DIGITAL EMPOWERMENT and AMERICA'S LIBRARIES

From getting an education and securing employment to filing taxes and staying in touch with family, broadband access, adoption and use are increasingly essential to every aspect of life. Yet 33 million U.S. households do not use the internet at home, and nearly twice that number have low levels of digital readiness. Low-income families, rural residents, African Americans, Latinos, and people with disabilities are disproportionately impacted by digital opportunity gaps. The leading reasons for these gaps are lack of awareness of the benefits of broadband, affordability, and lack of digital literacy. America's libraries—120,000 strong—are essential to addressing these gaps and realizing the vision of universal broadband adoption and ability to use.

Libraries work in our communities to: (1) spur home adoption by increasing awareness of and confidence in using online resources and services, (2) provide internet access at the library for those who lack home broadband, and (3) support digital learning opportunities that empower entrepreneurship, job retraining, and widespread use of emerging applications and devices. Decision makers at the White House, the Federal Communications Commission (FCC), the National Telecommunications & Information Administration, the U.S. Congress, and other public and private entities should look to libraries as critical players to make broadband work for everyone. ▶

Promoting widespread broadband adoption

Libraries boost digital skills and provide broad-ranging services to patrons beyond free access to the internet. Library professionals train people on digital skills, which boosts users' confidence and makes the internet more relevant to their lives. Nearly 90% of libraries offer digital literacy training, and a significant majority support training related to using new technology devices (62%), safe online practices (57%), and social media use (56%).

Libraries also help to make the case for broadband adoption. Through myriad programs and outreach, libraries increase awareness of the benefits and advantages afforded by new technologies. Also, the American Library Association (ALA) and libraries advocate for efforts like the recent Lifeline modernization to apply subsidies to broadband costs for low-income Americans.

Leveraging high-speed broadband

From videoconferencing to hackathons to 3D printers, today's libraries empower people to create, collaborate, and learn new digital skills. People also use libraries to access vital services and information online—do schoolwork, file their taxes, research health concerns, and explore our world. Many of these services are now only available online. Affordable high-speed broadband is essential to provide modern library services, and yet it is not available to all libraries at speeds they need or costs they can afford.

Affordable, high-speed (i.e., gigabit speeds and higher) connectivity has been a game changer for Ohio's Cuyahoga County Public Library (CCPL). Before its upgrade, internet usage at multiple branches was so high that CCPL had to schedule digital trainings and programming when they knew public internet access would be low—there was not enough bandwidth to do both at the same time. Now, most of CCPL's 500+ public

"**What's so exciting about the GigLab project is that its impact isn't limited to one classroom, one school, or even one organization—everyone is invited into this space to use this incredible technology and to access this amazingly fast connection,**" said Mozilla Community Catalyst, Lindsey Frost Cleary.

access computers are in continual use, and the library offers services that include a community recording studio and innovation centers for entrepreneurs.

The Chattanooga (Tenn.) Public Library, with city government, has used its gigabit broadband to create an open data platform. They host all city data and enable citizens, developers, non-profits, and researchers to track progress on community goals and create useful applications. Mayor Andy Berke sees open data as a way to spur civic innovation and economic growth. The collaboration is one among many in development through the library's GigLab, in partnership with the Mozilla Foundation, the National Science Foundation and others.

Expanding Wi-Fi access

Libraries across the country use Wi-Fi in diverse ways. The Poultney (Vt.) Public Library expanded its popular Wi-Fi service into an internet zone for the downtown district, connecting residents to the internet regardless of library hours and space limitations, and showcasing local businesses and organizations. Across the country at the Young (Ariz.) Public Library, U.S. Forest Service fire watchers in the community of 700 bring their laptops to the library and connect to the Wi-Fi to monitor and report on incidents.

Wi-Fi exponentially increases the library's capacity to serve the public beyond its wired desktops—powering patron's handheld devices and laptops inside the library and on the road with mobile training labs and pop-up library programs, connected through Wi-Fi. Libraries from suburban Michigan communities to Philadelphia report that Wi-Fi usage doubled in only two years' time. In libraries, as in society at large, we see major opportunities to support the growth of connection technologies like Wi-Fi.

Getting up to speed

The FCC established broadband goals of 100 Mbps for smaller libraries and 1 Gbps for larger libraries, but too many libraries fall short. Today, about 40 percent of public libraries have subscribed speeds of 10 Mbps or less—closer to average home broadband speeds than what is needed for a complex, multi-user environment.

Broadband prices also can be excessive, particularly for rural libraries. For example, one Idaho library pays

about $1,300 monthly for wireless 5 Mbps service. The only other option for internet at this library is dial-up. In contrast, a suburban library near Boise pays $750 per month for 40 Mbps broadband. More than one-third of public libraries (and 41% of rural libraries) cannot offer better broadband because they subscribe to the maximum speed available in their area. Improving rural broadband access is essential.

The federal E-rate program provides critical funding for public libraries to upgrade and sustain broadband connections. As part of the FCC E-rate modernization process, ALA successfully advocated for increased support and more options for deploying high-speed broadband to libraries and schools. ALA continues to work with libraries and the FCC to make best use of E-rate funding and share best practices to boost broadband capacity.

Upskilling and lifelong learning

Those who receive formal digital literacy training (as opposed to informal assistance from family or friends) are significantly more likely to use the internet to pursue economic opportunities and cultivate social ties. For example, nearly 600 people who took part in New York State Library's "Broadband Express @ your library" program went on to secure employment.

Lifelong learning is essential in the Digital Age. Employers consistently report they face major skills shortages, and millions of jobs remain unfilled in the United States. Diverse library training opportunities advance upskilling efforts where people retrain for other opportunities.

Libraries also connect digital learning with small business development. Offerings include using social media and search engine optimization like Red Mountain Library's (Ariz.) "Google My Business" seminar to coding and web design classes like those at the Lexington (Ky.) Public Library. "I thought I knew how to use the internet," said home business owner Jonathan Helf, who completed a series of marketing classes at the Octavia Felling Public Library (N.M.). "(The programs) opened my eyes to a whole new world."

Technology will continue to evolve. In concert, new services and opportunities will emerge. Libraries are well-positioned to assist people in learning about new technologies and how they may be harnessed for improving daily life.

Libraries are partners in public-private initiatives like the U.S. Department of Housing and Urban Development's ConnectHome Initiative to narrow the digital divide for families with school-age children who live in public housing. Libraries have provided training and access to digital services that families need in 28 pilot communities—and beyond.

Preserving the Open Internet

America's libraries are steadfast advocates for fast, affordable, fair, and neutral wired and wireless networks. Libraries collect, create, and disseminate essential information impartially to the public over the internet, and ensure our users can access the internet and create and distribute their own digital content and applications. Preserving the Open Internet is key to our nation's freedom of speech, educational achievement, and economic growth. ■

TAKEAWAYS for decision makers ▶ ▶ ▶ ▶ ▶ ▶ ▶ ▶ ▶ ▶

- Libraries maximize expert staff and technology infrastructure to boost Americans' awareness of the benefits of broadband adoption and the digital skills needed to thrive online.

- Affordable, high-speed broadband is essential infrastructure in the digital age. Libraries serve as vital community anchor institutions that advance digital opportunity and should be connected in and through Gigabit Opportunity Zones and similar efforts.

- Federal policymakers should promote investment and growth through initiatives that strengthen existing Wi-Fi spectrum designations, free up new frequencies for Wi-Fi, and establish transparent and predictable rules for Wi-Fi spectrum.

- Federal and state policies must further the promise of E-rate modernization, as well as promote competition that enables local choice among broadband providers to meet growing digital demands. Where choice or competition are not realistic the federal and state governments must take actions to ensure affordable Internet connectivity for all.

- Libraries need strong Open Internet rules to serve our communities.

ABOUT AMERICA'S LIBRARIES

The 120,000 libraries across the United States are a powerful force in addressing public policy priorities. Libraries advance Education, Employment, Entrepreneurship, Empowerment, and Engagement for Everyone, Everywhere—The E's of Libraries®.

Libraries serve America's cities, towns, counties, and states; on school and college campuses; on military bases; in hospitals, government agencies, corporations, and other institutions. Library professionals provide diverse programs, services and resources tailored to community needs.

The American Library Association (ALA) is the oldest and largest library association in the world, with more than 58,000 members. The ALA Annual Conference, held in June, typically attracts over 20,000 participants. ALA maintains a Washington Office to engage federal and national decision makers and influencers.

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ALA American Library Association