



# **UTAH BROADBAND CENTER CONNECTING UTAH**



## **DAVIS COUNTY SCHOOL DISTRICT AND COMMUNITY LOCAL BROADBAND PLAN**





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## EXECUTIVE SUMMARY

The vision and purposes of the Broadband Equity, Access, and Deployment Program (BEAD <https://broadbandusa.ntia.doc.gov/funding-programs/broadband-equity-access-and-deployment-bead-program-0> ) are supported by the combined efforts of the Davis County Local Broadband Planning Committee (the committee). For many years, members of this committee have worked in isolation to accomplish the same outcomes identified in the BEAD Grant and Program. This grant proposal has offered members of the committee the opportunity to work together and to collaborate with a broader community across Utah. For example, the Digital Teaching and Learning plan in the Davis School District (DSD) that was sponsored by the Utah State Board of Education (USBE) is also a comprehensive program aimed at addressing limited broadband availability, unequal access to digital information, and fostering personalized learning experiences and social advancement. This executive summary outlines the key objectives, strategies, stakeholders, and expected outcomes of these combined initiatives and cooperative work to accomplish the objectives of the BEAD Grant and Program.

**Objectives:** The primary objective of the work of this committee is to ensure the opportunity for all citizens to master the skills and knowledge that will give them more access to opportunities in competitive employment and more fulfillment because of their increased ability to contribute to the community. To accomplish this, the Committee must ensure equitable access to information via high-speed broadband services for all learners of all ages in Davis County. By bridging the digital divide and providing tailored educational pathways and personalized learning experiences, the program aims to promote economic growth, educational opportunities, and social mobility, benefiting individuals and the community at large.

**Strategies:** To achieve the objectives, the initiative incorporates the following strategies:

1. **Broadband Accessibility:** According to the Utah Broadband Availability Map that can be found here: <https://broadband.ugrc.utah.gov/>, higher speed internet infrastructure (100Mbps download speed) has been developed and is available in some form across Davis County. According to DSD student surveys (DTLUtah.org), high-speed internet is not yet accessible to all students when they are at home. This proposal begins with ensuring reliable and high-speed internet connectivity for learners of all ages. This will provide digital access to global information and to the supporting local institutions like libraries or schools, 24/7.
2. **Access to a High-Speed Capable Device at Home:** The proposed initiative emphasizes personalized learning experiences tailored to individual preferences and needs. This means that information and instruction is ubiquitous and equitably available to all learners, via a device capable of high-speed connection. High-speed capable devices will be made available to families through schools, public libraries, and the Chamber of Commerce for small business.



3. **Access and Affordability Initiatives:** Recognizing the financial barriers to broadband access, the proposal would implement measures to promote affordable internet service options. Internet advisors will be hired to communicate with internet providers and then share this information about affordable plans with the public. All citizens would have a person to talk to about what their best and most affordable internet options are. The internet advisors will help to establish partnerships with internet service providers and facilitate discounted plans, subsidies, and cost-saving initiatives for low-income households and small businesses.
4. **Digital Literacy and Community Engagement:** The proposed program emphasizes the importance of digital literacy by providing resources and training programs to enhance digital skills among learners and their families. Internet advisors will organize and build online instruction resources accessible to underserved populations that will help learners of all ages have the skills necessary to access digital information.

Working together as a committee will encourage community engagement initiatives that foster collaboration among stakeholders, including educational institutions, businesses, civic organizations, and county authorities, to address specific needs and ensure collective success.

**Stakeholders:** DSD is committed to leading this cooperative committee of community stakeholders. The representative committee members on this project are:

- Student and parent representation from the Davis School District.
- Teacher and school administrator representation from the Davis School District.
- Representation from the DSD Information and Technology (IT) Department.
- Davis Technical College (DTC) – representing efforts to support adult digital literacy and higher education and upward employment mobility in Davis County.
- Canyon Heights Adult Learning Center in Davis County – representing needs to improve adult digital literacy in the less formally educated Davis County residents.
- Davis County Commission and their selected representation – to link efforts between the school system and community service and internet providers.
  - This effort will include the distribution of resources (i.e., hotspots, devices, and instruction) county-wide through the County Library Network.
- Pioneer Adult Rehabilitation Center (PARC) –to link efforts to the adult disability community across the county.
- Davis Chamber of Commerce - through the Davis Chamber of Commerce, the business community will be represented in addition to many civic organizations (mayors and city councils).
- Open Doors Utah – This organization supports families experiencing homelessness, food insecurity, and employment and financial instability.
- Davis School District Office of Equal Opportunity (OEO) and its Equity Committee. This group will help to represent previously underrepresented ethnic groups in the county.
- Davis County Parent and Teacher Association (PTA), representing families in the county concerned with accessibility and especially safe internet practices.



- Davis Education Foundation – representing low-income students and families with housing instability.
- Davis County Parent and Teacher Association or PTA representing students and their families across the county.
- In addition to these groups, DSD will include any other experts or organizations as suggested by the Governor's Office of Economic Opportunity or the Davis County Commission. For example, Vikram Ravi, federal program officer for the National Telecommunications and Information Administration has already reached out to provide valuable information and insight regarding work in other communities intended to bridge digital divides.

Together these stake holders will work to bridge digital divides that exist in Davis County by providing high-speed access to digital tools and information for all.

**Expected Outcomes:** The successful implementation of the initiative is anticipated to yield the following outcomes:

1. **Expanded Broadband Accessibility:** The proposed program aims to expand broadband coverage and reduce the number of unserved or underserved populations in Davis County.
2. **Enhanced Personalized Learning:** By promoting personalized learning experiences and competency-based education, the initiative seeks to empower learners and provide them with the tools and resources needed for individual success. Learners have access to unlimited digital information and resources twenty-four hours a day and seven days a week.
3. **Improved Economic Opportunities:** The program aims to stimulate economic growth by creating a level playing field for businesses (especially small business), attracting investments, and facilitating job creation in Davis County.
4. **Increased Digital Inclusion:** By ensuring equitable access to broadband and fostering digital literacy, the initiative seeks to bridge the digital divide and provide all individuals with equal opportunities to participate in the digital economy and competitive work force.
5. **Community Advancement:** Through community-wide collaboration and engagement, the initiative strives to uplift and educate all citizens, promoting social mobility, lifelong learning, and personal growth. It is also important to teach internet safety to vulnerable populations in the community.

**Conclusion:** The Broadband Equity, Access, and Personalized Learning Initiative combines the goals of the BEAD Grant and the objectives of the civic groups represented on this committee to create a comprehensive program in Davis County that ensures opportunities for connectivity. By addressing broadband disparities, promoting personalized learning experiences, fostering digital literacy, and engaging the community, the initiative aims to bridge the digital divide, support



economic growth, and enhance educational opportunities for all learners. The involvement of various stakeholders ensures a holistic approach to achieve personalized and equitable learning, benefiting individuals, families, and the entire Davis County community. If learning is a life-long endeavor, which it is, personalized learning experiences at the optimal speed of individually developed competency is the goal for ALL members of the community and all age groups. It is imperative that communities learn together, grow together and work collaboratively with limited public resources to realize the greatest return on the public's investment and to achieve high levels of social mobility, lifelong learning, and personal growth.



## VISION

As Helen Keller said, "Alone we can do so little: together we can do so much." Equitable high speed internet connection and digital fluency benefits ALL members of our community. Many different civic organizations and community service providers (like public schools) have a vested interest in helping stakeholders access high speed Internet connection on devices that can reliably process high-speed data transfers and while using digital skills that allow them to fluently navigate information and opportunities found on the World Wide Web. Each different civic organization and community service provider has resources available to them to accomplish different elements of high-speed digital connectivity in the community. However, none of these groups could independently accomplish their goals more effectively than by pooling their resources and working together in unity. For example, DSD will continue to provide Internet capable devices to all students in a 1:1 ratio, but DSD working cooperatively with other civic organizations could give all students and their families a faster Internet capable device with better and more ubiquitous connection. This device/connection could be used by other members of the family to support and connect all its members to opportunities available on the World Wide Web. If DSD were to work in collaboration with other community groups toward common digital goals, all demographic groups in the community would stand to benefit from the unified effort.

Working together increases efficiency in the expenditure of public funds and improves the outcomes that separate and individual groups could not accomplish if working on their own. DSD could not hope to purchase and adequately refresh student devices in a 1 student per 1 device ratio (1:1) with a device capable of processing high-speed internet and complex instructional software without additional support. This requires more data transfer and without the cooperation of other community groups working in harmony and guided by a 5-year Community Broadband Plan, more robust devices could not be afforded. Working together with the support of GOEO through this grant, this committee could provide:

- Affordable high-speed internet connection for all and especially underprivileged populations in Davis County.
- High-speed capable computing device(s) in every home.
- Support/help in finding affordable plans and devices that are available for every home.
- Digital skill development and digital fluency for all citizens.
- Internet safety and awareness for all groups but especially those elements of the community (children and the intellectually disabled) most susceptible to those seeking to do them harm on the internet.

To accomplish these objectives and others, we are definitely better when we are working together.





**KEY BARRIERS**

| <b>Affordable High-Speed Internet</b>   | <b>Inadequate Devices to Connect to High-Speed Internet in the Home</b>  | <b>Support to Access Affordable High-Speed Plans, Devices, and Digital Skills</b>  | <b>Education to Inform Effective Use of Digital Tools and Online Safety</b>   |
|---|--|--|---|
| <p>DSD survey data indicates that over 90% of students report adequate home access to the internet. This means that 10% of all students do not have adequate access and inadequate connection at home. This is inequitable. Ensuring affordable connection and access for all families by addressing availability and affordability are the proper first steps to ubiquitous connection to high-speed connection for all learners. This survey data can be found at <a href="http://DTLUtah.org">DTLUtah.org</a> and will be discussed further in this application.</p> | <p>After affordable high-speed connection is available for all, families need access to a device capable of high-speed connection. It is not helpful to have infrastructure available and affordable internet plans present if devices capable of high-speed connection are not used. For example, DSD provides an internet capable device to all its students and their families for schoolwork and home learning, but not all these devices are capable of high-speed internet connection. Some students have devices capable of high-speed connection and some do not. The Committee in partnership with GO EO could see this situation remedied and all Davis students provided a high-speed capable device.</p> | <p>DSD has 92 schools that span all neighborhoods in the county. Each of these schools has high-speed connection and infrastructure is present. DSD surveys say high-speed/adequate connection is available in over 98% of homes. Furthermore, over 90% of students report having adequate Internet connection at home. This means that community members without adequate home connection either can't afford high-speed connection, or they do not know where or how to find it. Also, it is unclear which group or at what place a person could find the support and information they need to access either an affordable high-speed plan or to obtain a high-speed capable device.</p> | <p>In addition to having support and guidance that gives access to plans and devices, citizens can benefit from instruction that helps them navigate the many resources available on the internet that will help them to engage in the pursuit of information providing upward mobility and to do this safely. There is a difference or divide in the experience and ability that some have in interacting with information via the internet. Some have better internet skills and fluency than others do. This difference results from prior lack of experience with digital devices or digital instruction and this could have been caused by economic, societal, or language barriers.</p> |





**COVERED POPULATIONS**

Davis County has population of approx. 367,000. DSD serves approx. 80,000 children ages 3-22. When parents are included in those served, likely more than 1/2 of the county or 200,000 people are served directly by the school district. This includes representation from ALL demographic groups of citizens in every social and financial circumstance present within Davis County. English Language Learners and new Americans can also be identified through schools.

The U.S. Census Bureau's annual survey says 12% of the general population identified as having a disability. 12% is also the guideline used for Special Ed. ratings in schools (IDEA). Of that 12%, the U.S. Dept. of Labor's Office of Disability Employment Policy, uses 3% as the number of those who have significant disabilities and barriers to employment and social opportunities. This estimates Davis to have 44,000 people w/disabilities and 11,000 with significant disabilities. PARC serves this population with focus on disabled veterans.

Families most at-risk of digital, social, and employment disconnection are those families with unemployed and underemployed parents and at or below poverty level. Most underemployment stems from the lack of high school (HS) diploma. Reasons for no HS diploma could result from: immigration and non-English speaking, learning disability, unemployed parents, housing instability, incarceration, and lack of resources and support available in earlier school aged years. Canyon Heights Adult Ed. will represent this population.

Families and adults seeking to improve their economic circumstance by obtaining professional certification likely attend the Davis Technical College (DTC). To do so successfully, these individuals require access to high-speed internet and digital tools both at school and at home. Lack of access to digital tools because of finance or skill is a barrier to upward mobility for this group of people and limits their ability to participate at the DTC.

In the county, there are also individuals and families with high school graduation and professional certifications that remain financially limited and without access to high-speed computing largely on account of financial instability or circumstance. Also aging community members can be disconnected from information. This limitation can exist for many other reasons, but it does exist. The Davis County Library System is the network that will be used to facilitate this groups needs.



**GOALS**

**Goal 1:** People experiencing situations that historically isolate them from the community and require additional support and coaching to access information about community resources already available to them, will be provided with a professional dedicated to reaching out to them and ensuring that their needs are met. The professional will also provide advice to help them access affordable high-speed internet and accessible devices. To achieve this, 4 full-time internet advisors will be hired, utilizing grant funds. These advisors will work out of DSD with adult education, PARC supporting people with disabilities, the county library system also supporting non-profits that work with subpopulations experiencing instability of many kinds, and the Chamber of Commerce working with DTC. Advisors will have one year to help identify continued funding for their positions. The committee will work towards adding the necessary resources to accomplish this goal.

**Goal 2:** All families in Davis County will have at least one high-speed capable device in their home and connection to high-speed digital opportunities. High speed capable devices will be available to each K-12 student/family. High speed capable devices would also be available to be checked out in adult education, DTC, and through the County Library System. In addition to devices, hotspots will be made available through this grant for check out at all the previously mentioned locations. Furthermore, refurbished devices would also be made available through non-profits supporting community members with connectivity and accessibility challenges.

**Goal 3:** The digital divide refers to the documented disparity in access to digital information and digital fluency among different demographic groups within the community. To address this issue, at-risk populations will receive training and instruction to enhance their digital fluency through established support organizations and networks. Internet advisors will oversee the collection and organization of instructional resources, which can be linked on websites utilized by organizations with committee members. The objective is to ensure that connectivity and usage survey questions on the DSD's annual tech survey demonstrate improved effectiveness and usage.

**Goal 4:** Internet safety instruction will be provided to the disability community via PARC, children in the school system, and all other individuals or groups that are susceptible to fraudulent, dangerous, and misleading behavior on the internet. The internet advisors will organize these training resources.



## KEY STRATEGIES

**Goal 1:** Using these funds, support staff will be made available to the community for the purpose of outreach and help in accessing programs or opportunities by which people can obtain discounted internet plans and digital devices that will allow them to be connected. Participating organizations will have three months to hire these positions and have them put into place. The newly hired internet advisors will then have nine months to work with their supervising organizations to acquire funding for the continuation of their positions and to accomplish the objectives described in this proposal.

**Goal 2:** To maximize public resources, to ensure a standard of equitable access for all, and to increase the return on investment of public funds, it is proposed that BEAD grant funding is used with DSD funding, other grant funding and technology planning for USBE, existing community structure in DTC, Adult Education, PARC, and Davis County to ensure that all homes in all social demographic groupings have access to high speed internet connection or hotspots and are equipped with a digital device that is capable of high-speed connection. It will take several months but less than a year for devices and hotspots to be purchased, devices formatted, inventoried, and distributed. However, organizations (libraries and schools) already have systems for check-out and management in place.

**Goal 3:** Digital fluency will increase in all demographic groups as courses teaching online skills will be made available through the partner network in Davis County. Course organization and accumulation will be led by the hired internet advisors. Courses and resources will be digital and can be housed in Canvas or YouTube. Resources will also be created and translated in different languages to support English Language Learners. DSD's Office of Equity and Opportunity will help to translate these resources and make them accessible to all populations.

**Goal 4:** In addition to courses helping to grow digital fluency, additional courses will be offered to the more at-risk elements of the population susceptible to fraud and exploitation via the Internet. Specifically, these populations are those less familiar with the Internet, those with intellectual disabilities, and inexperienced children. These resources will be digital and built on a website, YouTube, or Canvas and will be available for many years into the future.



# 1 OVERVIEW OF THE LOCAL BROADBAND PLAN

## 1.1 VISION

In the Davis School District (DSD), it is our mission to see that each learner (learners come in all ages) and family has a Personalized and Competency Based Learning (PCBL) experience. Other community institutions (specifically those mentioned in the Executive Summary of this document) share this same mission for learners outside the K-12 system and all committee stake holders work together for the benefit of the community. PCBL is best described by the Utah State Board of Education (USBE) as the means ensuring that each learner will receive the skills and knowledge they need to be successful, when they need it, and at the optimal level of support for their success (<https://schools.utah.gov/curr/pcbl>). To support school districts in this mission, USBE has allocated funding through a variety of grants and funding sources like the Digital Teaching and Learning Grant ([dtl.utah.org](http://dtl.utah.org)) and the Personalized and Competency Based Education Grant (<https://schools.utah.gov/curr/pcbl>). As our community utilizes these grant resources, works together, and makes progress towards accomplishing this goal of equitable access to information and social opportunity for all, it is believed that more learners of all ages from all demographic subpopulations will experience greater success in the work force, make significant contributions as citizens in the community, and achieve the self-actualization of their full potential.

As part of DSD's participation in the previously mentioned grant programs, DSD has researched and surveyed student and family access to high-speed internet devices and their usage for learning and instruction. This data is also useful to other civic minded groups in the community and is essential to this committee dedicated to the Connecting Utah Community Local Broadband Program. As was stated previously, stake holders on this committee and the Connecting Utah Broadband Community share similar goals and all are looking to ensure equitable access and connectivity for all citizens. Davis County school data can be found at [DTLUtah.org](http://DTLUtah.org) and under Davis as the Local Education Authority (LEA). In addition, DSD has created a digital plan for the Davis County school community that extend 5 years into the future. This plan can also be accessed at the same website and under the "View the LEA Plan" link.

A more descriptive definition of the personalized learning that can only be achieved with ubiquitous high-speed connection to digital information is as follows:

- Learners of all ages are at the center of their own instructional experience.
- Learner opportunities for engagement with digital information is the purpose, and learning paths are tailored to meet the unique strengths, interests, needs and goals of each learner. With ubiquitous highspeed connection, learning via digital means can occur anytime, at any pace of engagement, and anywhere. Although learning can occur



anywhere, this proposal specifically describes access supported via an institution of learning (i.e., school, library, community center) at either the institution or at home.

- Learners progress from subject to subject or standard to standard at a pace that is optimal to them and independent of groups or class pacing.
- Effective use of highspeed 21<sup>st</sup> Century digital tools and connection are essential to providing all learners a personalized learning experience with information, training, curriculum, content, and other resources, twenty-four hours a day and seven days a week.

Additional description and resources regarding personalized learning for DSD can be found here: <https://personalizedlearning.davis.k12.ut.us> or from USBE here: <https://schools.utah.gov/curr/pcb1>

Being the center of one's own learning means:

- The learner is actively involved in defining their learning path.
- Learners are empowered to develop a growth mindset, cultivate habits of mind, develop digital skills, and engage in deep reflective practice.
- Learners choose their own learning resources, co-design their learning experiences, and have flexibility in how they show mastery of their learning.
- Learners have ubiquitous access to highspeed internet/information with capable digital devices that supply the learner with multiple entry points to limitless information and opportunities for personal development.

Effective use of high speed 21st Century digital tools are essential to providing all learners a personalized learning experience and accessibility to curriculum, content, and resources, 24/7. The full expression of this vision is dependent on equitable access to high-speed internet for learners of all ages.

## 1.2 GOALS AND OBJECTIVES

Goal 1: People experiencing conditions or situations that historically isolate them from the community, require support to access information about community resources already available to them and they will be provided a professional consultant that is dedicated to reaching out to them and seeing that their needs are met and that they are given advice that will help them find affordable high-speed internet and accessible devices.

Goal 2: All families in Davis County will have at least one high-speed capable device in their home and connection to high-speed digital information and opportunities.

Goal 3: The digital divide is a well-documented difference that exists in access to digital information and digital fluency between demographic groups in the community. Through instruction via consultants at the previously mentioned and pre-existing support organizations



and networks, at-risk populations will receive the training and instruction they need to increase their digital fluency.

Goal 4: Internet safety instruction will be provided to the disability community, children in the school system, and all other individuals or groups that are susceptible to fraudulent, dangerous, and misleading behavior on the internet.

The Davis County School District recognizes the importance of ensuring that all community members have access to information through high-speed internet access and high levels of digital fluency. High speed Internet access and digital fluency are essential to competing successfully in today's job market. High-speed internet connection and fluency is no longer a luxury, but it is a necessity for equitable inclusion in 21<sup>st</sup> century civilization, culture, and business/industry. These modern resources and skills are essential to having equitable access to the pursuit of health and happiness written about by Thomas Jefferson in 1776.

## **2 BACKGROUND**

### **2.1 SCOPE OF BROADBAND PLAN**

Over 72,000 students from diverse backgrounds with unique learning needs rely on the Davis School District and the surrounding community to prepare them to be life, college and/or career ready when they graduate from the K-12 system. Those skills and attributes that our school community prioritizes most are found in the standards and expectations established for graduation. All efforts within the school system build towards the graduation experience. To help graduates thrive in a rapidly changing world, Davis School District is committed to helping students build the skills today that they will need to become leaders tomorrow.

Davis County is home to Hill Air Force Base, and this (along with other innovative businesses) affords community members access to many technology-based careers, resources, and the enriching partnerships that are associated with them. Davis County is a suburban and residential neighbor to Salt Lake City. Parents here are generally better educated than the national or state average, however, localized communities exist that consistently measure very highly on state agency ratings of generational poverty. The entire spectrum of talents, abilities, and challenges present in any global society can be found within Davis County. Davis School District has actively worked to set up a 1:1 and technology rich school and instructional environment for more than 15 years. The goal for the relationship between instruction and technology has always been to provide each student/family the instruction and support most needed to help them to be successful in a modern world and economy. Over time, there have been many lessons about the appropriateness of student devices and how they are used at home with their family, how to care for these devices, digital security, network filtration, network infrastructure, and what is the most useful and research proven software. DSD's experiences have also helped to develop strong partnerships and relationships with Microsoft, Dell, and Apple. In both the 2016 and 2020 Future Ready Assessment Surveys (FRS), DSD rated itself





above the national average in overall readiness to increase student and community access to digital tools. Based on this committee's analysis, and DTL surveys, DSD believes that the community is ahead of state and national averages, and this is motivational to the organization. DSD's prioritization as guided by the Future Ready School Community Gears has historically and deliberately been to:

1. Stay within the budget and use resources wisely.
2. Student safety.
3. Provide robust infrastructure.
4. Ensure a technically educated level of leadership and support.
5. Digital curriculum and resources.
6. Instructing for digital fluency through a personalized learning format.
7. Student and family choices within time and space regarding instructional pathways.
8. Form community partnerships to maximize efforts and success.

All gears/drivers are areas of focus for DSD; however, these principles are equally emphasized by the organizations represented on this committee. Information about Future Ready Schools Framework can be found here: <https://futureready.org/future-ready-frameworks/>

USBE's DTL Grant has had a significant influence on DSD and its efforts to increase digital fluency in the school community. Essential information from the Future Ready Schools Assessment/Survey is present in DSD's DTL 5 year grant plan found at [www.dtlutah.org](http://www.dtlutah.org), but DSD's full Future Ready Assessment from 2020 can be found here: [https://livedsdmail-my.sharepoint.com/:b:/g/personal/rhansen\\_dsdmail\\_net/EUqOBoZileNEmOImge4KFclBpUp1WoQEir74SoBbg6wgTQ?e=er6vGI](https://livedsdmail-my.sharepoint.com/:b:/g/personal/rhansen_dsdmail_net/EUqOBoZileNEmOImge4KFclBpUp1WoQEir74SoBbg6wgTQ?e=er6vGI)





Map of Davis County Utah:



## 2.2 WHAT IS BROADBAND?

Broadband is a dedicated connection to high-speed internet. The threshold for what speed is defined as high-speed internet changes according to the standards presented by the Federal Communication Commission (FCC). Currently, broadband is defined as any speeds above 25 megabits per second (Mbps) download speed and 3 Mbps upload speed (25/3 Mbps).

The Broadband Equity, Access, and Deployment (BEAD) Program defines households with less than 25/3 Mbps as unserved locations and those with less than 100/20 Mbps as underserved locations. Community anchor institutions with less than 1/1 gigabits per second (Gbps) speeds are also considered underserved, as defined by Section 60102 of the Infrastructure Investment and Jobs Act, which also sets forth the BEAD program.

### 2.2.1 Broadband Network Distribution

The infrastructure that data travels along is called a network. Similar to other public utilities such as roads or water pipes, the network infrastructure is carefully planned and then built according to how many people need to be served in both the present and the future. Within the network, data is carried across fiber, wires, or radio signals in the air (wireless). These various means of carrying data have different capacities and speeds. The part of the network used to transport data between cities or across cities is known as Middle Mile infrastructure. The Middle Mile network connects to hubs built throughout a city. The part of the network that connects from a



hub to the end user is called Final Mile or Last Mile infrastructure. End users can be businesses, residential homes, or individuals connecting to cell service.

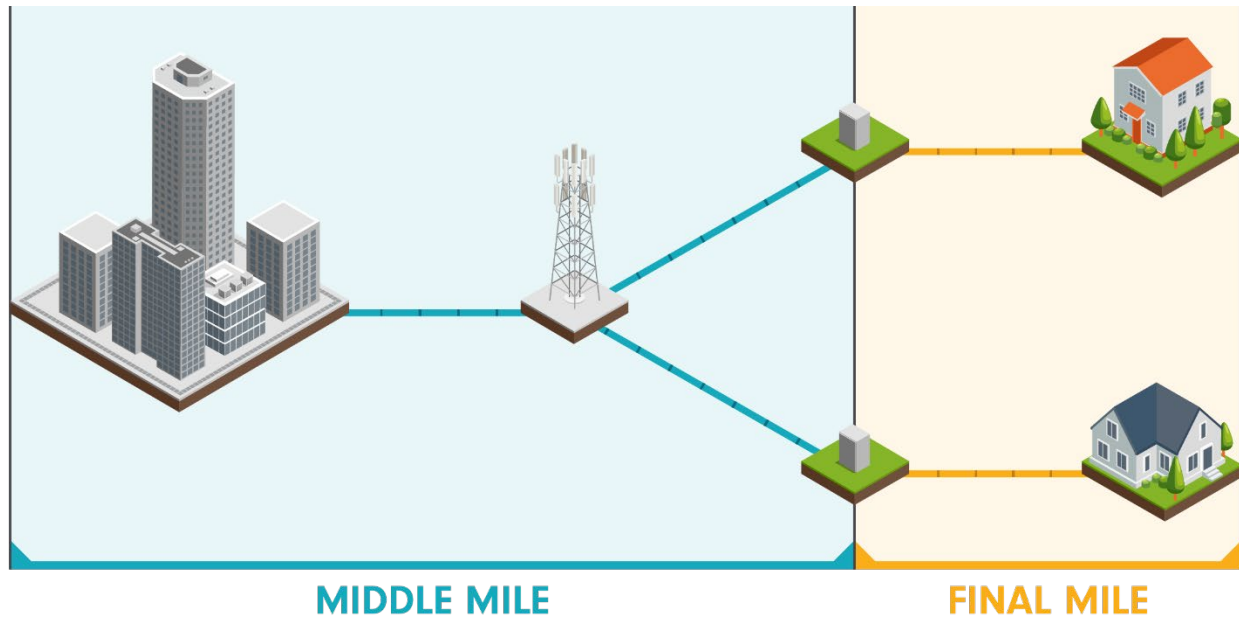


Figure 1. The blue lines connecting the city to the hubs represent Middle Mile infrastructure. The orange lines connecting the hubs to the residential houses represent Final Mile infrastructure.

## 2.2.2 Types of Broadband

There are various technologies that high-speed broadband internet can be served through, such as fiber optic, digital subscriber line (DSL), cable modem (Coax), and wireless technologies. Each form of technology has pros and cons.

### 2.2.2.1 Fiber Optic

Fiber optic technology sends digital signals carrying data as light through cables made of glass fibers. It provides the fastest, most reliable networks. Because fiber is a newer technology, many areas do not have fiber networks developed, so this type of network can require building new infrastructure. Fiber optic cables can be placed on existing power poles or can be placed inside conduit buried in the ground. If the network is designed and installed correctly, speeds can be up to 1 Gbps. **Fiber Optic is the gold standard for high-speed broadband internet as it provides the fastest speeds and can support emerging digital technologies into the future.**

### 2.2.2.2 DSL

DSL uses existing copper telephone cables to transmit data. Speeds vary widely based on local providers, as they can be less than 1 Mbps or up to 100 Mbps. Households with this connection are typically considered “served” with high-speed broadband internet. With maximum DSL speeds at 100 Mbps, DSL does not meet the ever-growing needs of future technologies, so it is not a preferred option when building modern broadband infrastructure.



### **2.2.2.3 Cable Modem (Coax)**

Cable Modem delivers similar speeds as DSL, but it uses the coaxial cables used for cable televisions to transmit broadband data. Like DSL, it is not a preferred option when building new broadband infrastructure, but it can be used where existing infrastructure is in place.

### **2.2.2.4 Wireless**

Wireless broadband includes several technologies, including satellite broadband, Wireless Local Area Networks (WLANs), Wi-Fi, and cellular 4G, 5G, and LTE. These technologies use radio spectrum to transmit broadband data. Please note that BEAD funding can only be used to build wireless broadband technology when it is connected to a terrestrial Middle Mile network and cannot be used on satellite broadband technologies.

**Satellite Broadband** – Satellite broadband involves satellites that orbit the earth transmitting long range signals. It is primarily a Middle Mile wireless solution. It is often used in rural locations where there are no other terrestrial networks available. Satellite broadband has a higher latency (also known as lag), making video calls extremely difficult on this type of broadband. When using satellite connection, speeds vary based on location, and weather can cause outages.

**WLANs** – WLANs are the Last Mile networks used at homes or businesses to distribute internet to phones, computers, and other devices through radio signals. Wi-Fi and hotspots are both examples of a WLAN. Connection speeds are dependent on the service provided at the access point.

**Cellular 4G, 5G, and LTE** – Cellular 4G, 5G, and LTE involve cell towers transmitting radio signals of high-speed broadband internet data, which are then picked up through the modems in cellular phones, mobile routers, cellular antennas, or various signal boosters. The cell towers are often connected to a Middle Mile fiber network and provide a Final Mile connection for anyone near the signal. The speeds can often reach speeds of 600 Mbps if specialized equipment is used to boost the signal. This is usually the fastest high-speed broadband internet available for users that do not have access to fiber optic technology. Please note that BEAD funding can be used to build infrastructure for cell towers as long as they are connected to a terrestrial Middle Mile network.

## **2.2.3 Benefits of Broadband**

High-speed broadband internet has become an integral part of society. It is critical for work, education, telehealth, and the completion of everyday tasks.

High-speed broadband internet has transformed the way the world does business. There are few businesses that can operate today without the internet, and while some can get by with a low-speed connection, high-speed internet is becoming more and more necessary. A [Pew Research Center survey](#) conducted in April 2021 found that 90% of adults surveyed considered internet “essential or important for them personally during the [COVID-19] pandemic.” High-speed broadband internet has allowed for remote work possibilities, which opens the possibility



of highly skilled workers relocating to smaller communities and benefiting the economies of those communities. Readily available access to the internet has allowed businesses to widen their customer base to a global market. Davis County's primary business is Hill Air Force Base, and high-speed broadband internet helps to ensure that the community is educated and informed enough to properly support one of the country's leading and more technical military installations. In today's world, broadband access and digital fluency can grow Davis's economic outlook.

While high-speed broadband internet is benefitting many regions across the globe, it is important to ensure that all learners of Davis County do not get left behind. There is a growing digital divide where those that do not have access to the internet do not learn the digital skills necessary for high paying jobs, pushing them further into poverty. Conversely, increasing high-speed broadband internet access increases economic opportunities for low-income families.

Developing digital skills at a young age has become increasingly important, as high-speed broadband internet is an integral tool in modern education and preparation for the future workforce. Access to online classes, homework submissions, and research opportunities can be lost if a reliable high-speed broadband internet connection is not secured. Many districts are also utilizing online learning on snow days and other times when it isn't possible for students to gather at the school. Online classes can be made available for specialized subjects like foreign language or technological courses that do not have a local teacher available. Children without access to a broadband internet connection may be left out in these scenarios. According to survey results found at [www.dtlutah.org](http://www.dtlutah.org), All students in Davis County public schools use Internet at school and at home to learn essential information, to complete their homework and to turn it in. Highspeed connection is essential for interacting with their teachers. Highspeed Internet connection is incredibly important for all students and especially those from historically challenged demographics to be most successful in today's schools and to compete with their peers.

Other online resources are also becoming more important for communities. For example, telehealth is a tool that allows users to connect to doctors and medical providers online. Some of the benefits of telehealth include decreased healthcare costs, access to specialists not available locally, travel time reductions, and reducing the risk of exposing others to viral infections. High-speed broadband internet is necessary when completing a video call with a health professional.

High-speed broadband internet has become increasingly essential for daily tasks. High-speed internet is used when paying bills, accessing banks and retirement accounts, and applying and interviewing for jobs. High-speed broadband internet is also vital when enjoying modern-day entertainment, such as video streaming, watching live sports, or playing live video games. It is used when communicating with family and friends, especially when making a video call. Even using a smartphone with 4G or 5G service involves broadband technology.



## 3 CURRENT STATE OF BROADBAND AND DIGITAL ACCESS

### 3.1 METHODS TO DETERMINE THE CURRENT STATE OF BROADBAND

The Davis County Local Broadband Planning Committee (the committee) and the DTL Grant support network took several steps to determine the current state of high-speed broadband internet in Davis County. The DTL Grant team that acquired the surveys used by this committee included the following individuals and/or organizations:

- Utah Board of Education and the Digital Teaching and Learning Grant support team.
- Metiri Consulting and Research Group
- Davis School District Research and Assessment Department
- Davis School District Digital Learning and Technology Departments
- Governor’s Office of Economic Opportunity (GOEO) – Utah Residential Broadband Map

The activities performed included:

- **Public Outreach:** All 72,000 students in DSD are provided with an internet capable device for school and home use and a Wi-Fi hotspot if their family does not have internet connection at home. Approximately 3,000 teachers, 200 school counselors, and over 300 school administrators participate in this outreach program to ensure that each family has a device and connection. In addition to Wi-Fi hotspots and student devices, families can be provided with a refurbished home computer (refurbished computers come from school computer labs that have aged out of use) with an image that allows for internet connection and the Microsoft suite. When families with insufficient Internet connection are identified because students and families cannot successfully communicate with the school or the student with their teacher, a referral is made by the school administration to the Computers for Kids Program and the student is provided with a refurbished computer or an internet hotspot depending on the family’s need. The Computers for Kids program is sponsored by the Davis Education Foundation and the school computers are cleaned and refurbished by people with disabilities employed by PARC. Approximately 150-200 computers are delivered through this program each year to families in Davis County at no charge to the family.

More information about the current Computers for Kids program can be found here:

<https://www.parc-ut.org/computer-4-kids> and also here (this is the application):

<https://forms.office.com/Pages/ResponsePage.aspx?id=dPKcPX5U9UqN3gGmNuC2Bx>





[psl85ITkpPmRlZrsuuUTtUN04yTFRQRDIHRERHTVpEQUNZSVY3VDg5SCQIQCN0PWcu](https://www.davis.k12.ut.us/parents-family/support-for-remote-learning)

Information about student devices available through the Davis School District can be found here: <https://www.davis.k12.ut.us/parents-family/support-for-remote-learning>

Information about hotspots and affordable internet in Davis County provided by DSD in outreach efforts can be found here: <https://www.davis.k12.ut.us/parents-family/support-for-remote-learning/home-internet-solutions>

In addition to outreach from the public school system, the adult education providers (DTC and Canyon Heights Adult Ed) and the County Library system also provide either onsite locations for internet connection (i.e., computer labs or available Wi-Fi) or devices for checkout based upon the needs of their clientele.

The Davis Chamber of Commerce has a broad network of large and small business in Davis County, and they are aware small businesses are challenged with obtaining competitive Internet connection, but they need additional personnel to reach out and then support small business internet needs by providing them with good information and connecting them to helpful internet providers.

**Public Surveys:** Annual digital access and fluency surveys have been created by the Metiri Group, supported by USBE, and distributed to students in grades 5-12 in the Davis School District by the Digital Learning Department. Results of these surveys dating back to 2021 and for each public school community in Davis County can be found here: [www.DTLUtah.org](http://www.DTLUtah.org) under Davis as the LEA.

- **Internet Speed Tests:** all 92 DSD schools conduct regular internet speed tests and all schools in all geographic locations of Davis County have infrastructure that supports a minimum of 10G bandwidth. School Technology Specialists and Device Technicians (over 100 in total) regularly check internet upload and download speeds at school locations. All DSD schools have upload and download speeds that qualify as high-speed internet as previously defined in this proposal.

Furthermore, the Governor's Office of Economic Opportunity – Utah Residential Broadband Map indicates good internet speed across Davis County. This is further discussed later in the proposal, but GOEO's connectivity matches the experience of the Davis School District.

- **Stakeholder Meetings:** DSD meets many times through the year with the Digital Teaching and Learning advisement committee that makes recommendations for the DTL Grant (this is a USBE grant) plans and expenditures. Annual reports are made to USBE providing documentation of the use of DTL Funds. Furthermore, after the announcement of BEAD Grant funds, the Davis County Local Broadband Planning Committee began to communicate and prepare this application plan. This committee will continue to meet and address community accessibility needs regardless of the awarding of BEAD funds.



- **Meeting With Internet Service Providers:** Highspeed connection to all 92 DSD schools is provided by the Utah Education Telehealth Network (UETN) and 10G bandwidth is available at all DSD schools and locations. Regular meetings occur with UETN for this purpose.

DSD provides some essential staff and School Board Members with home high-speed internet service, and this is imperative for the successful completion of essential work that occurs during nonbusiness hours. Service is provided to these homes via partnerships with Utopia, Comcast, and CenturyLink. Regular meetings occur with these providers for this purpose.

Meetings with T-Mobile to acquire hotspots for students that do not have adequate home internet connection also take place as needed.

- **Existing Assets Assessment:** In DSD, inventory meetings are preplanned and scheduled throughout the year. 54 School Technology Specialists (STS) that service the 92 DSD schools are responsible for keeping the district wide inventory up to date. The STSs work with their principals each spring to assess the school inventory and to make the appropriate purchases for the coming year. Approximately  $\frac{1}{4}$  of all DSD devices are refreshed annually. 150-200 of these devices are refurbished annually and distributed to families experiencing financial and connectivity challenges that are requesting donated home computers through the Computers for Kids Program.

Adult Ed, DTC, and the library system run on similar device refresh schedules. Adult Ed and PARC families can also access the Computer for Kids program through DSD.

The Davis County Local Broadband Planning Committee will meet regularly to address future broadband needs in Davis County.

- **Disparity Analysis:** Based on surveyed results, discrepancy in home connectivity to high-speed internet does exist and this should be addressed to ensure equitable access to opportunity for all demographic groups in the community. This will be further discussed in following sections.
- **Research:** Ongoing research is conducted as part of the DTL Grant in cooperation with USBE to see that DTL and USBE goals are met. DTL Grant and USBE Goals mirror the objectives of the BEAD Program and the purposes of the Local Broadband Equity Program.
- **Geographic Information System (GIS) Mapping:** All schools in all geographic extremes within the county have 10G internet. Infrastructure exists in all areas of the county. Affordability and access are the questions for Davis County. This will be further demonstrated in sections that follow.





### 3.2 EXISTING RESOURCES

Existing programs include all the programs and activities that Davis County currently performs or has performed in the past.

**Table 1. Current Broadband-Related Activities**

| ACTIVITY NAME                          | DESCRIPTION  | INTENDED OUTCOME(S)  |
|--|--|--|
| DSD 5 Year Technology Plan             | <p>This plan is created in partnership with school employees, administrators and community members and guides DSD’s school tech purchases and efforts to ensure all students and their families are digitally connected. This plan is not generally available to the public and is used internally to ensure targeted purchases and internal accountability. This plan is also made-up of School Improvement plans created annually by the 92 different schools and these plans are then reviewed by the school board and approved and then submitted to USBE for further review and approval.</p> | <p>Ensure that all DSD Tech purchases are made wisely, efficiently, and ensure that the devices and training can be refreshed as needed and programs and successful practice retained. Trust Land funds can also be available for these school plans after they have been properly approved. Individual school plans can be found here:<br/> <a href="https://www.schools.utah.gov/schoollandtrust">https://www.schools.utah.gov/schoollandtrust</a></p> |
| DSD DTL Grant Plan, Goals, and Program | <p>This plan and program use the 5-year technology plan with supplemental USBE grant funds that increase opportunities for exploration and implementation. These activities are research based and accounted for each year. This plan can be accessed at <a href="http://www.DTLutah.org">www.DTLutah.org</a> under Davis as the LEA and then under “View the LEA Plan.”</p>   | <p>This program is designed to identify best digital learning practice, give schools and communities license to explore new products and techniques, and to increase digital fluency and the development of technical skills for all community members, especially students.</p>   |



Community and organizational networks that already exist with these listed partners: All organizations and agencies share the goal of ubiquitous high-speed connectivity and access to opportunity in the community.

- Davis School District
- Davis Technical College (DTC)
- Canyon Heights Adult Learning Center
- Davis County Libraries and Commission
- Pioneer Adult Rehabilitation Center (PARC)
- Davis Chamber of Commerce
- Open Doors Utah
- DSD Office of Equity
- Davis Education Foundation

Many different civic organizations and community service providers (like public schools) have a vested interest in helping stakeholders access high speed Internet connection on devices that can reliably process high-speed data transfers while using digital skills that allow them to fluently navigate information and opportunities found on the World Wide Web. Each different civic organization and community service provider has resources available to them to accomplish different elements of high-speed digital connectivity in the community. However, none of these groups could independently accomplish their goals more effectively than by pooling their resources and working together in unity. Working together increases efficiency in the expenditure of public funds and improves the outcomes that individual groups could not hope to accomplish if working on their own.

DSD currently works collaboratively with the Utah State School Board (USBE) and a state-wide public-school community through the Digital Teaching and Learning Grant program to overcome a digital divide that occurs along economic and ethnic demographic demarcations among Utah students and families. To participate in this grant funded program, DSD was required to collaborate with Davis County school stakeholders representative of the school community (parents of different demographic subpopulations, teachers, school administrators, the technology department, etc.) by forming a committee and cooperatively writing a 5-year technology plan that was approved by USBE in 2020-21. A primary intention of this plan was to increase student opportunities through digital fluency and by using digital devices effectively. This plan can be accessed at [www.DTLutah.org](http://www.DTLutah.org) under Davis as the LEA and then under "View the LEA Plan."

Each of these hired professionals and the hiring organizations would have one BEAD funded year to gather as much information as possible about the connectedness of the populations they serve and to either create ongoing funds for this position or move these responsibilities to other employees in positions with ongoing funding. The Metiri created surveys used by DSD for the DTL Grant would be the measure of this program's success. The number of self-reported students would be "0" after successful implementation of this program.



**Table 2. Current and Planned Full-Time and Part-Time Employees**

| CURRENT / PLANNED | FULL TIME / PART TIME | POSITION   | DESCRIPTION OF ROLE  |
|-------------------|-----------------------|--|--|
| Current           | No                    | NA   | Currently, a full or part time position in Davis County supporting/counseling individuals in need of internet access does not exist. Many different groups support their clientele, but this occurs in silos and a community wide effort has not yet taken place.  |
| Current           | Yes                   | Teachers, School Administrators, School Technology Specialists (STS), IT Department and Device Tech's, | The first professional that helps a student to be connected at school and at home is the classroom teacher. The teacher ensures that each student has a device and monitors connectivity to their instruction. This connection between the teacher and student is further supported by a School Technology Specialist (STS). The STS ensures that the device has been assigned appropriately, that it has the correct licenses, and that it reliably works as designed. This specialist also coaches the teacher to organize and deliver good instruction through effective use of digital tools. An IT department of near 100 employees also helps devices to be available to students, to ensure that they work, and to see that the software functions as designed on each device for each student to help the student access information and their schoolwork. School administrators ensure that all students have equitable access to devices and their teacher via digital tools. Also, a purchasing and accounting department ensure that purchases are made appropriately and that all departments remain on budget. In DSD, literally, thousands of employees work to these organizational goals. DTC, adult ed, the library system, Open Doors, and PARC have similar organizational structure, but likely not to the extent and expanse demonstrated by the school district. They have similar structure, but at a smaller scale. |



|         |    |                             |  |
|---------|----|-----------------------------|--|
| Planned | FT | Internet Access Consultants | <p>It is proposed that 4 full-time employees be hired on 1-year contracts as public consultants to work with all community broadband connectivity entities to ensure that all demographic community groups have equal access to high-speed internet. One consultant would be hired to serve DSD and adult education. Each of these groups are employed by the Davis School Board and are from a single employing entity. One consultant would be hired to serve DTC and the Chamber of Commerce. These two organizations share an office in the Business Resource Center at the DTC and the employee could conveniently serve both organizations with similar missions via an MOU. One consultant would be hired by the Davis County library system and would be accessible to Open Doors and their clientele. One consultant would be hired by PARC and work to ensure connectivity for the adult population in Davis County with disabilities. This is a significantly underserved population in our community regarding internet accessibility.</p> <p>These positions would measure their effectiveness by the Metiri created USBE approved survey. It is anticipated that student's representative of the larger community would self-report adequate internet speeds in their annual survey. These employees would draw upon other grant funded resources (i.e., hotspots, high speed capable devices, partnerships and affordable internet plans subsidized with federal money, and Computers for Kids refurbished computers available in schools and libraries to ensure 100% highspeed accessibility and connectivity in the community.</p> |
|---------|----|-----------------------------|--|



**Table 3. Broadband Funding**

| SOURCE                             | PURPOSE   | TOTAL               | EXPENDED    | AVAILABLE  |
|------------------------------------|---|---------------------|-------------|--|
| Emergency Connectivity Funds (ECF) | DSD Previously received ECF Funds from the FCC to ensure that all students had an internet connectable device for school and home use and a hotspot with low to average speed for those students without connectivity at home during and immediately after COVID. DSD will absorb the cost of the device refresh by allocating more general funds to the purchase of digital devices for students, although without the help of BEAD funding, these devices will not be capable of high-speed computing. Also, the purchasing of hotspots will be the future responsibility of the limited and depleting DTL Grant funding. | \$6,000,000         | \$6,000,000 | 0  |
| DSD - Annual Technology Budget     | The DSD annual student device refresh budget has been \$6,000,000 annually until 2021. Since 2021, this budget has increased to \$12-13,000,000 with the addition of CARES and COVID funding. In 2024, this budget is scheduled to return to pre-pandemic levels of \$6,000,000. This will cause DSD's refresh purchase to longer purchase student devices with more processing power and memory making them internet capable instead of high-speed compatible. Students in a higher-speed digital world will receive even slower and inadequate devices.   | \$6,000,000         | 0           | \$6,000,000<br>This money is available to be matched by BEAD Funding |
| DSD Refurbished Computer Budget    | Refreshed computers are cleaned and reimaged through contributions paid by the Davis Education Foundation. To date, refurbished computers have been donated primarily to families of students in the Davis School District. These students have used licenses that are already purchased for them and the additional expense is minimal. This will not be the case when devices are distributed to families not connected to the Davis School District and the cost will go up.   | \$1,000<br>Annually | 0           | \$1,000<br>Annually  |



### 3.3 PARTNERSHIPS

This section identifies existing and potential partners and community anchor institutions that Davis School District may engage for the development and implementation of the Local Broadband Plan. Such partners include organizations that are already engaged in issues related to broadband deployment and digital inclusion, such as local governments, college and university systems, school systems, faith-based organizations, foundations, chambers of commerce, and local internet service providers.

**Table 4. Local Community Partners and Community Anchor Institutions**

| COMMUNITY PARTNER / ANCHOR INSTITUTION | DESCRIPTION OF CURRENT OR PLANNED ROLE IN BROADBAND DEPLOYMENT AND ADOPTION   |
|--|---|
| Davis School District                  | <p>Represents 72,000 students and over half the population of the county when considering parents and other family members are stake holders. Collectively these represent all demographic and social groups countywide. <a href="https://www.davis.k12.ut.us/">https://www.davis.k12.ut.us/</a></p> <p>and information about the refresh program: <a href="https://www.davis.k12.ut.us/departments/technology-services/programs/computer-refresh">https://www.davis.k12.ut.us/departments/technology-services/programs/computer-refresh</a></p>  |
| Davis Technical College                | <p>Working to support adult digital literacy and higher education in Davis County. Possibly, DTC could offer higher ed. certifications for adults completing digital literacy courses and this would need to be planned and approved in cooperation with boards of higher education in Utah. <a href="https://www.davistech.edu/">https://www.davistech.edu/</a></p> <p>Currently, DTC students are required to bring their own device to complete courses and computer labs are available on campus for students to work in and personal or school devices can be used. Occasionally, DTC does find students without a device and home connectivity and these students can be provided a device on loan, but loaner devices and hotspots are limited, and it is unknown if the requirement to have a device and connectivity upon registration is a significant deterrent for students that would attend courses if they were more equipped.</p> |



|   |   |
|---|---|
| <p>Canyon Heights Adult Learning Center</p>       | <p>Represents efforts to support adult digital literacy in a less formally educated Davis County demographic. In addition, Canyon Heights serves a large population of English language learners in Davis County. Canyon Heights could offer high school credit to adults completing digital literacy courses that do not yet have a high school diploma. Canyon Heights could also make Internet instruction available in English and Spanish. <a href="https://canyonheights.davis.k12.ut.us/">https://canyonheights.davis.k12.ut.us/</a></p> <p>Limited digital skills and device/connectivity are considered to be significant barriers to the success of participants in adult education.</p>  |
| <p>Davis County Commission and Library System</p> | <p>The Davis County Commission and County Administration have connected this effort with their selected representation and the County Library System – to link efforts between the school system and community service and internet providers. If provided the resources, the library system can do much to support digital instruction and see that high quality devices are available to check out to each family not connected to the school system. <a href="https://www.daviscountyutah.gov/library">https://www.daviscountyutah.gov/library</a></p> <p>Currently, the library system only has three laptops available to be checked out of the Clearfield location for 1 week at a time for anyone requiring a device for home use. The libraries do not have hotspots available to be checked out.</p> |
| <p>Pioneer Adult Rehabilitation Center - PARC</p> | <p>PARC is a local non-profit with the mission of supporting people with disabilities toward full inclusion in the work force. PARC represents the needs of people with disabilities in Davis County and their connectivity needs. People with disabilities are also employed by PARC to clean and reimage the devices made available through the Computers for Kids program. <a href="https://www.parc-ut.org/computer-4-kids/">https://www.parc-ut.org/computer-4-kids/</a></p> <p>and information about PARC: <a href="https://www.parc-ut.org/">https://www.parc-ut.org/</a></p>  |
| <p>Davis Chamber of Commerce</p>                  | <p>Davis Chamber of Commerce - through the Davis Chamber of Commerce, the business community is represented in addition to many civic organizations (mayors and city councils). The Davis Chamber will also represent the needs of small businesses in the county. Small business is the lifeblood of innovation and upward mobility for the low and middle class. The Chamber specifically looks at the needs of this underrepresented and underserved portion of the community and helps to ensure their businesses have high-speed access and remain competitive in this way. The Chamber can also work closely with mayors and city councils to ensure affordable service plans are available in their cities. <a href="https://davischamberofcommerce.com/">https://davischamberofcommerce.com/</a></p>  |





|  |   |
|--|---|
| Davis School District Office of Equal Opportunity and Equity Committee | Davis School District Office of Equal Opportunity and its Equity Committee. This group will help to represent previously underrepresented ethnic groups. <a href="https://www.davis.k12.ut.us/departments/office-of-equal-opportunity">https://www.davis.k12.ut.us/departments/office-of-equal-opportunity</a>  |
| Davis Education Foundation   | Davis Education Foundation – representing low-income students and families with housing instability. <a href="https://www.daviseducationfoundation.org/">https://www.daviseducationfoundation.org/</a>  |
| Open Doors Utah  | Open Doors Utah with two locations in Davis County provides support to families that are challenged with food and housing insecurity. This organization can distribute refurbished devices and provide families experiencing employment and financial insecurity with affordable Internet options.  |
| Microsoft  | DSD has a strong cooperative partnership with Microsoft and information and innovation are shared mutually. Microsoft will support efforts to increase digital fluency and will help to build instructional resources for this purpose. Microsoft supports the licensing of refurbished computers for redistribution to families in need through modifications in licensing requirements of operating systems and the Microsoft Suite software package. |
| Apple  | DSD has a partnership with Apple Computers and Apple has expressed their willingness to cooperate to see that all members of the community have high-speed connectivity. Specifically, Apple has offered reduced cost for devices purchased in bulk and access to consultation with company representatives that work with communities in this space across the country.  |

Supplemental digital literacy courses or resources are not currently available in any of these locations.

**Table 5. State-Wide Partners**

| NAME           | CONTACT INFORMATION                 | ROLE IN BROADBAND DEPLOYMENT AND ADOPTION   |
|----------------|-------------------------------------|---|
| Rebecca Dilg   | rdilg@utah.gov<br>(801) 538-8681    | Utah Broadband Center Director<br><i>Governor's Office of Economic Opportunity</i>        |
| Claire Warnick | cwarnick@utah.gov<br>(801) 450-6682 | Utah Broadband Center Program Manager<br><i>Governor's Office of Economic Opportunity</i> |

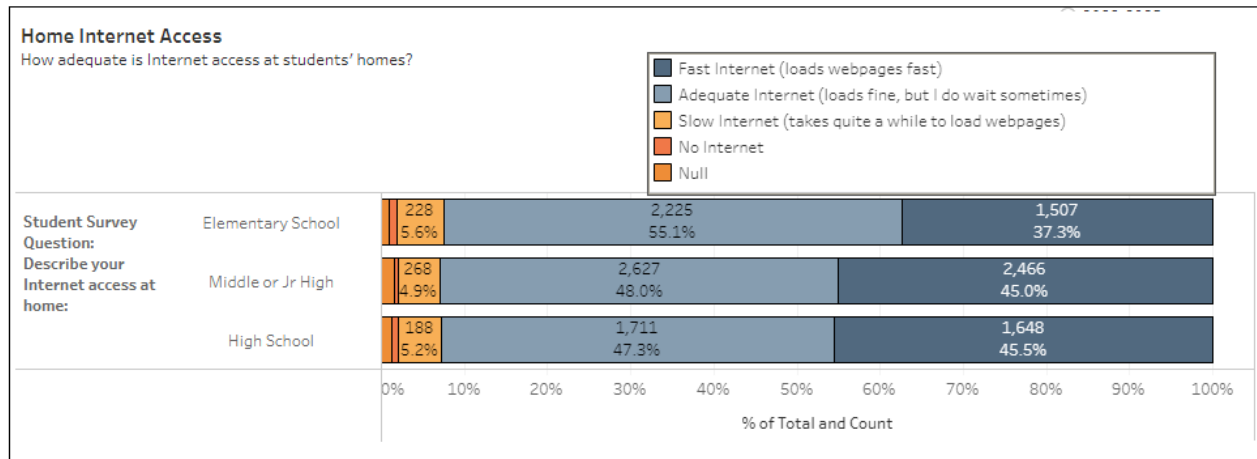


|              |                                  |  |
|--------------|----------------------------------|--|
| Teri Mumm    | tmumm@utah.gov                   | Utah Broadband Center Digital Access Program Manager<br><i>Governor's Office of Economic Opportunity</i> |
| Lynne Yocom  | yocom@utah.gov<br>(801) 514-4565 | Fiber Optics Manager<br><i>Utah Department of Transportation</i>   |
| Liz Gabbitas | lgabbitas@utah.gov               | Digital Access and Education Program Manager<br><i>Utah State Library</i>                                |
| Vikram Ravi  | vravi@ntia.gov                   | Federal Program Officer for Utah<br><i>National Telecommunications and Information Administration</i>    |

### 3.4 ASSET INVENTORY

Broadband assets include hard assets (e.g., towers, buildings, and utility poles) and soft assets (e.g., programs, activities, strategies, skills, people) that can be leveraged to close the digital divide. Hard assets in Davis County are described in section 3.4.1. Davis County's soft assets are described in sections 3.4.2 and 3.4.3, below.

#### 3.4.1 Broadband Availability

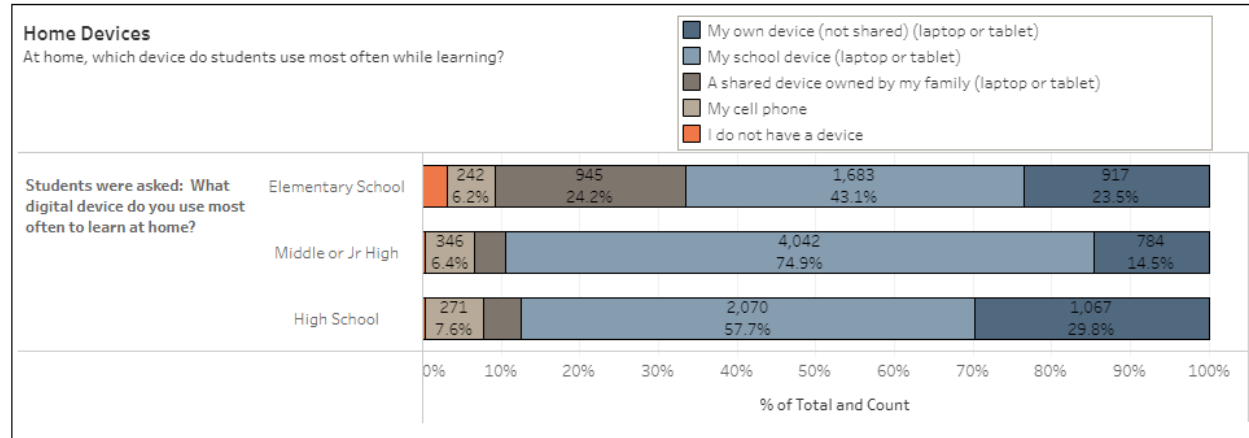


13,000+ students in grades 5-12 were surveyed in 2022 and above was their response. This data matches similar survey data from 2021 and very newly released data from 2023.

([www.dtlutah.org](http://www.dtlutah.org))



### 3.4.2 Digital Access



13,000+ students in grades 5-12 were surveyed in 2022 and above was their response. This data matches similar survey data from 2021 and recently updated data from 2023.

([www.dtlutah.org](http://www.dtlutah.org) )

### 3.4.3 Broadband Affordability

DSD provides average speed internet hot spots at no charge to all students/families without internet connection at home. Currently, 300 hotspots with unlimited data are acquired annually from T-Mobile and approximately 200 of these hotspots have been checked out to students or teachers in Davis County for the 2022-23 school year. At year’s end, they were returned, unless the student was participating in online summer-school, and they can be checked out again at the beginning of school in 2023-24. There is not a waitlist and the time between the request for a hotspot and delivery to the student/family is minimal. School personnel can initiate the request of a hotspot or families or staff can request them from this location found under the “PARENT AND FAMILY” tab and then “Devices & Support for Remote Learning” on DSD’s main webpage: <https://www.davis.k12.ut.us/parents-family/support-for-remote-learning>

## 3.5 NEEDS AND GAPS ASSESSMENT

During February/March of 2021, 2022, and 2023, the Davis School District (DSD) partnered with the Utah State Board of Education (USBE) and their contracted Metiri Research and Consulting Group to conduct a Student Technology Survey for all students in grades 5-12 in Davis County. Over 13,000 students randomly representing all neighborhoods in Davis County responded. In the survey, students were asked, “How adequate is internet access in your home?” And students could choose from the following responses: fast internet (loads webpages fast); adequate internet (loads fine, but I do wait sometimes); slow internet (takes quite a while to load webpages); no internet; or null. From these options, approximately 45% of students said that they had fast internet, 48% said they had adequate internet, 5% said they had slow internet, and

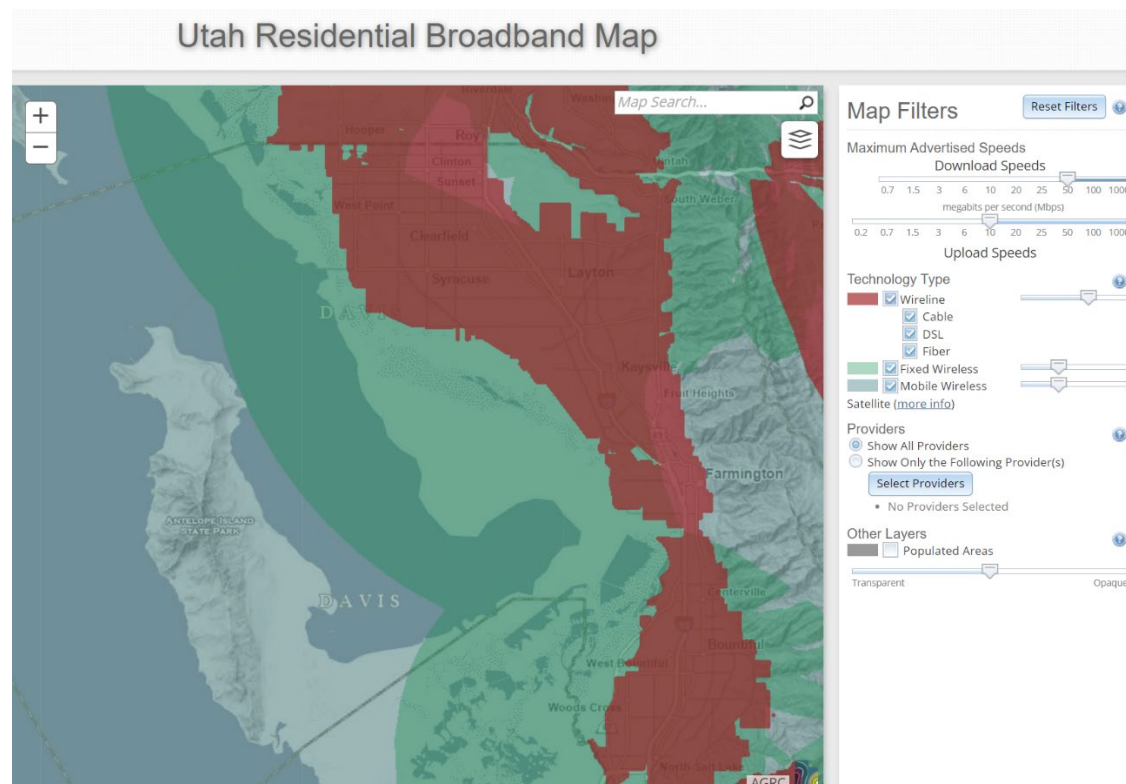


2% or less said they had no internet at all or responded “null.” These survey results and other survey data can be viewed at [www.dtlutah.org](http://www.dtlutah.org) .

### 3.5.1 Broadband Availability

It has been DSD’s experience when studying these outcomes to conclude that some DSD students (72,000+ students in total) representing all neighborhoods in Davis County have high-speed internet infrastructure available to them. Because some students from all Davis County neighborhoods and communities have high speed internet connection, it can be deduced that high-speed infrastructure is generally present in all Davis County neighborhoods. Some, but not all, students from all neighborhoods report having high speed internet in their homes. Because some students from all Davis County neighborhoods and communities lack high speed connectivity, it can further be deduced that a limiting factor for internet quality is the internet plan/provider a family has selected and purchased services from. Likely, this is the plan/provider that the family can best afford. Therefore, high-speed internet infrastructure is not the limiting factor to high-speed internet access, but the cost for that access is.

This conclusion is further supported by the Utah Residential Broadband Map from the Governor’s Office of Economic Opportunity ([Residential Broadband Map \(utah.gov\)](http://Residential Broadband Map (utah.gov)) ) that indicates good internet speed availability throughout Davis County. The map is shown here:





For the 2% of students reporting that they do not have internet connection or the 5% reporting to have slow/inadequate internet in their home, T-Mobile hotspots with unlimited data plans have been purchased by DSD using COVID emergency funding. Students can check these out for home use with the approval of their local school administration. Currently, only 212 hotspots have been requested and are assigned to students and their families. These are not high-speed hotspots, but they do provide adequate internet connection to run basic academic software and the Canvas Learning Management System used extensively by DSD. These children would not have connectivity otherwise. The hotspots do not address the inequity created by the differing connection speeds that other (often more privileged) students have. If affordability (frequently economic short fall is influenced by language barriers as was documented in this review: <https://www.brookings.edu/articles/as-we-tackle-school-segregation-dont-forget-about-english-learner-students/#:~:text=Given%20the%20disadvantaged%20family%20backgrounds,are%20commonly%20high%2Dpoverty%20schools> ) prevent these students from high-speed internet access (and survey data would suggest this may be the case), the hotspots narrow the connectivity gap, but do not completely remove it. As things currently stand, 45% of Davis County students have a connectivity advantage to all other students.

Further perplexing is the fact that various providers have extra affordable plans as are evidenced here in a link from DSD: <https://www.davis.k12.ut.us/parents-family/support-for-remote-learning/home-internet-solutions>

These subsidized plans may not be fully accessed because: 1. Families have not found this information. 2. Families do not understand the information once they have found it. 3. They do not have the skill necessary to navigate the application process. In any of these cases, a strong case can be made supporting the proposal to hire Internet Access Consultants as part of this grant request.

### **3.5.2 Digital Access**

Limitation to high-speed connectivity could also be caused by the inadequate device that the family uses to connect to the internet. The Davis School District provides internet capable devices to all 72,000+ students grades K-12 in a 1 device per 1 student (1:1) ratio. For this school year, DSD has issued 31,428 iPads (mostly to students in grades K-2), 12,044 Windows devices with touch screen capability, and roughly 30,000 non-touchscreen Windows devices. What is problematic is that the non-touchscreen Windows devices have processors that are not as robust as the touchscreen Windows and Apple devices. The devices with the lesser quality processors have more challenges with high-speed internet connection than do the devices with more processing power. These lesser, or older devices, freeze or glitch much more frequently when running instructional software programs that require higher speed connectivity and more data consumption/processing. DSD refreshes or recycles student devices on a four-year incremental rotation, this means that 1/4 of all DSD students use devices that do not meet industry standards because the devices are more than three years old. The older devices also have more challenges with high-speed Internet connection, freezing processors, swelling



batteries, and other glitches due to their age and the limitations in the specifications of their original design (i.e., inferior processors). DSD has purchased devices with less effective processing speed and maintains a device refresh schedule that is sub-standard (based on industry standards) because funding is limited and insufficient.

Furthermore, in the survey, students are asked which device they “use most often to learn at home.” 74% of junior high school students reported that they use the device issued to them by their school to engage in learning activities more often than they use their cell phones or a home device for learning (i.e., schoolwork). High school and elementary students reported using a device in/from their home slightly more often than what junior high school students reported, but not overwhelmingly so. Likely, surveyed students report slow internet because the device provided from DSD processes more slowly than other devices. For this reason, DSD determines that it is necessary to equitably provide ALL students with devices that are capable of high-speed internet connection so that ALL students are connected to learning resources at high speeds 24-hours-a-day and seven-days-a-week and with the same familiar device they use while “learning” during the school day. This type of connection would mean that high-speed learning could happen at the time of day when students are most ready to learn, and the information would be most relevant. When student devices and connectivity are inequitably distributed or some students experience more barriers to their connection with learning and information, learning at high levels is inequitable. This further creates academic division resulting from digital divides that usually occur along economic and ethnic divisions in our local population(s).

In addition to the disparity in the devices that are assigned for student use and student connectivity at home, there is also a difference in parents’ abilities to access and interact with information via the internet. Some students’ parents have better internet skills and fluency than others do. This difference results from prior lack of experience with digital devices or digital instruction and this could have been caused by economic, societal, or language barriers. This difference indirectly causes some students to be at a disadvantage to other students because their parents have different abilities in accessing digital information and online connection to their teacher or school. Students with more technically fluent parents can get more help completing their schoolwork successfully and these students are generally more successful in school. This same discrepancy in internet access and digital fluency also limits parents from gaining information about employment, healthcare, and other services or opportunities that could provide more resources to their family. DSD has anecdotal and empirical data to support the presence of a digital divide in internet fluency and skill between economic and ethnic divisions in Davis County. For all children to succeed, this divide must be bridged, and all students/families placed on an equitable digital playing field.

### **3.5.3 Broadband Affordability**

Access to high-speed broadband affordability can be achieved by leveraging local libraries and schools, both K-12 institutions and higher learning establishments, as community hubs. These facilities can play a pivotal role in bridging the digital divide by offering free or low-cost high-





speed Internet access to residents, especially those who cannot afford it at home. By transforming these places into digital inclusion centers, equipped with state-of-the-art connectivity infrastructure, computers, and other necessary resources, individuals can access the Internet for various educational, professional, and personal purposes. Libraries and schools can also provide digital literacy training programs, empowering community members with the skills needed to navigate the online world effectively. Through this collaborative effort, communities can enhance digital equity and ensure that high-speed broadband becomes a fundamental right accessible to all, regardless of socioeconomic status. Fortunately, Davis County is well furnished with locations in all school communities where high-speed access is available through the good work and cooperation of UETN.

Additionally, communities can work hand in hand with internet service providers (ISPs) to reduce the cost of broadband plans available to low-income families. By engaging in dialogue with ISPs, local governments and community leaders can advocate for special pricing arrangements or subsidies tailored to low-income households. Such negotiations can result in the creation of affordable Internet packages that offer high-speed connectivity without compromising on quality. Additionally, partnerships between ISPs and community organizations can be established to develop innovative initiatives, such as community-based discount programs or shared infrastructure projects, which lower the overall cost of broadband services. By fostering a collaborative relationship with ISPs, communities can make significant strides in ensuring that even the most economically disadvantaged families have access to the transformative benefits of high-speed broadband, fostering a more equitable and inclusive digital landscape for everyone. Evidence of this work with ISPs previously begun in Davis County can be found here: <https://www.davis.k12.ut.us/parents-family/support-for-remote-learning/home-internet-solutions>

## **4 OBSTACLES OR BARRIERS**

As was stated previously, these are the obstacles/barriers to ubiquitous access to high-speed connectivity in Davis County:

- 1- DSD survey data indicates that over 90% of students report access to adequate internet speed at home. However, not all students have equitable access and high-speed information available. Addressing availability and ensuring that it is affordable for all is the first step to ensuring access for all to high-speed information.
- 2- After affordable high-speed infrastructure is available to all, it is imperative that all families have access to a device capable of high-speed connection. It makes no sense to have infrastructure available through affordable plans if devices capable of high-speed connection are not affordable and present.
- 3- DSD has 92 schools that span all neighborhoods in the county. Each of these schools has high-speed connections where infrastructure is present. Furthermore, over 90% of students report to having adequate Internet connection at home. This means that the





remaining community members either can't afford high-speed connection, or they do not know where or how to find it. In the county, it is unclear which group or at what place a person could find the support and information they need to access either an affordable high-speed plan or to obtain a device capable of high-speed connection.

- 4- In addition to having support and guidance that gives access to plans and devices, citizens can benefit from instruction that helps them navigate the many resources available on the internet safely. There is a difference or divide in the experience and ability that some have in interacting with information via the internet. Some have better internet skills and fluency than others do. This difference results from prior lack of experience with digital devices or digital instruction and this could have been caused by economic, societal, or language barriers.

## **5 IMPLEMENTATION PLAN**

### **5.1 PRIORITIES**

Highest Priority - Unify the efforts of several community service organizations to accomplish equitable access to high-speed information for all. The BEAD program emphasizes the power of collaboration and collective action among community service organizations. By uniting their efforts, these organizations can effectively address digital inequities and promote equal access to high-speed information, in line with the program's vision of a connected and inclusive community. This would be accomplished by:

1. Providing all under-represented and under-served members of the community with advisement and support in finding, obtaining, and accessing high-speed connection. The BEAD program places a strong emphasis on reaching out to under-represented and under-served individuals, recognizing their unique needs and challenges. By providing personalized advisement and support, the program aims to ensure that these community members receive the necessary assistance to connect to high-speed information and participate fully in the digital world.
2. Ensure all community members have access to high-speed capable devices and connection at work, at school, and at home. The BEAD program recognizes that access to high-speed capable devices is crucial in achieving digital inclusion. By providing such devices in schools and through partnerships with various organizations, the program aligns with its goal of enabling community members to have seamless access to high-speed Internet, regardless of their location or economic background. This would be accomplished by:
  - a. Assigning high-speed capable devices to school-aged students and their families. The BEAD program focuses on empowering the future generation through education. By assigning high-speed capable devices to students and their families, the program ensures that young learners have the tools they need



to access educational resources and opportunities online, fostering academic growth and success. Issuing a high-speed capable device to all K-12 students in Davis County, it is ensured that well over half of Davis County Citizens have high-speed connectivity available to their family.

- b. Providing devices to families not connected to the school system through adult education, higher education, the county library system, and non-profits supporting families experiencing financial, employment, food, and housing insecurity. The BEAD program recognizes that there are various barriers to digital access for some families. By collaborating with adult education centers, higher education institutions, the county library system, and non-profit organizations, the program aims to break down these barriers and provide devices to those who may otherwise be left behind, fulfilling its mission of equitable access to high-speed information for all.
  - i. Making refurbished computers available to families outside of the school system via Open Doors and possibly other nonprofit organizations is an additional way of ensuring all members of the community have access to high-speed connection. As part of the committee's commitment to ensuring that all community members have the necessary resources to connect to the digital world, refurbished computers are a cost-effective and sustainable solution. By making refurbished devices available to individuals and families in need, especially those facing financial challenges or lacking access to the school system, the BEAD program funding maximizes the impact of its efforts in bridging the digital divide. These computers not only provide access to high-speed information but also promote environmental sustainability by giving new life to existing technology. By incorporating refurbished computers into its initiatives, this program reinforces its vision of fostering a connected, inclusive, and environmentally conscious community.
3. Provide personalized instruction and support to all demographic groups in the community, facilitated by the same counseling and support personnel described in Priority #2, so that digital skills, fluency, and safety can be achieved. The BEAD program places a strong emphasis on digital literacy and safety. By offering personalized instruction and support through counseling and support personnel, the program ensures that individuals from all demographic groups receive the necessary guidance to develop digital skills and fluency while staying safe online, aligning with its vision of a digitally empowered and protected community.

These priorities collectively reflect the core values and ideals of the BEAD program, focusing on collaboration, inclusivity, and empowerment to achieve equitable high-speed information access for everyone in the community.



**Table 6. Priorities for Broadband Deployment and Digital Access**

| PRIORITY  | RANKING     | DESCRIPTION  |
|---|-------------|--|
| <p>The foremost funding priority for this grant is to bolster the support personnel. Within the BEAD program's framework, it is imperative to address the challenges faced by underrepresented and underserved populations, who often lack awareness of available assistance for accessing affordable high-speed devices and plans. By allocating resources to support personnel, outreach efforts are enhanced, providing these communities with the guidance and information they need to overcome barriers to digital inclusion. This strategic investment aligns with the core mission of the BEAD program, fostering an empowered and connected community where equitable access to high-speed information is readily accessible to all.</p> | <p>High</p> | <p>A dedicated individual or team is essential to support individuals and families in accessing the plethora of available resources and options. This proposal requests the allocation of four full-time FTE (Full-Time Equivalent) positions to serve at key locations: 1) DSD and adult education, 2) People with Disabilities- PARC, 3) Public Libraries also serving families facing employment, economic, food, and housing instability, and 4) the Chamber of Commerce with DTC to assist the small business community and those improving their access to the job market. By having this team in place, the committee can maximize the impact of the BEAD program, ensuring that those in need receive personalized support and guidance to avail themselves of these valuable resources.</p> |



The subsequent level of priority involves securing a funding match of Davis School District Funds. This matching of funds aims to enhance the quality of devices provided to families, ensuring they are not just internet capable but capable of high-speed connectivity. By securing this match, the committee can significantly improve the digital experience of families in the community, empowering them with the tools they need to access high-speed information seamlessly. This strategic focus on device quality aligns with the BEAD program's mission of fostering equitable access to technology, thereby strengthening the foundation of a digitally inclusive and thriving community.

In addition to the request matching school district investment, money is also requested for devices for check-out via adult institutions of higher learning, public libraries, and non-profits serving the disability community and those experiencing various forms of financial and social insecurity.

High

Students would greatly benefit from being provided a \$600 laptop or iPad that is capable of high-speed internet connection and processing, as opposed to a \$300 laptop that is only internet capable. Here are the key advantages:

**Enhanced Performance:** The \$600 device is equipped with better hardware and processing power, allowing students to work on resource-intensive tasks, run complex applications, and multitask efficiently. This ensures a smoother and more productive learning experience.

**Improved Connectivity:** High-speed internet capability enables students to access online resources, educational platforms, and digital learning materials without delays or disruptions. This seamless connectivity enhances their engagement with online lessons and collaborative activities.

**Longer Lifespan:** The \$600 device often comes with higher build quality and durability, meaning it is likely to have a longer lifespan compared to the cheaper alternative. This translates to reduced maintenance costs and longer usability for students.

**Futureproofing:** As technology advances, the \$600 device is more likely to remain relevant for a longer time, accommodating software updates and new educational tools. This future-proofing aspect ensures a better return on investment over the device's lifespan.

Regarding BEAD Grant funding supporting a school system, the grant could match the school system's \$300 expenditure by providing an additional \$300. This matching approach would effectively double the school's budget for acquiring devices, allowing them to purchase the \$600 high-speed capable laptops or iPads for students. This collaboration between the school system and the BEAD Grant program ensures that students receive top-notch devices that cater to their educational needs, fostering a digitally inclusive and enriched learning environment. The matching of funds showcases the commitment of the BEAD program to supporting educational institutions in their efforts to bridge the digital divide and create equal opportunities for all students.



|   |               |   |
|---|---------------|---|
|   |               | <p>By ensuring that all families in Davis County have access to high-speed capable devices through the school system, over half of the community is ensured to have high speed connectivity.</p> <p>In addition to matching school district funds, institutions serving adult students and nonstudents (i.e., libraries, DTC, and Open Doors) would also have the capability of checking out high-speed capable devices to patrons in need.</p> <p>Refurbished computers would also be available for distribution to families in need of permanent high-speed capable connection.</p> |
| <p>Next, is the availability of high-speed hot spots that can be acquired through the center of community service that is most applicable to the person in need. This is of medium importance because Davis Counties network of schools, public libraries, and institutions of higher learning make high-speed connectivity hubs available in nearly all communities.</p> | <p>Medium</p> | <p>Clearly devices and training are of no or lessened value if connectivity is not available. This is not the highest priority because surveys indicate most families report to having adequate Internet service, but having opportunities to check out high-speed hotspots will bridge the gap for families not served in other ways. Devices would be checked out from the organization they are acquired for and these are listed in the tables that are to follow in later sections.</p>  |



Once devices and hotspots are in place it makes sense to address digital literacy and ensure that information and training are available to those seeking information through high-speed service.

Medium

Addressing the digital divide regarding fluency with tools and software requires a long-term plan and commitment to instructing underserved and underrepresented elements of the community. Fluency can only be taught or acquired once tools are adequately in place and accessible.

The BEAD program and other federal programs would likely recommend focusing on teaching a range of essential digital skills to underemployed members of the community. These skills are aimed at empowering individuals with the necessary knowledge and tools to thrive in an increasingly digital world. Some of the key digital skills that may (depending on the needs of the group) be covered include:

**Basic Computer Literacy:** This includes fundamental skills such as navigating operating systems, using keyboard shortcuts, and understanding file management.

**Internet Navigation:** Learning how to browse the web effectively, conduct online research, and use search engines to find relevant information.

**Digital Communication:** Understanding email etiquette, using instant messaging, and engaging in video conferencing for remote communication and collaboration.

**Digital Security:** Educating individuals on best practices for online safety, such as creating strong passwords, recognizing phishing attempts, and protecting personal information.

**Online Job Search and Application:** Assisting individuals in utilizing online job portals, creating and uploading resumes, and submitting applications electronically.

**Digital Productivity Tools:** Training on using word processing software, spreadsheets, and presentation tools for various tasks, both personal and professional.

**Social Media and Online Networking:** Guidance on using social media platforms for networking, personal branding, and understanding online reputation management.





|  |  |
|--|--|
|  | <p>E-commerce and Online Transactions: Understanding online shopping, digital payment methods, and safe practices for online transactions.</p> <p>Online Learning and Education: Familiarizing individuals with digital learning platforms, accessing educational resources, and participating in online courses.</p> <p>Digital Problem-Solving: Building problem-solving skills using technology, troubleshooting common issues, and seeking digital support when needed.</p> <p>These digital skills are essential in today's technology-driven society and can significantly improve the employability and overall quality of life for underemployed individuals. The BEAD program and federal programs would work to ensure that all community members have access to resources and training to develop these skills, promoting digital equity and inclusion.</p> |
|--|--|

## 5.2 PLANNED ACTIVITIES

DSD currently works collaboratively with the Utah State School Board (USBE) and a state-wide public-school community through the Digital Teaching and Learning Grant program to overcome a digital divide that occurs along economic and ethnic demographic demarcations. To participate in this grant funded program, DSD was required to collaborate with Davis County school stake holder groups representative of the school community by forming a committee and to cooperatively write a 5-year technology plan that was approved by USBE in 2022 (This plan is visible at [DTLUtah.org](http://DTLUtah.org)). Representation from teachers, school administrators, parents, students (mostly through surveys), and DSD's IT Department met regularly to identify student needs and the goals and processes that would be followed in the 5-year technology plan. A primary intention of this plan was to increase student opportunities through digital fluency and by using digital devices effectively. These meetings and collaboration will expand to include all members of this committee as this plan is implemented across the county.

## 5.3 KEY EXECUTION STRATEGIES

To accomplish goals 1-4 as stated above, the following plans will be engaged in:

Goal 1: Using these funds, support staff will be made available to the community for the purpose of outreach and help in accessing programs or opportunities by which people can obtain discounted internet plans and digital devices that will allow them to be connected.



Goal 2: To maximize public resources, to ensure a standard of equitable access for all, and to increase the return on investment of public funds, it is proposed that Federal funding is used with DSD funding, grant funding and technology planning for USBE, existing community structure in DTC, Adult Education, PARC, and Davis County to ensure that all homes in all social demographic groupings have access to high speed internet connection or hotspots and are equipped with a digital device that is capable of high-speed connection.

Goal 3: Digital fluency will increase in all demographic groups as courses teaching online skills will be made available through the partner network in Davis County.

Goal 4: In addition to courses helping to grow digital fluency, additional courses will be offered to the more at-risk elements of the population susceptible to fraud and exploitation via the Internet. Specifically, these populations are those less familiar with the Internet, those with intellectual disabilities, and inexperienced children.

## **5.4 ONGOING STAKEHOLDER ENGAGEMENT**

Community representation would be acquired from:

- Davis Technical College (DTC) – to support adult digital literacy and higher education in Davis County. Possibly, DTC could offer higher ed. certifications for adults completing digital literacy courses.
- Canyon Heights Adult Ed High School in Davis County – to support adult digital literacy in a less formally educated Davis County demographic. Possibly, Canyon Heights could offer high school credit to adults completing digital literacy courses that do not yet have a high school diploma.
- Davis County Commission or their selected representation – to link efforts between the school system and community service and internet providers. DSD can do much to support digital instruction and see that high quality devices are checked out to each child/family, but other community leaders must help to bring the cost of high-speed internet service down and make it affordable to all families.
- PARC is a local non-profit with the mission of supporting people with disabilities toward full inclusion in the work force. PARC represents the needs of people with disabilities in Davis County and their connectivity needs.
- Through the Davis Chamber of Commerce, the business community will be represented in addition to many civic organizations (mayors and city councils).
- Open Doors Utah – representing those experiencing economic, housing, food, and employment instability.
- Davis School District Office of Equal Opportunity and its Equity Committee. This group will help to represent previously underrepresented ethnic groups.
- Davis Education Foundation – representing low-income students and families with housing instability.
- Davis County Parent and Teacher Association (PTA), representing families in the county concerned with accessibility and especially safe internet practices.



- In addition to these groups, DSD would be open to including any other organizations suggested by the Governor's Office of Economic Opportunity or the Davis County Commission.

Regardless of BEAD approval and funding, this committee will continue to work together to support meet the high-speed needs of the community. This collaboration has already proved helpful and needful for Davis County.

## **5.5 ESTIMATED TIMELINE FOR UNIVERSAL SERVICE**

Once awarded funding, this plan hire 4 full-time internet advisors would be fully implemented within 3 months of the funding announcement. Proposed employees hired would be on 1-year contracts until a permanent funding source could be identified.

The proposed services and products to be purchased products are/would already have a negotiated price approved by Utah State purchasing standards and purchases could be expedited and completed within the 1-year window of BEAD Grant funding.

## **5.6 ESTIMATED COST FOR UNIVERSAL SERVICE**

The anticipated costs for universal and ubiquitous high-speed connectivity in Davis County are these:

The largest cost in this request is made to ensure that all members of Davis County have equal access to high-speed capable devices. To do this, high-speed capable devices will be assigned to all K-12 school aged students and their families and high-speed capable devices will be available to check out via adult education, higher education, and public libraries for families without current access to the public school system. This proposal requests funds to match DSD's expenditure of tax dollars to improve student devices from internet capable devices to high-speed capable devices that can be maintained the industry standard of no more than 4 years on a device refresh schedule.

Next, devices would be purchased for distribution to adults through adult education, higher education, and through the County Library system.

In addition, for the disability community, an onsite high-speed lab will be funded for the purpose of teaching of internet skills and safety prior to devices being available for check out to this population.



| Devices             |            |            |        |                        |
|---------------------|------------|------------|--------|------------------------|
| Entity              | Devices    | BEAD Grant | Units  | Total                  |
| DSD                 | \$ 600.00  | \$ 300.00  | 20,000 | \$ 6,000,000.00        |
| 7 Libraries         | \$ 600.00  | \$ -       | 210    | \$ 126,000.00          |
| Adult Ed            | \$ 600.00  | \$ -       | 50     | \$ 30,000.00           |
| DTC                 | \$ 600.00  |            | 75     | \$ 45,000.00           |
| PARC                | \$ 600.00  |            | 100    | \$ 60,000.00           |
| PARC Lab            | \$1,000.00 |            | 40     | \$ 40,000.00           |
| <b>Device Total</b> |            |            |        | <b>\$ 6,301,000.00</b> |

The next largest grant request (this includes the institutional support required by committee participants to hire and employee these positions) is for support personnel to counsel and consult with this committee and community patrons and help them access available devices and internet plans/opportunities to obtain high-speed access. Currently, there is not any person, place, or program in Davis County solely dedicated to helping county members to access Internet in a way that best meets the needs of their family. Different organizations, like DSD, advise families on connectivity and device usage, however, this responsibility is a secondary responsibility for hundreds of different organization members and the communication to parents it becomes disjointed and location specific. Having one person that all can refer to find correct information and advice his imperative for equitable service for all community members. If acquired, grant funds would provide a one year launching opportunity for these positions and organizations would have one year to identify continued funding sources or ways to fit this responsibility into permanently funded organizational positions.

| Support Personnel               |                     |               |       |                      |
|---------------------------------|---------------------|---------------|-------|----------------------|
| Entity                          | Salary and Benefits | Grant Payment | Units | Total                |
| DSD & Adult Ed                  | \$ 100,000.00       | \$ 100,000.00 | 1     | \$ 100,000.00        |
| Libraries and Cty. & Open Doors | \$ 100,000.00       | \$ 100,000.00 | 1     | \$ 100,000.00        |
| DTC & Davis Chamber of Commerce | \$ 100,000.00       | \$ 100,000.00 | 1     | \$ 100,000.00        |
| PARC                            | \$ 100,000.00       | \$ 100,000.00 | 1     | \$ 100,000.00        |
| <b>Salary Total</b>             |                     |               |       | <b>\$ 400,000.00</b> |

DSD's current deal with T-Mobile for high-speed capable hotspots follows the following price breakdown. This price includes the price of the device (usually ½ the cost of the total package) and then the cost of the unlimited high-speed plan. With support of BEAD funding, the devices would be obtained and the first year of the plans funded allowing organizations to find funding for continuing the plans in following years. The purchase of only the plan in subsequent years means organizations have only ½ the cost moving forward making continuation more affordable.



This gives cities an additional 3-5 years to grapple with the logistics of providing all citizens with affordable and ubiquitous high-speed opportunities. The acquisition of high-speed hotspots for locations outside the school district for check out is in the following table. The Public Library system has seven locations in Davis County and this number would provide 30 high-speed hotspots for each location.

| Entity                    | Annual Cost per unit | Grant Payment | Units | Total         |
|---------------------------|----------------------|---------------|-------|---------------|
| DSD                       | \$ 600.00            | \$ 600.00     | 300   | \$ 180,000.00 |
| Libraries                 | \$ 600.00            | \$ 600.00     | 210   | \$ 126,000.00 |
| Adult Ed                  | \$ 600.00            | \$ 600.00     | 50    | \$ 30,000.00  |
| DTC                       | \$ 600.00            | \$ 600.00     | 50    | \$ 30,000.00  |
| PARC                      | \$ 600.00            | \$ 600.00     | 100   | \$ 60,000.00  |
| Davis Chamber of Commerce | \$ 600.00            | \$ 600.00     | 30    | \$ 18,000.00  |
| Total Hotspots            |                      |               |       | \$ 444,000.00 |

Currently, DSD provides between 150 and 200 high-speed capable refurbished desktop computers to families of DSD students, Canyon Heights Adult Education, and PARC participants with disabilities. This opportunity to obtain a refurbished computer would be extended to participants within Open Doors Utah. The Davis Education Foundation will continue to fund the refurbishment and distribution of computers for families of students and PARC participants. An additional \$28,000 is requested from BEAD funds to expand the program to Open Doors Utah Participants. Devices distributed outside of the Davis School District cost more for licensing because previously purchased software licenses cannot be accessed by families outside of those already purchased by DSD for students. This will be addressed moving forward and other community solutions explored to extend this program after BEAD Grant funding is no longer available.

| Refurbished Computers                | Unit Cost for Students | Unit Cost for NonStudents |
|--------------------------------------|------------------------|---------------------------|
| Clean and Reimage - PARC             | \$ 30.00               | \$ 30.00                  |
| Microsoft Licenses for Students      | \$ -                   |                           |
| Microsoft Licenses for NonStudents   |                        | \$ 50.00                  |
| Device Cost - for Students           | \$ -                   |                           |
| Device Cost - for NonStudents        |                        | \$ 200.00                 |
| <b>Cost for Refurbished Computer</b> | <b>\$ 30.00</b>        | <b>\$ 280.00</b>          |
| Units Acquired for 1 year            | \$ 200.00              | \$ 100.00                 |
|                                      | \$ 6,000.00            | \$ 28,000.00              |
| Refurbished Computer Request         | \$ 34,000.00           |                           |



A summary of all expenditures and the total request made for BEAD funds can be found here:

| <b>Total Request for BEAD Grant Funds</b> |                 |
|---|-----------------|
| Support Personnel                         | \$ 400,000.00   |
| Devices                                   | \$ 6,301,000.00 |
| High Speed Hotspots                       | \$ 444,000.00   |
| Refurbished Computers                     | \$ 34,000.00    |
| Grand Total - Request                     | \$ 7,179,000.00 |

Total BEAD Grant request for Davis County to provide universal high speed internet service:  
**\$7,179,000.00.**

## **5.7 ALIGNMENT**

The real strength of this proposal, as stated in earlier sections, lies in the social impact that could be achieved through the collaboration of multiple community service organizations, all committed to promoting equitable access to high-speed Internet for all members of the community. This plan has been jointly developed by seven independent public service entities who share the same belief and vision as the BEAD Program, which is supported by the Governor's Office of Economic Opportunity. A summary of the key actions for this proposal can be found in the "CONCLUSION" section that follows this one.

In line with the BEAD Grant Program's mission, the unification of efforts by diverse community service organizations is a pivotal step towards achieving the goal of equitable high-speed Internet access for every member of our community. By fostering collaboration and synergy among these entities, the committee can pool resources, expertise, and insights, enabling this committee to tackle the challenges of digital inclusion with a comprehensive and coordinated approach created through this proposal. Together, this committee aims to bridge the digital divide and empower underserved communities with the tools they need to thrive in today's interconnected world. The BEAD Grant Program stands as a testament to a collective commitment to creating a more inclusive and connected society, where every individual could harness the transformative power of the Internet for personal and professional growth.

## **5.8 TECHNICAL ASSISTANCE**

In the originally accepted Local Broadband Planning Grant for Davis County, a consultant or consulting group was to be acquired with Planning Grant Funds to support the drafting of this proposal. In writing this proposal with input from community stakeholders (those previously mentioned in this document) and with advisement from the Governor's Office of Economic Development, technical assistance was not acquired from any other party and no other party's services will be required for execution of this accepted proposal. This direction is subject to





change based on information provided from the BEAD Grant Administrators, GOEO, or the NTIS upon award of this grant request.

## 6 CONCLUSION

The Broadband Equity, Access, and Personalized Learning Initiative presented in this BEAD Grant Proposal is a comprehensive program designed to address digital disparities and promote personalized learning experiences in Davis County. By uniting the efforts of the Davis County Local Broadband Planning Committee and various civic organizations, this initiative aims to bridge the digital divide, foster economic growth, and enhance educational opportunities for all community members.

In summary, this proposal aims to:

- Unify the efforts of several community service organizations to accomplish equitable access to high-speed information for all. This would be accomplished by:
  1. Providing all under-represented and under-served members of the community with advisement and support in finding, obtaining, and accessing, high-speed connection.
  2. Ensure all community members have access to high-speed capable devices and connection at work, at school, and at home.
    - a. This is accomplished by ensuring all school aged students and their families have a high-speed capable device assigned by the school.
    - b. This is further accomplished for families not connected to the school system through adult education and higher education, the county library system, and through non-profits supporting families experiencing financial, employment, food, and housing insecurity. New devices can be checked out or refurbished devices can be acquired through application.
  3. Provide personalized instruction and support to all demographic groups in the community via the same counseling and support personnel described in #1 so that digital skills, fluency, and safety can be achieved.

The initiative's primary objectives revolve around ensuring equitable access to high-speed broadband services for all citizens in Davis County, thereby promoting economic development and social mobility. Through well-thought-out strategies, including expanding broadband accessibility, providing access to high-speed capable devices at home, implementing affordability initiatives, and enhancing digital literacy, the program seeks to create a more inclusive and empowered digital landscape.



By working collaboratively as a committee and engaging stakeholders from different organizations such as the Davis School District, Davis Technical College, Davis County Commission, and other community service providers, the initiative ensures a holistic approach to achieving personalized and equitable learning experiences for all age groups in the county. This collective effort maximizes the efficiency of public resources and enhances the impact of the initiative beyond what individual entities could accomplish independently.

The expected outcomes of the initiative are far-reaching, aiming to expand broadband coverage, promote personalized learning experiences, stimulate economic opportunities, bridge the digital divide, and uplift the entire Davis County community through increased digital inclusion and community engagement.

Students stand to gain significant benefits from receiving a \$600 laptop or iPad with high-speed internet capabilities and advanced processing, surpassing the advantages of a \$300 laptop limited to basic internet use. These benefits include improved performance, allowing students to handle resource-intensive tasks and run complex applications with ease, leading to a more productive learning experience. Moreover, the high-speed internet connection enables seamless access to online resources and digital learning materials, promoting enhanced engagement in online lessons and collaborative activities.

Furthermore, the \$600 device boasts superior build quality, ensuring greater durability and a longer lifespan compared to cheaper alternatives. As a result, maintenance costs are reduced, and students can use the device for a more extended period.

In terms of futureproofing, the \$600 device is designed to remain relevant as technology advances, accommodating software updates and new educational tools. This ensures a better return on investment, considering the device's longevity and compatibility with future technological advancements.

Regarding the BEAD Grant's support for the school system, it could match the school district's \$300 expenditure with an additional \$300, effectively doubling the budget for acquiring high-speed capable laptops or iPads for students. This collaborative effort creates a digitally inclusive and enriched learning environment, fostering equal opportunities for all students to access top-notch devices that cater to their educational needs.

Moreover, the initiative extends beyond the school system. Families in Davis County are ensured access to high-speed capable devices, benefiting over half of the community with improved digital connectivity.

Additionally, institutions serving adult students and non-students, such as libraries, DTC, and Open Doors, can participate by providing high-speed capable devices for checkout to patrons in need. This expansion broadens the program's impact, promoting digital access and inclusion for a more diverse range of individuals within the community.

The vision of the initiative embraces unity and collaboration, recognizing that by coming together, we can accomplish far more than by acting in isolation. The initiative's goals, which



focus on providing affordable high-speed internet connection, access to high-speed capable devices, and digital literacy support, reflect the commitment to ensure that no community member is left behind in the digital age.

The covered populations include families and students served by the Davis School District, individuals with disabilities served by the Pioneer Adult Rehabilitation Center, at-risk families seeking improved economic circumstances, and individuals with limited access to high-speed computing due to financial instability.

In conclusion, the Broadband Equity, Access, and Personalized Learning Initiative symbolizes a collective effort to create a more connected and empowered community in Davis County. By leveraging the strengths of various civic organizations and community service providers, this initiative aims to bridge digital gaps, promote lifelong learning, and foster social advancement for all citizens. By embracing collaboration and pooling resources, the initiative seeks to create a brighter future where opportunities are accessible to all, regardless of their circumstances.

When entire communities are better informed and educated, all community members are more physically, intellectually, socially, and emotionally healthy. Healthier communities allow more community resources to be directed to community opportunities rather than restorative or remedial efforts. All community members benefit from cooperative and synergistic efforts to improve community learning and capacity through ubiquitous access to higher speed internet connectivity and greater digital fluency.