



National Broadband Plan: Lessons for State and Local Governments

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The National Broadband Plan: Overview

- Funded by the American Recovery and Reinvestment Act of 2009
- Goal is to accelerate broadband deployment across the U.S.
- FCC required by Congress to address four statutory objectives
 - Analyze most effective and efficient mechanisms to ensure broadband access
 - Provide strategy for achieving affordability and utilization of such a service
 - Evaluate state of deployment
 - Provide a plan for use of broadband infrastructure and services to serve national purposes, including education, health care, public safety and energy independence and efficiency



The National Broadband Plan: Process

- Set new precedents for government openness, transparency, and rigor
- Information for the plan was gathered in:
 - 36 public workshops
 - 9 field hearing
 - 31 public notices
 - 75,000 pages of public comments
 - 131 blogposts that triggered 1,489 comments
 - 181 ideas on IdeaScale garnering 6,100 votes
 - 69,500 views on YouTube
 - 335,000 Twitter followers
- Independent research and data-gathering
 - Industry (Utilities, Vendors, Communications, Web, Investors, etc.)
 - Federal and State Government
 - Non-profits, Academia, etc.

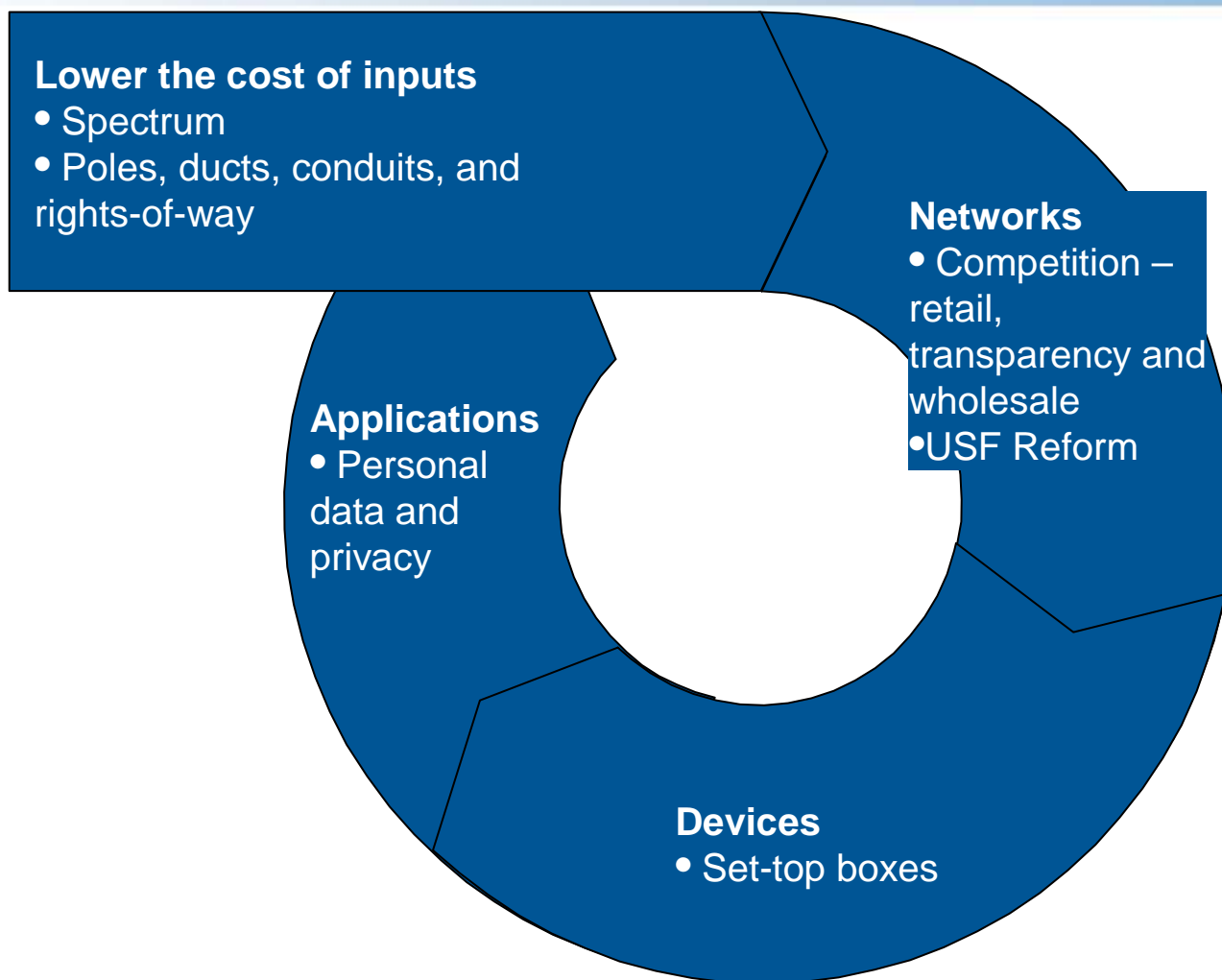


Four Broadband Gaps

- **Availability Gap**
 - 14 million Americans (and apx 250,000 Kansans) do not have access to broadband infrastructure that can support 4 Mbps down/1 Mbps up
 - FCC estimates that additional funds needed beyond private investment to close this gap nationally would require \$23B in support (\$650M in Kansas)
- **Adoption Gap:** 93 million Americans do not have broadband at home
- **Digital Skills Gap:** Many Americans lack digital skills, even as many job openings are posted exclusively online
- **National Purposes Gap**
 - Only 16% of public community colleges have high-speed connections comparable to those available at U.S. research universities
 - U.S. ranks in the bottom half of comparable countries on nearly every metric used to measure the adoption of health information technology
 - Most of the U.S. electric grid is not connected to broadband



The Plan's Approach



Source: FCC, National Broadband Plan



National Broadband Plan Goals (and ideas for state follow-on goals)

- **Goal No. 1:** At least 100 million U.S. homes should have affordable access to actual download speeds of at least 100 megabits per second and actual upload speeds of at least 50 megabits per second.
 - State Goal: Establish “Gigabit communities”, “Broadband Corridors”
- **Goal No. 2:** The United States should lead the world in mobile innovation, with the fastest and most extensive wireless networks of any nation.
 - State Goal: Proactive programs to permit wireless towers for 4G; leverage common infrastructure with public safety and highway agencies
- **Goal No. 3:** Every American should have affordable access to robust broadband service and the means and skills to subscribe if they so choose.
 - State Goal: Lower costs of inputs that state/local gov’t controls (conduit, rights-of-way, poles, permits), establish adoption and digital literacy programs
- **Goal No. 4:** Every American community should have affordable access to service of at least 1 gigabit per second to anchor institutions such as schools, hospitals and government buildings.
 - State Goal: Identify and connect all anchor institutions proactively through shared network infrastructure (no “silo” networks)



National Broadband Plan Goals, cont.

- **Goal No. 5:** To ensure the safety of the American people, every first responder should have access to a nationwide, wireless, interoperable broadband public safety network.
 - State Goal: Don't wait for federal government; pursue public safety network waivers, establish interoperability between jurisdictions, proactively obtain roaming agreements with major commercial carriers, share infrastructure (towers, etc.) with industry and other anchor institutions
- **Goal No. 6:** To ensure that America leads in the clean energy economy, every American should be able to use broadband to track and manage their real-time energy consumption by 2020.
 - State Goal: PUC to explore SmartGrid policies and rates; protection for and use of user data
 - States can have profound influence on SmartGrid deployment, as they regulate rates and local distribution industry structure



Public Working Materials

www.broadband.gov

- *Connecting America: The National Broadband Plan*, www.broadband.gov/download-plan/
- *The Broadband Availability Gap*, Technical Paper No. 1
 - Engineering and economic model of National Broadband Availability Target (**4 Mbps down/1 Mbps up**) by telephone company, cable and wireless networks
 - Where is 4/1 likely to be available today? What is business case for deployment? What is the investment gap – areas where business case for broadband does not exist and might require subsidy?
 - State and county maps: <http://www.broadband.gov/maps/availability.htm>
 - Kansas: only 9 of 105 counties “fully served”; some counties as low as 0-3% availability of 4/1
- *Broadband Performance*, Technical Paper No. 4
 - Describes how FCC established 4 Mbps down/1 Mbps upstream as National Broadband Availability Target
 - Discussion of Actual v. Advertised speeds
 - <http://download.broadband.gov/plan/fcc-omnibus-broadband-initiative-%28obi%29-technical-paper-broadband-performance.pdf>
- *Broadband Adoption and Use in America*, Working Paper No. 1
 - Survey of 5,005 individuals
 - Studied adoption rates among demographic groups
 - http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296442A1.pdf
- *American’s Perspectives on Online Connection Speeds*
 - Approximately 4 of 5 Americans do not know speed of home Internet connection
 - http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db0601/DOC-298516A1.pdf



Role of National Government

- Ensure efficient allocation and management of assets government controls or influences, such as spectrum, “dig once” policies, access to public rights-of-way, attachment to utility poles, and rights-of-way, to encourage network upgrades and competitive entry
- Reform current universal service mechanisms to support deployment of broadband and voice in high-cost areas and help ensure that low-income Americans can afford broadband
- Promote and lower cost of connecting community anchor institutions (UCAN)
- Support efforts to boost adoption and utilization
- Design policies to maximize social welfare, innovation and investment
- Reform laws, policies, standards and incentives to maximize the adoption and utilization of broadband in sectors government influences significantly: public education, health care, energy, and government operations



Possible Roles of State and Local Government

- Develop and Implement Smart Infrastructure Policies
 - Infrastructure Planning
 - Public rights-of-way
 - Access to utility poles
 - Access to and deployment of conduits
- Connect community anchor institutions, such as schools, libraries
- Encourage and facilitate deployment of Smart Grid and Public Safety Networks that take advantage of shared infrastructure
- Promote and develop digital literacy
- Reform laws, policies, standards and incentives to maximize the benefits of broadband in sectors government has a significant influence, such as public education, health care, energy, and government operations



Specific NBP Ideas for State Action: Education, Health Care and Economic Development

- Establish digital literacy standards in schools (11.9)
- Assess accreditation and certification requirements to permit online classes across state lines (11.5)
- Electronic educational records and transparency (11.11-11.12)
- Remove regulatory barriers to adoption of health IT, such as credentialing, licensing, and e-prescriptions (10.2)
- Explore and reassess tax and other barriers to telework (13.6)
- Integrate broadband infrastructure into general economic development planning (13.8)



Thoughts for Proceeding

- Be transparent and open—but gather information independently when needed
- Set Goals and Benchmarks
- Clearly establish role for government upfront
 - State and local governments affect deployment, through ROW, zoning, pole and public works projects – the opportunity exists for pro-active policies
 - Improve performance of anchor institutions such as schools, health care, public safety – can it improve broadband value proposition for entire surrounding community?
- Be Inclusive and Expansive in Identifying Gaps
 - Reach beyond study of infrastructure availability – focus upon adoption, use, and economic development
 - Include health care agencies, government operations, public safety, highway departments, education
 - Focus on **social welfare** benefits of broadband
- Seek institutional “buy-in” from all government agencies – the people that will ultimately implement the recommendations
- Socialize recommendations
- Be flexible



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