BROADBAND

WHAT THE HECK IS IT AND WHY IS IT SO IMPORTANT TO RURAL AMERICA?

WHAT IS BROADBAND?

Broadband Internet service truly is the most used form of Internet access because of its high access speeds; it is offered in four different forms, DSL (Digital Subscriber Line), also fiber-optic, cable, and satellite. But I digress…we will explore this more at a later time.

In a nutshell…

INFASTRUCTURE begets

High Speed Internet begets

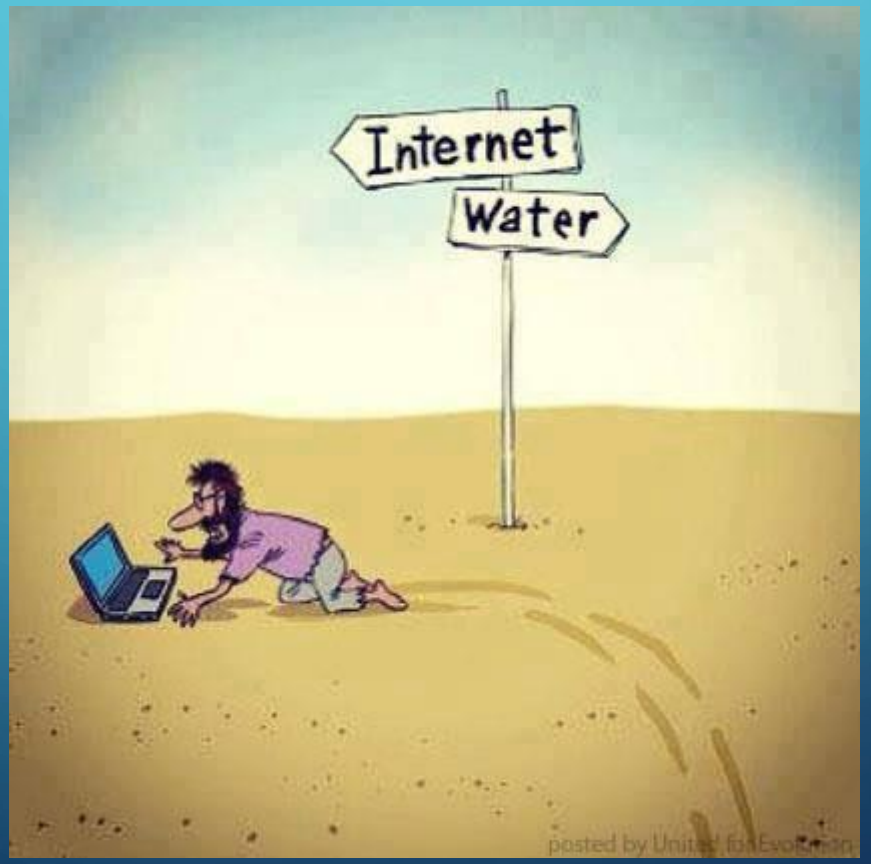
Opportunity!

And there you have it! It's like totally important DUDE!

WHY IS BROADBAND IMPORTANT TO RURAL AMERICA?

- High speed Internet breaks down the barriers of distance, allowing residents of rural areas to participate in economic and civic life far beyond their geographic region.
- Economic Advantages; communication made possible by broadband thus eliminating the logistical constraints of regionally-based business models, allowing businesses in isolated areas to compete with their big-city counterparts.
- Social advantages of high speed Internet in rural areas benefits the entire community.

WHY DOES PALISADE NEED TO LOOK TO THE FUTURE AND INVEST IN BROADBAND INFRASTRUCTURE *NOW?*



#1- BROADBAND BRINGS LOCAL BUSINESS TO GLOBAL MARKETS

- Websites like Etsy, Facebook, and Pinterest are a hub for crafters, creators, and anyone else who has something to sell.
- Businesses and individuals with services to offer can also promote their brand online and put the internet to work for them.
- With a broadband connection, businesses can connect to millions of consumers in just a few clicks.

All of Palisade's goodness,

all over the WORLD=

WORLD DOMINATION!!!

#2-BROADBAND CREATES EDUCATIONAL OPPORTUNITIES

Online classes, anyone?

From homeschooling to college degrees – it's all available online!

Where students once had to (gasp!) put on clothes and make their way into a classroom, most educational programs now offer an online program. (Thanks Covid for expanding this for our local students)

#3-BROADBAND CONNECTS THE PUBLIC TO QUALITY HEALTHCARE OPTIONS

- Rural clinics and hospitals can quickly and securely connect to larger, urban medical centers with specialists and advanced equipment.
- Patients can also view online medical records, make payments and schedule appointments, or even participate in Tele-Medicine.

#4-BROADBAND INCREASES AREA JOB GROWTH

"If you build it, they will come."

A small town with commercial land to sell is all well and good, but add in a solid network that will connect a large business to its vendors, employees, and consumers, and you've got prime real estate for potential employers. Big business brings jobs, and high-speed internet brings the businesses.

Can you say Amazon warehouse in Mesa County???

You know you want same day Amazon delivery….

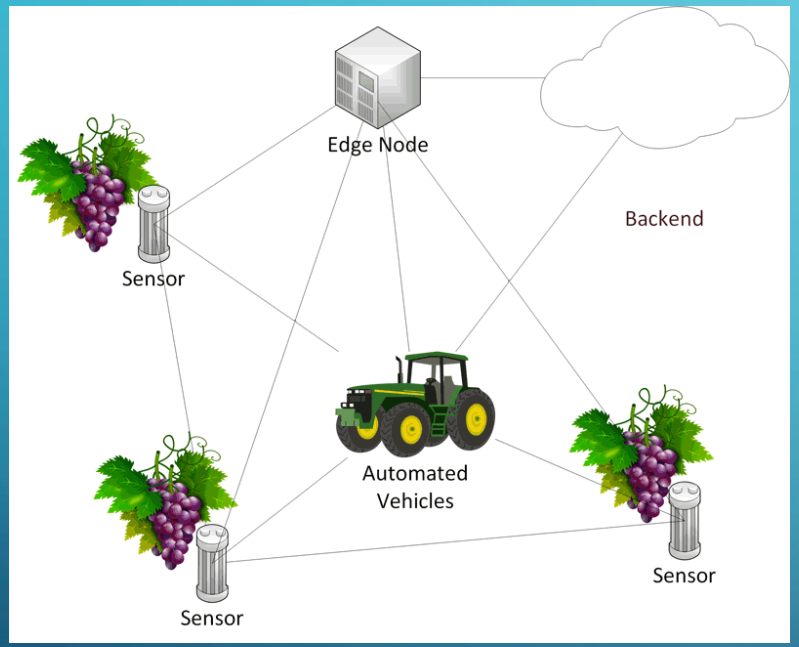
#5-BROADBAND ATTRACTS VISITORS TO LOCAL BUSINESSES

Most people on the road these days use some form of GPS. Without an internet connect, local businesses wouldn’t show up on maps or in local Google search listings. Being connected means passersby can learn about local businesses and make a stop as they move through the area.

#6-BROADBAND ALLOWS USERS TO STAY IN TOUCH WITH FRIENDS AND FAMILY...IF THAT'S YOUR THING!?

Gone are the days of hand-written letters delivered by pony. Telegrams are old news too, and who even uses a cell phone for actually talking nowadays? … Grandma and Grandpa can enjoy retirement in Florida and still see their grand kids in real-time on the computer screen. We joke, but broadband has truly changed the way we communicate.

#7- BROADBAND OFFERS NEW TOOLS FOR FARMERS TO ”GROW” BUSINESS



Farmers need high speed, reliable internet service? You bet!

- Farmers use the internet to analyze weather data, manage nutrient applications, map their crop yields, and adjust planting for the next season with modern precision agriculture tools.
- Rural broadband means farmers have an easier time bringing their product to market.
- Increasingly, farmers (and everyone else) are turning to Social Media for **FREE** advertisement and marketing.

#8- BROADBAND HELPS CUT DOWN ON COMMUTING, INCREASES VIRTUAL WORK

- Thousands of dollars are saved in rural communities where employees have the ability to Tele-Commute.
- Lower car maintenance expenses and less stress – sounds like a win/win.
- Plus…who doesn't want to work in their jammies, am I right!?

#9- BROADBAND HELPS THE PUBLIC CONNECT WITH LOCAL LAW ENFORCEMENT AND GOVERNMENT

- Social networks, websites and virtual attendance of municipal meetings give rural citizens access to important updates and information from government agencies, local police and fire agencies.
- Dangerous situations, Amber Alerts, and emergency notifications can all be made in real-time through use of a broadband network.

OTHER JUST AS IMPORTANT CONSIDERATIONS REGARDING BROADBAND SERVICE…

Faster online shopping…am I right ladies?!

Access to mobile banking without getting the boot from your loot!

Increased ability for streaming TV service without getting the loaded spins, ur, I mean loading spins!

Enable Palisade as a truly “Smart City” for our guests… let’s face it; we’re not currently very “smart.”

SO, NOW YOU'RE CONVINCED PALISADE NEEDS BROADBAND INTERNET SERVICE…WHAT'S NEXT?

FACILITATE "DIG-ONCE" POLICY" AND CONSTRUCTION SPECIFICATIONS

To help build assets such as conduit and fiber consider sanctioning policies that facilitate and encourage their construction. "Dig Once" policies open streets and rights-of-way to utility construction when related projects are underway, realizing efficiencies in network construction, resulting in a more uniform and efficient network infrastructure. Such policies also protect roads and sidewalks from frequent, life-shortening cuts and minimize traffic and other disruption from utility construction.

Dig-once opportunities are frequently followed by a moratorium on further construction for a year or more in order to incentivize providers to build together and realize these efficiencies.

Even where private partners do not place conduit, municipalities should use dig-once opportunities to install their own conduit and fiber—which can be made available to private entities in the future. This outcome is particularly valuable in areas where construction costs are high, or in highly congested rights-of-way where construction can be more disruptive. In highly congested and high-cost areas, municipalities might choose to construct uniform conduit banks with sufficient capacity for all current and future providers, thus using both space and time more efficiently. Remember that public fiber and conduit construction entails costs for the locality, as does efficient administration of a dig-once policy but the resulting benefit can be dramatic, use of these assets can reduce the upfront cost of buildout, whether by the locality itself or by a private entity, by up to 8%.

FACILITATE AERIAL CONSTRUCTION THROUGH ACCESS TO UTILITY POLES

A critical item for any municipality or company (ISP) building new broadband is access to utility poles. Optimally, the network builder (ISP) will secure efficient access to the poles and will have a swift, reasonable “make-ready” process to prepare the poles for the new fiber bundle attachments.

In most communities, utility poles are privately owned by phone and electric companies, which have control over both fees and timeframes for new fiber attachments to their poles. Municipalities generally, have relationships with the pole owners which frequently allows them some influence in their use. Localities should use that influence by working with the pole owners to encourage them to help facilitate rather than obstruct the process of the fiber build out.

FACILITATE IN-BUILDING ACCESS FOR WIRELINE INFRASTRUCTURE

One significant barrier to new network providers is the entry into a building or development. A government can improve services to its residents and businesses if it requires by code—or creates an incentive for developers to build—additional pathways from the public rights-of-way to a connection point.

Developers and builders are already accustomed to providing pathways for telephone, power, and cable TV from the property line to a room designated for utility services within a new building. Ensuring the availability of spare conduit into buildings would reduce installation time, risk, and barriers to entry for new providers.

The incremental cost to add an additional conduit for public fiber optic cable at the time of construction would be minimal. The conduit would originate in the area designated for utilities and follow the same path as telephone and cable TV conduit. The incremental cost to the developer of a 200-foot conduit path from the utilities on the home to the property line would be approximately $2 per foot for labor and $2 per foot for materials. This would total approximately $1,000 in additional construction costs for the outside plant portion of installing conduit. In contrast, the cost for new construction of the same route can be $1,500 to $10,000 if a network provider needs to create a new entry path.

MAKE DATA AVAILABLE WHEREVER POSSIBLE

Devote resources to collecting key data in such databases as Geographic Information Systems (GIS); these databases can also potentially serve to facilitate the community's broadband goals if certain data sets are made available to network deployers (ISP).

Other data sets can be extremely helpful for a locality's own broadband planning, it is recommended that municipalities compile information about existing utilities, town infrastructure, rights-of-way, available easements, and viable locations for CNL's (Carrier Neutral Location).

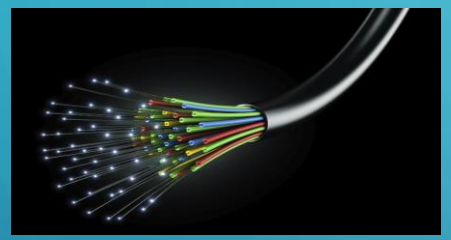
With this information, it becomes easier, faster, and cheaper to conduct the high-level planning phase of a large-scale broadband construction project in which the prospective builder examines options and determines what assets are needed both to plan and build.

WHAT *ELSE* CAN WE DO TO SUPPORT BROADBAND EFFORTS FOR PALISADE?

Research funding, ISP providers, etc.

Connect with other communities

Streamline permitting processes when the time comes



Support measures to increase public awareness about the importance of Broadband as **INFASTRUCTURE**.

MOST IMPORTANTLY…

Listen to Ellen and Nicole, they are busting their

to get this figured out. (Just kidding…kind of)

WHAT HAVE YOU ACCOMPLISHED? WE'RE GLAD YOU ASKED…

- First, we had to figure out what all this meant…We did that by attending the Mountain Connect Broadband Conference in May 2021.

  Mountain Connect focuses on a myriad of topics including Intelligent/Smart Infrastructure, Digital Government, Economic Development, Healthcare, Education, Emerging Technologies, Policy Impacting Broadband and Broadband 101 Education for Elected Officials.

- Ellen went on an adventure to visit a potential ISP partner located in Vernal, UT.
- Meetings, meetings, meetings!!!

  Region 10, DOLA, Stratta, Mesa County, etc.

- Applied for a DOLA grant to help fund Middle Mile Infrastructure- outcome pending.
- Identified where our CNL will be located.
- Ongoing discussions with Mesa County regarding forming a Broadband Coalition.

COLORADO
Department of Local Affairs

FOOD FOR THOUGHT…

"Today, high-speed Internet is the backbone for 21st century economic growth in the digital economy. Unnecessary price regulation in competitive broadband markets will have far-reaching negative impacts on U.S. economic growth and development. Without ample investment in modern networks, consumers and the entire broadband ecosystem – from Internet Service Providers (ISPs) to edge providers – will suffer from reduced innovation and fewer cutting edge broadband services, as well as reduced jobs and economic growth in the nation's Internet economy."

-RICK BOUCHER, A FORMER DEMOCRATIC CONGRESSMAN WHO CHAIRED THE ENERGY AND COMMERCE SUBCOMMITTEE ON COMMUNICATIONS AND THE INTERNET AND NOW SERVES AS HONORARY CHAIRMAN OF THE IIA