

STEM ADVISORY COUNCIL BROADBAND COMMITTEE

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I. What barriers or other issues can you identify that may impede the increase of broadband access, adoption and use across the state?

We should differentiate between residential and business needs. Businesses that rely on data communications generally are not satisfied with less than 15Mb of bandwidth.

Unserved Areas:

- Distance from Serving Areas + Population Density = Uneconomical to Serve

Underserved Areas:

- Carriers trying to leverage existing facilities and not investing in upgrading facilities
- Low income households can't afford the necessary computing device or monthly cost

Adoption Rate:

- Low adoption percentages makes serving an area uneconomical
- Allow for a certain percentage to be uninterested

II. If you had to choose one primary barrier, what would that be?

The cost to serve the unserved and underserved is the primary barrier.

The **Last Mile is the issue.** The middle mile is not the problem. There are several existing statewide carriers with more than enough capacity to aggregate and transport the data. Most of these carriers are using Dense Wave Division Multiplexing with multiple gigs and numerous wavelengths providing huge amounts of bandwidth. Getting the end-users in sparsely

populated areas connected to these pipes and the costs associated in building these connections is the biggest obstacle.

III. *What recommendations do you have to overcome these barriers?*

In those unserved areas where local providers do not have fiber facilities and where it's not economically viable to place fiber, a wireless solution may be the most economical alternative.

- Wireless has the potential to fulfill the needs in the home, business and in remote locations like farm fields, recreational parks, construction areas, and ballparks
- Little to no stranded investment is realized if the end user disconnects or relocates
- Offers a potentially lower maintenance cost
- Could be synergistic with FirstNet data needs for first responders
- May not be a universal solution due to topography, trees, and other obstacles

We recommend providing incentives like grants or tax breaks to carriers or wireless service providers to deliver service to unserved areas.

We recommend providing assistance for users to pay for higher cost services such as tax deductions, rebates, or other financial support for end users to purchase higher cost services.

For adoption and underserved, we recommend:

- Offering a subsidy for low income households (at least 12.6% lowans)
- Including both an ongoing monthly subsidy and an access device for low income end users that qualify for assistance
- Not pursuing the 'uninterested'

IV. *What are your expectations for future access needs?*

For business and industry within the state, the existing middle mile fiber networks already available from current providers offers the adequate capacity, bandwidth, and QoS required for service convergence. Again the middle mile is not the issue; the cost to build and serve the last mile is.

Businesses with higher bandwidth needs require fiber to deliver their service. Older technologies that adapt networks designed to deliver other services generally are unsatisfactory.

V. *Other comments?*



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The Governor's original statement speaks of a private/public partnership; however, the fact is that the business case to serve the unserved and underserved areas requires outside financial incentives and support.

The private sector responsibility lies in devising a plan to serve the unserved areas. Understanding information on penetration rates per serving area will help identify the underserved and low adoption areas.

The public sector should be responsible in providing the incentives and subsidies outlined in III above.

INS supports the majority of the comments submitted by Dave Duncan on behalf of Iowa's independent telecommunications industry.