

The Need: Where we are now...

- The **need** for Broadband connectivity in schools will **increase more than 700%** by the year 2011
(2007 America's Digital Schools (ADS) 2007 survey - from 6.0 kbps to 45.0 kbps)
 - **Colorado** districts average **approximately 55%** of the national average bandwidth
(Jan 2009 ADS report - 3.57 kbps for Colorado and 6.48 kbps national average)
 - Prior to July 2009, **Colorado** was one of only 12 states **not offering Internet2** connectivity to K-12 schools and districts across the state. In July 2009, the *Internet2 Gateway* connection was established for Colorado with the funding of the first year annual membership fee.
 - **Only a limited number of districts** in the state are connected to the *Internet2 Gateway* and can provide advanced educational opportunities, such as full screen high definition **interactive video conferencing** over Internet2, that exist for 50,000 other schools and districts across the country.
 - Even with the *Internet2 Gateway* connection, there are still **significant broadband / middle and last mile connectivity issues** impacting access to advanced educational opportunities.
 - Full term **course offerings** and short-term distance learning opportunities for classrooms is difficult to find and does not always meet students and/or staff needs. Low bandwidth opportunities are **unreliable**.
 - Students' bandwidth at home or on their personal cell phone often out performs the connectivity and content available to them in school. Many **families cannot afford Internet** service at home.
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The Plan: What we need to do...

Business Case

- Reduce duplication of resources across the state
 - Cost of ownership 10 times greater than cost sharing through a consortium
- Leverage cost of bandwidth
 - Nebraska and Utah are examples where costs are leveraged
(\$15/Mbps in Nebraska vs. \$800/Mbps in some districts in Colorado)

Instructional Case

- Improve access to educational resources
 - CDE initiatives: Assessments On-Line, Data Analysis/Sharing, Online Learning, Video Conferencing, State-wide IEP
 - Utilize existing consortium model, continue development of Eagle-Net managed through BOCES
- Ensure long term opportunities for students and staff
 - Instructional need for bandwidth outpacing funding

Develop Partnerships

- Public/Private Leveraged Resources
 - Aggregate Points in a Community to a common High Speed Broadband Connection
 - Multi-Vendor collaborative Partnerships with Higher Ed, Front Range GigaPop (FRGP), University Corporation for Atmospheric Research (UCAR), Public Libraries, Museums, Fire/Safety, Healthcare, Colorado TeleHealth Network
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The Benefits: What it would look like...

Bandwidth Vision

- High speed broadband infrastructure
- Affordable content options to retain and enhance local control and provide a sense of community
- Essential model for rural, declining and small districts
- CAP4K, Concurrent Enrollment, Online Learning, and College Course Pre-Graduation initiatives can only happen if Colorado meets the bandwidth needs

Collaborative Vision

- Partners for strong statewide infrastructure connectivity currently include Higher Ed, Colorado Tele-Health Network, Public Libraries, Community Colleges, Fire and Safety
- Provide on-net connectivity prior to accessing a gateway to the Internet

Economic Development Vision

- Private sector and housing values in rural / underserved areas will benefit and promote economic development
 - Provides for expansion, growth and future partnerships
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