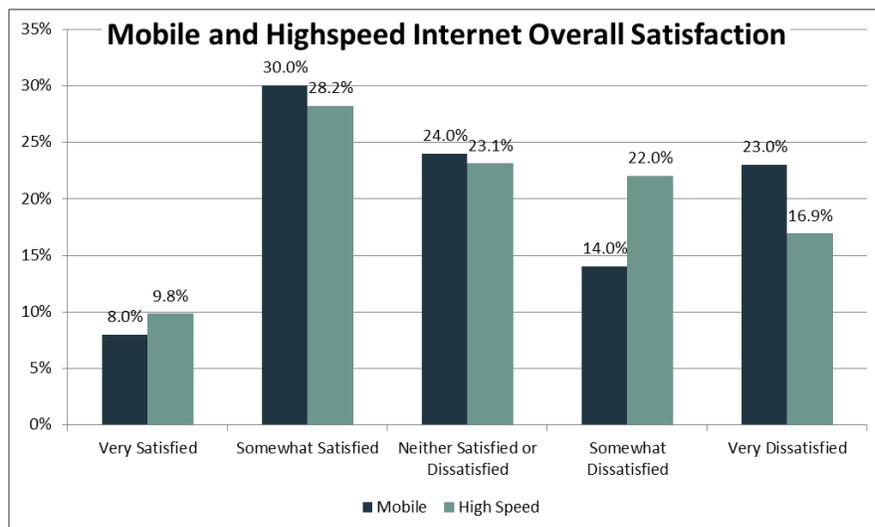


Survey respondents were asked how satisfied or dissatisfied they were with Internet service. The majority indicated they were either very satisfied or somewhat satisfied with the price (46.5%), reliability (48%) and support (47.2%) of their Internet service. In contrast, over half of the respondents (57.3%) indicated that they were either very dissatisfied or somewhat dissatisfied with the speed of their Internet service. Respondents



were nearly divided in their overall satisfaction with their Internet service with 38% of those surveyed indicating that they were very satisfied or somewhat satisfied with their Internet service, while 38.9% are either very dissatisfied or somewhat dissatisfied.

Residents were also asked how satisfied or dissatisfied they were with mobile Internet service. Of those who had mobile Internet service (131 respondents), the majority were either very satisfied or somewhat satisfied with the price (45%), reliability (48%) and support. Respondents were evenly split regarding their satisfaction with the speed of their mobile Internet service – 42% of respondents were very satisfied and somewhat satisfied with the speed of their mobile Internet service while 42% were also very dissatisfied or somewhat dissatisfied. Respondents were also evenly split regarding their overall satisfaction of mobile Internet service. 38% of respondents were very satisfied and somewhat satisfied and the same percentage was very dissatisfied or somewhat dissatisfied.



Questions were also included about public facility computer use and Internet “hotspots”. When asked about free access at a public facility, such as a library or school, 65% indicated that public facilities were available but the majority (46.4%) reported never using these facilities. A high percentage of respondents (41.4%) indicated they use Internet “hotspots” at private businesses (coffee shops, etc.) in their community. In fact, 63.1% either agreed or strongly agreed that they are more likely to frequent businesses that offer free Internet “hotspots.” The lack of use of public facilities may be explained through review of the comments section of the survey where several reported difficulty of use due to distance or hours of operation. Increased use of hot spots, especially free, public access points, might be identified through additional outreach to underrepresented populations. Regardless of use, the vast majority of respondents (87.4%) agreed or strongly agreed that it is important to have Internet “hotspots” available in the community.

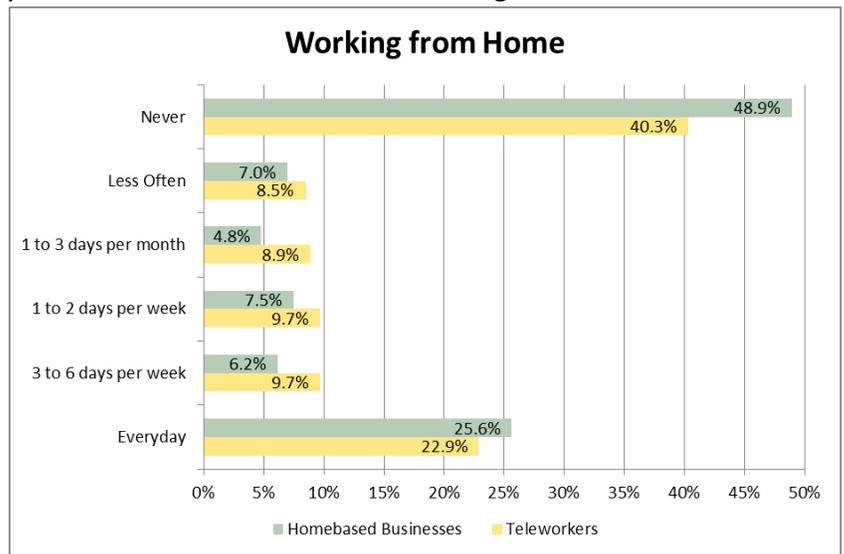
When asked to rate the quality of Internet availability in their local community, the majority (28.5%) rated the quality of Internet as very poor for their household, attracting new residents (28.5%) and future generations (37.5%). Most residents selected “Do not know” when asked about the

quality of Internet for current businesses (33.1%) and attracting future businesses (31.8%). However, 51.1% of respondents selected either poor or very poor for attracting future businesses and 35% indicated the quality of Internet was poor or very poor for current businesses. This indicates the understanding that many respondents have for the crucial role high speed Internet access plays for community and business vitality.

### Broadband Use

Respondents were asked to report on the types and frequency of home Internet use. The majority use the Internet every day for news and weather information (62.2%), social media and networking (57.1%) general information and research (45.7%) and entertainment (42.1%).<sup>1</sup> The majority of respondents indicated they never use the Internet for help with homework, searching or applying for jobs, or taking online courses or distance learning. As previously stated, the highest percentage of survey respondents were age 60 and over which could explain why most respondents do not engage in these activities.

Many respondents indicated they used the Internet to work from home for an employer with 43% using the Internet to telework from home one or more days per week. Internet use by home-based businesses was also high with 39% use one or more days per week. Almost half (48.9%) reported ecommerce activity at least one day per week. Since the question did not provide an opportunity to select between buying and selling online it is difficult to know how much of this is an economic generator for residents versus consumer activity. Regardless, there is a significantly high rate of ecommerce supported by respondents.



Survey respondents were asked questions in order to determine the technology training needs of individuals in their household. Low interest was identified for basic technology training (computer use, email, Internet use, etc.). In contrast, free training for skills that appear to support of telework or home-based businesses were identified as of interest. These include website development, basic computer networking, audio/video production and writing for the web. Other

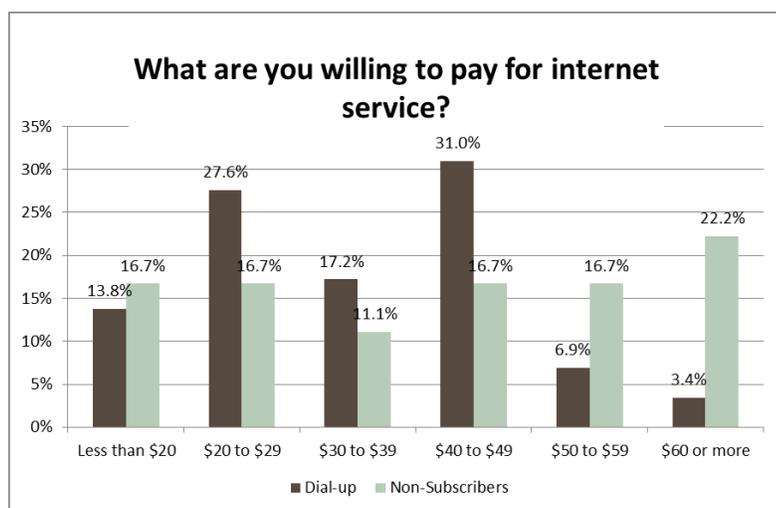
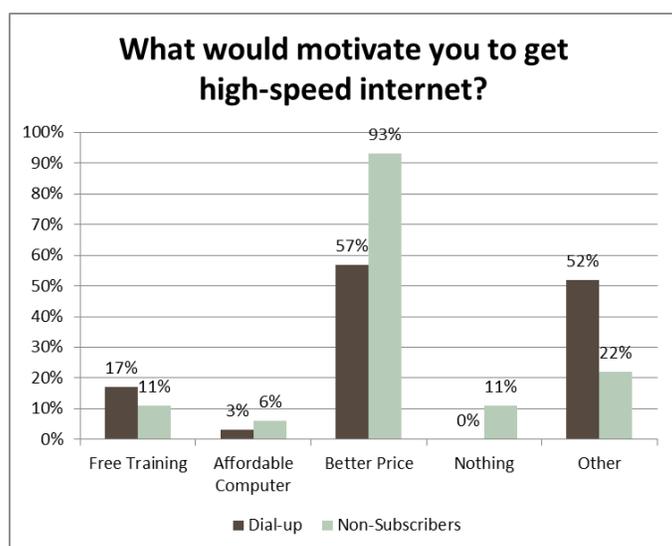
<sup>1</sup> “Communications” (email, Skype, etc.) was inadvertently left off as a selection in this survey but based on review of other residential broadband reports it would appear that it too would have been rated as one of the most frequent uses.

technology courses listed by respondents included business development, computer repair, cloud based computing and Internet marketing.

Twenty-nine respondents (10.4%) reported using a dial up connection at home. The highest percentage of individuals (57%) indicated that better pricing would motivate them to get high speed Internet service. Other was the second highest selection, further explaining that lack of availability was the issue. The maximum individuals would be willing to pay varied but the majority (31%) reported they would be willing to pay \$40-49 per month.

A section of the survey was dedicated to those who do not have Internet service. Of the 280 residents surveyed, 18 (6.4%) reported not having Internet service in their home. When asked what would motivate respondents to get Internet service, 93.3% reported better price for service. Respondents were asked to select the maximum monthly amount they would be willing to pay for Internet service and slight majority selected \$60 or more followed by 16.7% willing to pay \$50-59 and 16.7% reporting \$40-49.

The following graphs compare motivation and pricing information for both the dial up and non-subscribers.



More detailed information about the results of the community survey, including respondent comments, are provided in Appendix D.

### Next Steps

As stated earlier, the demographics of the survey respondents do not reflect the overall population in Klickitat and Skamania counties. The findings did however inform the project team about populations that need to be reached to secure information about their broadband use and needs. A critical next step in this project is to identify ways to reach those who individuals. Project staff is working with the full KSLTPT committee to identify how best to do

this. From this, additional priorities to help increase broadband awareness, access and adoption will be identified.

Priority next steps already identified also include:

- Due to the frequency of use of private business “hotspots” and the strong agreement about the importance of free public Internet “hotspots”, the KSLTPT will encourage and support expanded access through these venues in the two counties.
- KSLTPT staff will also share community survey results with telecommunications providers and regional government planning and public works staff with the goal of identifying resources and solutions to meet broadband access demand.
- Based on community survey results it appears that training interests are primarily focused on strengthening telework and home-based business activity. Promotion for business training available during the KSLTPT project will include residential outreach.

## Section 5: Business Broadband Assessment Survey

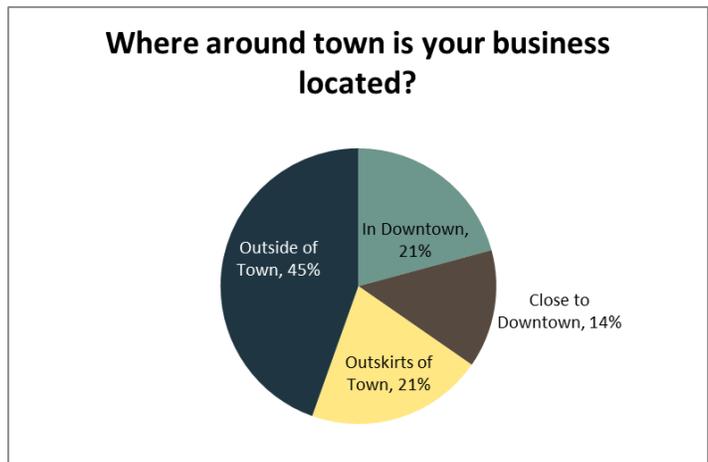
The Business Broadband Assessment Survey was developed to better understand broadband access, adoption, and demand in our business community. Project staff reviewed surveys from similar processes in San Juan County, Washington, Nebraska, Montana, and Wisconsin to ensure the instrument was in line with current best practices. In addition to reviewing these examples, MCEDD staff sought input from project partners and Internet service providers to support collecting data that would move the group toward our goals of increasing broadband access and adoption.

The survey included 28 questions and was designed to learn about Internet services available in the region, if businesses had adequate Internet service, how they use the Internet, and training opportunities useful to increasing business adoption of broadband. Staff produced both an online version and a hardcopy version of the survey. The survey instrument and full results are available in Appendices E and F.

The business survey was distributed through several avenues. Project staff partnered with business and community organizations to distribute the surveys to their networks via newsletters, postings on websites and social media outlets. In addition, MCEDD staff utilized existing business contacts in the two counties to individually request participation. MCEDD also hosted the survey on its project website and distributed links to the surveys through its newsletter which has a distribution of about 1,000 readers. The CEKC team assisted with circulation by bringing paper copies of the business survey to each community forums and allowing time for MCEDD staff to highlight the survey when in attendance.

### Who Responded

The survey had 80 businesses respond from throughout the two counties. With 59 from Klickitat County and 21 in Skamania County, the responses are slightly skewed toward Klickitat in excess of the population proportions. There was a good spread between those located in towns and in more rural areas. The largest group of respondents were from the outskirts of town (44%), while about 35% were in town and 20% outside of town. The survey did not ask about whether or not they were home based businesses, but in the comments there were many respondents who indicated that they were, which is supported by the large numbers who are not located in town.



The firms' sizes and industries were relatively varied as well. The majority, 70%, of respondents, had between one and four employees. The

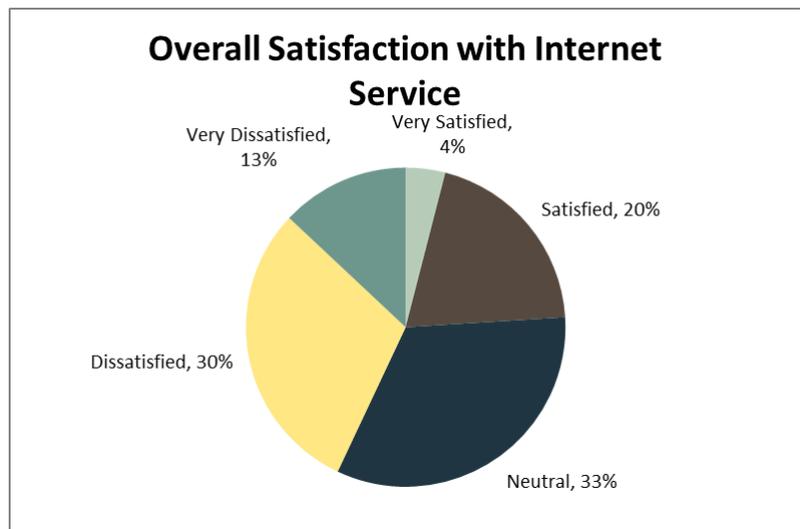
professional and business services sector made up the largest portion of the respondents at 16.3%. This group represents about a third of businesses in Klickitat County and about 6% in Skamania. Our second most represented are value added agriculture (15%). Many of the value added agriculture businesses that responded are wineries or vineyards, making up 11.3% of total respondents. According to economic data, they also play a large role in the region’s tourism and food service industries.<sup>ix</sup>

Q2) What field/industry is your business in? (Number of respondents)		
	#	%
Government	2	3%
Real Estate	4	5%
Science Related	4	5%
Value Added Ag (9 wineries)	12	15%
Ag	2	3%
Construction	2	3%
Manufacturing	4	5%
Medical	2	3%
Misc	6	8%
Business Services	13	16%
Tech	6	8%
Artisan	3	4%
Energy	4	5%
Recreation	4	5%
Hospitality Services	6	8%
Retail	3	4%

### Internet Service for Businesses

There was a wide range of service types, providers, and speeds reported. Gorge Networks and CenturyLink were the two companies with the largest market share. Of the respondents, those two combined held over 73% of customers. The next two providers were satellite providers, with about 10% of respondents. Almost half of the respondents reported having DSL connections, with 24% utilizing wireless connections. There were still four respondents who had dialup connections for their businesses. Only one of our respondents reported having a cellular “hotspot” connection, which could also be an indication of significant cell coverage issues or a need for additional education about the possibilities mobile devices could hold for broadband access.

The survey asked about speed, reliability, customer service, and pricing as well as overall satisfaction. The main concerns expressed centered around speed and reliability. 60% reported being dissatisfied or very dissatisfied with their speed. Reliability was rated as 42% dissatisfied or very dissatisfied, with 34% satisfied or very satisfied. For price, the range was fairly evenly split with a few more respondents leaning toward dissatisfied. Many reiterated in the comment portion of the survey that speed and reliability are two significant factors in productivity so these issues cause major challenges. In addition to staff being able to meet the businesses’ needs, hospitality establishments also indicated that they were struggling to meet customers’ demands for bandwidth with the growing number of mobile devices visitors are bringing onto networks.



A question was also included that asked about employees’ ability to work remotely from their homes. Over half (53%) of respondents were dissatisfied

with connections available to employees for this type of work. 31% were neutral but only 1% were very satisfied. Working remotely in the context of the long commutes discussed previously could positively impact the local economy by keeping businesses and employees in the region throughout the work week.

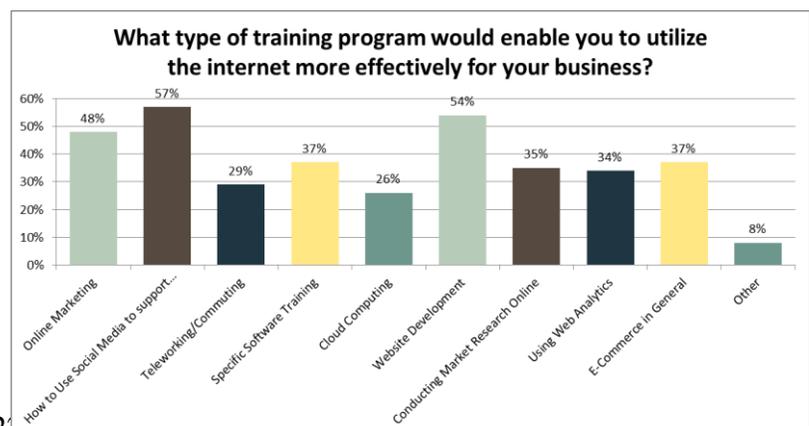
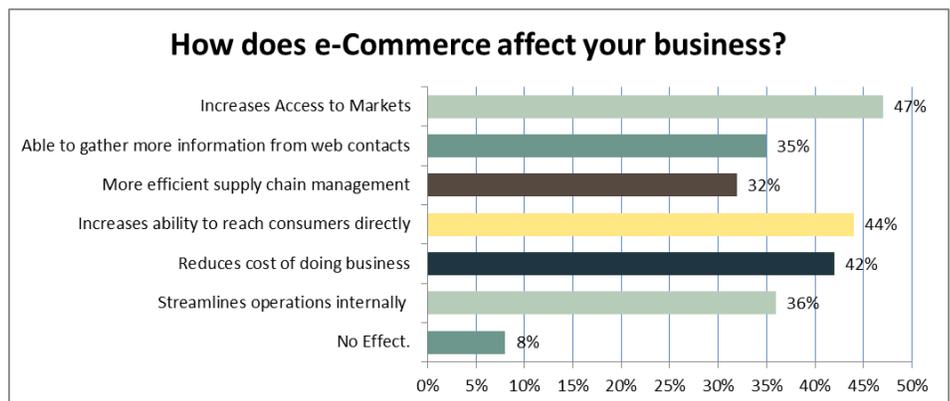
## Broadband Use

Altogether, in a variety of formats, the 80 businesses that responded to the survey have 175 online presences. From a website to Facebook page, they are trying to participate in this necessary activity to connect to the broader marketplace. 78% of respondents have their own webpage, with 52% having a Facebook page. Only 11 of the 80 companies who took the survey reported having no Internet presence. While many companies are working to keep up a digital presence, several comments were submitted that indicated their connections affected the capabilities they were able to embed in their sites. This can affect their competitiveness in an already difficult business climate for rural areas.

In addition to creating an online presence for themselves, many of our businesses utilize broadband intensive applications to do their work. They need to have the capability to stream video, transfer files, and have access to cloud

computing to keep up with technology trends. Respondents indicated that it was difficult to complete these activities with their current service. Businesses stated that additional access would allow better utilization of e-commerce, access to more customers and reduction of costs. Those that use these tools expressed a strong understanding that broadband is necessary to support a robust business today.

The survey also asked about what types of training might best support utilization of broadband for businesses. Respondents were given options as well as an opportunity to suggest training topics. 47.5% of respondents said that they would like training on social media utilization. In addition, 43.8% wanted training on website development. The third ranked, with



38%, by businesses was online marketing training. These strategies would enable businesses in the Gorge to more effectively connect with customers and spread the word about their businesses.

### **Next Steps with Businesses**

Business respondents supported the need to continue working to address access issues in our area. Addressing these challenges creatively would give businesses more certainty about their work and greater access to outside resources and markets. A strong focus must also be put on efforts to support adoption of broadband technology that will increase businesses visibility and help them keep up with rapidly changing technology. The businesses who responded to the survey provided much information about how they already use broadband, and ways that they could do better with both more training and access.

Several next steps include:

- Businesses that already participate in e-commerce see its value, but only about half of our respondents utilize these strategies. This indicates an opportunity to support increasing adoption of e-commerce through training on the concept and implementation strategies
- The largest training needs identified were looking to build a stronger online presence. Developing websites and effectively utilizing social media to support a business were the top identified interests. Providing training to help businesses in the region learn more about how to implement these strategies will support increased broadband adoption as well as increase our businesses opportunities for success. Some of our local partners have provided this type of training but have indicated a continued concern about attendance as well as finding appropriate equipment and locations to host them. The results of the surveys only highlight the need to continue these efforts and look to creative partnerships to support and expand the training available currently.
- Support telework initiatives that would increase the success of home based businesses in our local economy and encourage employees of larger companies to take advantage of the option to work remotely and stay in place rather than commute long distances.
- While some businesses have their needs met by the service available to them, respondents overwhelmingly felt that they could take advantage of expanded high speed internet access for their businesses. The KSLPT will continue to work with the ISPs in our region to address challenges to expanding service in the two counties for businesses and residents.

## Section 6: Conclusions and Next Steps

The KSLTPT gathered the information discussed above, but has also been active in several other ways. The planning team has held meetings with the full LTPT, our local service providers, and worked with the WSBO to incorporate their expertise into these efforts. While our conclusions and next steps incorporate each of these efforts to create a full picture of the telecommunications ecosystem in our region. The KSLTPT will continue to incorporate feedback and report back to stakeholders as we move through the next phases.

Our upcoming work will be guided by the following conclusions:

**Access Gaps.** Many community members and businesses have expressed concerns about access to broadband and the currently available speeds and reliability through our three data collection mechanisms. The KSLTPT has encouraged conducting speed tests and providing feedback through the WSBO website on these issues to create an accurate picture of what is available in our region.<sup>2</sup> In addition, to these steps, the KSLTPT would also like to:

- **Reach out to ISPs** in the area to better understand what format this information would be most useful for them. This includes additional mapping for areas where gaps have been identified and continuing to detail local demand.
- The KSLTPT will also continue to **engage with local, regional, and state governmental entities** that are involved with development and infrastructure to discuss strategies to support extending broadband service in Klickitat and Skamania counties.
- Many residents expressed interest in **public hot spots**, either for free or at businesses. Increasing the accessibility of these venues might create a stop gap solution while we work to address the longer term challenge of broadband access in homes and businesses throughout the two counties.

**Rural Broadband Resources.** There are many opportunities to leverage funding and expertise to address our access gaps. Bringing together information on public, private and non-profit funding sources as well as best practice examples from other communities will provide a base from which to move forward on these issues. In addition to gathering funding information, working to identify specific projects and priorities will enable the KSLTPT to bring in a “tech team” of funders to discuss additional opportunities and approaches to building out our broadband infrastructure through public-private partnerships.

**Gaps in Adoption.** While many of our respondents understand the importance of broadband adoption, there are several areas where the KSLTPT can support increasing this understanding and providing the tools to those interested in improving their broadband utilization. Several next steps are apparent:

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<sup>2</sup> An up to date look at the WSBO map can be found in Appendix G or at <http://wabroadbandmapping.org/InteractiveMap/>

- The KSLTPT will continue to work to **identify adoption gaps** in the community. This report highlights several gaps in our survey data that should be addressed to gain a full picture of community needs. This will require additional outreach in a variety of methods to underrepresented communities to better understand training needs as well as barriers to access and affordability concerns.
- The team has identified several **training** requirements for which the KSLTPT will seek to provide training for the highest identified needs. The KSLPT will collaborate with local partners already involved in training, including Chambers of Commerce, the Small Business Development Centers, economic development entities, the local libraries, and others to address ongoing challenges to making this training available with creative approaches to solving location, training and attendance concerns. This process will continue to develop as new information is collected and additional needs identified.
- In our business and residential surveys we heard many concerns about the speed and reliability of connections for **working remotely, or home based businesses**. Finding creative solutions to this issue that allow residents to work in or near their homes rather than traveling to work in larger cities could allow residents to remain in the community and enjoy the quality of life offered in this region while having access to broader job markets.

**Formalize the KSLTPT.** The KSLTPT has been a successful proponent of broadband in the two counties, and continues to be opportunistic about taking on projects to support broadband access and adoption. The KSLTPT will look at creating a structure that will best fit continuing these efforts. This could include a core team with technical knowledge and local expertise that meets regularly as well as a broader mechanism for successfully gathering input from and disseminating information to community members and businesses interested in the project.

**Develop Regional Approaches.** Another way to strengthen our efforts is to consider opportunities to work together across the Columbia River with the whole Mid-Columbia Region. This is a challenge faced in both our Washington and Oregon Counties so ways to combine efforts, build on successes, and draw from the knowledge and experience available will support moving forward. This coordination and information sharing could support creation of a larger market for services and collaboration on training and adoption needs.

**Regional Broadband Information Hub.** The planning team has heard from community members and businesses about the need for better information regarding broadband in our region. This would help communities and local institutions by increasing their understanding of broadband terminology, available resources in our area, challenges with middle and last mile service provision, and keep them up to date on service changes. In addition, creating materials and a website focused on the importance of broadband and its economic benefits could encourage additional investment and adoption. These resources would empower communities to be strong partners in increasing broadband awareness, access, and adoption.

## **Afterward**

If you have any questions regarding this project or would like additional information about this report or other Klickitat-Skamania Local Technology Planning Team activities, please contact Mid-Columbia Economic Development District at 541-296-2266 or visit our project website: [www.mcedd.org/broadband.htm](http://www.mcedd.org/broadband.htm).

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