KANDIYOHI COUNTY AND CITY OF WILLMAR ECONOMIC DEVELOPMENT COMMISSION (EDC)
BROADBAND AND ADVANCED TECHNOLOGY COMMITTEE MEETING
MINUTES
December 2, 2019
Kandiyohi County Health & Human Services Building, Willmar

Present: Mark Boeschen, Donna Boonstra, Dean Bouta, Bruce DeBlieck, Roger Imdieke, Michelle
                  Marotzke, Rollie Nissen, Glenn Otteson, Gregg Price, David Sisser and Donn Winckler

Excused: Les Nelson

Absent: Scott Froemming, Brian Mort and Ramsey Schaffnit

Staff: Connie Schmoll, Business Development Manager

Secretarial: Nancy Birkeland, Legal & Administrative Assistants, Inc. (*LAA*)

Chairperson Mark Boeschen called the meeting to order at approximately 12:07 p.m.

AGENDA—There were no changes to the agenda.

MINUTES—

   IT WAS MOVED BY Rollie Nissen, SECONDED BY Dave Sisser, to approve the Minutes of the
   November 4, 2019 meeting as emailed. MOTION CARRIED.

UNFINISHED BUSINESS

Township projects. Connie Schmoll reported the EDC sent a letter to approximately 2,035 residents
and businesses in Dovre, Mamre and St. Johns Townships informing them of the survey. The surveys
were mailed with a return envelope to Compass Consultants and, to date, Compass Consultants has
received 262 surveys. There is a QR code to track responses. Schmoll received screenshots with the
served areas removed. Schmoll will obtain a timeline of what has been done and what needs to be
done. Sisser stated he will be speaking at the Dovre Township meeting tomorrow night. Glen Otteson
voiced concern with homeowners having to pay for drops to their homes, noting if that is the case,
people will not sign up for service. Schmoll noted service must be brought to the home to qualify for a
state Border-to-Border Grant and Compass Consultants was directed to include those costs to comply
with the state grant requirements. Schmoll noted she invited Mark Birkholz of Arvig to attend this
committee's January meeting. Chairperson Boeschen stated he has an individual willing to be a
champion of the project and encouraged other committee members to note other champions.
Schmoll suggested an Education Task Force be created and meet in February to gather information to
answer anticipated questions by residents in the three townships. The following volunteered to be on
the Education Task Force for the three townships: Marotkzke, Schmoll, Nissen and Sisser.

Digital inclusion. Schmoll reported she watched a webinar that was more related to getting high school and college students interested in IT and to raise awareness of technology careers. Donn Winckler stated the Area Agency on Aging has held classes for senior citizens, but he doesn't know if they are still being done. Michelle Marotzke stated Willmar Municipal Utilities Commission has discussed having a class on how to use its new app. It was suggested that how to secure your computer may be the most important topic to teach. Schmoll noted that in order to write a broadband grant application, we must have an education component and requested a task force be formed relative to digital inclusion. Schmoll suggested the Digital Inclusion Task Force meet for an hour immediately following the January 6th committee meeting. Schmoll stated the Digital Inclusion Task Force would come up with a plan on how to teach adoption and utilize broadband. Winckler noted inclusion was a component of a previous Blandin grant and included PCs for People. It was questioned if the public library holds classes or community education. The first task could be to investigate what is already being done. Winckler volunteered to attend the first task force meeting, however, he is retiring the end of January. Winckler will contact the Area Agency on Aging. Bruce DeBlieck indicated he will be gone until the first of February, but volunteered to research what the library and community education may be doing. Schmoll will contact PCs for People.

REPORTS

Blandin Innovation Conference. Donna Boonstra reported Blandin's conference was excellent and left attendees excited about what is being done in broadband. She noted that even if there is telehealth, the person must still have someone come to their home. The film Farm Forward was shown and shows technology and farming. Boonstra recommended committee members watch the film, which can be found on YouTube. Other topics included exercising for elderly; a Somalian gentleman, who is a software programmer and holds coding classes for young Somali women in Minneapolis. Schmoll indicated this committee could do more to target our community as an Intelligent Rural Community (see attached notes from Intelligent Community Forum). Presentations included member-owned cooperatives and Meeker County's Vibrant Broadband and many conversations about wired versus wireless. See Boonstra's conference summary attached.

High-Speed Broadband Conference in Virginia. Schmoll reported she and Boonstra also attended the Broadband Communities Summit in Alexandria, Virginia, "High-Speed Broadband: Driving America's Growth". The theme was world class broadband in 2020; the haves and have nots (low-income families who cannot afford broadband) and the need to focus on solutions. Schmoll encouraged reading her notes from the conference (see attached). Kandiyohi County is considered a blindspot. Until everyone has speeds of 10/1, the USDA will not put money into higher speeds. Boonstra stated each workshop had a panel with a moderator. One panelist Mike Bosch of RG Fiber, Baldwin City, Kansas, found a way to bring broadband to his community. This committee may wish to invite Bosch to come to Kandiyohi County. Bosch had already researched our community the day after Boonstra spoke with him. The conference spoke a lot about rural cooperatives providing broadband. It was stated the next Olympics will require 8K and telemedicine will be increasing.

Meetings in Washington, D.C. Schmoll reported she and Boonstra traveled to Washington, D.C. and met with staff of federal legislators Tina Smith, Amy Klobuchar and Collin Peterson. They were

informed that all of the Minnesota legislators have some type of broadband project going on and all are looking into Medicare payments. Schmoll presented each with a handout on High-Speed Broadband for Kandiyohi County/Rural Minnesota (see attached). Schmoll requested that each time a provider completes a project the maps be required to be updated. Boonstra stated they were well received by each office and staff was very receptive and interested in what they could do.

Minnesota Rural Broadband Coalition. Chairperson Boeschen stated he will be attending the conference call this week.

ADJOURNMENT—There being no further business,

        IT WAS MOVED, SECONDED AND CARRIED to adjourn the meeting.

The meeting was adjourned at approximately 12:50 p.m.

NEXT MEETING—The next committee meeting is **12 noon, Monday, January 6, 2020** at the Kandiyohi County Health & Human Services Building, Willmar, followed by the Digital Inclusion Task Force meeting at 1:00 p.m.

Intelligent Community Forum (ICF)

Innovation at the forefront. Community accelerator. Global recognition. See the gaps, and mind the gaps. Pick 21 per year to work with then use a report card to measure gaps and see how doing in comparison.

1. Globalization – political, social/cultural, economic
2. Climate Change
3. Urbanization
4. Digital Disruption

Globalization

Climate Change

- Costly to communities
- Offers new business models (EV's, Solar Energy, etc.)

Urbanization

- 68% of world population projected to live urban areas by 2050

Digital Disruption

- Taking jobs

ICF Methodology – Intelligent Community Forum

Smart City, Intelligent Community focuses on efficiency and effectiveness. Use this to get to talent, attraction, creation, retention ecosystem that nurtures and attracts agile and ready to respond to disruptions/Foreign Direct Investment.

Target our area as "Tech Ready" Investment Ready

Examples

1. Columbus, Ohio. Most Intelligent Community skills, innovation and adaptability: keys to the broadband economy.
2. Olds, Alberta. The gigabit town
3. Stratford, Ontario. The Globe and Mail
4. Sunshine Coast, Queenland, Australia 2014. Embraced by the whole community education, libraries, promoting region
5. Hudson, Ohio (population 22,000)

Top 10 Strategic Technology Trends for 2019

Digital ethics and privacy	Autonomous things
Quantum competing	Augmented analytics
Digital twins	Block chain

A. **Member owned coop**
   1. **Garden Valley**   ACAM II CLEC, 118+218 mile projects
      $2million + $3.6 million   cost per mile $13,512K $15,334K
      a.   Greater NW area, Thief River Falls, Bemidji Area, to most Grand Forks

Cost estimates were much higher than actual but because we have our own crew and equipment, we saved a lot of money. Close to 60% take rates. Railroad is a huge challenge

CAFII Dev. Action. $880.36 for 10 years for areas around current grant areas, Submitted two grants in 2019

USDA – Reconnect Grant ---- terrible application to complete

2020 – USDA Reconnect II, RDOF Reverse Action, Amazon game for Micah

"With a better product – You will eventually get most of the market (people in area) to sign up". Just have to be patient.

   2. **Woodstock Communications** – 5 ILEC Exchange, Terry Nelson, CEO

3 B to B grants: Russell, Harvord, Woodstock, Westbrook SW MN, 1,200 voice customers. Population decline in rural areas in SW MN. Ag based communities. Losing landline and saturated broadband.

Surrounded by CenturyLink and Frontier FCC uncertainty

Growth is outside of our ILEC area, Starting out: Build a partnership – trust know each other

   3. **Westbrook.** Hospital, school. Need for letters, helped secure grants

Educate city and residents: Who we are, what type technology we use – FTTH. What FTTH can mean for a community/economic development. Started meeting with city administrators, council members to complete surveys. They gave us free use of community center, gave land for a remote with/16,420 building sq. ft. Built in 2017 – today over 70% penetration.

   4. **Balaton** – same. Unhappy residents with Frontier. Built in 2015, 55-60% penetration.
   5. **Woodstock.** Wave wireless service, 7-mile radius
   6. **Pipestone County Wireless.** Most of county already fiber. So did build with four new owners to offer hybrid fiber/wireless.
   7. **Midco** – Justin. YouTube/kix6vazhvNu

Movie Theatre Co. "Let's Go". Fiber, HFC, Fixed Wireless, 5 states

10G evolution - Annandale, 1st 10G city in America, Midco Rural Internet. Fixed wireless. Point to Point plus point to multipoint. Awarded $38.9 million in CAF Phase II

7410 MV locations – 100/20 speeds offered, Fixed 5G future capability. Larger cities only. 5G is all about Spectrum to move through tower density is very small so need so, so many towers – every 100 feet. Economically have to have lots of people per tower.

Challenge: getting all Spectrum we need. Why fixed wireless? All the reasons will do our 10 years of work in the next couple of years. Fixed wireless better for farmers so they can connect many devices' ie: water pumps, security equipment, etc.

8. **Sjoberg, Inc.** Dick Sjoberg, 75 year-old appliance company—cable--Internet. "Digikey" Thief River Falls area. Data over cable: 1998 Internet systems, started at Sjoberg.

Future: 10G symmetrical   Cable industry to be built out to entire USA by 2028
Cable labs of Denver, CO. working on coaxed cable, 100G symmetrical on Coax, Doxis 4.0 = standard
Impact of high speed internet on gdb Gross Domestic Product, up by .073%, 2 trillion x .073% = a lot: $15 billion
Full duplex – 5 teraloytes of cap, Consumer Surplus: current $3.5 billion internet value is higher than we perceive

Day 2

Carl Meyerhoefer. Calix. Broadband and the customer experience. The goal—no dead zones. Mood lighting, security, climate control, audio distribution, remotes, appliances. Wireless inside the home is critical. Calix provides reliable Wi-Fi, single hub, Alexa voice (Amazon because they are easy to work with) Other option is Google. Your brand.

Subscribers expect much. WiFi to connect devices to the world.

The home gateway is important. Fiber to the antenna is good plan. Antenna to the home WiFi to all the devices.

Wired vs Wireless

- Mitch Koep. A Better Wireless. Wireless – 200/50 mgbs fixed wireless w/LTD, no managed services.
- Bridge Gap – Wireless – Fixed wireless – Fiber
- Wireless, a good stop gap to get it out there and get it going. Wireless good in its place. The higher the frequency, the shorter the wave.
- LTE – phone networks
- Wired/wireless (as an isp or wisp). Compliment to each other.
- Copper depreciated a long time ago. Large ILEC's not making investments that they should be making. Others like Arvig are making the investments they should be making. 4G – 5G just adding more frequencies. Northern Michigan University. 5G research sheets point to multipoint.

CTC using townships exploration model. Joe Buttweiler, City of Little Falls, City of Aitken, business demand. Township investment – Franconian and Chisago Lakes Townships, City of Long Prairie, city owned CTC leased.

Grants

1. RUS___ Reconnect Loan and Grant Program
2. RUS___ Community Connect Grants
3. Mille Lacs Energy Project
4. Reverse Auction
5. FCC auction, Rural Digital Opportunity Fund

Roseau Electric. Ryan Severson

N-NW MN includes Lake of the Woods, North Stream Fiber

Community Surveys found: The need is real and the interest is high. Surveys done at fair, fall festivals

Opportunities researched. New Market Tax Credits. Internet Technologies (wireless/fiber), Open System

Early Education leads to buy-in, Feasibility Study shows real member interest. Authorization to proceed to auction. FCC Auction, March 2018, short form application. July 21-August 21, Auction Bidding Award and then long form application, July 2019 first disbursement (1 of 120).

Call Ryan about their early education process.

Used a new Border-to Border grant application to fill in gaps in CAF II funded area.

Tim Bergen – Meeker County Vibrant Broadband

Vibrant Broadband, 9 directors, 28 employees, 7,800 members/owners, 1,935 miles electrical line, 4 members per mile line. At 2015 Blandin meeting, heard the phrase" Vibrant Broadband". 2016-2018, 2 feasibility studies, 2017-2018 Hybrid System and Meeker County Study. Combo fiber/fixed wireless (see picture).

VIBRANT Broadband

450 miles of fiber. 60%is underground, the rest is on poles, 47-120 feet mono poles, 5-6 miles apart, 2 existing towers. Two-year buildout, 1st customers are hooked up. Financing: Business loan and Co Bank loan. Now 44 employees and 4 temporaries. Governor Walz was at the Ribbon Cutting.

Tim – Meeker County, Choosing technical and frequency design. NRTC. Pulse Engineering, and Neo Nova did the research and consultation.

Using Adtron and Redwin and unlicensed Spectrum. All/nearly all tower and fiber lines on private property—not in road right of way. Coop model—can take many years to get ROI – 10 years.

Southwest MN Broadband Service traded $500,000 in financing for $1,000,000 worth of services after the build was complete and operating.

Hiawatha Broadband Communications – Gary Evans—(now Dan Pecarina). Gary is a writer of mystery novels, 4 of them (Death by Drowning). Winona resident, college administrator

Feasibility Studies. Finley Engineering, Mark Mula and Chris Konehne, 20 studies in the last three years. What for? Typically, Needs assessment, Market, Audit of existing, mapping, community engagement guidance. Network designs/technologies/costs, mapping of network options, provider options, partnership options, funding options.

Do Your Research – RFPcaution: Don't ask for more than you need –costly. Be sure you compare apples to apples when choosing the company to do the RFP.

Options to decide:

Design, Technology, Financing/Funding, Partnership

Feasibility Studies in MN now more important than ever. MN best broadband program. B2B grants 2014-presnet. Consulting 25 other states. 2-4 months to do a study – GIS helps. Goal is to "get a buildable project"

Community Involvement

Barbara, LeSueur County

- Awareness, education, needs assessment
- Two more champions to drive it forward
- Surveys
- Speed test verification
- Service commitment sign-ups to verify adequate sign-ups (some communities)
- County or City contribution and/or land or facility for the equipment and/or offices.

First Steps:

- Assemble a team: speeds and technology, challenges providers are facing, economics or broadband
- Research, areas of need, identify resources, fiber backhaul, county fiber infrastructure
- Set goals, primary/secondary
- Provider Engagement, evaluate existing providers and their plans
- Community Engagement. Educate community on process and get feedback.
- Providers and Project Obstacles: Economics, Funding Options, Making the case, Take rates
- Technologies.
    - Fiber: the ultimate solution. High cost, 7 times a wireless network, aerial or buried, time to deploy, low maintenance cost.
    - Fixed wireless: (transmission and receiving are fixed in place). Adequate for today's needs and beyond. Technology is steadily improving—many advancements, cost effective

Speed, latency &reliability

Quick deployment, fight for Spectrum, coverage challenges, tower assets needed.

What does 5G mean for rural American? Moving target, many explanations. A combination of much different wave length frequencies.

Finley

Building a model. Reality – won't know ahead of time. What project will come from a study. Model = flexibility. Factors driving accuracy: data, digital, scope. Steady results to public, providers. Identify next steps, local contributions, maintain momentum. Project partners, singles versus homeowners. Update.

Feasibility Study:

Barbara Droher Kline. LeSueur County - BevComm and Jaguar

Betsy Olianti, Central Iron Range. Faith – take the first step even though you cannot see the rest of the steps.

Nancy Hoffman, Chisago County. Fiber to the Home through Century Link. Mapped out the providers for the county. Township – ½ of the townships driven by the residents (credited districts).

CTC and Scandia—going into Chisago County (possibility).

Survey: Franconia Township. Resident support, current monthly cost. (Get PowerPoint. Blandin Grants). Get from Nancy.

LeSueur County selling bonds and townships pay annually to payback County.

NTIA

Get PowerPoint. Nat. Telecommunication Information and Assistance

Expanding broadband, educating stakeholders, facilitating relationships, provide resources

Or: Educate, Assist, Convene

BTOP. Home value up by 3.1% with high speed broadband.

Be a place where families desire to live:

17 strategies

- Renewable Energy
- Agriculture Technology
- STEM Training
- Multi-lingual applications to serve people coming to our country. "Who is that worker that we are trying to attract?". Finding workforce and accommodating lingual difference is critical in economic development strategies today.
- LIFT – Learn Your Future Today. In school districts –training skills in the school.
- Driving Simulators. North Force (website). Driverless Vehicles. DEED Teleworker Program. Anticipate what is needed for tomorrow/future, 10 years from now. Aim, changing demographics, data on attraction, also track retention.
- Tech based entrepreneurship and telework. Ryan Pesch, U of M Extension. Data with no net international migration # of workforce will decrease. Why people come or stay rural: quality of life = simpler pace, safety and security, low housing cost. 2019 State Newcomer Survey. 1,600 respondents, Mix of rural county types across MN. 37% would quit job to be able to work from home. 1 of 10 are independent contractors.
- To help positive entrepreneurial climate.

Broadband for Seniors

Seniors as workforce. Work on: safety and security online and mentoring to and from.

Use of technology to engage and ensure quality of life for older adults.

Dancing Heart. Senior centers, VA hospital, theaters. Using zoom platform – interactive. "It's just for fun—we need to have the fun in our lives" participant.

Leading Age (tm)

Using, video conferencing service, Smart RV, sound bar, and acoustic camera. Connect local partners, connect providers and professionals, equip the community. Educational topics.

Programs scheduled for a year.

Nathalie – S. Chisago County. Silos to circles partners with communities to improve the experience of aging.

Silos to circles with portal - Lifelong learning – events at community ed, library, expo

Healthcare and wellness, food and nutrition, caring for yourself while caregiving, need a ride? Things to do.

Perfection free culture is important. May not dance but instead move fingers –OK

Readiness factors: 2-3 committed champions

Next Step: High Speed Broadband

Terri@leadingage.mn.org   Silos to Circles

Institute for local self-reliance

Christopher Mitchell. Local solutions for globally competitive connectivity. Where are we headed – goal – like electricity be able to use BB w/0 thinking about capacity, speed security or latency.

Focuses: Local banking, decentralized energy, main street businesses, recycling, waste to wealth

Broadband

Weekly pod casts, Fact Sheets, Platform that answers questions, Reports

** 5G Hype = get this handout. 5th generation wireless

- Local solutions vs large conglomerates sucking money from communities, i.e.,: AT & T
- Frontier is not a solution. In lots of trouble.
- Century Link not investing in fiber in rural communities.
- "Waste in healthcare systems because of not using telemedicine".
- Co-op and Muni-fiber networks are making a difference.

Fortune trucking – Windom, 47 jobs. Windom invested funds for Internet to save the company and keep them

Download is important but upload is contributing rather than consuming, especially true for telecommuters.

All hands on deck publication – needs to be updated,
Look up: Ammon's Model – The Virtual End

Successful strategies for BB public/private partnerships. Not that expensive: compare to cost of light rail, for example.

Session Summary 1 by Donna Boonstra

Healthcare: The Importance of the "Last Mile"

Expectations around healthcare are changing. People are now wanting to be able to access their doctor anytime that they need them without going to a clinic. Three presenters told us how we can do just that IF both patients and physicians have access to at least 25MBPS/5MBPS broadband.

Tele-Health has always been facility based and now it is becoming home based. There is a Virtual Care Application available that allows processes from the phone, including:
- ✓ Manage appointments
- ✓ Request a prescription refill
- ✓ See test results
- ✓ Send photos or videos
- ✓ Access health records
- ✓ Access vaccination records
- ✓ E-chat

Virtual OB Care allows pregnant women to have a 10-minute checkup from their phone on a lunch hour or break without having to invest travel time to go to a clinic.

Patients are being released from the hospital earlier if they have access to remote monitoring capabilities. As an outpatient they are able to do a daily blood pressure check, step on a scale, take their pulse etc., which tells the doctor if they are fine or if they need to be seen by the doctor.

The hospital in Grand Forks, ND is host to 13 community hospitals in MN and ND who are not aligned with robust health systems. They receive tech support along with electronic records and video capabilities from Grand Forks IF they can access bandwidth is fast enough and large enough to stream.

Allina Health allows one physician (hospitalist) to provide cross coverage at more than one hospital at a time. Quick access to physicians removes the need for nurses to stack requests until they feel waking a doctor is justified. Patients' needs are addressed quickly and efficiently and they can remain close to home. The process enhances the work and private life of the physicians as well. This program requires training of physicians on how hospitals deliver care.

Allina provides an aluminum cart that can be rolled from room to room a the hospital that is equipped with the following:

       30x Optical Zoom Camera that is controlled by a physician or a nurse
       24" Monitor
       Wired Speakerphone
       Small Form Factor Wireless PC

Issue of Importance

One thing that is very distressing to me is that Medicare requires the patient go to a care facility in order for them to pay for the service. This defeats the purpose of telemedicine, being able to stay home or at work to communicate with the doctor.

For more information go to: www.ruralhealthweb.org/getattachment/advocate/policy

Session Summary 2 by Donna Boonstra

Tech-Transformed Agriculture

Keith Olander - How do I maintain my farm (environment) and remain viable? That's the million-dollar question in agriculture in these times. MN is the 3rd worst state in the US. We are 76% lower but all are down by 2/3 income. We all are at a 25 year low and cannot cover costs as well as earn a living. There is no control over the weather but automation management helps farmers know what weather is coming and suggest what to do before weather hits. Broadband offers ways to create a virtual classroom anywhere in the field. Drones in ag show site specific areas where pesticides need to be applied, reducing the effects of broadcast applications. For a closer look at how broadband benefits agriculture please go to You Tube: Farm Forward.

Jim Chamberlin – Jim been an organic farmer since 1986. He has a degree in Natural Resource Management. He shared several facts about how our soil needs to be cared for. Historically civilizations thrive by how the soil is treated. Agriculture done well heals our soils, waters and communities. Organic matter allows the soil to retain moisture and mitigates flooding and makes it more resilient to drought and excessive rain. 85 to 90% of soil fertility is through biology (living organisms). Overuse of anhydrous ammonia (liquid nitrogen) is the culprit of Dead Zones (250 in the world). When anhydrous ammonia is applied 30% is released into the atmosphere otherwise leaching into the ground water. It's toxic to the soils. Carbon in the atmosphere has to go somewhere. This is causing more carbon build up than any fossil fuel ever will. Natural nitrogen is the best source. It's the chemicals from plant roots that produces the nutrients needed to enrich the soil with nitrogen. Fungus takes phosphorous in an unusable form and makes it usable. Jim says to stop tilling so much as tillage disturbs the natural process. Keep the soil covered with a cover crop to keep the soil temperature consistent and give the soil the nutrients it needs to heal. A diverse plan community is excellent for the soil. Allow animals to graze. Protect the beetles that are good for the soil. They take the dung from animals and pull it underground and lay their eggs in it which is fertilizer that is needed for soil health.

This was such interesting information to me that I just had to share it. The reason he was asked to speak is because of the way he gets his information and markets his organic produce. He uses You Tube for learning many of his tried and true best practices, Facebook for E-commerce, belongs to a Farmer to Farmer Network and has conversations with other farmers. He believes that farmers no longer want to sit on a tractor for hours on end so there's a need for autonomous vehicles to do that for us. He stresses the need for maps of pasture land showing soil testing results that can help determine how many animals per acre can be placed there, etc.

Broadband is needed for all of these important practices.

Sam Ziegler, GreenSeam Exec. Dir. – Works with all types and sizes of agriculture-related businesses Southern MN and northern IA. He currently has 950 businesses as members. GreenSeam is a public/private partnership that has created an Ag Bioscience Solution Center. They have tons of data that needs to be analyzed and managed. Farmers are able to collect so much data that they don't know what to do with it all. They are realizing that different farming practices such as what was described by Jim earlier would save $2.3 trillion dollars!!!! Such good information!!

Sam's main message was "Agriculture is ready for Technology but is Technology ready for farming?"

World-class 21st Century Broadband - an essential infrastructure in 2019, and not attainable everywhere, not even in all of Alexandria Virginia.

$600 Million Dollars of federal RDOF funding – most communities not eligible, yet all went out.

The nature of the problem falls in three areas according to **Nicol Turner-Lee, Fellow at Brookings Institute- Center for Technology Innovations**

> Impact
> Scope
> Solution

Have and Have-not is a matter of life survival – it is important/critical that you are on-line. Any divide is bad – geographical and socio-economic. New underclass today because of internet access vs lack of access.

This conference is an opportunity to look any solutions, the creative projects that are happening today. Including:
> Telehealth – telemedicine for veterans with PTSD
> E-rate Program – with funding for broadband for libraries and schools

Chris Mitchell – Institute for Local Self-Reliance

Chris gave credit to the **Quiet Success of Internet Providers: Rural Cooperatives**, those doing incremental efforts, those deploying in low income neighborhoods (NY).

Panel of a few of such providers included:
Jason Grey of Virginia – Director of Utilities for a City/Municipality Danville, Virginia
Mel Poole - Director, OCALA Fiber Network – Facilitated planning with many community leaders.
Richard Sherwin – CEO, Spot on Networks – Broadband in affordable housing units – install and teach residents to use – things such as how to use U-Tube TV and still get sporting events, etc.

First Day Keynote: Adrianne B. Furniss- E. D. Benton Institute for Broadband and Society

> "No matter what your first issue is, Broadband needs to be your second issue." And
> "Whatever we care about, we need to care about broadband."

Check out the Benton Monthly Digest and reports – Benton Senior Fellow has done work to report on "More Than One Digital Divide", there is the geographical, competition, affordability, and adoption/training divides. Everyone needs robust, competitive, fixed networks. Note to self: Get the article for grant and for township training uses. He says: "We won't solve all problems with broadband but we cannot solve our biggest problems without broadband."

Ms. Furniss added: A tool for lifting up economic opportunity is called, "Four Building Blocks for Policy Makers"

The four blocks:

1. Deployment of networks
    a. Futureproof, scalable, 100MBPS minimum and able to upgrade fixed broadband deployments
    b. Latency and data caps are not acceptable

      c. Do not leave out the "blind spots" 15MBPS/2MBPS type areas. Too slow for minimum standards for most processes but does not qualify for most fed. funding
  2. Competition
      a. Forty-four states have broadband agencies
  3. Affordability
      a. Community anchor institutions (schools, hospitals, libraries) need quality access at reduced price
      b. Contact National Digital Inclusion Alliance – public assistance group
  4. Adoption
      a. Seek expansion of E-rate program for schools and allow the networks to expand to residents in the area, with private dollars.
      b. Digital skills and training are important.

Funding Broadband Projects

Kirk Burgee- Wireline Competition Bureau Chief of Staff

R-DOF – Connect America – Rural Digital Opportunity Fund

In recognition that broadband access is no longer a luxury, but critical for all Americans, the Federal Communications Commission ("FCC") has established the Rural Digital Opportunity Fund ("RDOF"). $24.4 billion over the next decade to support high-speed broadband networks in rural America. Building on the success of the recent Connect America Fund Phase II ("CAF II") auction.

Parker – filling in – did not get his last name
Laura Spining, Director, Broadband Infrastructure NTIA

ReConnect $600 million through USDA

For < 10/1 areas only, must build out to a minimum of 25/3, those with best plans for higher speed and less money get the funding. **(note: areas considered "blind spots" in the area of 15/2, do not qualify for reconnect but too slow for minimum standards)**

    3 products:
      1. 100% loan- 2 % fixed interest
      2. 50% grant and 50% loan   requires 25% match
      3. 100% grant

All went out –scoring was based on Economic Development and Quality of Life components which lead to growth of wealth ability.

Latency issues and data caps are not acceptable under this funding source (no satellite)

FY 2019 - $550 million ?? – area does not have to be contiguous.

Other information shared: 44 states have a Broadband agency such as Minnesota's Border-to-border program.

Everyone needs a Maverick and the Coops have become that is many areas.

References made to "open access" anyone can hop onto the dark fiber.

References also made to "overbuilding" competition on the open access lines. Competition is good for a community.

Other Programs on NTIA Website

Rural Access Loan program - $47 million in loans.

Community Connect grant program- $30 million available for small community buildouts where there is no service at all.

Distance Learning and Telemedicine Grant Program – for rural clinics or colleges – to pay for equipment. Opioid focus qualifies – require 50% match.

Alternative Programs with Alternative Sources of Funding

Althena, Deborah Simpier – local people install and maintain the wireless equipment. Also sell subunits owned and run by community members
Neighborly, Jase Wilson – municipal bonds to fund BB
COS systems used in Sweden – light years ahead
Open access information infrastructure to replace BB connected economy
"Build it and they will come" ?? Opportunity Zones – use municipal bonds to finance to the area as an incentive along with opportunity zone funds.
INCOMPAS.org – Look this up.

Other News
Deloitte estimates $130 to $150 billion needed in US to get to "connected"
The entertainment industry is requiring fiber connections.
    Next year Olympics will be broadcast in 8K – Are we ready?
    Post Live Concerts

Public Private Partnerships

David Hoover, Principal - The Ferguson Group
PPP – A long term agreement between Government and private sector to share risks and rewards of delivering an essential service

Models:
Public facilitation/private investment, Public funding/private execution, shared investment & risk
Example: Mike Bosch – RG Fiber for Really Good Fiber Mike was energetic, a doer and motivating

He said he believes in R&D!! Rob it and do it, and encouraged audience to rob his ideas and do them. Builds in Kansas 150/150 is slowest speed package. Fiber builds. Look at BB as Economic Development. He bought in a service provider as a design build contractor.

Cheryl DeBerry Natural Resources Business Specialist – Garrett County, Maryland
Worked with Joanne Hovis, used TV Whitespace
Declarations Network Group to Design, Build, Contract and Comcast doing competitive projects with the open access

GarrettCo.Org/broadband – county owned, grants and county funded Private Partner is Network Designer/operator

Co-ops
In 1969, landed on the moon – and we still cannot get affordable modern day broadband to everyone. Reason: Lack of political will.

Ron Holcomb – Tipmount Co-op – "obligation to serve" Culture of Co-ops – commitment to community/service

Co-ops say, there may be money out there or not but regardless, we are building – for our co-op members.

Casey Logon – Prince George Electric Co-op VA
Local Govt. putting $s in the projects.
Says, Do not follow a canned model, figure out your own advantages, partners etc.

Lesson learned: Success is dependent on your co-op's culture.

Logan – manage expectations; when the cat is let out of the bag, be ready!

Craig Eccher – Tri-County REC Mansfield, Pennsylvania
Providing something our members cannot otherwise get right now, to bring this to the community - you become relevant again. The relevance that everyone feels again – drives the transformation.

Geoffrey Starks – FCC Commissioner
Rural Digital Opportunity Fund
$16 billion for broadband – mapping. Currently FCC Maps wrong on 66 million mapped sites. Pushing for mapping to be completed in less than one more years' time.

 Starks says: low income and homeless people need connection to internet for medical, family, and job application and jobs.

EDC

Kandiyohi County & City of Willmar
ECONOMIC DEVELOPMENT COMMISSION

High-Speed Broadband for Kandiyohi County/Rural Minnesota

I.   New Funding for Broadband in Unserved and Underserved Areas

Funds have recently been allocated for loans and grants to help build broadband, an essential service, in rural America. Such funding is imperative if we are ever to bridge the digital divide in America. Internet service providers may apply for funding through USDA's new ReConnect Program to connect rural areas that currently have insufficient broadband service.

The problem: The funds are not available for those who have access to speeds at 10MBPS/1MBPS or greater. For adequate use of today's technology, a minimum requirement is at least 25MBPS/3MBPS and will be closer to 100MBPS/100MBPS for future use. Most Urban areas advance through network connections of 1000MBPS/1000MBPS (a gigabit) or more.

Solution: Change the eligibility requirement for the ReConnect Program, allowing areas that do not have at least 25MBPS/3MBPS to apply and potentially secure funds.

II.   Tech-Transformed Agriculture

Broadband offers ways to create a virtual classroom anywhere in the field. Drones used in agricultural environments show site specific issues such as where pesticides need to be applied. High-speed connections are necessary for upload as well as download of drone collected data. For a closer look at how broadband benefits agriculture please go to You Tube: Farm Forward.

The problem: The rural areas are least likely to have access to high-speed broadband services.

Solution: Prioritize broadband infrastructure funding for rural areas as an essential service for the advancement of agriculture.

III.   Healthcare: The Importance of the "Last Mile"

Expectations around healthcare are changing. People want to access their doctor quickly and from anywhere. This is possible with telemedicine if both patients and physicians have access to at least 25MBPS/5MBPS.

The problem: Medicare requires the patient go to a care facility in order for Medicare to pay for the service. This requirement defeats the purpose of telemedicine; being able to stay home to communicate with the doctor.

The solution: Amend Medicare policy language to allow reimbursement for off-site telemedicine healthcare visits.

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