Oregon Broadband Advisory Council Meeting

January 23, 2020 Salem, OR

Attendance

Members Present: Katie Cox, Kurtis Danka, Dr. Miles Ellenby, Joseph Franell, Michael Heffner, Wade Holmes, Maureen Bock for Galen McGill, Rick Petersen, Jeremy Pietzold, Cheri Rhinhart, Senator Arnie Roblan, Dave Sabala, and Commissioner David Yamamoto.

Staff Present: Christopher Tamarin

Guests: Bryan Conway, Public Utility Commission of Oregon; Alexandra Corvello, Lane County; Dr. Jonathan Fink, Portland State University; Bob Fletcher, Jay Gratchner and Rick Woidyla, Verizon; Jennifer Groth, Rural Health Initiative; Ken Kestner; Deborah Sempier, Althea; Stuart Taubman, Zayo; Charlie Tracy, Oregon Trail Electric Cooperative; and Barry Walton, Corning

The meeting was called to order at 9:20 am.

Welcome, Introductions

Chair Joseph Franell called the meeting to order and asked for guest introductions.

Joe welcome the newest members of the Council, Katie Cox representing Consumers and the Public at Large, Michael Heffner representing Public Safety, and Cheri Rhinhart representing education.

Information about the new members is posted on the council website.

Minutes

Maureen Bock moved that the September 26, 2019, minutes be approved as distributed. Jeremy Pietzold seconded the motion. The council approved the motion.

National Broadband Activity Updates

Chris Tamarin provided references on the following national broadband activity regarding infrastructure deployment, technology, market trends, public policy, and illustrations of the value of broadband adoption and utilization since the council's last meeting.

2019

2019 was an eventful year during which:

- Policymakers are recognizing the importance of universal broadband. Once viewed as a luxury, broadband increasingly is seen as a necessity, as essential infrastructure and service

- Broadband Mapping was finally called out at a national problem and that that the government, policy makers, and funding programs don't have accurate data about where broadband is and isn't available.
- Mobile wireless continues to be a major growth segment of the telecommunications industry as it starts deploying 5G.
- Continued growth of video which is increasing network data traffic and user bandwidth needs.
- Changing patterns of use, cord cutting, POTS cutting and the continuing convergence of all user applications being served over broadband networks. https://www.telecompetitor.com/top-broadband-stories

Pew Trust Broadband Research

Research by Pew Trusts finds that States are playing a crucial role in efforts to expand broadband. To close gaps in access, almost every state has established broadband task forces or offices to centralize their efforts and many have set up dedicated funds aimed at reducing the number of state residents who lack broadband access. And by passing laws governing broadband construction and service, state legislatures have shaped how state agencies, local governments, internet service providers, and community anchor institutions—including hospitals, schools, and libraries—can boost connectivity…Pew's research shows that broadband-related state statutes can be grouped into five categories: establishing programs; defining service speed and goals; setting up funding and financing; designating who can provide service; and regulating access to the infrastructure that providers need to build and maintain broadband networks. https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/12/how-state-policy-shapes-broadband

Precision Agriculture

The first meeting of the FCC's advisory Task Force on precision agriculture was on December 9, 2019. Working groups are (1) Mapping and Analyzing Connectivity on Agricultural Lands; (2) Examining Current and Future Connectivity Demand for Precision Agriculture; (3) Encouraging Adoption of Precision Agriculture and Availability of High-Quality Jobs on Connected Farms; and (4) Accelerating Broadband Deployment on Unserved Agricultural Lands.

A survey was conducted across a wide cross-section of 2,000 farmers and ranchers from across the country. This survey included farmers of field and row crops like soybeans and corn, livestock, and specialty crops like fruits and vegetables.

Key findings of the survey include:

- Almost 60% of farmers said they don't have had adequate broadband to run their business.
- 60% of farmers said the primary problem with their broadband is slow speed. Other issues identified include the cost and reliability of broadband connections.
- 78% of farmers said they have only one option for choosing an ISP.
- The survey showed that 59% of farmers want to incorporate the use of more data in their business and another 28% are considering it.
- The survey looked at two aspects of broadband—in the office and in the fields. Only 32% of farmers found broadband in their office to be reliable. Over 77% don't think they have a good

broadband solution in their fields. Only 26% say that cellular coverage is reliable in their fields.
- 67% of farmers want the ability to transfer data wirelessly from their fields.
- 90% of farmers are using a cellphone for Internet access in their fields. A few farmers surveyed constructed their own wireless networks to reach their fields.
- Most farmers now use 2 or 3 different wireless devices (laptops, tablets, smartphones, desktops, and smart farm machinery).
- 33% of farmers say lack of broadband has affected their equipment purchases – they are not yet buying smart machinery.

Farmers in the survey could also tell their story about how they use or would like to use broadband. Some of the technologies reported include:
- Precision agriculture where field data provides the ability of farm equipment to apply different amounts of nutrients and insecticide only where it's needed.
- Soil monitoring to better understand the condition of the soil—with a goal to improve the soil year after year.
- Precision irrigation that provides water only where it's needed.
- Drones to survey the fields to gather data.

https://potsandpansbyccg.com/2019/11/20/another-farming-broadband-survey/

Rural Digital Opportunity Fund (RDOF)

The FCC will vote this January on rules for the Rural Digital Opportunity Fund (RDOF). The rules call for $20.4 billion in rural broadband funding to be made available through reverse auction in two phases. The majority of the funding ($16 billion) would be awarded in the first phase, which would target areas where broadband at speeds of least 25/3 Mbps is not available to any location based on FCC data gathered through Form 477. The remainder of the funding would be awarded at a later date based on new data that the FCC will be collecting from service providers. Service providers winning funding through the reverse auction process will be required to deploy service at speeds of at least 25/3 Mbps and will receive their funding over a 10-year period. A reverse auction is designed to award funding to the provider that offers to deploy service for the lowest level of government support. Proposed auction plans call for a weighting system to be used to prioritize bids to provide service at **higher speeds** and with **lower latency**. This weighting system proposed is different from what was originally outlined in a notice of proposed rulemaking adopted in August. The commission proposed four speed tiers—a baseline tier of 25/3 Mbps, "above baseline" tiers of 50/5 Mbps, 100/20 Mbps, and a gigabit tier of 1 Gbps/500 Mbps. The FCC identified the number of homes in each state in areas where RDOF will subsidize the deployment of broadband. Oregon has 91,000 locations, Idaho has 76,000 and the state of Washington has 115,000.
https://www.telecompetitor.com/fcc-poised-to-adopt-rdof-rules-16-billion-for-totally-unserved-areas-in-phase-1/

Digital Inclusion

The Comcast Internet Essentials program achieved a number of milestones in 2019:
- 8 million low-income people have been connected to home Internet services, 90% of which didn't have connections previously.
- More than $650 million in digital skills training, benefiting nearly 9.5 million people,

- 100,000 discounted and subsidized laptop or desktop computers have been provided since the program started.
- In August the company lowered the threshold for people to qualify for the program.

https://www.telecompetitor.com/comcast-internet-essentials

New York City Universal Broadband

New York City plans to bring broadband service to every resident under a public-private Internet Master Plan representing $2.1 billion in existing infrastructure and potential new public- and private-sector investment, makes a case for how a lack of access to affordable and high-quality internet hampers the mobility of families and small businesses, and how encouraging market competition on vendor-neutral infrastructure could drive social inclusion. The plan offers a strategy for encouraging new private investment on an internet infrastructure that the city government says is inadequate, particularly for its poorest residents. The first steps in the plan, which city officials said will be rolled out over the next 18 months, involve agencies coordinating to provide a coherent regulatory environment, an invitation to private companies to find new ways to use the city's physical assets—including its street poles, rooftops and even park benches—and $70 million in seed investment from the government to build new infrastructure, prioritizing its most poorly connected neighborhoods.
https://statescoop.com/new-york-city-internet-master-plan

Internet of Things

The early impact of the Internet of Things has been on the industrial markets. Sensors have been added to industrial equipment large and small to collect all sorts of data, and that data has created IoT services. These IoT services provide insights, such as predictive analytics and maintenance.

IoT systems will have an increasing impact on consumer markets going forward. The Internet of Things Consortium presented predictions on five key vertical markets and how IoT systems will impact their future.

- Homes: Smart home devices like video doorbells, connected light bulbs, and smart thermostats will lead the charge in 2020.It is estimated the global market for smart home devices grew by 27 percent in 2019, with 833 million devices shipped.
- Retail: In-store robots, automation, and drone deliveries are some of the ways IoT is being introduced into retail stores. IoT systems will increasingly assist and replace human tasks. Walmart and Giant Food Stores are currently using robots for floor cleaning and inventory checking. In the future, robots and automation can be used to restock store shelves and packaging in warehouses, and pick and deliver orders for customers. Another IoT service coming to retail will be smart checkouts. Customers will no longer interact with cashiers but will simply pick their items off the shelf and walk out of the store.
- Smart Cities: Sensors will be used to track energy usage, water facilities, waste production, and carbon emissions to create collaboration management platforms between governments and their citizens.
- Smart Vehicles: Connected vehicles will provide autonomous driving. Over the past five years, automakers and vehicle tech companies have already invested $50 billion to develop autonomous vehicle technology.

- Wearable Technology: Smartwatches, headphones, and earbuds have already been on the rise for the last few years. Further miniaturizations, sensor accuracy, and data analysis will to not just connect people to digital networks but will act as medical accessories.

https://www.asme.org/topics-resources/content

Cloud Gaming

ABI Research forecasts that by 2024, there will be more than 42 million active cloud gaming users, which will boost the revenue for the gaming market to $4.5 billion. And further boosting the growth of e-sports. Currently, there are several million cloud gaming users.
http://finleyusa.com/cloud-gaming-forecast-4-5-billion-by-2024-thanks-to-5g/

USDA ReConnect Program—Round 2

A second round of $550 million in United States Department of Agriculture (USDA) Reconnect Pilot Program funding appropriated by Congress. USDA will make available up to $200 million for grants, up to $200 million for 50/50 grant/loan combinations, and up to $200 million for low-interest loans. The application window for this round of funding is January 31 to March 16, 2020.
www.usda.gov/reconnect

5G Health Effects

There is no evidence that 5G radio signals constitute a health hazard, the Federal Communications Commission decided in a unanimous vote upholding the current RF emission standards for cellphones and wireless infrastructure. The agency pointed to Food and Drug Administration research that failed to find a link between phones and health issues.
https://www.wsj.com/articles/fcc-says-5g-doesnt-pose-new-cellphone-radiation-threats

Changing Patterns of Use

Ericsson forecasts that video traffic will increase by about 30% a year from its current 60% share to reach 76% of mobile data by 2025. And that will happen even as the total volume of data explodes from 38 exabytes a month to 160 exabytes. 1 Exabyte = (10^{18}) bytes, or one billion gigabytes.
https://www.ericsson.com/en/mobility-report/reports/november-2019

Cybersecurity

More than seventy state and local governments across the US were the victims of ransomware attacks in 2019. Hackers used to attack the average person with ransomware but have discovered that governments are much more willing to pay up because they hold more sensitive data and inherently have deeper pockets. The malware has also hit hospitals, businesses and universities, but governments have become a prime target.
https://www.cnet.com/news/ransomware-devastated-cities-in-2019

State Broadband Activity Updates

Chris Tamarin provided references on the following state broadband activity regarding infrastructure deployment, technology, market trends, public policy, and illustrations of the value of broadband adoption and utilization since the council's last meeting.

Cybersecurity

Commissioner Yamamoto reported that he is not in Salem today because Tillamook County has been hacked and suffered a ransomware attack. The county's server and internal computer systems, phone systems, email networks and website were all affected.

Expanding Broadband Access in Eugene

The Eugene City Council has asked city staff to explore an expansion of EUGNet, downtown's open-access high-speed network. The EUGNet fiber project was designed for downtown, and so far the network is accomplishing its economic development mission. More than 80 buildings downtown are connected to the network, existing businesses have grown and new ones have re-located to take advantage of it. Downtown vacancy has reduced from 10% at the start of the EUGNet project build-out in 2017 to its current occupancy rate of 7%.
https://www.govtech.com/network/High-Hopes-for-Expanding-Broadband-Access-in-Oregon.html

USDA ReConnect Program grant award

The U.S. Department of Agriculture's ReConnect Program is providing a $6 million grant to construct 89 miles of fiber optic line, connecting the cities of Long Creek, Monument, Seneca, and Spray to Oregon Telephone Corporation's high-speed broadband network that already connects the other cities in the county. This will expand broadband across a 242-square-mile area, with nearly 650 potential new customers—418 households, 22 businesses, 22 farms, three schools and two fire stations—that can receive broadband access and high-speed internet services, according to information from the USDA.

In a public-private partnership with the intergovernmental Grant County Digital Network Coalition, Ortelco has committed to providing the fastest internet access to as many residents at the lowest price possible. Expansion of the broadband network will start in early 2020 and will be a progressive project that is expected to last for five years. The grant funding requires a local match of $1.9 million that will be covered by Ortelco and the Grant County Digital Network Coalition, which includes representatives from John Day, Seneca and Grant County.

The coalition has access to funding, thanks to lobbying by the city of John Day to improve broadband connectivity in the county. In July 2017, before the coalition was created, John Day received a $1.8 million appropriation from the state legislature to modernize Grant County's digital infrastructure.
https://www.bluemountaineagle.com/news/m-grant-will-fund-major-broadband-rollout/article

Digital Inclusion

AT&T has launched **Believe Portland** as a program to promote Digital Inclusion efforts in Portland. AT&T is committed to addressing the struggles around digital inequity in Portland and are doing that through this employee initiative designed to raise awareness and generate support around digital inclusion initiatives that improve the lives of underserved communities in Portland. [George Granger—AT&T Oregon President]

Senator Merkley Introduces Legislation to Ensure Fast as Advertised Internet

After announcing that his subcommittee was committing for the third year in a row to fund at least $500 million in rural high-speed internet expansion, through the ReConnect Program, Oregon's Senator Jeff Merkley introduced a package of two bills to ensure that broadband internet speeds are being reported and mapped with honesty and accuracy across the country.

The legislative package is made up of two bills that would tackle speed reporting and map accuracy head-on. The first, the **Broadband Speed Act**, would require internet service providers to report to the FCC the actual internet speeds they are capable of providing in specific areas, as opposed to advertised speeds. This will help give the FCC a full picture of real speeds on the ground, so that the FCC has a more accurate picture of where high-speed broadband access gaps exist.

The second bill, the **Community Broadband Mapping Act**, would enable local governments, electric and telephone cooperatives, local economic development groups, and small internet providers to access USDA Rural Utility Service grant funding to collect information on actual broadband speeds. This will enable communities that are inaccurately classified as having adequate service to dispute that classification with the FCC, so that they can become eligible for funding for underserved areas. [Senator Merkley 12-18-19 Press Release]

CenturyLink Settlement

Oregon Attorney General Ellen Rosenblum Tuesday announced a $4 million settlement with CenturyLink for engaging in deceptive advertising by door-to-door salespeople, deceptive billing practices, undisclosed fees, and failing to apply promised discounts to customer accounts. As part of the settlement, CenturyLink also will refund $672,000 to 8,212 Oregonians who were overcharged for their services or did not receive the promised discount. "Purchasing internet, phone service and cable is confusing enough without false promises, and confusing prices and fees. Today's settlement sends a clear message that hidden fees and other forms of unfair and deceptive business practices will not be tolerated in Oregon," said Attorney General Rosenblum. The impacted Oregon consumers will be contracted by CenturyLink directly, but any consumers with questions can contact the Oregon Attorney General's Consumer hotline at 877-877-9392. [Office of the Oregon Attorney General]

Fiber deployed in Eastern Oregon

Eastern Oregon Telecom has completed construction of a fiber-to-the-home network in Weston and is working on FTTH networks in the cities of Athena and Westin to be turned up in January 2020.

Wave Business Hillsboro Data Center Ring

Wave Business announced that the construction of a Hillsboro Data Center Ring is scheduled to be completed in the second quarter of 2020. Hillsboro is already home to Wave's fiber Ring I, a cross-connect facility for several transpacific submarine cables that currently connects six data centers.

Ring I and Ring II will together connect up to 14 existing or planned data centers and will service seven transpacific submarine cable systems. The transpacific destinations involving submarine cable systems include China, Taiwan, Japan, Korea, Guam, Hawaii, New Zealand, Australia, and American Samoa, and additional destinations including the Philippines and Alaska are set to be added in 2020, as well as New Caledonia that will be added in 2021. Wave also operates the Tillamook Lightwave-owned cable landing station in Pacific City, Oregon, and provides path-diverse dark fiber routes to Hillsboro for incoming transpacific subsea cables. https://data-economy.com/wave-business-announces-construction-of-hillsboro-data-centre

Connect America Fund II (CAF II)

Frontier and CenturyLink have informed the FCC that they will not meet certain Connect America Fund CAF II deployment milestones. Carriers that accepted CAF II broadband funding were supposed to have reached 80% of locations in every state for which they are receiving support by December 31, 2019, but both carriers will miss that milestone in certain states.

Frontier said it has met or exceeded the latest CAF II target in 16 states, but based on preliminary data, the company may not have met the target in 13 others, including Oregon. CenturyLink said in its letter to the FCC that it met or exceeded milestones in 10 states but may not have met milestones in 23 other states, including Oregon. The obligations of both companies are expected to be met and completed. https://www.telecompetitor.com/frontier

Frontier Communications Bankruptcy Filing Planned

It has been reported by Bloomberg that Frontier Communications is planning to file for bankruptcy in mid-March. Frontier reportedly wants to negotiate a restructuring of debt before March 15, when $356 million in debt payments are due. If a Frontier bankruptcy indeed comes to pass, it would be the second for a major telecom provider in just over one year. Windstream filed for bankruptcy in January 2019. Concurrently, Frontier Communications is also in the process of selling its Oregon, Washington, Idaho, and Montana local telephone company exchange business to WaveDivision Capital, LLC (WDC) in partnership with Searchlight Capital Partners, LLC. https://www.telecompetitor.com/frontier-bankruptcy-reportedly-planned-for-mid-march/

Presentations

Dr. Jonathan Fink

Dr. Jonathan Fink provided a briefing on Portland State University's Digital City Testbed Center and the concept of smart cities, campuses and regions. The Digital City Testbed Center (DCTC) at Portland State University establishes a network of campuses in the Pacific Northwest where smart city innovation can be tested. A primary goal is to balance the promise of new technologies against concerns about security, equity, ethics, and possible monopolization.

Dr. Fink has been working on a data science roadmap for Oregon. Research Universities measure themselves by the funds invested in research. Oregon institutions are competing with larger institutions with larger budgets. The University of Washington invests more in research than all of Oregon's institutions combined. Oregon institutions need to coordinate and combine their efforts to be competitive. This is important because universities drive applications which drive industry activity and connections which drive economic growth.

Battelle out of Ohio was contracted to study this challenge and issued a report on a Data Science Roadmap for Oregon in 2015. Battelle looked at states that are comparable to Oregon for reference and best practices. One of the findings was the Oregon has under-invested in networking. This finding contributed to the development of the Link Oregon initiative of the Oregon Fiber Partnership. Oregon's Universities are working to advance the state's network infrastructure as is OBAC.

Battelle's study asked the questions:

- How good are Oregon's connectivity and network management?
- What hardware and software tools does the state's network offer?
- How can we advance Data Science research capabilities and technologies?
- How is talent development in Data Science being advanced?
- What applications are supported by statewide research computing?
- How are research computing resources organized and governed?
- What are the economic and research funding benefits and impacts?

Battelle recommended that Oregon's Universities focus on key areas by institution:

- University of Oregon on environmental informatics and education technology.
- Oregon State University on agriculture, fisheries, forestry, water resources and advanced manufacturing.
- Oregon Health and Science University on genomic medicine and health informatics.
- Portland State University on smart cities.

https://www.pdx.edu/research/battellereportoregon

Portland State University is studying and working on smart city projects. There is a lot of positive potential to bring technology into cities. "Smart Cities" refers to the use of digital technology (sensors, cloud computing, analytics, visualization) to improve urban operations and residents' quality of life. Smart city applications improve city operations, accessibility, equity, opportunity, health care, and emissions and pollution reduction.

Cities are faced with many technologies, many vendors, and many strategic alternatives making it difficult to decide what to do. It has proven helpful to test these alternatives to decide what to do. Single owner campuses (academic, government, or corporate) are excellent test-beds. Test before you deploy. PSU is using its own Portland campus, the Oregon Museum of Science and Industry campus which will be undergoing significant development over the next ten years and University of British Columbia in Vancouver, BC. The Portland International Airport is a fourth campus test bed will be coming online in the future.

PSU concurrently created Centers of Excellence.

- In 2018, PSU held a competition to create two "Centers of Excellence"
- Two of 28 proposals were selected: Digital City Testbed Center (DCTC) and Homelessness Research and Action Collaborative (HRAC)
- Each received $500K/year for three years
- Goal is to help PSU and Portland become national research leaders
- DCTC relies on PSU's very strong ties to innovative local government
- DCTC is well-connected to the two strongest U.S. smart city networks:

- MetroLab Network (City-University pairs)
- NIST's Global City Teams Challenge (Federal-Corporate-Academic)

There are two other groups working in this space that PSU is engaged with, the MetroLab Network https://metrolabnetwork.org/, a network of city-university partnerships and Global Cities Team Challenge https://pages.nist.gov/GCTC/ an initiative to encourage collaboration and the development of standards. GCTC's long-term goal is to establish and demonstrate replicable, scalable, and sustainable models for incubation and deployment of interoperable, standard-based solutions using advanced technologies such as IoT and CPS and demonstrate their measurable benefits in communities and cities.

Innovation programs can be implemented a scalable levels; household, block, neighborhood, city-wide, metro-area or on a regional (megapolitan level) and include many partners to test new technologies and applications.

Issues for study include seismic preparedness, restricted mobility/physical access, restricted vision, bike-car collisions, air-quality (indoor and outdoor), building occupancy and public smart city education.

The U.S. Census Bureau has identified ten megapolitan regions that represent 70% of the U.S. Population. Cascadia which incorporates northwest Oregon and western Washington State is one of those regions. Vancouver BC, Seattle and Portland Metro areas form the Cascadia Innovation Corridor. Cascadia as a region has more commonality that other regions around the country making it attractive as a testbed. The Pacific Northwest is at the leading edge of smart city development.

Oregon has not been as engaged in Cascadia initiatives as it needs to be. There will be a Cascadia conference in Vancouver, BC in October that needs Oregon representation, ideally the Governor.

PSU Digital City Testbed Center Summary

- Networks campus-based testbeds in Pacific Northwest
- Addresses accessibility, resilience & public education
- Brings together public, private and academic sectors
- Emphasizes social science and policy questions
- Evaluates replicability, interoperability and data storage/retrieval
- Eager to partner

https://www.pdx.edu/digital-cities-testbed-center

Debora Simpier

Debora Simpier provided a briefing on her company Althea https://althea.net/ and its innovative broadband solutions for serving rural areas, though the model has and may also be applied in urban areas. Althea creates routing and billing software that enables routers to pay other routers in the system which enables decentralized networks of networks where participants can be compensated for their contributions. In an Althea network, instead of one ISP at the top collecting monthly payments, many different people can earn money by expanding and strengthening the network. Althea networks are made up of nodes owned by the people who use them.

The solution is a decentralized infrastructure:

- People in the community host hardware and get paid automatically for forwarding bandwidth
- Relays sell their neighbors
- A local group of people help support the network
- Lower build out cost, more efficient network configuration, more equitable governance

Subscribers load up their device or WiFi router with blockchain crypto currency to pay for internet access. A network of rooftop transmitters forward packets. They earn money and compete to provide service. Gateways connect the network to the internet, competing with other gateways in the area. The core technology behind Althea is a price-aware routing protocol and blockchain-based payment system that debits and credits cryptocurrency based on a router's bandwidth usage. Bandwidth is metered. The cost of deploying a network is significantly reduced compared to the standard model of an ISP building the network and providing service to subscribers.

The Benefits

- Use of existing homes and businesses
- Price Aware version of Babel to select routes
- the connection will always follow the cheapest and best route
- A discrete "exit node" or VPN for encryption and route verification
- Pay neighbors per GB with Ethereum or Xdai digital crypto currency
- All data traffic is encrypted

Redundancy

- The connection will always follow the cheapest and best route
- Will automatically switch if one route goes down

Deborah described existing installations of Althea networks in Clatskanie, Tacoma, and Abuja, Nigeria. The initial buildout cost of the network in Clatskanie was about $5,000 using 5GHz unlicensed spectrum line-of-site wireless connections using directional antennae. This solution lends itself to rural areas that have geographic, topographic and economic barriers to providing broadband internet access. End-users can become "relays" by extending the signal to other users and then earn money on the traffic carried.

"AltheaHoods"

- Organizers start an Althea network in their community
- Create a **demand aggregation site**
- Pre-register interested subscribers
- Subscriber thresholds ensure a viable build out
- Local organizers are supported with marketing materials

Work Session

Oregon Broadband Office

Chris reported on the Oregon Broadband Office Strategic Plan. The strategy of the Oregon Broadband Office is to follow the well-defined directives and goals established in the state's public policy with programs and activities to address each directive and achieve each goal, scaled to the resources available.

Oregon now has a formal organizational structure and policy in place to pursue, and support broadband opportunities, initiatives, programs and projects to accelerate the deployment, adoption and utilization of this essential infrastructure.

Oregon now has a vehicle:

- For state government to be a source of funding for planning, engineering and infrastructure projects.
- For state government to be a source of matching funds to help communities leverage federal and private foundation loan and grant programs.
- To be a source of Technical Assistance.
- To engage in primary data collection to measure performance.
- To promote statewide and national networking within the broadband community of interest to share information and leverage best practices.
- To promote education on broadband issues and promote engagement in broadband planning in local communities.
- To coordinate with other state agencies to initiate and support programs that leverage the State's existing assets, capabilities and related expenditures to stimulate the broader deployment of broadband services for residences and businesses statewide.
- To support Digital Inclusion: the capability of individuals or groups to obtain the benefits of broadband connectivity and to be able to use information and telecommunications technology confidently, safely and securely to improve their lives.

The strategy includes establishing three programs.

Rural Broadband Capacity Improvement Program

A Rural Broadband Capacity Improvement Program will be established, scaled to available funds, to support broadband planning, engineering, and/or infrastructure deployment projects targeting rural areas lacking adequate broadband access. Eligible recipients are Oregon cities, counties, ports, tribes, cooperatives, non-profit corporations and public-private partnerships.
The program will provide grants and forgivable loans for:

- Planning—for projects to organize and engage rural community stakeholders to develop broadband strategic plans for the deployment, adoption, and utilization of broadband infrastructure in their respective communities.
- Engineering—for projects that have completed plans, a grant may be used for the design and engineering of broadband infrastructure.
- Infrastructure—for projects that have completed plans and engineering designs, a grant may be used for the construction of broadband infrastructure.

- Matching Funds and Application Support—for use as matching funds and for grant application support to enable eligible applicants to successfully apply for grants and loans from federal and private funding programs for broadband planning, engineering, and infrastructure deployment projects.

Digital Literacy, Security, and Inclusion Program

A Digital Literacy, Security, and Inclusion Program will be established, scaled to available funds, to support activities and projects to improve digital literacy, cybersecurity, and inclusion of unserved and underserved populations so that the benefits of broadband access to the internet may be realized within Oregon's communities throughout the state.

The program will provide grants and forgivable loans for projects that address:

- Digital Inclusion: Deploy state-level strategies and programs to ensure that all individuals and communities have access to affordable state of the art broadband communications services, and the skills, knowledge and technical support needed to use them.
- Cybersecurity: The security of data and communications systems continues to be a critical risk exposure for government, public organizations, private sector businesses, and for individuals that is widely unrecognized and under managed. This program will support the state's 2017 cyber security initiatives for ongoing, expanded and pro-active cyber risk management www.cyberoregon.com.
- Education: Oregon's K-20 educational institutions and public libraries are positioned to realize significant economic, work force and community development benefits for the state through the utilization of broadband networks and applications. State level support and coordination is needed to leverage these resources to reach and assist unserved and underserved populations.
- Matching Funds—a grant or loan may also be used as matching funds and for grant application support to enable eligible applicants to successfully apply for grants and loans from federal and private funding programs for digital literacy, digital inclusion and cybersecurity projects.

Broadband Outreach Program

A Broadband Outreach Program will be established, scaled to available funds, to engage stakeholders; elected officials, government officials, healthcare providers, educators, businesses, agricultural producers and other community leaders, and broadband service providers to facilitate communications, recruit local champions and aggregate the demand of the different segments of the community to help to make a business case for broadband investment.

The strategy will be posted on the Oregon Broadband Office website.

Broadband in Oregon 2020 Report

The report of the Oregon Broadband Advisory Council (OBAC) to the Legislative Assembly on the affordability and accessibility of broadband technology in all areas of the state, and on broadband technology use in healthcare, energy management, education and government, and on the role of broadband in local, regional and state economies, economic development, public policy issues, and key broadband related challenges and opportunities and facing the state is due on November 1, 2020.

Rural Telecommunications Investment Act

The Rural Telecommunications Investment Act will be introduced as HB 4079 in the 2020 Legislative Session. The Bill proposes to modify definitions applicable for purposes of universal service surcharge. Subjects the sale of retail commercial mobile radio services and retail interconnected voice over internet protocol services to universal service surcharge. Reduces rate cap to six percent of sale of services subject to surcharge.

Directs Public Utility Commission to transfer up to $5 million per year of moneys deposited in universal service fund to Broadband Fund. Establishes Broadband Fund. Continuously appropriates moneys in Broadband Fund to Oregon Business Development Department to provide grants and loans through, and to administer, program related to broadband. Directs department to adopt program for providing grants and loans by rule. Directs department to report annually to interim committee of Legislative Assembly related to telecommunications on status of Broadband Fund. Sunsets Broadband Fund, transfer of moneys from universal service fund to Broadband Fund and grant program on January 2, 2030. Becomes operative on January 1, 2021, if passed.

Public Questions/Comments

No comments.

Meeting Schedule

The January 23, 2020, meeting of the Oregon Broadband Advisory Council was held at the Local Government Center, 1201 Court Street NE, Salem, Oregon. The next meeting of the council will be held on February 27, 2020, in Salem. Meeting information will be posted on the council website.

Meeting adjourned at 12:10 pm.

Approved by:

Signature on file February 28, 2020

Joseph Franell, Chair Date
Oregon Broadband Advisory Council

Signature on file February 27, 2020

Christopher Tamarin Date
Business Oregon