<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Position</th>
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<tbody>
<tr>
<td>Terrence Woods</td>
<td>CIO, State of Oregon</td>
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<tr>
<td>Dr. Danny Jacobs</td>
<td>President, OHSU (Keynote)</td>
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<tr>
<td>Rep. Pam Marsh</td>
<td>Oregon House of Representatives</td>
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<td>Dr. Kristen Sheeran</td>
<td>Energy, Climate &amp; Transportation Policy Advisor to the Governor</td>
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<td>Dr. Colt Gill</td>
<td>Director, Oregon Department of Education</td>
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<td>Joseph Franell</td>
<td>Chair, Oregon Broadband Advisory Council; President, Blue Mountain Network</td>
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<tr>
<td>Dr. Doug Toomey</td>
<td>Director, Oregon Hazards Lab, University of Oregon</td>
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<td>Dr. Robert Cowen</td>
<td>Director, Hatfield Marine Science Center, Oregon State University</td>
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<tr>
<td>Dr. Steve Corbató</td>
<td>Executive Director, Link Oregon</td>
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<tr>
<td>Andrea Ballinger</td>
<td>CIO, Oregon State University</td>
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• Link Oregon is an Oregon non-profit consortium founded in 2019 by
  
  - Member-focused, middle-mile network provider with strategic board
  - Uses dark fiber and other network assets to serve public and non-profit sectors
  - Supports K-12 & higher education, healthcare, libraries, Tribes, state government, and other non-profits
  - Provides Ethernet transport and Internet transit as primary services
Organizational Focus

• Works to raise Oregon’s **public broadband capabilities and resiliency** to be on par with our peer networks in the West

• Promotes local **Internet Exchanges** (IXes) and serves as a **public-private partnership** (P3)

• Part of a **diverse broadband ecosystem** engaging education, healthcare, state & federal governments, Tribes, counties, communities, commercial telecoms, and technology providers

  • Collaborates closely with **Oregon Broadband Office** in Business Oregon
    • Oregon has over 300 ISPs serving 4.2 million people dispersed across nearly 100,000 square miles

  • Active member of **Western States Pact Broadband Alliance**
    • Convenes state broadband offices, state libraries, and state networks to share strategies and opportunities
    • Six collaborating states: California, Colorado, Nevada, Oregon, Utah, and Washington
• Oregon Legislature Emergency Board allocated **$8.39 million** via Business Oregon last June

• Enabled accelerated **network backbone expansion** in eastern and southern Oregon

• Utilized nearly **2,000 route miles** of previously acquired, long-haul **dark fiber** assets

• Acquired assets from 5 **long-haul telecoms** and **10 metro lateral providers** (telecoms & municipal networks)

• Deployed **Fujitsu** and **Arista** technologies

• **Augmented implementation team** with expert staff loaned from Link Oregon’s founding partners

• **Achieved fiber and optical completion** with **50 service locations** statewide in May 2021
  • Pilot sites at Southern Oregon University (Ashland) and InterMountain ESD (Pendleton)

• Outsourcing network operations services to Indiana University **GlobalNOC**
Terrence Woods **Chair** / State CIO, Enterprise Information Services, State of Oregon

Andrea Ballinger **Vice Chair** / Vice Provost IT & CIO, Oregon State University

Jessie Minton **Treasurer** / Vice Provost IT & CIO, University of Oregon

Bridget Barnes Vice President IT & CIO, OHSU

Kurtis Danka State CTO, EIS, State of Oregon

Kirk Kelly **Past Chair** / Vice President IT & CIO, Portland State University

Stuart Long CIO, Cascade Technology Alliance and Northwest Regional ESD

Kristen Sheeran Energy, Climate & Transportation Policy Advisor to the Governor

Peter Tamayo CIO, Oregon Department of Education

Steve Corbató *(Ex officio)* Executive Director, Link Oregon

Molly Thurston *(Ex officio)* **Secretary** / Executive Specialist, Link Oregon
Network Implementation Team

Core Staff

Kevin Bohan  Senior Network Engineer / Architect
Cynthia Brown  Project & Process Manager
Steve Corbató  Executive Director
Stephen Fromm  Network Engineer
Richard Hicks  Network Engineer
Tina Kirk  Business Manager
Ann M. Marcus  Communications Lead
Molly Thurston  Executive Specialist

Member-assigned Project Staff

Ann Andrews  EIS, State of Oregon
Ryan Bass  PSU
Danna Blattmann  OHSU
Robert Cesaro  OHSU
Harvey Clawson  OHSU
Michael Gromek  EIS, State of Oregon
Katy Molloy  Contractor
Andy Payne  OHSU
Alex Sanchez  PSU
Sandy Wood  PSU Student
### Network Implementation Contributors

#### Members
- Clackamas ESD
- Eastern Oregon University
- InterMountain ESD
- OHSU
- Oregon State University
- Extension & Engagement
- Hatfield Marine Science Ctr
- Portland State University
- Southern Oregon ESD
- Southern Oregon University
- State of Oregon
  - Enterprise Info. Services
  - HECC, ODE, Broadband Office
- University of Oregon
- Network Startup Resource Ctr
- Oregon Hazards Lab (OHAZ)

#### Public Sector Partners
- City of Portland
- City of Sandy (SandyNet)
- Clackamas County (CBX)
- Indiana University (Global NOC)
- Lane Council of Gov’ts. (WIX)
- NOAA (N-Wave)
- Oregon Dept. of Education
- Q-Life (Columbia Gorge)

#### Non-profit Affiliates
- CENIC (California)
- Internet2
- IRON (Idaho)
- NWAX
- PNWGP (Washington)
- SHLB
- TAO
- The Quilt
- UETN (Utah)

#### Equipment Manufacturers
- Arista Networks
- Fujitsu Network Communications

#### Professional Services
- Axiom Recovery
- Black Helterline LLP
- CompuNet, Inc.
- Fiber Channels, Inc.
- Legacy Fiber Optics
- Structured
- University of Washington Oceanography

#### Lateral Fiber & Colocation Providers
- Blue Mountain Networks
- Douglas FastNet
- Fatbeam
- Flexential
- Pittock Block
- TDS OneNeck
- Windwave
- Ziply Fiber

#### Long Haul Fiber Providers
- Hunter Communications
- Lumen
- PEAK/Pioneer
- TDS BendBroadband
- Zayo

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**Partial financial support through Business Oregon**

"Think big and swing for the fences!" — Rep. Pam Marsh, April 2020
Support for Rural and Urban Broadband Development

• We are at a **pivotal moment** in our national broadband development
  • Unprecedented federal and state funding in the pipeline to address deficiencies revealed during pandemic
  • Analogous to rural electrification (1930s) and Interstate Highway System development (1950s)
  • Entities in Oregon’s broadband ecosystem need to collaborate and to work aggressively to address challenge

• As a non-profit, middle-mile network, Link Oregon is *not a common carrier* and *does not provide last-mile service* to residences or businesses

• Link Oregon **does**
  • Serve as **anchor tenant** through aggregation of community anchor institutions
  • Partner with **providers making broadband investments** in rural and urban communities
  • Enter into public-private partnerships for **extension of middle-mile** fiber networks
  • Support **local exchange** of Internet traffic
  • Provide **resilient connectivity** for eastern and southern Oregon
  • Collaborate with local **broadband action teams** and **Oregon Broadband Office**
  • Help assess **new technologies** (wireless, low-orbit satellite) and **use cases**
What’s next for us?

• Network operationalization
  • Remote support arrangements, initial service delivery, member and legacy network transition

• Member engagement and development

• State broadband expansion engagement
  • Working to collaborate on community, Tribal, and statewide proposals for federal/state broadband funding
  • Advocacy for sustainable broadband architecture and long-term broadband mapping & analytics

• Planning for next phase of our network expansion
  • Oregon Coast (US 101) – Astoria-Brookings
  • Additional communities in eastern Oregon – Lakeview, Prineville, Mitchell, John Day, and Enterprise
  • Collaboration with CENIC – extending connections across southern Oregon and northern California

• New service development
  • eduroam wireless network roaming pilot with higher education members, ODE, HECC, and Linn-Benton-Lincoln ESD
  • Last-mile wireless networking working group
THANK YOU!

info@linkoregon.org