

EXPANDING BROADBAND AND INFORMATION COMMUNICATION TECHNOLOGY FOR EVERYONE

A Business Plan Priority for 2022

December 2021

Why Broadband and ICT

Internet access is as essential as electricity, radio, and the telephone were when they emerged a century ago. The coronavirus pandemic has intensified demand for high speed broadband connections and information communications technology (ICT) in every facet of daily life, including home-based work, education, health care, contact with friends and family, and entertainment. The elevated use and value of broadband will not diminish post pandemic. Expanding and upgrading Oregon’s broadband capability and improving digital equity will help ensure a vibrant, equitable state economy and a more connected Oregon.

Broadband needs across the state’s geography and across industry sectors are not uniform. Some areas require access to new or improved infrastructure. Others are well served by existing infrastructure but require more focus on affordability and adoption. Designing networks that meet high tech computing and manufacturing needs while serving working families and students in frontier communities is a complex puzzle. It will require ingenuity and flexibility on the part of providers and community partners. The web of new and emerging technologies, private and public sector partners, and layers of regulatory frameworks across multiple jurisdictions can be daunting.

Collaborative efforts among service providers, educators and local governments were largely successful in meeting the pandemic-driven, immediate needs of Oregonians in 2020 and 2021. Still, anecdotal evidence and hard data underscore the problems and challenges that still exist. Wildfires tore through the state in September, 2020, leaving whole communities without communications infrastructure; many students and families in rural and some urban areas barely get by with unreliable or inadequate broadband capacity for learning or working from home; and in some places, long term availability, affordability, and adequacy of devices and high quality services seem unattainable.

The Difference We Can Make in Three to Five Years

With strategic action, Oregon has a unique opportunity to provide the broadband capacity necessary to propel economic growth and related benefits. That includes good jobs in manufacturing, curricula and connectivity for education and workforce training, and 21st century communications technology in new housing development. Broadband also shows great promise to advance productivity in agriculture and water resource management applications, leverage rural economic development opportunities, and provide greater resiliency for energy, transportation and communication grids.

What’s Needed To Achieve Desired Results

Private sector firms are constantly investing in facilities to expand and upgrade broadband services, and they are by far the largest source of funding for broadband expansion and innovation. However, public dollars flowing through federal, state and local programs can provide critical additional support and will be especially valuable if invested in conjunction with private investments to close gaps that plague unserved and underserved areas and populations. It is critically important that federal dollars from CRSSA, ARPA and American Jobs Plan legislation be coordinated with other sources of funding.

This paper recommends that private-public funding be deployed in an overarching strategy – with goals, metrics, and interconnected plans of action – to address three interrelated needs that underserved communities have for broadband capability.

- **Access:** putting in place the physical infrastructure to provide households with high-speed internet in every corner of the state. Access will be achieved through the efforts of a wide range of private sector service providers, coupled with targeted public investment in unserved and underserved areas.
- **Affordability:** leveraging federal subsidies to those who otherwise would be unable to afford access at the commercial rates typically available. These programs address affordability, but additional effort is required to increase awareness and get people signed up, in particular those communities disproportionately impacted by the covid pandemic.
- **Adoption:** providing community-based technical assistance, equipment, and software, as well as promotion of internet benefits and literacy for those not now connected.

Absent a coordinated strategy, resources could easily be wasted.

Access

- **Invest in a detailed mapping analysis of broadband infrastructure and speeds available across the state.**
 - Conduct more rigorous data collection and analysis to accurately identify geographic areas and populations lacking sufficient bandwidth for learning or work at home applications.
 - Develop a dashboard to identify metrics and measure progress for physical infrastructure and speeds.
- **Encourage aggressive but attainable standards for broadband service irrespective of provider or technology.**
 - Create detailed map of current capabilities of providers.
 - Track progress in terms of speed, reliability, pricing and access.
 - Aim policies and investments at continuously upgrading performance. (In this evolving, competitive arena, we should expect accelerating improvement over the decade ahead.)
- **Expand the percentage of households, businesses and organizations with physical access to adequate levels of broadband.**
 - Ensure that funds allocated through competitive processes at the state level target unserved and underserved areas as well BIPOC populations in both rural and urban communities.
 - Provide technical assistance and matching funds to help eligible Oregon applicants navigate complex federal application and reporting requirements for funds.
- **Rely largely on private providers to expand and improve access.**
- **Use public dollars to address gaps.** Allocate funds through competitive process to get the best value for investment in terms of internet speed and price.
- **Consider tradeoff between infrastructure investment and public dollars** to support affordability and adoption. (Infrastructure doesn't help if it isn't used.)

Affordability

- **Analyze and develop a coherent structure for both available low-cost service options and government funded assistance programs.**
 - Currently, major internet providers offer low-cost options for low-income households, and state programs and some school districts provide additional support for families with students.

- Engage in outreach campaigns to enroll eligible Oregonians in both private sector and government funded assistance programs.
- Leverage financial supports for those who cannot afford service.
- Evaluate using the the Oregon Universal Service Fund in this effort.
- Develop a table showing the various subsidies and cross-subsidies that provide support, and services and providers eligible to participate.

Adoption

- **Build the case for relevance and adoption:** It should address such questions as Why is having and knowing how to use information communication technology important to farmers? to students? to patients? to voters? Why is this relevant for learning, safety, health care, family life, job security, banking, and more?
- **Engage with communities and organizations** closest to those experiencing challenges to understand specific needs and the obstacles or barriers to adoption.
- **In partnership with trusted, culturally competent organizations,** develop a comprehensive engagement strategy and tailored approaches to fit the affected communities or user groups.
- **Develop a marketing plan to dramatically increase adoption,** including market segmentation and research to identify adoption barriers.
- **Identify channels to help reach potential users and address their needs,** including community-based organizations, libraries, schools, and coordinated care organizations.
- **Develop and deploy end-user technology adoption strategies and curricula** that can be adapted to the requirements of various community populations using a wide equity lens to ensure adoption, acceptance, and productivity.
- **Explore ways to create an easily accessible support network** of organizations to assist with installation, equipment set-up, initial trouble shooting, and digital literacy.
- **Evaluate current methods of distributing devices and software to those needing them,** and increase the percentage of households with end-user equipment and software needed to access the internet.

The plan for adoption would enlist a wide variety of partners – community-based organizations, libraries, K-12 and higher education, business, and more. We can imagine a youth corps to reach out and assist families who need help to set up service. We can imagine Free Geek and other service organizations helping to provide equipment for those in need.

Next steps

Building out the strategy, structure, and work plans will require mobilizing a strong network of federal, state, and local government entities, service providers, individuals and non-profit and community based organizations. There is much work to be done to engage with a variety of stakeholders and policy makers to refine these ideas and build consensus and ownership.

This work must be carried out in close cooperation with the State of Oregon, including the Governor’s Office and the newly upgraded Broadband Office in Business Oregon. Throughout, the intent will be to support and supplement – not duplicate – their efforts or the efforts of anyone else. In fact, working in partnership is the only way to successfully boost greater broadband investment, ensure coordination among jurisdictions and providers to take full advantage of funding streams, and set policies to get the greatest benefit from investments.