Wideband Community Network (WCN)

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Basic Concept

- Los Alamos County Invests in Optical Fiber Infrastructure to Every Home and Business
- Funded by Revenue Bonds
- Repaid by Content Providers

Background

- Structural Changes in Telecommunications Industry
- Economic Development and Telecom
- How is Los Alamos Positioned?

Telecom Technology 101

- Rapid Technology Change Continues
  - Wireless: Cellular and Local Internet
  - More Traffic on Fiber (2 Fibers could carry 60% of the world's phone calls with current technology)
  - Decreasing Equipment Cost
  - Digital and Software Based: Merger of Computing and Communications
- Strategies
  - Increased Use of the Telco Infrastructure
  - Increased Use of the Cable TV Infrastructure
  - Increased Use of the Use of the Wireless Spectrum
  - Faster Computers and Smarter Software

Telecom Business 101

- "Ma Bell" is Gone and So is Consistency (Early 80's)
- The Babies Rule (Qwest, SBC, etc)
- 1996 Telecom Act
  - Aggressive Competition Emerges
  - Long Haul Fiber
- Telecom Bust of 2000-2002
  - 500,000 Jobs Lost
  - $2 Trillion Loss in Stock Market Value
  - Biggest Bankruptcies in History
  - Over Half of the Top National Carriers Went Bankrupt in Two Years
- Failure of Original Competitive Model
  - Huge Overbuild of Fiber
  - Strangulation by Local Copper and State Regulators

Telecom Business 102

- Voice and Cable TV Are Still Where the Big $ Are
- Rapid Growth in Broadband
- Innovative Products and Bundling
- Resurgent Investment Based on
  - Wealth
  - Density
  - Competition
- Competition in Major Markets
  - Cell Phones
  - Cable TV Companies
  - Independent Content Providers
- Rural, Poor Areas Are Left Behind
- Regulatory Uncertainties and Failures

Economic Development and Telecom 101

- Manufacturing and Agriculture: 20% of Jobs
- The Percentage of Service Jobs Continues to Grow
- High Paying Service Jobs are Information Based
- Information Is Delivered Over Telecommunications
- Lack of Telecom Infrastructure Will Limit Growth
- Telecom Investment Will Not Guarantee Growth
  - There Has to Be Information to Be Accessed
  - The Information Must Be Capable of Improving Economic Output
  - People Must Use the Information

Economic Development and Telecom 102

- Economic Development is Linked to Telecom Through an Iterative Process
- Traditional Telecom Investment $ Are Scarce
- Urban and Wealthy Get Better Information Services and Connectivity Than Rural and Poor
- Market Works Where There Is
  - Density
  - Wealth
  - Competition
- Otherwise, Non-Market Initiatives Necessary

Los Alamos Competitive Position

- Several Years Behind
- Utilities Model Gives LAC Options
  - Leading Edge, Not Bleeding Edge, Project
- WCN Committee Has History of Poor Execution
- Options
  - Wait and Hope
  - Regulatory Encouragement (?)
  - Wholesale Model
  - Retail Model
- Politics: Expect a War and We Aren't Ready

Some Parting Thoughts

- In the Immortal Words of Yogi Berra, “The future ain’t what it used to be.”
- The Business Proposition is More Important than the Technology
- Our Telecom Destiny (and Our Economic Future) is Our Responsibility