

City of Madison Digital Inclusion Task Force Report

Version: July 30, 2021

Creation and Mission of the Digital Inclusion Task Force

The **Digital Inclusion Task Force** was created by the City of Madison's Common Council on March 20, 2021, is to act in an advisory capacity to the Mayor and Common Council on the deployment and use of digital technology and to identify Digital Inclusion Strategic Priorities¹ to guide action by the City of Madison and other community stakeholders including:

1. Recommending how to provide internet access to all residents, with special attention to low income families
2. Incorporating the effective use of MUFN (the Metropolitan Unified Fiber Network)
3. Exploring technological needs of existing and startup businesses
4. Assisting with the provision of digital infrastructure
5. Facilitating communication with the local information technology community
6. Assisting in providing high speed, low or no-cost access for travelers and commuters and
7. Exploring the feasibility of other public and private investments in 21st century telecommunication technologies, including FTTP (fiber optics to the premises/home).

Schedule and Staffing to the Task Force:

- The Digital Inclusion Task Force began meeting April 28, 2021, and completed its work on July 31, 2021. Task Force was staffed by the City of Madison IT Department.

Membership:

- Two members from the Digital Technology Committee, one of which is a member of the Madison Common Council: Chair: **Alder Keith Furman, District 19**, Vice-Chair: **Mark H. Evans**
- One Alder from the Education Committee: **Ald. Tag Evers, District 13**
- One representative from Madison Metropolitan School District Board: **Savion Castro**
- One staff member from Madison Public Library appointed by the Library Director: **Martin Alvarado**
- Two Alternate non-voting members: **Carousel Bayrd**, Dane County Supervisor, Sarah Edgerton, City of Madison IT Director

A. What is Digital Inclusion?

Digital Inclusion refers to activities required to ensure that all individuals and communities including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs). This includes 5 five elements²:

1. Affordable and robust broadband internet service
2. Internet-enabled devices that meet user needs
3. Access to digital literacy training
4. Quality technical support
5. Applications and online content designed to enable and encourage self-sufficiency, participation and collaboration

This allows for **Digital Equity**, which is having the information technology capacity required for full participation in society, democracy and our economy. It is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.

¹ Strategic Priorities are the values to focus on now to help achieve long term goals

² modified from NDIA: the National Digital Inclusion Alliance: www.digitalinclusion.org/definitions/

Digital Inclusion must evolve and requires intentional strategies and investments to reduce and eliminate historical, institutional and structural barriers to access and use technology.²

Digital Inclusion allows access to **Digital Literacy**, the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.³ A digitally literate person:

- possesses technical and cognitive skills required to find, understand, evaluate, create, and communicate digital information in a wide variety of formats
- is able to use diverse technologies appropriately and effectively to retrieve information, interpret results, and judge the quality of that information
- understands the relationship between technology, life-long learning, personal privacy, and the stewardship of information
- uses these skills and the appropriate technology to:
 - communicate and collaborate with peers, colleagues, and family
 - actively participate in civic society and contribute to a vibrant, informed, and engaged community

B. Background:

Broadband internet has become a necessity to effectively access education, healthcare, employment, government, and commerce. Despite its essential role in our daily lives, broadband access is not universally available in our community. US Census Bureau Data⁴ shows over 13,000 households in Madison and over 30,000 households in Dane County do not have a broadband subscription. In our communities, as in the rest of our country, lack of access to broadband internet is disproportionately experienced by communities of color, a disparity that has been put in stark contrast during the COVID-19 pandemic. Gaps in infrastructure, affordability, device access, and digital literacy skills represent the main obstacles to having community access to broadband. These are factors that keep a substantial number of our residents from full participation in our community. This document presents a framework to identify community needs, develop standards and policies, establish partnerships, and recommend and support strategic local, state and federal initiatives and investments in to address digital inclusion.

C. Strategic Priorities to Achieve Digital Inclusion:

To address digital inclusion, the City of Madison must identify where efforts should be focused, understand gaps in current availability of digital technologies and address those gaps, and formalize ongoing communication with partners to monitor and update progress. Strategic priorities are listed below:

Table 1: Strategic Priorities ⁵		Recommended collaborating entities: ⁶
1. Identify focus for Digital Inclusion efforts:		
Define targets	Identify demographic groups, facilities, or geographic neighborhoods to target efforts	MMSD, DPI, CDA, Case managers
	Identify most cost-effective interventions	MMSD, DPI, CDA, Case managers

³ American Library Association’s definition of Digital Literacy

⁴ 2015 – 2019 American Community Survey 5 Year Estimate, types of computers and internet subscriptions, City of Madison, WI

⁵ Compare to WI’s top priorities to address broadband access; See p.22 of the 2021 Governor’s Task Force on Broadband Access released on 30June2021: <https://psc.wi.gov/Documents/broadband/2021%20Governors%20Task%20Force%20on%20Broadband%20Access.pdf>

⁶ This is only a draft list of participating/collaborating entities and is subject to change.

Determine gaps	Identify collaborating entities to define partners, determine their areas of focus and determine gaps in service delivery	Recommended new staff person
2. Update digital technology asset inventory:		
Utility	Define broadband speed needs for specific functions	Recommended new staff person
	Map broadband assets and public access points and identify all mobile access point providers	MMSD, City of Madison, Madison College, Madison Public Library
Device access	Determine availability of free or low-cost devices to targeted groups or facilities	Recommended new City staff person
	Identify available technical support systems	Recommended new City staff person, DANEnet, Madison Public Library, MMSD
Technical support	Identify organizations providing digital literacy training, their areas of focus and community impact	Recommended new City staff person, DANEnet, Madison Public Library, Case managers
3. Expand Internet Access:		
Utility	Continue support for broadband expansion including technical alternatives	City of Madison, MUFN
	Consider affordable connectivity to specific categories of residential, and Neighborhood, Community Centers	City of Madison, MMSD, MUFN, Recommended new City staff person
Device access	Expand availability of appropriate hardware tools	City of Madison, Madison Public Library, MMSD
	Ensure software products are designed and deployed to best serve users	Madison Public Library, Recommended new City staff person
Technical support	Provide access to appropriate end-user support and consider/plan for supporting costs	City of Madison, MMSD, DANEnet, Madison Public Library
4. Increase Digital Literacy:		
Digital literacy	Define digital literacy needs for prioritized demographic groups (ie. K12, post 12, job training, small business development, NFPs, elderly, etc.)	Recommended new City staff person, City Education Committee, MMSD, Case Managers, Madison Public Library, DANEnet, UW-Madison, Madison College
	Distribute curricula for Internet use/resources	
	Create/fund bi/multi-lingual Digital Navigator position	
	Define appropriate application use literacy metrics	
	Define curricula regarding security/privacy	
5. Formalize ongoing collaboration:		
Collaboration	Continue to develop systems for public & private collaboration to address strategic priorities	Recommended new City staff person, City of Madison, Madison College

D. Challenges to creating an environment of Digital Inclusion:

Madison faces many challenges related to Digital Inclusion that are not unique to Madison. The City of Madison and the community have learned a lot about these challenges, especially during the COVID-19 pandemic.

- **Budget:** Yearly constraints with the City’s budget make it difficult to fund digital inclusion projects. Past efforts have been mostly focused on educational classes and pilot programs related to access. Based on research, costs of capital infrastructure projects related to access can range from a few hundred thousand dollars to nearly \$200 million.
- **Legal:** Wisconsin State law limits the City’s ability to become an Internet Service Provider (Wis. Stat. Sec. [66.0422](#)).
- **Assets:** The City does not have the ability to keep a current inventory of assets in the community related to broadband availability, subscriptions, or affordability, nor computers/devices and digital literacy/skills of residents due to staffing limitations.
- **Coordination:** There are many different organizations in our community focused on Digital Inclusion, including, but not limited to City of Madison and CDA Housing Authority, DANenet, the Madison Metropolitan School District, and Madison College. There has been no formal coordination effort among these entities to share information on resources.
- **Availability, Adoption, Affordability and Access⁷:**
 - **Availability Gap:** Although the City of Madison does have fairly good broadband availability, there are an estimated 13,000 homes⁸ in the City where wired or wireless broadband is not reliably available.
 - **Adoption Gap:** In areas where broadband is available, there is an adoption gap related to digital literacy and device access.
 - **Affordability Gap:** Although subsidized broadband programs exist, there are barriers which make use of these programs difficult for residents most in need of help.
 - **Access to Economic Opportunity and Participation Gap:** Access to the Internet is not recognized as source of employment or as a key way to access essential services (such as banking and telehealth) by many most in need of these services.

E. Conclusions:

The City of Madison has limited resources to address digital inclusion initiatives, especially as it pertains to the cost of access⁹. However, the Task Force believes there is an important leadership role the City should play to address the five elements needed to achieve digital inclusion. The key to achieving strategic priorities listed in this report is more formal coordination between entities in Dane County currently working on parts of these priorities. We strongly recommend the City provide resources for managing this coordination. Further, we recommend these efforts be incorporated as part of the Imagine Madison¹⁰ plan.

⁷ Adapted from The Lewis Latimer Plan for Digital Equity and Inclusion: https://nul.org/sites/default/files/2021-04/NUL%20LL%20DEIA%20041421%20Latimer%20Plan_vFINAL_1136AM.pdf

⁸ per 2019 American Community Survey, 5 year estimates (see full citation in Appendix I, A., 9.) of households without broadband of any type; additionally, are approximately 7,500 homes that have only a cellular data plan as a broadband subscription

⁹ [Fiber-to-the-Premises Implementation Plan, Prepared for City of Madison 2018 by CTC Communications](#)

¹⁰ City of Comprehensive Plan, Imagine Madison: [https://www.cityofmadison.com/dpced/planning/documents/Part%203_Comprehensive%20Plan\(1\).pdf](https://www.cityofmadison.com/dpced/planning/documents/Part%203_Comprehensive%20Plan(1).pdf); go to: Economy & Opportunity, Strategy 4, Action D.

Appendix I. Resources and Assets:

Relevant Digital Inclusion materials and Websites are listed below:

1. Expand access to low cost, high-speed internet service has been defined by the City of Madison as one of 4 key actions the City must take under “Strategy 4: Close the educational opportunity gap” under Economy and Opportunity of the City’s 2018 Comprehensive Plan provided as a framework for policy and urban development strategies. <https://www.cityofmadison.com/dpced/planning/plans/440/> ; go to Citywide Plans, Comprehensive Plan, Part 2
2. Dane County Wisconsin’s Digital Inclusion efforts: June 9, 2021, The Capitol Times: No connection available... https://madison.com/ct/news/local/govt-and-politics/no-connection-available-from-rural-towns-to-urban-madison-many-still-don-t-have-fast/article_75f59530-a689-5cb9-b40f-2a79f2dee4a9.html
3. Wis. Stat. Sec. 66.0422: <https://docs.legis.wisconsin.gov/statutes/statutes/66/iv/0422/2>
4. NDIA: the National Digital Inclusion Alliance: www.digitalinclusion.org/definitions/
5. American Library Association: Digital Literacy: <https://literacy.ala.org/digital-literacy/>
6. Map of MUFN: [City IT & UW-Madison: consider security]: <https://mufn.org/>
8. Madison Community Development Authority: see: <https://affordablehousingonline.com/housing-authority/Wisconsin/Community-Development-Authority-of-the-City-of-Madison/WI003>
9. Types of computers and internet subscriptions in the city of Madison WI in 2019, see: <https://data.census.gov/cedsci/table?q=internet&g=1600000US5548000&tid=ACSST5Y2019.S2801> on July 14, 2021 [from U.S. Census Bureau. (2021), Table ID S2801]; note: figure for homes without broadband access derived by taking 110,924 (estimated number of households), minus 97,411 (estimated number of households with any broadband access) to arrive at 13,513 households without broadband access; estimated households with cellular data plan but no other internet subscription (7,554), are counted under households with broadband access (these households are likely limited from full use of internet by relying on mobile device for connectivity)
10. Digital Health Divide Runs Deep in Older Racial and Ethnic Minorities: February 3, 2021: <https://www.fau.edu/newsdesk/articles/digital-divide-study.php>
11. Digital Divide Pilot Program Lessons Learned: <https://madison.legistar.com/View.ashx?M=F&ID=6654232&GUID=4A55B545-F53E-4A16-BF6E-BAE4289AE2E1>
12. UW-Extension Center for Community and Economic Development: Broadband Internet and the Wisconsin Economy: <https://economicdevelopment.extension.wisc.edu/broadband-internet-and-the-wisconsin-economy/>
13. Governor Evers Task Force on Broadband Access: report issued June 30, 2021: <https://psc.wi.gov/Pages/Programs/BroadbandGovernorsTaskForce.aspx>
14. “FCC Annual Broadband Report Shows Digital Divide Is Rapidly Closing”: FCC Fourteenth Broadband Deployment Report, January 2021: <https://www.fcc.gov/document/fcc-annual-broadband-report-shows-digital-divide-rapidly-closing>
15. **Interim** Treasury Guidance: State and Local Fiscal Recovery Funds: 8 pages: <https://home.treasury.gov/system/files/136/SLFRP-Fact-Sheet-FINAL1-508A.pdf>
16. The Lewis Latimer Plan for Digital Equity and Inclusion: 195 pages (collaboration sponsored by Nat.Urban League): https://nul.org/sites/default/files/2021-04/NUL%20LL%20DEIA%20041421%20Latimer%20Plan_vFINAL_1136AM.pdf
17. NC Digital Inclusion Plan Template: <https://www.ncbroadband.gov/assistance/digital-inclusion-template-guide>
18. Internet Service Provider Coverage by WI school district map: see: https://docs.google.com/spreadsheets/d/14g_XyH3izd9Km1Pn2Jr3T-ccNF_N0pNOGQr47qL-fdQ/edit#gid=1763400444
19. DANEnet: <https://www.danenet.org/>
20. <https://www.common sense.org/education/website/pear-deck>
21. Fiber-to-the-Premises Implementation Plan, Prepared for City of Madison 2018 by CTC Communications

Appendix II. First Draft Table of Digital Priorities retained for future reference

Table 2: Priorities and actionable steps to achieve them with community partners:

			Agency:							
			City	MMSD	Madison Public Library	MadisonCollege	DANenet	MUFN	YWCA	
Connect all residents to devices & networks needed to access the Internet:										
a. Connectivity:	Internet Access	1.1	Continue expansion of MUFN consortium in metropolitan area	• Mad. City govt City of Madison working collaborating with MUFN						
		1.2	Increase availability of low-cost Internet service for residents in affordable housing							
		1.3	Support initiatives to connect Community Development Authority (CDA) housing to the Internet							
		1.4	Increase Wi-Fi access in public spaces & continue to add Wi-Fi in City-owned facilities							
		1.5	Coordinate hotspot deployment with other agencies							
	Devices	1.6	Increase availability of low-cost devices and continue to fund device refurbishment programs that provide low-cost devices to low-income residents							
		1.7	Provide fix-it clinics & help residents understand & maintain their devices							
	Digital Literacy	1.8	Fund programs for low-income resident digital literacy training [diff needs for K12, older adults, ...							
		1.9	Applications... (maybe under "Devices"...?)							
Use technology to connect public to City government:										
2. Digital Engagement:	2.1	Increase government transparency by helping residents access City news, meetings, data, and records through technology solutions and build applications that make City data interesting & understandable								
	2.2	Support civic engagement by transforming how people participate in the democratic process by facilitating an interactive relationship between government and the public								
	2.3	Improve the effectiveness & efficiency of public communications by training agency customers on service-first communication and develop solutions that support centralized communications & a cohesive digital presence								
	2.4	Update City policies to reflect capabilities of current technologies								

	2.5	Evaluate policies about public comments and meetings to promote equity and access to City government							
	2.6	Prepare for a 311 system and streamline service delivery and standardize user experience across departments; provide transparency into resident requests							
3. User Experience:	Increase usability of digital services by developing modern, user-friendly solutions								
	3.1	Regularly update the City of Madison website to ensure that core sections of the City's website are cohesive and consistent and continue to build a unified digital identity	1						
	3.2	Consolidate and standardize applications and develop and implement style guidelines shared across systems; standardize infrastructure, functionality, user experience, and appearance	1						
	3.3	Simplify doing business with the City and continuously evaluate systems for ways to improve service design, website navigation, and user experience	1						
	3.4	Build for the future and reduce the number of accounts required for residents and other members of the public while exploring options for one centralized resident account	1						
4. Accessibility:	Increase equity and access to City services by improving accessibility of the City's web presence								
	4.1	Establish accessibility audits as a standard process; evaluate accessibility throughout projects and follow compliance standards including Section 508, the Web Content Accessibility Guidelines (WCAG) 2.1 and the Federal Plain Language Guidelines	1	1		1			
	4.2	Produce accessible video content and add captions to all videos; produce alternatives with Audio Descriptive Service for videos that have nonverbal content	1			1			
	4.3	Encourage and support efforts to use plain language; provide writing in plain language training and explore solutions to make it easier for content editors to evaluate the reading level of their content	1	1		1			
	4.4	Evaluate new technologies for accessibility support and capabilities and ensure that third-party software follows standards and best practices for accessibility and usability	1			1			

Appendix III. Outline of NC Dept. of IT, Digital Inclusion Plan Template & Guide retained for possible future reference [see: <https://www.ncbroadband.gov/assistance/digital-inclusion-template-guide>]

I. Collective Vision for Digital Inclusion in your Community

A. Vision Statement

B. Mission Statement

C. Values

D. Goals

1. Alignment with existing community goals and plans (including community and economic development goals/plans)
2. Digital inclusion specific goals

E. Objectives

II. Current State of Digital Inclusion and Digital Divide in your Community

A. Asset Inventory

1. Broadband assets
 - a. Mobile broadband
 - b. Fixed broadband
 - c. Public Wi-Fi or public access points
 - d. Wi-Fi mobile hotspot lending programs
 - e. Discount/low-cost offer programs
2. Digital literacy/skills opportunities
 - a. Organizations specializing in digital literacy training
 - b. Workshops
 - c. Courses
3. Individual support
 - a. Digital navigators
 - b. Tech support
4. Public computer access points
5. Computer/devices
 - a. Refurbished
 - b. Low-cost
 - c. K-12
 - d. Other
6. Other/Miscellaneous

B. Needs Inventory

1. Broadband availability
2. Broadband subscription
3. Broadband affordability
4. Computers/devices
5. Digital literacy/skills
6. Other

C. Partner Identification

D. Gap Assessment

III. Implementation: Achieving a Collective Digital Inclusion Vision in your Community

A. Strategies

1. Leadership
2. Sustainability
3. Holistic response
4. Prioritization

5. Necessary resources
- B. Timeline**
1. Short-term
 2. Near-term
 3. Long-term

Appendix IV. Mark's notes from [The Lewis Latimer Plan for Digital Equity and Inclusion](https://nul.org/sites/default/files/2021-04/NUL%20LL%20DEIA%20041421%20Latimer%20Plan_vFINAL_1136AM.pdf): 195 pages (collaboration sponsored by Nat.Urban League): https://nul.org/sites/default/files/2021-04/NUL%20LL%20DEIA%20041421%20Latimer%20Plan_vFINAL_1136AM.pdf:

National Urban League called upon dozens of experts in a wide range of fields and collected their recommendations for how America could use the tools of the information economy to create a more equitable and inclusive economy and society, solving the problem those same tools had, in part, created. The result is the Lewis Latimer Plan for Digital Equity and Inclusion. It is named for, and inspired by, the life of Lewis Howard Latimer (1848-1928), a Black American draftsman, who made groundbreaking contributions in his work with, among others, Alexander Graham Bell and Thomas Edison. Just as telephony and electricity changed the world in Latimer's time, digitization is changing ours, and we should act to assure that everyone has the opportunity to contribute to and benefit from that change. **"the three A's"—availability, adoption, and access to economic opportunity (p.4)** Exec.Summary: p.10-17

Chapter 1:

p.22-23: What are the critical gaps? We focus particular attention on four distinct but interrelated challenges. While the pandemic has shined a glaring spotlight on each of them, these gaps have persisted for at least the past decade: The **Availability Gap**. Broadband network availability is the most basic pre-requisite to achieving digital equity and inclusion. Unfortunately, millions of American homes, businesses, and other enterprises cannot connect to a broadband network capable of allowing them to fully participate in the economy, obtain an education and health services, train, search, and apply for a job, and otherwise participate in society. In Chapter 3, we propose a number of policies that, if implemented, would close this gap within three years. The **Adoption Gap**. Even among those Americans for whom a broadband network is available, there are still tens of millions who have not adopted broadband in their homes. In Chapter 4, we review the causes of that gap, including digital literacy and digital readiness, and how they can be overcome to assure that all families can both have and benefit from broadband in their homes. The **Affordability Gap**. For millions of Americans who do not subscribe to broadband, the cost of service remains an overwhelming obstacle to adoption. Though the current Lifeline program has been adapted to subsidize broadband for the poorest households, legacy features and other limitations of the program's basic design make it a poor fit as a long-term and sustainable solution. In Chapter 5, we propose more efficient funding and distribution mechanisms to close the affordability gap within three years through a new program we call Lifeline+. The **Access to Economic Opportunity and Participation Gap**. While the digital economy has created the greatest opportunity for wealth accumulation in history, those opportunities are not equitably distributed throughout society. This means that the jobs especially the higher paying technology industry have not been filled by Blacks and Latinxs in any significant way. The National Urban League's 2018 State of Black America Report found that of the 40,000 employees of four major Silicon Valley technology firms, only 1,000 were Blacks; the number for Latinx is paltry. Moreover, business inclusion and opportunity in the growing tech sector has lagged miserably for Blacks and Latinxs. In Chapter 6, we address ways that the public and private sectors, working together, can help close that gap

Chapter 2: THE ECONOMIC CASE FOR DIGITAL EQUITY AND INCLUSION: moral imperative but economic necessity

Chapter 3 Closing the Broadband Availability Gap

3.1. PROBLEM STATEMENT Despite a decade which saw private, public and hybrid organizations investing nearly \$2 trillion in broadband infrastructure, the unfortunate fact remains that millions of American homes, businesses and other institutions have no available option to connect to a broadband network capable of supporting full participation in the modern economy. That includes the ability to use the Internet to train, search, and apply for

employment, obtain an education and health services, and otherwise benefit from life in an increasingly digital society

p.32: By the end of 2021, the FCC should define the characteristics of Internet access that are necessary in order for a location to be considered as “served with broadband” and the minimum level of Internet service that government funds should support in efforts to bring broadband to an unserved area, based on reasonable prediction of excess capacity and future application requirements over the next 10 years, with “excess capacity” and “application requirements” to be defined by the FCC following analysis of user requirements for THE LEWIS LATIMER PLAN 33 current and emerging applications and their technical and utilization characteristics....

Additional goals of the FCC in 2022, 2023 & 2024 defined

p.34: BB availability also a persistent & unique problem for tribal lands; high build out costs, limited local resources & shortage of trained local professionals to aid deployment & use... & availability gap is greatest in lowest density areas

p.37: 3.6.2. ASSESSING THE AVAILABILITY GAP: WHERE ARE THE UNSERVED LOCATIONS AND HOW MANY ARE THERE? To assess the availability gap under a particular definition of “broadband,” policymakers need accurate and frequently updated data indicating where the unserved locations both are and will likely remain given expectations about future deployments, both subsidized and otherwise. **A process to generate such data is discussed in detail in Section 3.8.1** [p.42 – 47... which targets actions the FCC should take]

* graphic of “setting the floor” for speed requirements needed & then, the floor for subsidized deployments [**my concern here is speed requirements keep moving higher, so adjustable speed fiber seems like a wise goal...** “future-proof broadband” ... see graphic on p.40]

p.39: determining the cost of the availability gap; trade-offs between universality and quality

Chapter 4: Closing the Broadband Adoption Gap

the biggest divide remains that of adoption. The Federal Communications Commission estimates that at the end of 2019, the number of Americans with no available broadband service was less than 14.5 million, though other sources suggest the number may be as high as 40 million. Even at the higher end of that range, however, **the number of Americans with available service who do not subscribe to broadband is significantly greater.**

Extensive public and private surveys suggest that, since 2010, there are three principal causes of the adoption gap, broadly speaking: problems of affordability, digital readiness, and perceived relevance. The first is obvious. Thirty-four million Americans living below the poverty line struggle with the most basic necessities of life—rent, food, electricity and water, transit, and basic communications. Adding the cost of monthly broadband service makes adoption untenable, even as it becomes increasingly clear that Internet service is more a necessity than a luxury.

The Communications Act of 1934 and the Telecommunications Act of 1996 both articulate a vision for communications policy that has taken on renewed importance today: universal and affordable communications services that are widely available.

Goals: (p.56)

1. By the end of 2023, all K-12 students should be active users of broadband services at home that enables them to attend virtual classes and complete their homework. They should also have devices capable of facilitating all learning activities.
2. By the end of 2023, all low-income persons on government health plans should be active users of broadband service in their residence that enables them to access the full range of telehealth services.
3. By the end of 2023, all persons who become unemployed should be active users of broadband service in their residence that enables them to engage in job training, job searching and applying for a job.
4. By the end of 2021, the Federal Government should establish an Office of Digital Equity (discussed further below in Section 4.5.1) with a mandate to coordinate across agencies and initiatives to increase home broadband adoption, and otherwise advocate for policies designed to achieve digital equity and inclusion.
5. By the end of 2023, all Americans should have access to programs and services that enable persons to be digitally ready

Discussion of ways to close the digital readiness gap; p.61 – 64

Chapter 5: Closing the Affordability Gap p.69