

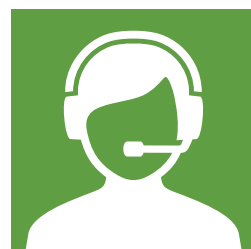
# 2023



## Public Library Technology Survey



### SUMMARY REPORT



# Acknowledgments

## Report authored by:

**Sara S. Goek**, Project Manager, Data and Research, PLA

## with contributions from:

**Larra Clark**, Deputy Director, Advocacy, PLA

**Katina Jones**, Program Manager, Evaluation and Assessment, PLA

**Members of the Measurement, Evaluation, and Assessment Committee**, PLA

## data analysis by:

**Karen Drill**, The Drill Consulting Group, LLC


## and design by:

**Karen Sheets de Gracia**, Karen Sheets Design, Inc.

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**Public Library Association**

A division of the American Library Association

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2024

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# Executive Summary

Public libraries have long played a critical role in providing access to information to facilitate learning and civic engagement. As information mediums have evolved, so too have libraries. The 2023 Public Library Technology Survey results shed light on the current state of technology resources, services, infrastructure, and staff in U.S. public libraries. Key findings include:



**Almost half of libraries (47%) offer hotspots for checkout, an increase from 2020.**



**About a quarter of libraries (25%) have digital media production equipment and over one-third (40%) have maker production equipment.**



**95% of public libraries offer some kind of formal or informal digital literacy training.**



**95% of libraries offer e-books and/or e-audiobooks and 58% offer streaming and downloadable media for patrons.**



**Federal funding is critical to supporting library technology needs: more than half (52%) of libraries applied for the E-rate program either individually or as part of a consortium.**



**Subscription costs or payment terms are the top factor influencing libraries' ability to offer digital content (selected by 86% of libraries overall).**

A variety of data collection efforts have tracked the evolution of library technology services over time. The American Library Association's (ALA) first survey on public libraries and technology access was administered in 1994. The federal Public Libraries Survey (PLS) added questions about electronic technology and internet access in FY 1995. The Public Library Association's (PLA) Public Library Technology Survey took its current form in 2020, drawing inspiration from earlier studies and complementing the questions now asked on the PLS.<sup>1</sup>

The 2020 survey took place during the COVID-19 pandemic, though that was neither its original intent nor focus. It highlighted the ways libraries used technology services to extend their reach beyond physical buildings, such as by offering streaming online programs and hotspots for checkout. The 2023 results shed light on changes wrought by the pandemic and emergence from it. Across the board, the technology resources and services libraries offer have expanded in the last three years.

This was facilitated at least in part by legislation responding to the COVID-19 pandemic, including the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) and American Rescue Plan Act (ARPA), both of which provided federal funding to public libraries via the Institute of Museum and Library Services (IMLS) and state library administrative agencies, as well as local government entities. Future iterations of this survey in 2026 and beyond will continue to document changing needs and emerging technology trends in public libraries.

## About the Survey Data

PLA fielded the Public Library Technology Survey in fall 2023. It is one of a set of three topical surveys administered on a rotating annual basis. The Measurement, Evaluation, and Assessment Committee decided to make minor changes in 2023 to reduce survey burden and ensure the data collected meet current needs in the field. See [Appendix C](#) for a reference copy of the survey.

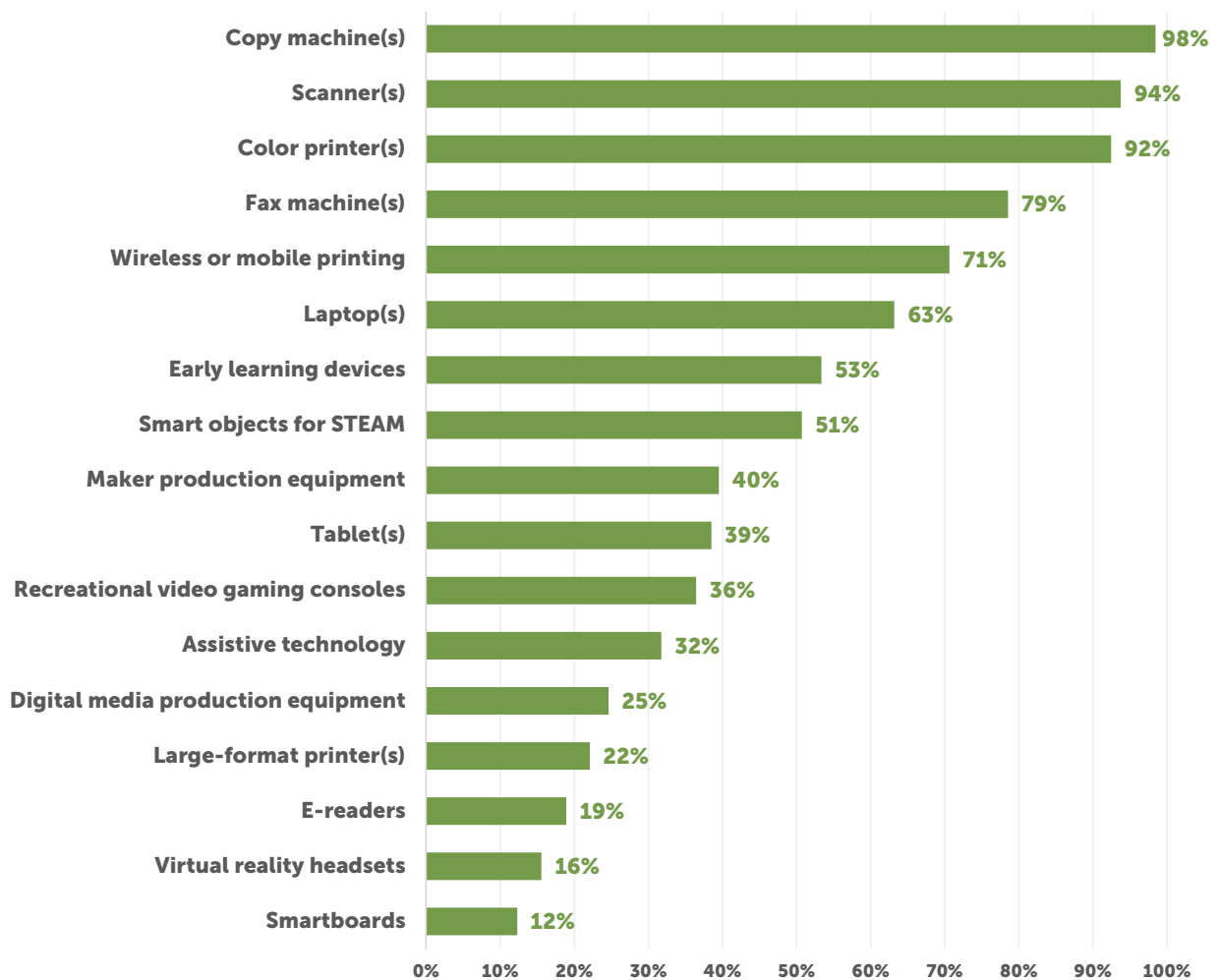


The survey methodology changed between 2020 and 2023. In 2020, the American Institutes for Research administered the survey on PLA's behalf and used a nationally representative sample. Starting in 2021, PLA has administered its annual surveys in-house via the Benchmark platform ([librarybenchmark.org](https://librarybenchmark.org)), opening them to all public libraries nationwide and weighting the results in post-processing to ensure they are representative. In 2023, PLA invited all U.S. public libraries (at the administrative entity level as defined by IMLS) to participate in the Technology Survey. In total, 1,511 libraries completed the survey, a response rate of 16.4%. The results presented below are weighted to account for differences between the responding libraries and the universe of all U.S. public libraries. All questions on the survey were optional, and the tables in the [Detailed Results](#) section include the number of respondents for each question. The percentage estimates reflect the percentage of respondents for a particular question, rather than the percentage of the full sample. See [Appendix A](#) for further details of the methodology.

The charts and tables below highlight responses for public libraries overall and by locale type. Locale indicates the level of urbanization of a given location, with libraries divided into the categories of city, suburban, and town/rural. While city libraries are a small proportion (6%) of all administrative entities (AEs), they serve a large share of the U.S. population (37%). Suburban libraries are 25% of AEs and serve 41% of the population. Town/rural libraries make up the majority of AEs (69%) but serve only 22% of the population.<sup>2</sup>

## Public Access Technology

Public libraries provide patrons with access to a wide range of technology devices both in their buildings and for use off-site, and they facilitate access to online resources. While older technologies like copy machines, color printers, and scanners are almost universally available, newer technologies are less so ([Figure 1](#)), particularly in town/rural libraries compared to their city and suburban



**Figure 1: On-Site Technology (overall).** See [Table 1](#) for detailed results by locale.

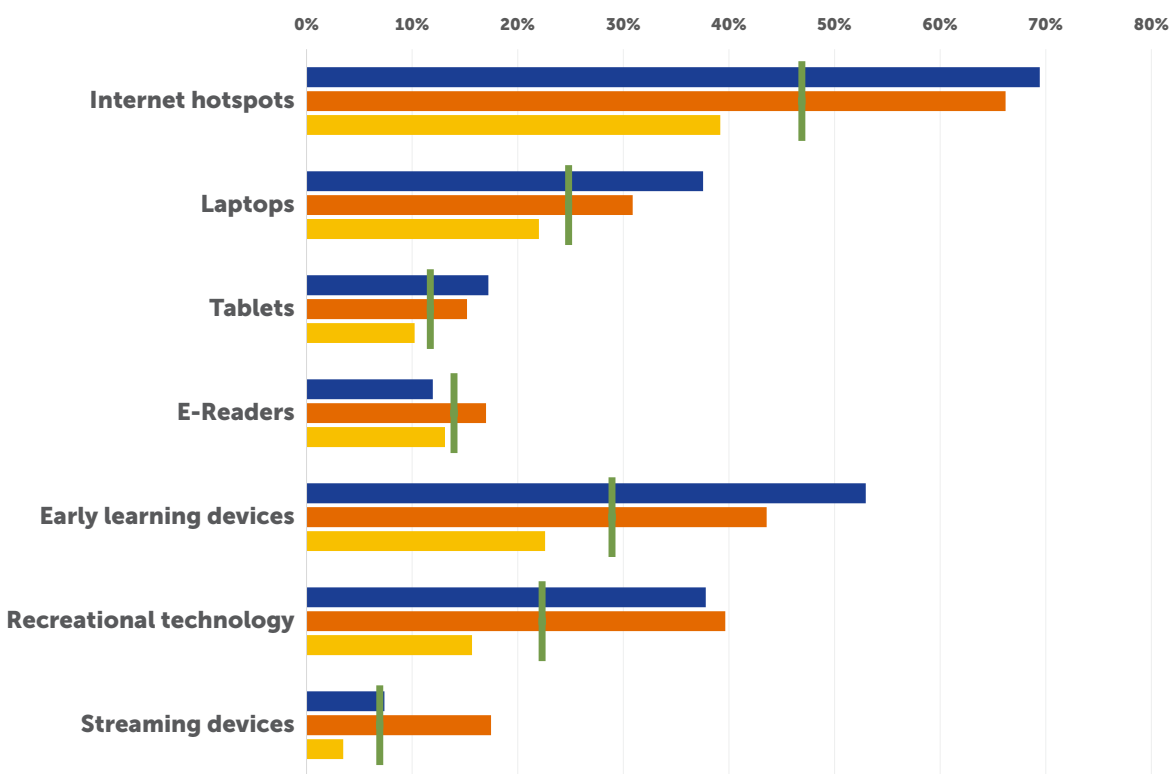
counterparts (details in [Table 1](#)). Maker production equipment (including 3D printers, carving or engraving tools, or sewing machines) is available in 39.5% of libraries overall, but in 74.8% of city libraries compared to about half (50.8%) of suburban libraries and one-third (33.5%) of town/rural libraries. Digital media production equipment (including hardware and software for audio or visual creation or editing) is available in 24.6% of libraries overall, 58.9% of city, 38.2% of suburban, and 18% of town/rural libraries. Since 2020, the proportion of libraries offering laptops, early learning devices, recreational video gaming consoles, and smart objects for STEAM has increased by more than 10%.

PLA's surveys focus on the types of resources and services libraries offer, complementing data captured in the annual IMLS Public Libraries Survey (PLS). The PLS includes counts of the number of public internet computers libraries have and their total annual uses, as well as Wi-Fi sessions and website visits. In FY 2022, the most recent year for which PLS data is available, on average libraries had 31 public computers each and those computers were used an average of 9,230 times per year. These

figures are much higher in city and suburban libraries than town/rural libraries, commensurate with their larger populations. However, per person in the library’s service area, the average rates of usage are higher among town/rural libraries.<sup>3</sup>

Technology lending garnered much attention during the pandemic. In the last three years the proportion of libraries circulating internet hotspots and laptops has increased (Figure 2). 46.9% of libraries overall now offer hotspots, compared to 32.6% in 2020. One respondent commented that hotspots are both “a wonderful thing and a difficult service to manage.” They can get lost or damaged and may be subject to data limits. Nonetheless, they can have a transformational impact for patrons, particularly in areas with limited broadband service or for households that struggle to afford the service.

24.8% of libraries circulate laptops for off-site use, compared to 16.7% in 2020. The proportion circulating tablets and e-readers has decreased slightly. PLA added three new items to this question about devices for off-site use, based on open-ended responses to the “other” option on the last survey. In 2023, 28.9% of libraries circulate early learning devices, 22.3% circulate recreational technology (e.g., action camera kits, gaming consoles, and coding robots), and 6.9% circulate streaming devices. In three areas—e-readers, recreational technology, and streaming devices—suburban libraries stand out as being the most likely to circulate these technologies for off-site use.



**Figure 2: Off-Site Technology.** See [Table 2](#) for detailed results.

■ City ■ Suburban ■ Town/Rural ■ Overall

## Hotspot Lending

**Result:** 46.9% of public libraries circulate internet hotspots for offsite use by patrons.

**Why it matters:** Reliable access to the internet is increasingly important for daily life, from paying bills to completing schoolwork, applying for jobs, reading the news, or simply browsing. Based on the most recent data available from the Census Bureau’s American Community Survey, 8.8% of U.S. households have no internet subscription, and among the 91% that do, 11.2% rely on a cellular data plan, with only 75.9% having broadband such as cable, fiber optic, or DSL. Low-income households are more likely to lack an internet subscription: as of 2022, 24.7% of households with annual incomes under \$20,000 are without an internet subscription, compared to only 3.3% of households with annual incomes over \$75,000.<sup>4</sup> According to a recent Federal Communications Commission (FCC) report, fixed broadband has not been deployed to approximately 7% of the population, with people in rural and Tribal areas more likely to lack access.<sup>5</sup>

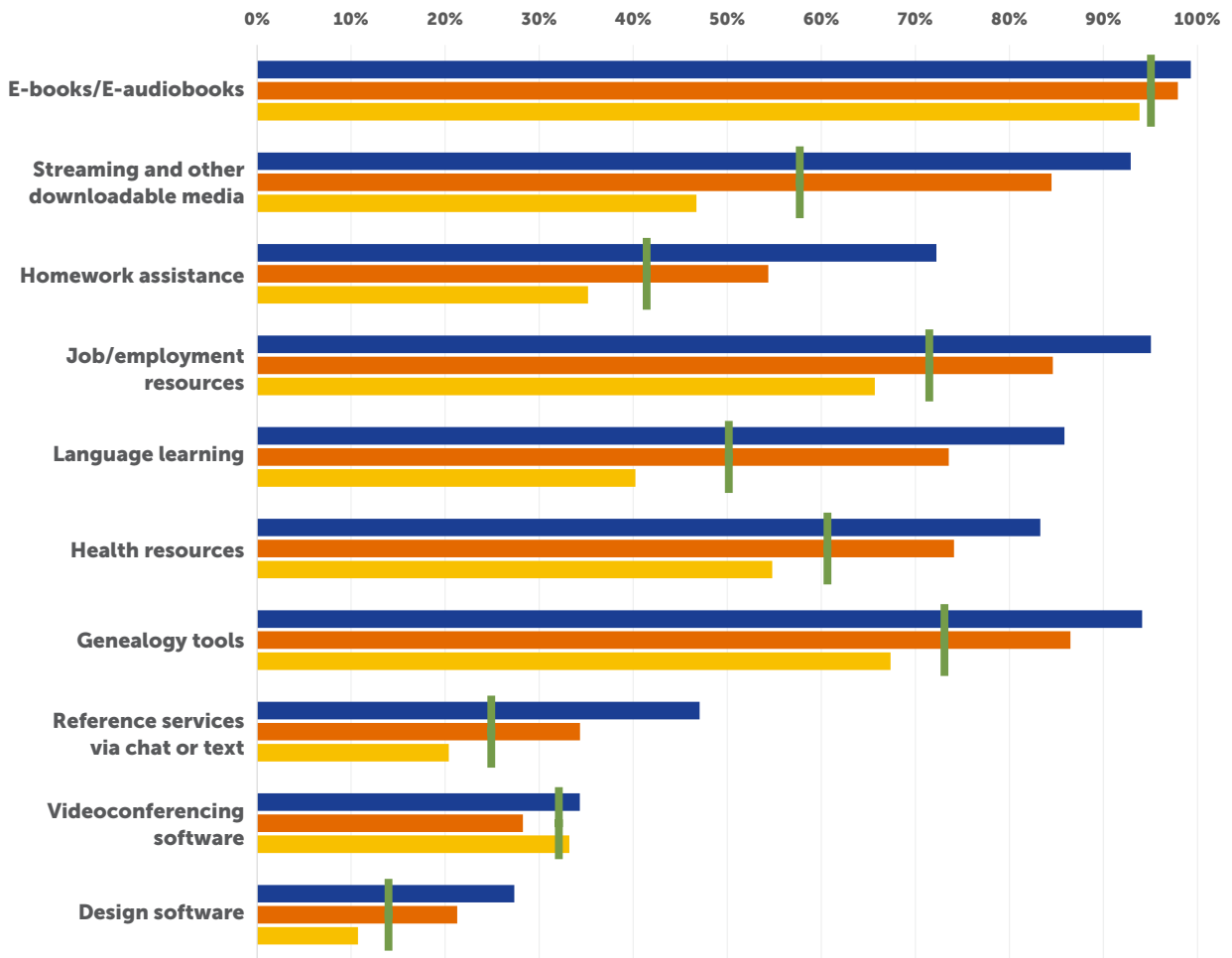
**In practice:** Libraries are leaders in providing internet access for their communities and empowering patrons to participate more fully in the digital world. That includes everything from public computers and Wi-Fi connections in library buildings, to training in digital skills, assisting patrons with getting connected at home, and hotspot lending. Research has shown that hotspots can make a difference in the lives of patrons, particularly those who cannot afford home broadband subscriptions or who live in areas where physical broadband is unavailable.<sup>6</sup>

To learn more about starting a mobile hotspot lending program, check out the “[How to Hotspot](#)” guide for libraries produced by an IMLS-funded Rural Hotspots grant project at the University of Texas at Austin. PLA has also created a “[Hotspot Playbook](#)” with guidance on implementing new hotspot lending programs. Find out more about federal funding for digital equity initiatives in libraries [from ALA](#).<sup>7</sup>

**Challenges:** Prohibitive costs, waiting lists for checkout, and damaged, lost, or defective devices can make hotspot lending programs a challenge. An anticipated July 2024 FCC ruling will address whether libraries can use E-rate funding for hotspots, which may help with the cost issue. Over half (63%) of state library administrative agencies also fund or facilitate library access to Wi-Fi hotspots, according to the most recent SLAA Survey.<sup>8</sup>







**Figure 3: Technology-Enabled Services and Online Resources.** See [Table 3](#) for detailed results.

■ City ■ Suburban ■ Town/Rural ■ Overall

As well as devices, libraries provide patrons with access to online resources and services (**Figure 3**). The most common are e-books and e-audiobooks, which 95% of public libraries offer. Almost three-quarters of libraries provide job or employment resources (71.5%) and genealogy tools (73.1%). While at least half offer streaming or other downloadable media services and language learning, the largest disparities by locale show up in these areas: 92.9% of city libraries offer streaming or downloadable media, compared to 46.7% of town/rural libraries, and language learning resources are available to patrons in 85.9% of city libraries, compared to 40.2% of town/rural libraries.

The survey also asked about mobile access to library services. 85.1% offer vendor-delivered apps for patrons to access library services. These include apps like Libby, Hoopla, and Beanstack. A much smaller proportion (28%) have mobile apps created specifically for the library. 83.3% of libraries overall say their website is optimized for mobile devices, with a relatively small difference by locale (details in [Table 4](#)).

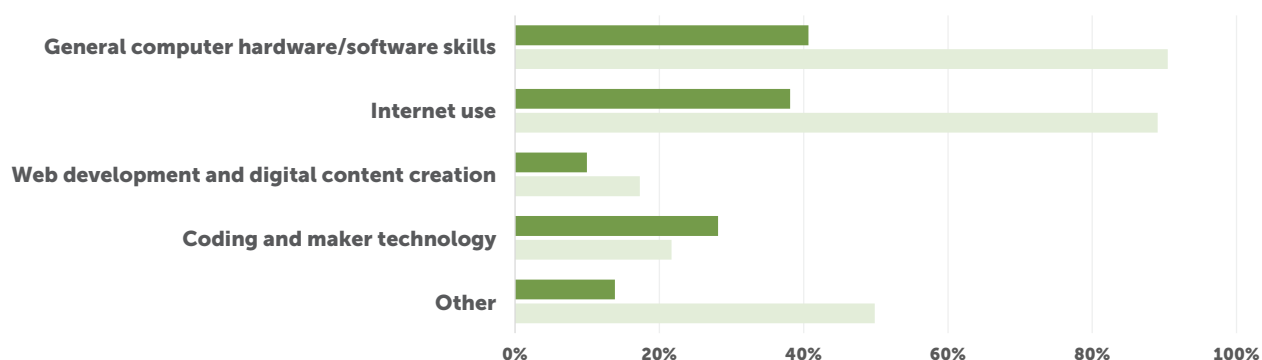
17.3% of libraries overall conduct technology-based mobile outreach in their communities (including 43.3% of city, 27.6% of suburban, and 12.3% of town/rural libraries). On the 2022 Services for Strong Communities Survey, only 2.7% of libraries reported that they have a dedicated cybermobile or mobile technology lab, suggesting that outreach may primarily rely on less formal facilities, such as staff carrying devices with them or using technology available at the outreach location.<sup>9</sup>

## Digital Literacy and Training

Digital inclusion encompasses not only access to devices and the internet, but education and digital literacy skills. Public libraries are well-positioned to help their community members learn to use technology and the internet effectively. 95.3% of libraries provide at least one type of digital literacy training. The survey asked about training in five areas:

- **General computer hardware/software** (e.g., how to use a mouse and keyboard, word processing, streaming devices);
- **Internet use** (e.g., web searching, online databases, social media, privacy and safety online);
- **Web development and digital content creation** (e.g., website creation, audio/visual content creation);
- **Coding and maker technology** (e.g., programming, robotics, 3D printing); and
- Other, including assistive technology, video conferencing, or other types of training.

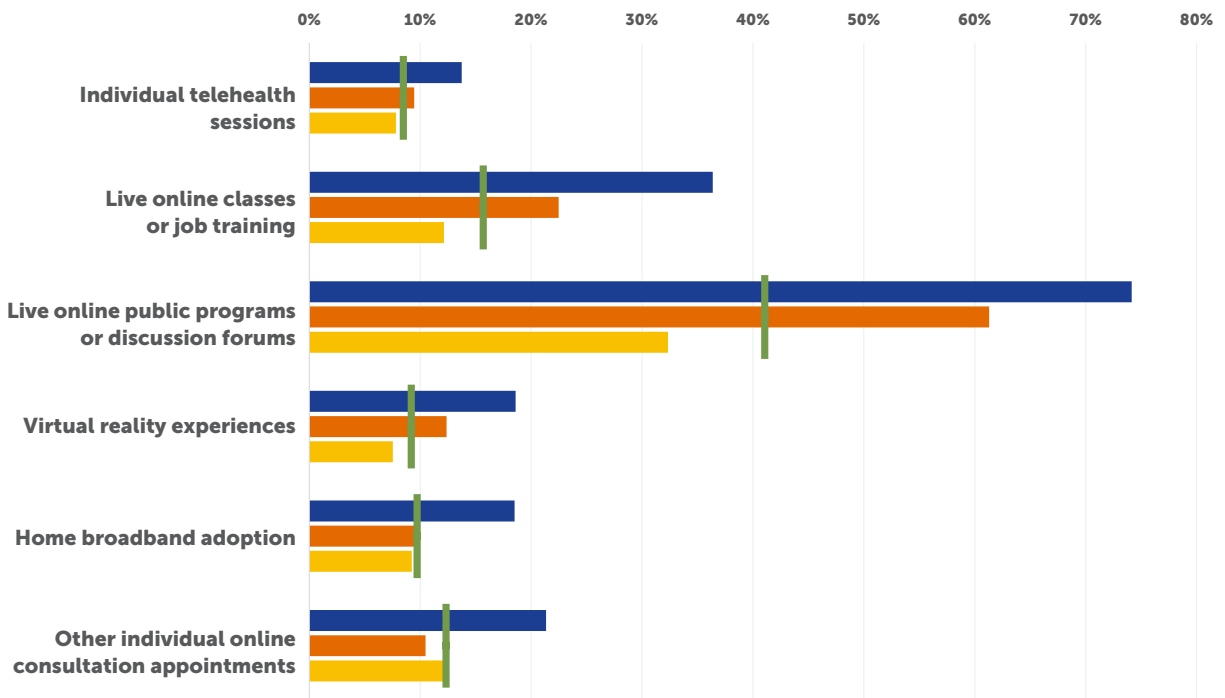
Training can mean formal programs, classes, or appointments, or informal, point-of use training, and libraries may offer both types. **Figure 4** shows the prevalence of formal and informal digital literacy training overall. In general, the basic types of training (general computer skills and internet use) are common among libraries of all locale types, while specialized topics (web development and coding) are found more in city and suburban libraries than in their town/rural counterparts (see detailed results in [Table 6](#)). Informal training is more common, except in the case of coding and maker technology training, which is more likely to be formal.



**Figure 4: Digital Literacy Training.** See [Table 6](#) for detailed results.

■ Formal ■ Informal

In 2020, the survey question about technology-enabled or online programs or services highlighted the impact of the pandemic. At the time, almost half (48.7%) of libraries offered streaming programs and 42.6% offered online discussion forums. In 2023, 41.1% of libraries offered streaming programs and/or online discussion forums (Figure 5). While many libraries continue to offer virtual programming, the slight decline suggests a renewed focus on in-person programming. Specialized online programs and services are less common overall: 15.7% of libraries have live online classes or job training, 12.3% hold individual online consultation appointments, and less than 10% offer telehealth sessions, virtual reality, or home broadband adoption services.



**Figure 5: Formal Technology-Enabled Programs and Services.** See [Table 7](#) for detailed results.

■ City ■ Suburban ■ Town/Rural ■ Overall

The 2023 survey included a new question about whether libraries have a digital navigator program. The National Digital Inclusion Alliance (NDIA) defines **digital navigators** as “individuals who address the whole digital inclusion process—home connectivity, devices, and digital skills—with community members through repeated interactions.”<sup>10</sup> Overall, 29.7% of libraries indicate they have a digital navigator program, including 42.1% of city, 34.4% of suburban, and 27.3% of town/rural libraries. However, a follow-up question asked respondents to provide details of their program and those comments suggest the percentages may be overestimates. Respondents describe services to provide technology assistance to patrons, but not all those services meet the definition of digital navigation. In some states, including **California** and **Arizona**, the state library administrative agency provides or manages digital navigator services.<sup>11</sup>

## Digital Navigators

**29.7% of libraries report that they offer a digital navigator program, though only 12.1% indicate that they have staff dedicated as digital navigators.**

The examples below—included with the respondents' permission—illustrate how libraries of all types and sizes work to meet their communities' digital inclusion needs.

If your library is interested in starting a digital navigator program,

resources from the [National Digital Inclusion Alliance](#) and [Urban Libraries Council](#) can help you learn more.<sup>12</sup>



**Columbus Metropolitan Library** in Ohio is a city library with 23 outlets serving a population of almost one million. The guiding principles the library developed for its Digital Navigators program are: “In order to get tech help, customers needed to feel safe, not judged; to be seen and not rushed; and to feel help is abundant, not scarce.” As the program has evolved, all adult services staff have received training in digital inclusion support and a dedicated Community Support Center focuses on more in-depth questions. To assess patron access, connectivity, and skills, staff consider: What does the patron say their need or goal is? What barriers get in the way of accomplishing that goal? What other needs might the patron have that are related, but unexpressed? What doesn't the patron know that it would help them to know?<sup>13</sup>

**Manchester-by-the-Sea Public Library** in Massachusetts is a single-outlet suburban library serving a population of over 5,000, of which a large proportion (22%) is over age 65. The library's staff regularly assist patrons with digital inclusion needs in one-on-one appointments or at designated drop-in sessions. Patrons using these services frequently ask for assistance with new devices or apps. A challenge the library has faced is that “people want help in the moment and that need cannot always be met” at that time or for that specific issue. However, this valuable service has enabled the library to “build rapport with repeat patrons who continue to increase their digital knowledge bank as time goes on.”



**Smyth County Public Library** in Virginia is a town/rural library with three outlets serving a population of about 30,000. In summer 2023 the library received a grant from the state's Office of Broadband in the Department of Housing and Community Development to pilot a digital navigator program in rural, underserved areas. Promoting it through word-of-mouth advertising and one-on-one assistance worked best for their community. They found that “developing a relationship of trust through repeated appointments is the key to unlocking patrons' eagerness to learn and explore.” The digital navigator model worked well, but the final report on the pilot program notes, “achieving digital equity in Smyth County will require a sustained, in-depth educational effort.”<sup>14</sup> The library continues to offer digital navigation services with one staff member and intends to seek funding for additional staff to grow the program and its outreach to areas where transportation is a barrier to accessing library services.

Another new question on the 2023 survey asked about libraries' involvement in digital equity planning. 14% of libraries overall indicate they are involved in their state's digital equity planning and 19.7% are involved in other digital equity or inclusion coalitions at the local, state, or regional level (see [Table 9](#) for detailed results).<sup>15</sup> With \$2.75 billion in federal funding available for state planning and implementation, as well as competitive grants through Digital Equity Act programs, this data informs PLA and ALA advocacy and resource development to support the role of libraries as digital equity hubs.

An open-ended question on the survey asked about new or emerging technologies for which libraries are developing or considering developing digital literacy assistance or training in the coming year. Of the 336 libraries that responded (excluding those who entered none or N/A), themes that emerge include:

- **artificial intelligence** (61%, n=204),
- **virtual reality, particularly for job training** (17%, n=58),
- **content creation and maker technologies**, including 3D printing, and digital media (10.7%, n=36), as well as
- **seeking partnerships and grant funding**, particularly related to telehealth, open data and job training efforts (15%, n = 50).



In the case of AI, overall, the comments suggest active engagement with the topic. Many respondents are planning or already offer programs and classes aimed at educating patrons about AI, covering the basics, implications, and practical uses in daily life or professional settings. Some libraries are exploring AI's potential applications within library services, including operations and digital literacy training.

Another open-ended question asked respondents to identify the greatest challenges their libraries face in providing digital literacy assistance or training. Of the 1,011 libraries that responded (excluding those who entered N/A), the five overarching challenges identified are:

- **Limited staff capacity** (54%, n=550), including not having enough staff or staff time, restricts libraries' ability to assist and train patrons.
- **Insufficient funding or resources** (39%, n=392) can hinder libraries' ability to invest in and sustain digital literacy programs, to purchase technology, and to hire qualified staff.
- **It can be difficult to reach underserved populations** (29%, n=300), including non-English speakers, low-income individuals, patrons with disabilities, seniors, or rural residents. Disparities in access present a persistent challenge as libraries try to meet digital equity needs.
- **Lack of staff expertise or training** (27%, n=276) can hinder libraries' ability to offer technology programs and services to meet patron needs. Rapid advancements in areas like AI can make it challenging to keep up and provide up-to-date programs and assistance.
- **Technological and spatial barriers** (17%, n=169) include outdated equipment, old buildings, and limited internet connectivity.

These issues range from financial constraints to community engagement barriers and addressing them will not be easy. Nonetheless, the survey results demonstrate how libraries already work to advance digital equity in their communities. The open-ended responses suggest active interest in continuing and expanding that work even in the face of challenges.

## Infrastructure

The questions in the infrastructure section of the survey focus on the libraries' internet connections, factors affecting connectivity, and recent improvements to the network and physical devices. Overall, 74.8% of public libraries have a fiber optic internet connection, though this is more common in city (86.6%) and suburban (78.6%) libraries than town/rural libraries (72.8%). This represents a ten percent increase from 2020. Almost all public libraries (99.4%) offer Wi-Fi internet access to patrons.

A set of three questions asked respondents to report the download and upload speeds at which the library subscribes for its public access Internet connection, as well as the results of tests of the download and upload speeds on wired connections and Wi-Fi. The results show that the average speeds city libraries subscribe to are over three times that of town/rural libraries and about twice that of suburban

libraries. More concerning is the proportion of public libraries whose connection speeds do not meet minimum federal standards for broadband. Until March 2024, FCC's standard was a minimum speed of 25 Mbps download and 3 Mbps upload. 5.6% of libraries overall (and 7.1% of town/rural libraries) report a subscribed download and/or upload speed that falls below that threshold. In March 2024 the standard changed to 100 Mbps download and 20 Mbps upload.<sup>16</sup> 28.4% of libraries overall (and 35.4% of town/rural

libraries) subscribe to internet connections that do not meet the new federal definition of broadband. While subscribed speeds represent an ideal maximum, speed tests provide a snapshot of a user's experience of the connection. The survey instructions recommended that respondents run the tests at their central library (if the library has multiple branches) during regular service hours. The results would vary depending on the time of day, the number of people using the network at the time, or the distance from a router for Wi-Fi. The results of the speed tests are considerably lower on average than the subscribed speeds (see [Table 12](#)).

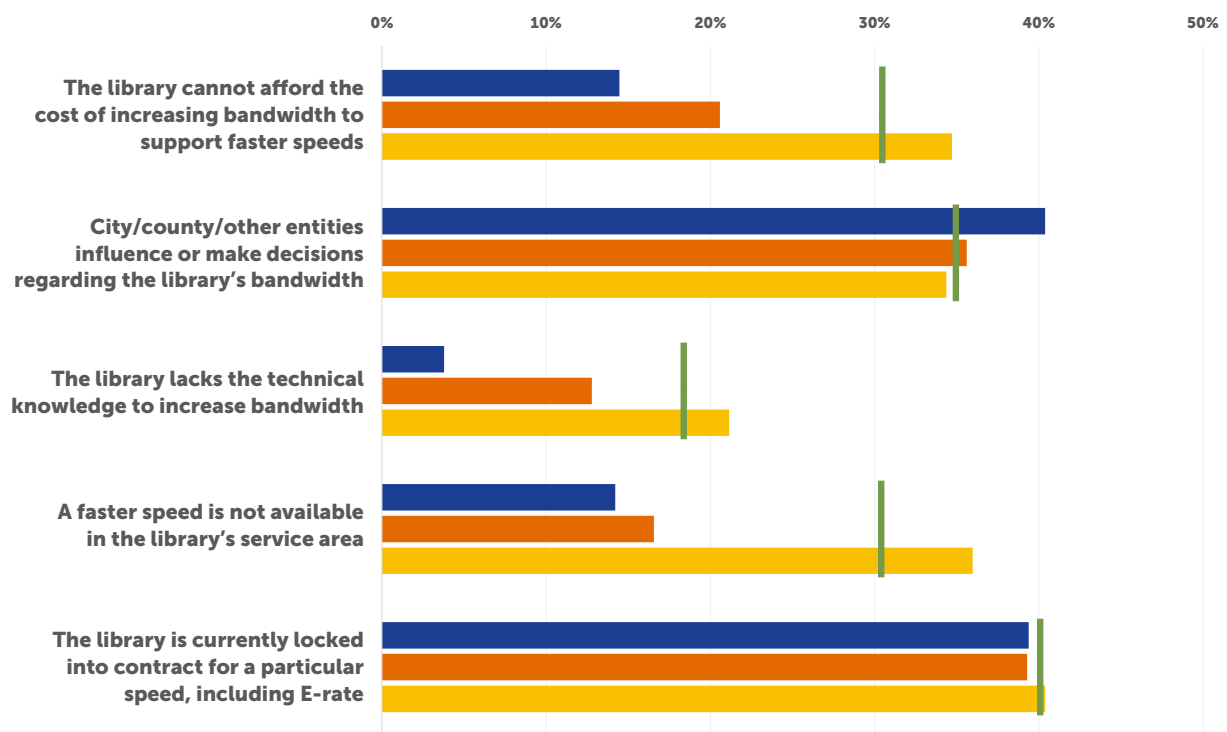
To complement this information, another question asked respondents to report their perception of how often the internet connection speed meets patron needs (**Figure 6**): rarely (pages are consistently delayed in loading), sometimes (pages may be delayed loading during busy times of day), or often (patrons can consistently access the content they want when they need it). 90.4% of libraries report that connections on public computers and 86.2% of Wi-Fi connections often meet patron needs.<sup>17</sup>



**28.4% of libraries overall  
subscribe to internet  
connections that do not meet  
the new federal definition  
of broadband.**

The responses to this question reflect staff perceptions based on anecdotal evidence, such as patron complaints about slow speeds. The open-ended comments explaining the selected rating highlight how experiences vary depending on the number of users, and the library may not be able to control the internet contract or speeds available.

Asked about factors affecting the library’s ability to increase its broadband connectivity, the top reason selected by 40.1% of respondents is that the library is locked into a contract for a particular speed (Figure 6). 34.9% of respondents indicate that an entity other than the library (including city or county government) makes decisions about the library’s bandwidth. 30.5% of libraries cannot afford the cost of increasing bandwidth and 30.4% do not have access to faster speeds in their area. The latter two factors are much more significant for town/rural libraries, compared to city and suburban libraries, and these challenges have persisted over time as bandwidth needs and standards have evolved.

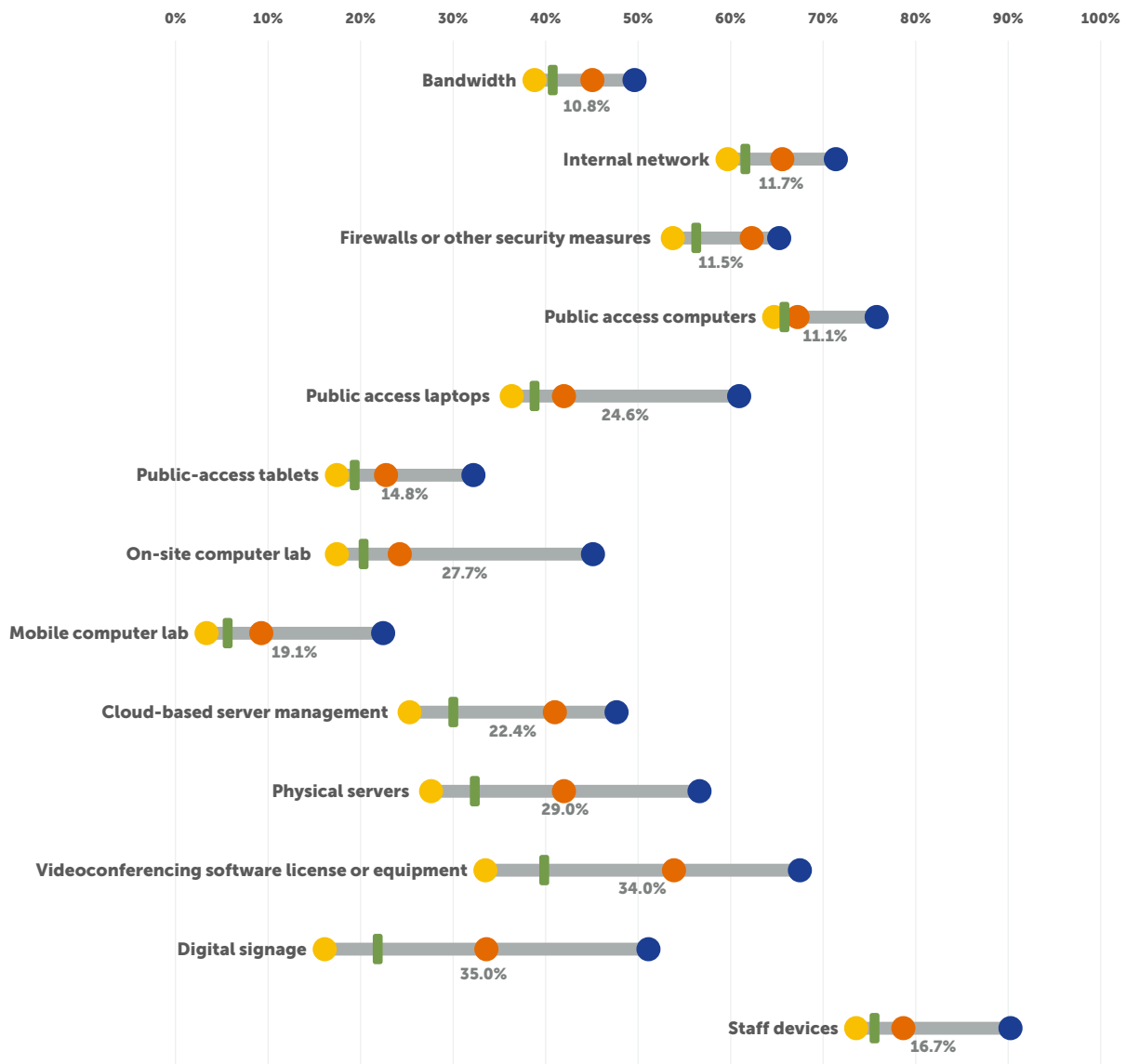


**Figure 6: Factors Affecting Broadband Connectivity.** See [Table 15](#) for detailed results.

■ City ■ Suburban ■ Town/Rural ■ Overall

Technology requires continual improvement. In terms of infrastructure, compared to 2020 more libraries have added, replaced, or upgraded their public access laptops and digital signage in the last two years. Overall differences in other areas are minimal. However, one of the encouraging changes visible in comparing the results from 2020 to those in 2023 is a narrowing gap between libraries by locale. In all areas except one, the gap between city and town/rural libraries has decreased

by more than 10%. The only area where the gap has widened is public access laptops: overall, more libraries have added, replaced, or upgraded their laptops in 2023, but where in 2020 the difference between city and town/rural was 20.1%, now it is 24.6%. Staff computers, laptops, and tablets was a new item added to this survey question in 2023; overall, three-quarters (75.5%) of libraries have added, replaced, or upgraded staff devices recently. **Figure 7** shows the areas in which libraries have made recent infrastructure improvements and where gaps remain between town/rural, suburban, and city libraries.



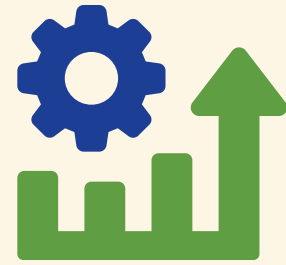
**Figure 7: Infrastructure Added, Replaced, or Upgraded within Last Two Years.** The gray line with percentage labels indicates the difference between city and town/rural libraries. See [Table 16](#) for detailed results.

● City ● Suburban ● Town/Rural ■ Overall — Difference between City and Town/Rural



## Data in Action

**Research on the evolution of technology services has always been closely tied to policymaking**, public awareness, and advocacy, particularly since the beginning of the Schools and Libraries program (E-rate) at the Federal Communications Commission (FCC) in 1996.



ALA and PLA have consistently engaged in the data collection, analysis, and reporting to draw an accurate and detailed picture of our communities' provision of public internet, public computers, and digital skill building. As long as the digital divide continues, this research remains essential for recognizing and positioning public libraries as digital equity hubs. Most significantly, ALA, PLA, and other advocates have used the data to advance public policy and awareness with three primary audiences:

**Congress and other legislators:** The digital divide was more visible than ever before during the pandemic, while most library buildings closed to the public for some period. In a series of pandemic relief and recovery bills, Congress awarded the **single largest increase in IMLS funding** and other funding for which libraries could apply directly and via state and local governments. This was due in large part to effective ALA lobbying, swift activation of library advocates, and effective use of **library data and examples**. Technology access data also has been used to advocate for federal Library Services Technology Act funding and recognizing libraries and their **digital literacy and workforce roles** in advocating for reauthorization of the Workforce Innovation and Opportunity Act (WIOA).<sup>18</sup>



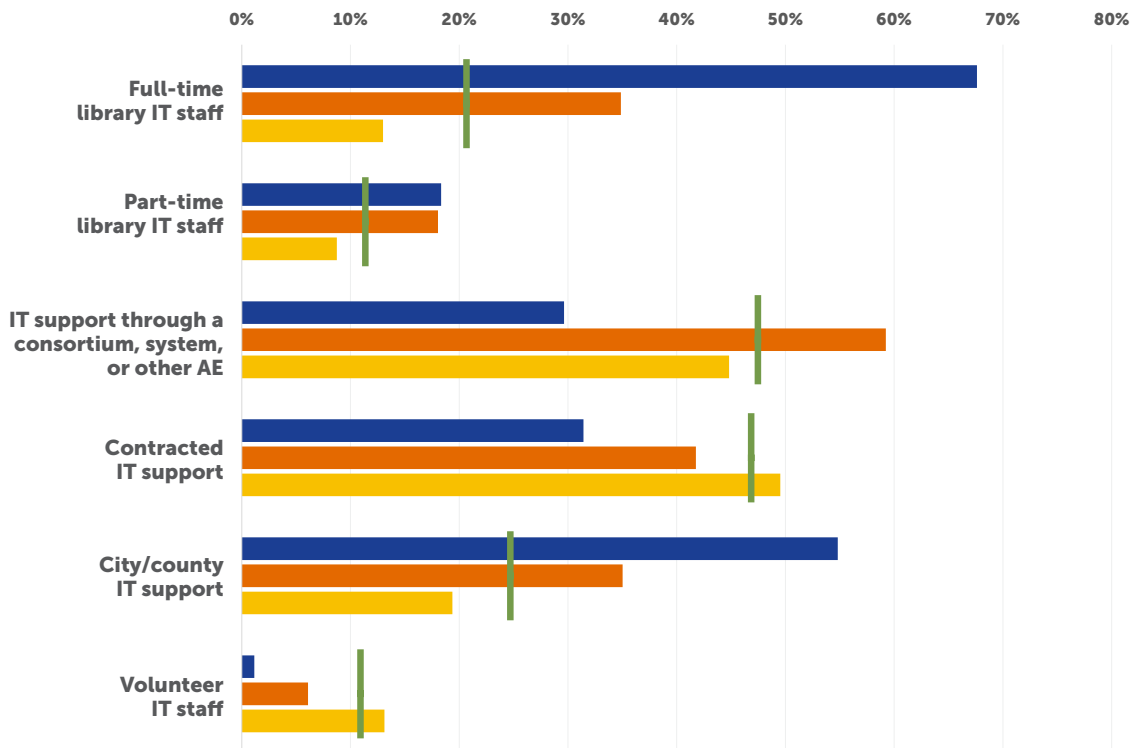
**Federal agencies and other policymakers:** Every year for decades the ALA and PLA have advocated with the FCC on behalf of public libraries as part of the **E-rate program**. Most recently this has focused on the Learn Without Limits initiative, and our ability to show the gaps that exist between urban and rural libraries has focused attention on the impacts of and barriers to library participation. Data also have helped us demonstrate why net neutrality protections are important for libraries, advocate for libraries as Affordable Connectivity Program outreach grantees, and amplify the need for E-rate to include cybersecurity costs. With billions of dollars in new funding from the **National Telecommunications & Information Administration**, ALA and PLA have positioned libraries as vital **hubs for digital equity**.<sup>19</sup>



**Media:** Every week ALA and PLA field inquiries and pitch reporters on **library issues**. Technology trend stories range from 3D printers to **digital literacy** to hotspot lending, allowing us to provide national benchmarks and context for local media, as well as give both quantitative data and qualitative examples of public library innovation and leadership.<sup>20</sup>

## Staff Support and Budget for Technology

Technology access, training, and infrastructure in public libraries all depend on staff and budgets to support that work. As **Figure 8** illustrates, while most libraries have some type of IT support staff, only 20.7% have full-time IT staff and 11.4% have part-time IT staff. City and suburban libraries are more likely than town/rural libraries to have dedicated IT support staff. Almost half (47.5%) of libraries get IT support from a consortium, system, or another administrative entity. 46.9% contract for IT support. Suburban and town/rural libraries are more likely than their city counterparts to have IT support through a consortium or system or to contract for that support. About a quarter of libraries (24.7%) get IT support from their city or county. Only a small proportion (10.9% overall) use volunteers. 3.3% of libraries, and 5.8% of town/rural libraries, indicated that they have no IT support staff of any type (selecting “no” for all options in the question).

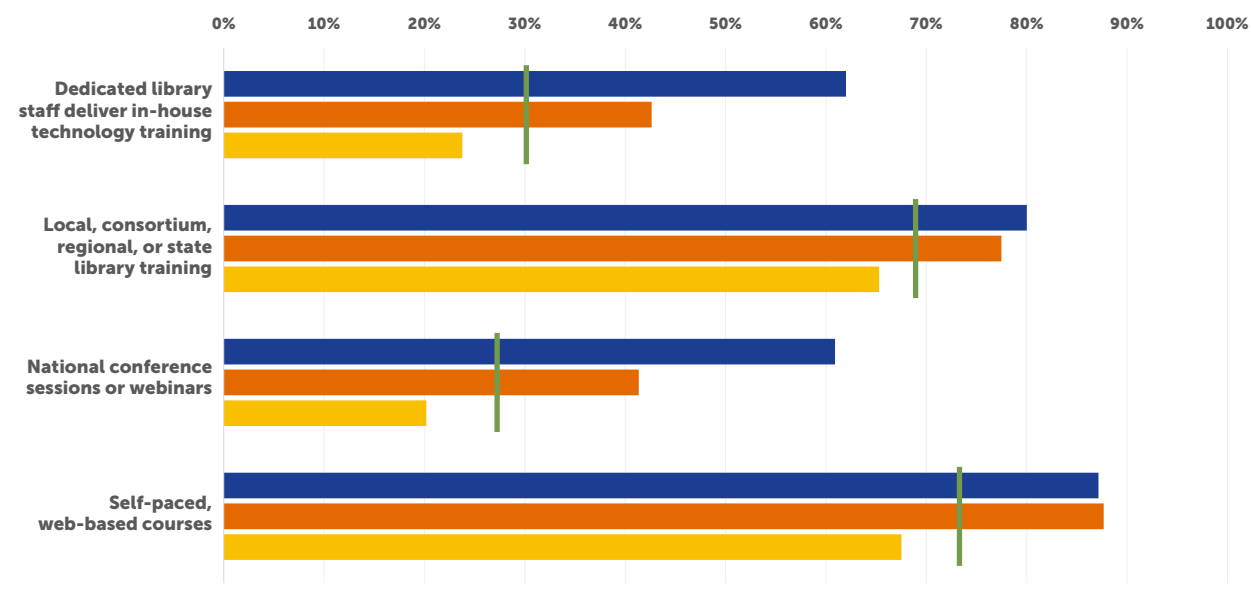


**Figure 8: IT Support Staff.** See [Table 17](#) for detailed results.

■ City ■ Suburban ■ Town/Rural ■ Overall

Staff may fulfill several types of technology-related roles. As an indicator of the importance of marketing and outreach in libraries, 58.5% report that they have staff dedicated to social media account management. Almost half of libraries (44.6%) have staff for website development and management. 28.3% have staff dedicated to technology programming and 27.9% have staff for digital literacy training. Only 12.1% indicate that they have dedicated Digital Navigators.

For staff to assist patrons and provide relevant programming, it's important that they themselves receive training to stay up to date. A new question added to the survey in 2023 asked how library staff receive technology training (**Figure 9**). Most common in libraries of all types are self-paced, web-based courses (73.3%). Local, consortium, regional, or state training is a close second (68.9%). Far fewer town/rural or suburban libraries have dedicated library staff to deliver in-house training or are able to participate in national conference sessions or webinars.



**Figure 9: Staff Technology Training.** See [Table 19](#) for detailed results.

■ City ■ Suburban ■ Town/Rural ■ Overall

While most libraries now offer electronic materials and nationwide electronic circulation has increased every year,<sup>22</sup> managing and funding that content involves many complex local decisions. Asked about the factors that influence the ability to offer digital content, the top choice for all types of libraries (selected by 85.7% overall) was the subscription cost or payment terms. For libraries to provide digital access to books is much more costly than the print equivalents.<sup>23</sup> 82.7% of libraries report that their digital content is curated by a consortia, regional system, or state, which also impacts the content they offer. About half of libraries overall (52.3%)—and 83.8% of city libraries—identify vendor licensing terms or restrictions as a primary factor. Town/rural libraries are more likely to report broadband limitations within the library’s service area as a factor influencing their digital content offerings. See [Table 20](#) for detailed results.

Overall, 60.8% of libraries have a budget line or funding designated specifically for public access technology, including hardware, programming, training, or online services. City libraries are more likely to have this dedicated funding (84.7%) relative to their suburban (69.1%) or town/rural (56.5%) counterparts. The libraries that responded affirmatively were asked in a follow-up question how much control library leadership has over technology expenditures: 63.2% say they have full control, 35%

## Upskilling Staff

**Result:** 27% of respondents identify staff training as a primary challenge they face in response to an open-ended question.

**Why it matters:** The survey respondents comment on the struggle to keep pace with new technologies and devices—knowledge that is necessary to assist patrons. This often intersects with other challenges, including capacity (having time to learn new skills) and funding (being able to hire staff with more specialized skills or pay for professional development).



**In practice:** The most common resources to support staff technology upskilling come from library support organizations and online, self-paced learning. A [review of the 2023-2027 plans](#) for state library agencies found that staff professional development and training is a nearly universal component.<sup>21</sup> The annual [Tech Boot Camp](#) organized by the Georgia Public Library Service (GPLS), for instance, brings together library IT professionals from across the state to share experiences and ideas related to emerging technology. GPLS also offers online technology training and cybersecurity resources for Georgia library staff.

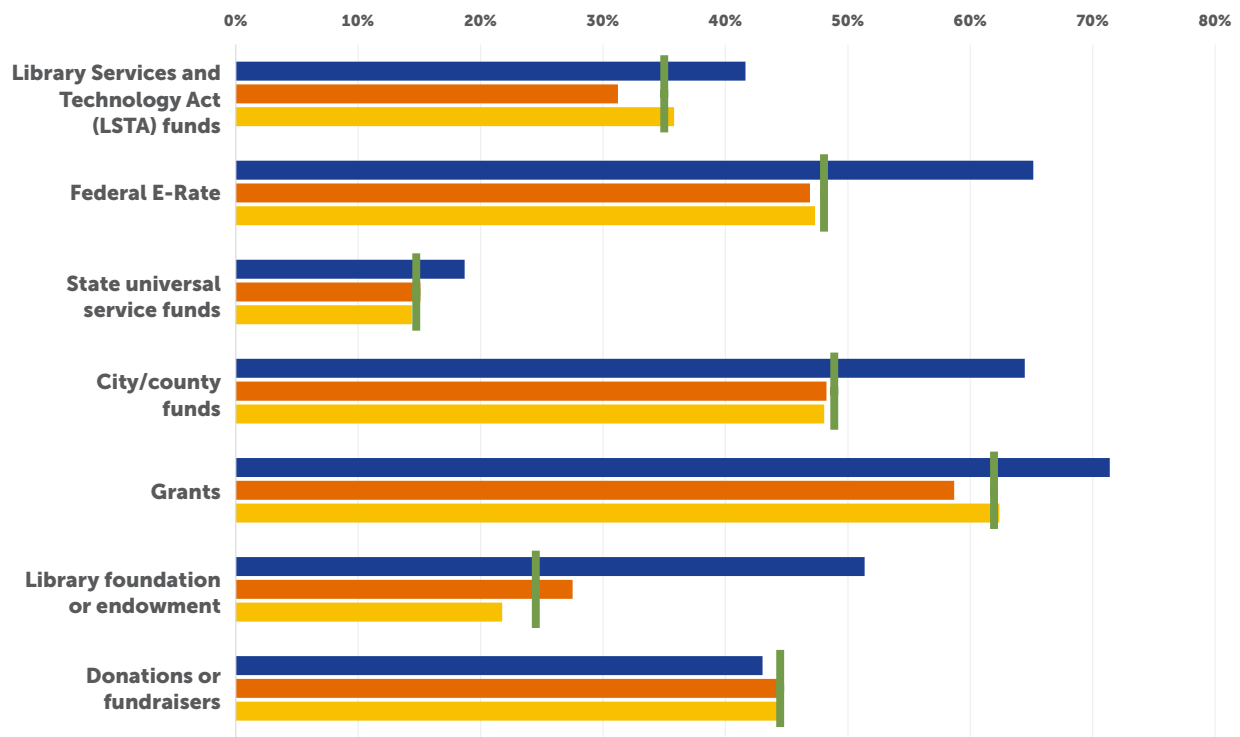
A wide range of online tools and training also support continuing education and facilitate skill building for patrons through public libraries. PLA's free [DigitalLearn.org](#) toolkit provides self-directed courses for building digital literacy skills and confidence using technology. While primarily used with patrons, the modules can also help staff learn about devices or software that may be unfamiliar to them. In addition to the online courses with videos, libraries have access to facilitator materials to help them conduct digital literacy workshops.

Many technology companies and other organizations have created their own suites of free, on-demand training materials that both patrons and staff may find useful. These include [Applied Digital Skills](#) from Google, [Skill Forward](#) from Verizon, and [EveryoneOn](#), a non-profit organization that aggregates and links to other resources.

**Challenges:** The technology landscape is changing rapidly with advances in areas like generative AI. It may be more meaningful for libraries to foster a culture of learning around technology than to approach skills as a checklist.

have some control, and 1.8% have no control over decision-making. When it comes to managing budgets, one respondent observed that their library struggles to balance core services with new needs for digital equity and access “while not always having the necessary budgets or resources (including funding and staffing) to meet these range of needs in an ideal or optimum level or be proactive in responding to trends in the way we’d ideally be able to respond.” The many similar comments on the survey suggest theirs is not a unique experience.

Funding for technology can come from many different sources (**Figure 10**). The top sources are grants (61.9%), city/county government (48.9%), and federal E-rate funding (48.1%). 44.5% of libraries use donations or fundraisers, including those from Friends groups, and 24.5% get funds from a library foundation or endowment. Only 35% of libraries report using Library Services and Technology Act (LSTA) funds, and 14.8% use universal service funds distributed by their state. While public libraries may not receive direct funding from LSTA, all benefit from statewide resource sharing and training enabled by the federal program through formula grants to state library agencies.<sup>24</sup>



**Figure 10: Funding Sources for Technology.** See [Table 23](#) for detailed results.

■ City ■ Suburban ■ Town/Rural ■ Overall

The FCC’s E-rate program provides funding for schools and libraries to help them obtain affordable internet access and related services. On the 2023 survey, 52.3% of libraries report that they applied for E-rate funding either individually or as part of a consortium, a slight increase from 2020 when 49.9% applied. Category One E-rate funding includes internet/broadband access and Category Two includes internal network connections and maintenance. Most libraries applied for Category One (56.1%) or both categories (37.7%). 6.2% report applying for only Category Two funding. Among the 47.7% of libraries that did not apply for E-rate funding, about half (51.2%) report that it was not necessary for them to apply because they had sufficient funding or access from another source. More than 40% of libraries that did not apply cite their lack of staff capacity or the limited discount they would receive as a reason.

## Conclusion

As the digital environment has evolved, libraries have grown and adapted with it. One respondent reflected, “We have responded and pivoted since COVID by changing service models to meet patron needs,” including offering online library cards and technology assistance, though “the everchanging technology landscape” and adoption of a diverse suite of offerings can be “challenging for both staff and community.” The role of the public library as a trusted institution is critical for patrons, who may be apprehensive or intimidated by new technologies in everyday life, from online applications for jobs or government services to generative AI. Despite persistent funding and staffing challenges, public libraries provide vital services that help communities of all types and sizes connect and engage online.

PLA’s Technology Survey provides essential information about how library technology resources, services, training, and infrastructure meet the needs of communities nationwide. The 2023 results will continue to inform everything from planning technology services at the local library level to digital equity planning in states and advocacy for library funding at the national level.

## Notes

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8. IMLS, State Library Administrative Agencies Survey (FY 2022), [imls.gov/research-evaluation/data-collection/state-library-administrative-agency-survey](https://imls.gov/research-evaluation/data-collection/state-library-administrative-agency-survey).
9. PLA, *Public Library Services for Strong Communities Report: Results from the 2022 PLA Annual Survey* (Chicago: Public Library Association, 2023), p.16: [hdl.handle.net/11213/20984](https://hdl.handle.net/11213/20984)
10. National Digital Inclusion Alliance, “The Digital Navigator Model,” [digitalinclusion.org/digital-navigator-model](https://digitalinclusion.org/digital-navigator-model).

11. 71% (n=36) of SLAAs support digital literacy programs and 69% (n=35) have a “statewide coordinated digital program or service” that covers public libraries. The SLAA survey does not have detail on how many states have formal digital navigator programs or services. Institute of Museum and Library Services, State Library Administrative Agency Survey (FY 2022), [imls.gov/research-evaluation/data-collection/state-library-administrative-agency-survey](https://imls.gov/research-evaluation/data-collection/state-library-administrative-agency-survey).
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# 2023 Public Library Technology Survey

# Detailed Results

The tables below contain detailed results for each question on the survey by library locale (city, suburban, and town/rural) and nationally. All results are weighted. For multiple choice or check-all-that-apply questions, the percentage of question respondents who selected each positive response is reported. The final row in each table reports the total number of respondents who answered that question on the survey. See [Appendix A](#) for a description of the survey and analysis methodology. To explore the results further and create custom peer comparisons, access the full dataset with a subscription to Benchmark: Library Metrics and Trends ([librarybenchmark.org](https://librarybenchmark.org)).

**Table 1. On-Site Technology**

**Question:** Does your library offer the following technologies for on-site use by patrons in any location?

	City	Suburban	Town/Rural	Overall
Color printer(s)	91.6%	94.5%	91.8%	92.4%
Large-format printer(s)	21.9%	25.7%	21.0%	22.1%
Wireless or mobile printing	87.8%	79.1%	66.8%	70.6%
Copy machine(s)	98.0%	98.9%	98.3%	98.5%
Fax machine(s)	76.8%	76.3%	79.4%	78.5%
Scanner(s)w	95.8%	94.9%	93.2%	93.7%
Laptop(s)	72.8%	67.6%	61.1%	63.2%
Tablet(s)	49.4%	41.0%	37.0%	38.5%
E-readers	18.8%	19.6%	18.7%	18.9%
Assistive technology	71.9%	45.1%	24.8%	31.7%
Smartboards	20.5%	14.8%	10.9%	12.3%
Early learning devices	77.9%	64.5%	48.1%	53.4%
Recreational video gaming consoles	65.6%	50.5%	30.0%	36.5%
Smart objects for STEAM	74.1%	60.9%	45.9%	50.7%
Virtual reality headsets	38.2%	23.4%	11.5%	15.6%
Digital media production equipment	58.9%	38.2%	18.0%	24.6%
Maker production equipment	74.8%	50.8%	33.5%	39.5%
Other on-site technologies	18.8%	15.1%	13.9%	14.4%
<b>Total question responses</b>	<b>204</b>	<b>502</b>	<b>805</b>	<b>1511</b>



**Table 2. Off-Site Technology****Question:** Does your library circulate the following technologies for off-site use by patrons from any location?

	City	Suburban	Town/Rural	Overall
Internet hotspots	69.4%	66.2%	39.2%	46.9%
Laptops	37.6%	30.9%	22.0%	24.8%
Tablets	17.2%	15.2%	10.2%	11.7%
E-Readers	12.0%	17.0%	13.1%	14.0%
Early learning devices	53.0%	43.6%	22.6%	28.9%
Recreational technology	37.8%	39.7%	15.7%	22.3%
Streaming devices	7.4%	17.5%	3.5%	6.9%
Other off-site technologies	16.7%	15.9%	11.0%	12.4%
<b>Total question responses</b>	<b>204</b>	<b>502</b>	<b>805</b>	<b>1511</b>

**Table 3. Technology-Enabled Services and Online Resources****Question:** Does your library make available the following technology-enabled services or online resources for use by patrons? Please consider both subscription-based services and resources curated by your library (e.g., links to free health resources on a webpage).

	City	Suburban	Town/Rural	Overall
E-books/E-audiobooks	99.3%	97.9%	93.8%	95.0%
Streaming and other downloadable media	92.9%	84.5%	46.7%	57.7%
Homework assistance	72.2%	54.4%	35.2%	41.4%
job/employment resources	95.1%	84.6%	65.7%	71.5%
Language learning	85.9%	73.6%	40.2%	50.2%
Health resources	83.3%	74.1%	54.8%	60.7%
Genealogy tools	94.1%	86.5%	67.4%	73.1%
Reference services via chat or text	47.1%	34.4%	20.4%	24.9%
Videoconferencing software	34.3%	28.3%	33.2%	32.1%
Design software	27.4%	21.3%	10.7%	14.0%
Other online resources	15.9%	9.8%	11.2%	11.1%
<b>Total question responses</b>	<b>204</b>	<b>502</b>	<b>805</b>	<b>1511</b>

**Table 4. Mobile Access to Library Services****Question:** Does your library offer the following methods for patrons to access library services with a mobile device?

	City	Suburban	Town/Rural	Overall
Library website optimized for mobile devices	89.8%	91.7%	80.1%	83.3%
A mobile app created for the library (e.g., with mobile self-checkout, early literacy resources)	52.6%	49.7%	19.3%	28.0%
Vendor-delivered apps to access library services (e.g., Libby, Beanstack)	97.1%	95.5%	80.9%	85.1%
Scanned codes (e.g., QR codes)	87.0%	75.6%	41.1%	51.3%
Other mobile device services	7.1%	6.5%	6.6%	6.6%
<b>Total question responses</b>	<b>204</b>	<b>502</b>	<b>805</b>	<b>1511</b>

**Table 5. Technology-Based Mobile Outreach**

**Question:** Does your library conduct technology-based outreach (e.g., via a mobile laptop lab or cybermobile) in the community?

	City	Suburban	Town/Rural	Overall
Yes	43.3%	27.6%	12.3%	17.3%
<b>Total question responses</b>	<b>204</b>	<b>502</b>	<b>804</b>	<b>1510</b>

**Table 6. Digital Literacy Training**

**Question:** Does your library offer programming or training to patrons on the following digital literacy related topics, whether in-person or online, or in the library or off-site?

The number of options for this question was condensed from twelve in 2020 down to five (not including the open-ended “other” option) to simplify the survey. However, all the options from 2020 are contained within the new, broader categories.

	City			Suburban			Town/Rural			Overall		
	Formal	Informal	Both	Formal	Informal	Both	Formal	Informal	Both	Formal	Informal	Both
General computer hardware/software skills (e.g., how to use a mouse and keyboard, word processing, streaming devices)	6.0%	21.5%	71.3%	3.0%	42.6%	50.4%	1.2%	56.6%	33.0%	1.8%	51.6%	38.8%
Internet use (e.g., web searching, online databases, social media, privacy and safety online)	8.7%	21.3%	68.6%	5.6%	42.9%	45.5%	2.6%	60.5%	28.7%	3.6%	54.5%	34.5%
Web development and digital content creation (e.g., website creation, audio/visual content creation)	13.7%	14.8%	21.1%	8.3%	14.2%	9.4%	2.1%	10.4%	3.7%	4.1%	11.5%	5.8%
Coding and maker technology (e.g., programming, robotics, 3D printing)	29.4%	14.3%	34.3%	24.0%	6.2%	19.6%	11.9%	9.7%	8.9%	15.5%	9.1%	12.6%
Other—including assistive technology, video conferencing, and other types of training	6.3%	40.9%	22.0%	5.0%	36.4%	16.2%	2.5%	40.1%	8.0%	3.3%	39.3%	10.6%
Other programming / training	9.4%			8.3%			8.4%			8.4%		
Any programming / training	100.0%			97.6%			94.3%			95.3%		
<b>Total question responses</b>	<b>204</b>			<b>500</b>			<b>804</b>			<b>1508</b>		

**Table 7. Formal Technology-Enabled Programs and Services**

**Question:** In the past 12 months, did your library formally offer any of the following technology-enabled or online programs or services, either alone or in partnership with another organization either on- or off-site?

	City	Suburban	Town/Rural	Overall
Individual telehealth sessions	13.7%	9.5%	7.8%	8.5%
Live online classes or job training	36.4%	22.5%	12.1%	15.7%
Live online public programs or discussion forums	74.1%	61.3%	32.4%	41.1%
Virtual reality experiences	18.6%	12.4%	7.5%	9.2%
Home broadband adoption	18.5%	9.5%	9.3%	9.7%
Other individual online consultation appointments	21.4%	10.5%	12.3%	12.3%
Other formal services	9.9%	4.9%	5.4%	5.5%
<b>Total question responses</b>	<b>204</b>	<b>498</b>	<b>803</b>	<b>1505</b>

**Table 8. Digital Navigators**

**Question:** Does your library offer a Digital Navigator program, or does it have staff or partners who assist patrons, through repeated interactions, with digital inclusion needs?

	City	Suburban	Town/Rural	Overall
Yes	42.1%	34.4%	27.3%	29.7%
<b>Total question responses</b>	<b>202</b>	<b>494</b>	<b>796</b>	<b>1492</b>

**Table 9. Digital Equity Planning**

	City			Suburban			Town/Rural			Overall		
	Yes	No	Not sure	Yes	No	Not sure	Yes	No	Not sure	Yes	No	Not sure
Is your library involved in your state's digital equity planning?	25.0%	51.0%	25.5%	15.4%	58.9%	27.8%	12.8%	49.8%	38.7%	14.0%	51.9%	35.6%
Is your library involved in any digital equity or inclusion coalition at the local, state, or regional level?	48.0%	33.7%	19.3%	21.6%	51.3%	27.7%	17.3%	46.4%	36.3%	19.7%	46.9%	33.5%
<b>Total question responses</b>	<b>201</b>			<b>492</b>			<b>803</b>			<b>1496</b>		

**Table 10. Fiber Optic Network**

**Question:** Is the public access Internet connection at your library fiber optic?

	City	Suburban	Town/Rural	Overall
Yes	86.6%	78.6%	72.8%	74.8%
Total question responses	202	492	788	1482

**Table 11. Wi-Fi**

**Question:** Does your library offer wireless (Wi-Fi) internet access to patrons (e.g., for use with patron laptops, tablets, or other wireless devices)?

	City	Suburban	Town/Rural	Overall
Yes	100.0%	100.0%	99.2%	99.4%
Total question responses	203	498	793	1494

**Table 12. Internet Speeds**

**Questions:**

- What are the DOWNLOAD and UPLOAD speeds at which your library subscribes for its public access Internet connection?
- By comparison, what are the typical speeds experienced by patrons utilizing the library’s WIRED public access internet connection?
- What are the DOWNLOAD and UPLOAD speeds of the wireless internet connection offered by your library?

	City	Suburban	Town/Rural	Overall
Subscribed speeds				
Average subscribed download speed (Mbps)	1278	680	359	504
Average subscribed upload speed (Mbps)	1216	578	311	441
Total question responses	151	281	388	820
Wired connection speed test				
Wired connection test results for download speed (Mbps)	447	318	199	241
Wired connection results for upload speed (Mbps)	390	228	135	171
Total question responses	171	390	575	1136
Wi-Fi connection speed test				
Wi-Fi test results for download speed (Mbps)	164	160	106	122
Wi-Fi test results for upload speed (Mbps)	139	112	76	88
Total question responses	175	383	574	1132

**Table 13. Broadband**

Based on the subscribed speeds reported in [Table 12](#), the results below reflect the percentage of libraries whose internet connections do not meet FCC standards for broadband. At the time of this survey, the Federal Communications Commission (FCC) definition of broadband was a download speed of at least 25 Mbps and upload speed of at least 3 Mbps. In March 2024 the FCC revised that definition to new thresholds of 100 Mbps for download and 20 Mbps for upload.

	City	Suburban	Town/Rural	Overall
<b>Below old FCC standard (25/3)</b>				
Subscribed download speed <25 Mbps	0.9%	2.7%	6.9%	5.4%
Subscribed upload speed <3 Mbps	0.9%	1.8%	2.3%	2.1%
Subscribed download and/or upload speed falls below old FCC threshold	0.9%	2.7%	7.1%	5.6%
<b>Below new FCC standard (100/20)</b>				
Subscribed download speed <100 Mbps	5.0%	11.6%	32.0%	25.1%
Subscribed upload speed <20 Mbps	1.5%	8.5%	15.7%	12.9%
Subscribed download and/or upload speed falls below new FCC threshold	5.0%	15.5%	35.4%	28.4%

**Table 14. Internet Connection Speeds Meeting Patron Needs**

**Question:** How often does your library’s public internet connection speed meet patron needs?

	City			Suburban			Town/Rural			Overall		
	Rarely	Sometimes	Often	Rarely	Sometimes	Often	Rarely	Sometimes	Often	Rarely	Sometimes	Often
Public computers	2.6%	2.5%	93.7%	0.7%	3.4%	94.8%	1.1%	8.4%	88.8%	1.1%	7.0%	90.4%
Wi-Fi	2.6%	14.2%	83.3%	0.4%	10.4%	89.1%	1.3%	12.1%	85.5%	1.2%	11.8%	86.2%
Total question responses	<b>203</b>			<b>499</b>			<b>796</b>			<b>1498</b>		

**Table 15. Factors Affecting Broadband Connectivity**

**Question:** Do any of the following factors affect your library’s ability to increase its broadband connectivity?

	City	Suburban	Town/Rural	Overall
The library cannot afford the cost of increasing bandwidth to support faster speeds.	14.5%	20.6%	34.7%	30.5%
City/county/other entities influence or make decisions regarding the library’s bandwidth.	40.4%	35.6%	34.4%	34.9%
The library lacks the technical knowledge to increase bandwidth.	3.8%	12.8%	21.1%	18.4%
A faster speed is not available in our service area.	14.2%	16.6%	36.0%	30.4%
The library is currently locked into contract for a particular speed, including E-rate.	39.4%	39.3%	40.4%	40.1%
Other factors	9.2%	11.0%	10.8%	10.8%
Total question responses	<b>202</b>	<b>496</b>	<b>797</b>	<b>1495</b>

**Table 16. Infrastructure Added, Replaced, or Upgraded within Last Two Years**

**Question:** Within the past 2 years, were the following components of your library’s technology infrastructure added, replaced, or upgraded?

	City	Suburban	Town/Rural	Overall
Public access computers	75.8%	67.2%	64.7%	65.8%
Public access laptops	60.9%	42.0%	36.3%	38.8%
Public access tablets	32.2%	22.7%	17.4%	19.4%
On-site computer lab	45.1%	24.2%	17.4%	20.3%
Mobile computer lab	22.4%	9.3%	3.3%	5.6%
Staff computers, laptops, or tablets	90.2%	78.7%	73.6%	75.5%
Bandwidth	49.6%	45.0%	38.8%	40.8%
Internal network	71.4%	65.6%	59.6%	61.6%
Firewalls or other security measures	65.2%	62.3%	53.7%	56.3%
Cloud-based server management	47.7%	41.0%	25.3%	30.0%
Physical servers	56.6%	42.0%	27.6%	32.3%
Videoconferencing software license or equipment for public or staff	67.5%	53.9%	33.5%	39.9%
Digital signage	51.1%	33.6%	16.1%	21.8%
Other components	9.1%	5.7%	5.1%	5.5%
<b>Total question responses</b>	<b>203</b>	<b>499</b>	<b>799</b>	<b>1501</b>

**Table 17. IT Support Staff**

**Question:** What type(s) of IT support staff are utilized by your library?

	City	Suburban	Town/Rural	Overall
Full-time library IT staff	67.6%	34.9%	13.0%	20.7%
Part-time library IT staff	18.3%	18.0%	8.8%	11.4%
IT support through a consortium, system, or other AE	29.6%	59.2%	44.8%	47.5%
Contracted IT support	31.4%	41.8%	49.5%	46.9%
City/county IT support	54.8%	35.0%	19.4%	24.7%
Volunteer IT staff	1.2%	6.1%	13.1%	10.9%
None: IT support provided by library staff without IT titles or roles.*	20.1%	36.5%	50.7%	45.9%
Libraries that selected “no” for all options	0.0%	0.6%	5.8%	3.3%
Other IT support	11.5%	10.4%	9.0%	9.5%
<b>Total question responses</b>	<b>204</b>	<b>502</b>	<b>805</b>	<b>1511</b>

\* Note that most respondents who selected “none” also selected one of the other options, making that response an inaccurate reflection of the proportion of libraries without dedicated IT support. An estimate is included for respondents that selected “no” for all options—a more accurate measure of libraries without any IT support staff.

**Table 18. Staff Dedicated to Technology Activities****Question:** Does your library have staff dedicated to any of the following technology-related activities?

	City	Suburban	Town/Rural	Overall
Website development and management	70.0%	58.2%	38.5%	44.6%
Social media account management	78.5%	70.5%	53.3%	58.5%
Digital literacy training for patrons	51.3%	39.9%	22.4%	27.9%
Technology programming for patrons (e.g. STEAM classes)	58.1%	42.1%	21.9%	28.3%
Digital Navigators to assist patrons	27.0%	15.6%	10.0%	12.1%
Other technology-related activities	12.4%	10.4%	8.2%	8.9%
<b>Total question responses</b>	<b>204</b>	<b>502</b>	<b>805</b>	<b>1511</b>

**Table 19. Staff Technology Training****Question:** How do library staff receive technology training to assist patrons or for professional development? Check all that apply.

	City	Suburban	Town/Rural	Overall
Dedicated library staff deliver in-house technology training	62.0%	42.6%	23.8%	30.2%
Local, consortium, regional, or state library training	80.0%	77.5%	65.3%	68.9%
National conference sessions or webinars	60.9%	41.4%	20.2%	27.2%
Self-paced, web-based courses	87.2%	87.7%	67.5%	73.3%
Other staff training methods	6.4%	9.3%	13.9%	12.4%
<b>Total question responses</b>	<b>200</b>	<b>490</b>	<b>757</b>	<b>1447</b>

**Table 20. Factors Influencing Digital Content Subscriptions****Question:** Take a moment to think about how you select digital content subscriptions for your library. Have any of the following influenced your ability to offer the digital content that you would like to provide?

	City	Suburban	Town/Rural	Overall
Digital content is curated by a consortia, regional system, or state library	75.9%	83.7%	82.8%	82.7%
Subscription cost or payment terms	96.3%	92.0%	83.0%	85.7%
Broadband limitations within the library service area	10.8%	8.3%	28.8%	23.2%
Duplication of content across vendors	65.6%	54.8%	35.1%	41.2%
Vendor licensing terms or restrictions (e.g., embargo, non-simultaneous usage, lack of remote use)	83.8%	68.5%	45.0%	52.3%
Concerns about privacy protections for patron data	55.3%	49.6%	37.3%	41.0%
Inability to obtain local data about patron usage	31.5%	24.8%	23.5%	24.2%
Other influences (please specify)	7.8%	5.7%	4.1%	4.7%
<b>Total question responses</b>	<b>204</b>	<b>500</b>	<b>801</b>	<b>1505</b>

**Table 21. Data and Network Security**

**Question:** How much of a priority is internal data and network security to your library? For example, the library’s ability to protect its online assets and patron privacy from cyberattacks.

	City	Suburban	Town/Rural	Overall
High priority	83.8%	71.4%	56.3%	61.1%
Medium priority	14.5%	22.7%	34.0%	30.4%
Low priority	1.8%	5.9%	9.7%	8.5%
<b>Total question responses</b>	<b>203</b>	<b>497</b>	<b>793</b>	<b>1493</b>

**Table 22. Technology Budgets**

**Questions:**

- Does your library have a budget line item(s) or funding designated specifically for public access technology, such as hardware, programming, training, and online services?
- How much control does your library leadership have over the decision-making of those technology expenditures?

	City	Suburban	Town/Rural	Overall
<b>Budget line</b>				
Yes*	84.7%	69.1%	56.5%	60.8%
<b>Total question responses</b>	<b>201</b>	<b>493</b>	<b>794</b>	<b>1488</b>
<b>Level of control</b>				
Full control	66.4%	68.1%	60.9%	63.2%
Some control	33.0%	30.5%	37.1%	35.0%
No control	0.6%	1.4%	2.1%	1.8%
<b>Total question responses</b>	<b>168</b>	<b>358</b>	<b>450</b>	<b>976</b>

\* Note: 50 “yes” responses were imputed based on the fact that these libraries indicated the level of control they have but had not selected a response to the previous budget line question. The results for the second question thus reflect only those libraries with a yes response for the first.

**Table 23. Funding Sources for Technology**

**Question:** Outside of the operating budget, does your library pay for technology needs from any of the following sources?

	City	Suburban	Town/Rural	Overall
Library Services and Technology Act (LSTA) funds	41.6%	31.2%	35.8%	35.0%
Federal E-Rate	65.2%	46.9%	47.3%	48.1%
State universal service funds	18.7%	15.1%	14.4%	14.8%
City/county funds	64.5%	48.3%	48.1%	48.9%
Grants	71.4%	58.7%	62.4%	61.9%
Library foundation or endowment	51.4%	27.5%	21.8%	24.5%
Donations or fundraisers	43.0%	44.4%	44.6%	44.5%
Other sources	7.4%	5.4%	5.4%	5.5%
<b>Total question responses</b>	<b>203</b>	<b>499</b>	<b>798</b>	<b>1500</b>



**Table 24. E-Rate**

**Questions:**

- Did your library apply for Federal E-rate program funding for FY 2023?
- IF YES to above: For which category of Federal E-rate program funding did your library apply?
- IF NO to above: For what reason(s) did your library not apply for E-rate funding for FY 2023?

	City	Suburban	Town/Rural	Overall
<b>Applied for E-Rate</b>				
Yes, individually	50.5%	24.1%	32.1%	31.1%
Yes, as part of a consortium	14.4%	27.9%	19.4%	21.2%
No	35.0%	48.0%	48.5%	47.7%
<b>Total question responses</b>	<b>202</b>	<b>498</b>	<b>798</b>	<b>1498</b>
<b>IF YES to above: E-Rate Category</b>				
Category One (i.e., broadband service)	49.3%	49.2%	59.0%	56.1%
Category Two (i.e., internal network, routers)	4.9%	7.0%	6.1%	6.2%
Both	45.8%	43.8%	35.0%	37.7%
<b>Total question responses</b>	<b>133</b>	<b>259</b>	<b>398</b>	<b>790</b>
<b>IF NO to above: Reasons for Not Applying</b>				
Lack of staff capacity to complete the application (e.g., it was too complicated or time consuming)	36.1%	44.0%	46.0%	45.2%
Staff did not believe the library would qualify or felt discouraged from applying due to a previously denied application	8.0%	13.5%	10.6%	11.2%
The library did not comply with the Children's Internet Protection Act (CIPA) filtering requirements	33.9%	40.0%	27.2%	30.4%
The library does not find it necessary to apply (e.g., it has sufficient funding or is provided free internet service)	52.9%	56.7%	49.3%	51.2%
The total discount was not worth the time needed to participate in the program	47.5%	47.1%	39.0%	41.2%
Other reasons	18.6%	16.6%	19.7%	19.0%
<b>Total question responses</b>	<b>69</b>	<b>227</b>	<b>379</b>	<b>675</b>

## Appendix A. Methodology

### Sample

The 2023 Public Library Technology Survey collected data at the administrative entity (AE) level as defined by IMLS. The AE was used as the sample unit because of the extensive data about each AE available from the annual IMLS Public Libraries Survey (PLS). The original sample frame was based on the FY 2021 PLS public use data file. PLA modified the sample to include eight (8) tribal libraries and eleven (11) new libraries that were open in fall 2023 but not represented in the available PLS data. PLA also removed 14 libraries that IMLS reported were permanently or temporarily closed. The survey was open for three months between September and December 2023. In total, 9,231 libraries were eligible to participate in the survey and 1,511 completed it, for a response rate of 16.4%. Six libraries (two law libraries, one tribal library, and three new libraries) were given a weight of 0, effectively excluding them from the national weighted analysis due to their lack of other PLS variables used for weighting. Thus, the weighted results presented in the report are based on a total of 1,505 completed surveys.

Table A1 below outlines the percentage of respondents by four key characteristics—locale, region, legal basis, legal service area population, and administrative structure—compared to the percentage of public libraries (AEs) nationwide with each of those characteristics (based on the FY 2021 IMLS Public Libraries Survey). The section on analysis and weighting below describes how the final estimates were calculated to account for these differences.

**Table A1**

	Survey Respondents	All AEs
<b>Locale</b>		
City	13.5%	6.0%
Suburban	33.2%	25.2%
Town/Rural	53.2%	68.8%
<b>Region</b>		
Far West	9.5%	5.6%
Great Lakes	21.5%	20.5%
Mid East	16.6%	16.8%
New England	11.0%	13.8%
Outlying Areas	0.0%	0.0%
Plains	12.1%	17.2%
Rocky Mountains	5.4%	4.3%
Southeast	12.4%	12.6%
Southwest	11.6%	9.3%

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	Survey Respondents	All AEs
<b>Legal Basis</b>		
County or City/County	13.2%	11.1%
Library District	15.8%	15.3%
Municipal	47.7%	52.7%
Nonprofit	14.5%	14.4%
Other	8.7%	6.6%
<b>Legal Service Area Population</b>		
<10,000	38.5%	57.6%
10,000 - 24,999	19.9%	18.9%
25,000 - 99,999	24.7%	17.1%
>100,000	16.8%	6.3%
<b>Administrative structure</b>		
Multiple outlets	30.9%	18.8%
Single outlet	69.1%	81.2%

## Survey Design

The Technology Survey was first administered in 2020. PLA developed it drawing extensively on the earlier Public Libraries and the Internet Survey and Digital Inclusion Survey. In 2023, PLA’s Measurement, Evaluation, and Assessment Committee reviewed the 2020 version of the survey and, in consultation with PLA staff, decided to make relatively minor changes. To reduce survey burden, questions about digital literacy training and internet speeds were simplified. To ensure the data collected meets current needs in the field, new questions were added about digital equity planning, digital navigators, and staff technology training. A reference copy of the full 2023 Public Library Technology Survey questionnaire is included in [Appendix B](#).

The 2023 Technology Survey opened on September 19, 2023 and closed on December 16, 2023. PLA sent printed invitation letters to all libraries in the sample and attempted to email all public library directors (though not all may have received the message due to missing or outdated email contact details). In addition, the survey was publicized via PLA’s e-news, website, publications, and [a free webinar](#) on October 12, 2023. State data coordinators were also asked to share the information with libraries in their states and to encourage participation. Several reminders were sent via email while the survey remained open. Responses were collected through PLA’s data platform, Benchmark: Library Metrics and Trends ([librarybenchmark.org](http://librarybenchmark.org)).

## Analysis and Weighting

This section outlines the procedure used to calculate weights for the 2023 Public Library Technology Survey. Because all public libraries were invited to complete the survey and the response rate was 16 percent, nonprobability sample weighting was used to calculate final weights for responding libraries.<sup>1</sup> This quasi-randomization approach corrects for selection bias—the sample differs from the rest of the population such that the results from the sample cannot be projected to the full population—by using a probability-based reference sample to estimate pseudo-inclusion probabilities for the responding libraries. This combined sample covered the total population of US public libraries (administrative entities) open in fall 2023.

Weights were assigned to 1505 libraries that (1) responded to the survey and (2) had data in the IMLS FY21 Public Libraries Survey. For a given responding library, the final weight was calculated by:

1. Coding the libraries in the reference sample as 0 and responding libraries as 1.
2. Assigning a probability sample weight to libraries in the reference sample ( $w = N/n$ ) and the libraries that responded to the survey ( $w = 1$ )
3. Adjusting the weight of the libraries in the reference sample to account for the nonnegligible percentage (16%) of libraries that responded to the survey:

$$w_i^* = w_i \frac{\hat{N} - n_{np}}{\hat{N}}$$

Where  $w_i$  is the weight for each library  $i$  in the reference sample  $S_{ref}$ ,  $\hat{N} = \sum_{S_{ref}} w_i$ , and  $n_{np}$  is the sample size of the responding libraries (the nonprobability sample).

4. Fitting a binary regression using the following library characteristics from the PLS to predict the probability of being in the sample of responding libraries:
  - **EBOOK:** Count of electronic book units
  - **BKVOL:** Count of print materials in collection
  - **OBereg:** Region Code (Bureau of Economic Analysis)
  - **AUDIO\_DL:** Count of downloadable audio units
  - **ELCONT:** Total electronic content use
  - **KIDCIRCL:** Count of circulation of all children’s materials
  - **LIBRARIA:** Total FTE of librarians
  - **LOCALE:** City, Suburban, Town/Rural
5. Calculating the inverse probability for each library that responded to the survey ( $w_{np} = 1/P$ ).

Two law libraries four other libraries not represented in the PLS were assigned a weight of 0 for a total number of 1511 libraries in the analytic sample.

The PLS population-level data was used to check how effective weighting was for estimating population averages across a number of variables. For example, the average number of librarians in the library population was 5.55. Before weighting, the average number of librarians in the sample of responding libraries was 13.20 (se = .89) which suggests that the number of librarians were overrepresented in responding libraries. After weighting, the estimated average number of librarians in the population was 5.81 (se = .24)—much closer to the population average. These results indicate that the weights were effective in reducing selection bias.

## Note

1. Valliant, R., Dever, J.A., & Kreuter, F. (2018). *Practical tools for designing and weighting survey samples*. Springer. [doi.org/10.1007/978-3-319-93632-1](https://doi.org/10.1007/978-3-319-93632-1).

## Appendix B. Survey Reference Copy

### 2023 Technology Survey



#### Survey: [librarybenchmark.org](https://librarybenchmark.org) | Deadline: December 16, 2023

The Public Library Association (PLA), a division of the American Library Association (ALA), is conducting this survey to better understand current and emerging technology in public libraries nationwide. The 2023 Public Library Technology Survey gathers information about the public access technology infrastructure, technology-related programming, and technology-related funding streams.

We ask that you respond to questions at the library **administrative entity** level. This is the same level at which you report annual statistics to your state library agency. Some questions ask about whether your library offers resources/services in "at least one location." A **location** refers to your single main library or any of your library branches that are usually open to the public and provide services to the community (e.g., lends books, offers public access to computers, etc.). Additionally, unless otherwise stated, your responses should reflect the **current situation** within your library at the point in time when you are completing this survey. A glossary of terms is available with the survey instructions.

Your input will help to ensure that the findings from the survey reflect the unique characteristics of your library as well as similar libraries across the country. In addition, your responses will enable PLA to provide nationally representative data to inform elected officials, the media, and funders about public library assets and needs. Findings from the survey will be analyzed and reported in aggregate across all public libraries and in groups of similar libraries. PLA will use results from the survey to advocate on behalf of public libraries at the national level. In addition, PLA will make a summary of aggregate results freely available [on its website](#) to share the results widely. Results will be incorporated into the *Benchmark: Library Metrics and Trends* data tool.

The survey does not request your name or the names of any staff members, and your library's survey responses will remain private. To read ALA's privacy policy, please visit <http://www.ala.org/privacypolicy>.

It should take 30 to 45 minutes to complete this survey. You do not need to complete the survey in one session. Rather, you may save your responses and return to the survey at another time. If you have any questions about the survey, please contact the project team at [plabenchmark@ala.org](mailto:plabenchmark@ala.org).

## **Additional Survey Information**

### *What type of information does this survey collect?*

The main sections on the 2023 Public Library Technology Survey are: Public Access Technology, Digital Literacy and Training, Infrastructure, and Staff Support and Budget for Technology. The survey questions are primarily multiple-choice, select-all-that-apply, and open-ended. No survey questions ask you to report any annual output measures.

### *Who should complete the survey?*

One person should submit the survey on behalf of a single library at the administrative entity level. Often that person is the library director, administrator, or data coordinator. However, you may need to work with other staff or library departments, such as IT, to complete some of these questions.

### *How do I enter my library's responses?*

Log into your library's account at <https://librarybenchmark.org/>. Click on "Surveys" in the menu, and then you will see this survey listed under "Open Surveys." The survey will remain open through Saturday, December 16, 2023.

### *Why should my library complete the survey?*

Your participation will help make the results powerful and actionable for your library and libraries across the country. Your input enables PLA to provide nationally representative data to engage and inform elected officials, the media, and funders about public library assets and needs. PLA will also share aggregate results widely with the field, develop tools for peer comparison, and plan relevant professional development opportunities. In addition, the survey questions may inspire new ideas for your library. As this is the second iteration of this survey, the 2023 results will show how the field has evolved. You can read the [report from the 2020 Technology Survey](#) on the PLA website.

### *How long will it take?*

We estimate the survey will take 30 to 45 minutes to complete. However, you may need to gather some information from colleagues before or during the process. We recommend reviewing all the questions beforehand to help you prepare.

### *How will the survey results be used?*

The survey results will be incorporated into the Benchmark data dashboards, so your library will be able to see how you compare to your peers and to other libraries in the United States. PLA will publish a report summarizing the aggregate results on the PLA website and will use the survey results to advocate on behalf of public libraries at the national level. For example, in the past 3 years, the results from the 2020 Technology Survey have been used to advocate for libraries in the E-Rate program, digital literacy initiatives, and to raise awareness about the value of public library services at the local level in states like Texas and New York and beyond.

## 2023 Technology Survey



Please enter responses in your library’s account in [Benchmark: Library Metrics and Trends](#). This document is a copy of the survey *for reference purposes only* – the questions shown to you in Benchmark are not numbered, nor presented in table format as shown here, and may vary depending on your answer choices.

### Section 1: Public Access Technology

1. Does your library offer the following technologies for **on-site** use by patrons in any location?

	Yes	No
Color printer(s)	<input type="radio"/>	<input type="radio"/>
Large-format printer(s)	<input type="radio"/>	<input type="radio"/>
Wireless or mobile printing	<input type="radio"/>	<input type="radio"/>
Copy machine(s)	<input type="radio"/>	<input type="radio"/>
Fax machine(s)	<input type="radio"/>	<input type="radio"/>
Scanner(s)	<input type="radio"/>	<input type="radio"/>
Laptop(s) (includes Chromebooks and gaming laptops)	<input type="radio"/>	<input type="radio"/>
Tablet(s)	<input type="radio"/>	<input type="radio"/>
E-readers	<input type="radio"/>	<input type="radio"/>
Assistive technology (e.g., screen readers)	<input type="radio"/>	<input type="radio"/>
Smartboards	<input type="radio"/>	<input type="radio"/>
Early learning devices (e.g., AWE stations, Launchpads)	<input type="radio"/>	<input type="radio"/>
Recreational video gaming consoles (e.g., PlayStation, Xbox)	<input type="radio"/>	<input type="radio"/>
Smart objects for STEAM (e.g., coding robots, circuit boards)	<input type="radio"/>	<input type="radio"/>
Virtual reality headsets (e.g., Oculus)	<input type="radio"/>	<input type="radio"/>
Digital media production equipment – with or without a lab (e.g., hardware/software for creating with audio or video, scanning content, editing digital photos)	<input type="radio"/>	<input type="radio"/>
Maker production equipment – with or without a makerspace (e.g., 3D printer, carving, engraving, vinyl cutting, or sewing machines)	<input type="radio"/>	<input type="radio"/>
Other on-site technologies ( <i>please specify</i> )		



2. Does your library **circulate** the following technologies for **off-site** use by patrons from any location?

	Yes	No
Internet hotspots	<input type="radio"/>	<input type="radio"/>
Laptops (includes Chromebooks)	<input type="radio"/>	<input type="radio"/>
Tablets	<input type="radio"/>	<input type="radio"/>
E-Readers	<input type="radio"/>	<input type="radio"/>
Early learning devices (e.g., Playaway Launchpads)	<input type="radio"/>	<input type="radio"/>
Recreational technology (e.g., GoPro Kits, gaming consoles, coding robots)	<input type="radio"/>	<input type="radio"/>
Streaming devices (e.g., Roku)	<input type="radio"/>	<input type="radio"/>
Other off-site technologies ( <i>please specify</i> )		

3. Does your library make available the following technology-enabled services or online resources for use by patrons? Please consider both subscription-based services and resources curated by your library (e.g., links to free health resources on a webpage).

	Yes	No
E-books/E-audiobooks (e.g., OverDrive)	<input type="radio"/>	<input type="radio"/>
Streaming and other downloadable media (e.g., Kanopy, Hoopla, Flipster, Freegal)	<input type="radio"/>	<input type="radio"/>
Online homework assistance (e.g., Brainfuse, tutor.com)	<input type="radio"/>	<input type="radio"/>
Online job/employment resources (e.g., LearningExpress, LinkedIn Learning, Gale Courses)	<input type="radio"/>	<input type="radio"/>
Online language learning (e.g., Mango)	<input type="radio"/>	<input type="radio"/>
Online health resources (e.g., Medline Plus, Health.gov)	<input checked="" type="radio"/>	<input type="radio"/>
Online genealogy tools (e.g., Ancestry, HeritageQuest, Fold3)	<input type="radio"/>	<input type="radio"/>
Reference services via chat or text	<input type="radio"/>	<input type="radio"/>
Videoconferencing software (e.g., Adobe Connect, Cisco, GoToMeeting, Zoom)	<input type="radio"/>	<input type="radio"/>
Design software (e.g., Adobe InDesign, Photoshop)	<input type="radio"/>	<input type="radio"/>
Other online resources ( <i>please specify</i> )		

4. Does your library offer the following methods for patrons to access library services with a mobile device?

	Yes	No
Library website optimized for mobile devices	<input type="radio"/>	<input type="radio"/>
A mobile app created for the library (e.g., with mobile self-checkout, early literacy resources)	<input type="radio"/>	<input type="radio"/>
Vendor-delivered apps to access library services (e.g., Libby, Beanstack)	<input type="radio"/>	<input type="radio"/>
QR codes	<input type="radio"/>	<input type="radio"/>
Other mobile device services ( <i>please specify</i> )		

5. Does your library conduct technology-based outreach (e.g., via a mobile laptop lab or cybermobile) in the community?
- Yes, from at least one location
  - No

## Section 2: Digital Literacy and Training

6. Does your library offer programming or training to patrons on the following digital literacy related topics, whether in-person or online, or in the library or off-site?

	<b>Yes, Informal Point-of-Use Training</b>	<b>Yes, Formal Program/ Class/ Appointment</b>	<b>Both, formal and informal</b>	<b>No</b>
General computer hardware/software skills (e.g., how to use a mouse and keyboard, word processing, streaming devices)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet use (e.g., web searching, online databases, social media, privacy and safety online)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Web development and digital content creation (e.g., website creation, audio/visual content creation)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coding and maker technology (e.g., programming, robotics, 3D printing)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (including assistive technology, video conferencing, or other types of training)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other programming/training ( <i>please specify</i> )				

7. In the past 12 months, did your library **formally offer** any of the following technology-enabled or online programs or services, either alone or in partnership with another organization either on- or off-site?

	<b>Yes</b>	<b>No</b>
Individual telehealth sessions (via private kiosks or videoconferencing in private rooms)	<input type="radio"/>	<input type="radio"/>
Live online classes or job training (e.g., interactive online classes, job certification programs)	<input type="radio"/>	<input type="radio"/>
Live online public programs or discussion forums (e.g., author talk, community issues forum)	<input type="radio"/>	<input type="radio"/>
Virtual reality experiences (e.g., field trips)	<input type="radio"/>	<input type="radio"/>
Home broadband adoption (e.g., researching options, ACP application)	<input type="radio"/>	<input type="radio"/>
Other individual online consultation appointments (i.e., private videoconferencing outside telehealth)	<input type="radio"/>	<input type="radio"/>
Other formal services ( <i>please specify</i> )		

8. Does your library offer a Digital Navigator program, or does it have staff or partners who assist patrons, through repeated interactions, with digital inclusion needs?

- No
- Yes

**If yes**, please share any links related to your digital navigator program, as well as any challenges or strengths you have discovered with digital navigator services in libraries and other community-based organizations.

9. The federal government is making historic investments in advancing digital equity, literacy, and inclusion for all through the Infrastructure Investment and Jobs Act (IIJA). Its *State Digital Equity Planning Grant Program* supports the creation of community-centric solutions to close the digital divide.

a. Is your library involved in your state's digital equity planning?

- Yes
- No
- Not sure

b. Is your library involved in **any** digital equity or inclusion coalition at the local, state, or regional level?

- Yes
- No
- Not sure

10. For what other **new or emerging** technologies is your library developing or considering developing digital literacy assistance or training in the coming year? Examples may include, but are not limited to, virtual reality job training, accessing open data, and utilizing artificial intelligence (AI).

11. What are the greatest challenges your library faces in providing digital literacy assistance or training?

### Section 3: Infrastructure

The questions in this section may require accessing information from other sources or requesting information from IT departments/staff.

12. Is the public access Internet connection at your library fiber optic?

- Yes, in at least one location
- No

#### PUBLIC COMPUTER CONNECTION SPEEDS

13. What are the DOWNLOAD and UPLOAD speeds at which your library **subscribes** for its public access Internet connection?

*Please refer to the contract with your Internet Service Provider (ISP) to answer this question. If you do not have access to your ISP contract, skip to question 14.*

Subscribed DOWNLOAD speed (Mbps): \_\_\_\_\_

Subscribed UPLOAD speed (Mbps): \_\_\_\_\_

14. By comparison, what are the typical speeds experienced by patrons utilizing the library's WIRED public access internet connection?

*Use a speed test service such as speed.cloudflare.com on one of your public access computers when connected to the library's internet service via an ethernet (wired) connection. Run the test at your central library (if your library has multiple branches) during regular service hours to capture an accurate reflection of speeds that patrons and staff experience on a daily basis.*

Test results for DOWNLOAD speed (Mbps): \_\_\_\_\_

Test results for UPLOAD speed (Mbps): \_\_\_\_\_

#### WIRELESS CONNECTION SPEEDS

15. Does your library offer wireless (Wi-Fi) internet access to patrons (e.g., for use with patron laptops, tablets, or other wireless devices)?

- Yes
- No [**skip to question 17**]

16. What are the DOWNLOAD and UPLOAD speeds of the wireless internet connection offered by your library?

*Use a speed test service such as speed.cloudflare.com on a device connected to the library's internet service via Wi-Fi. Run the test at your central library (if your library has multiple branches) during regular service hours to capture an accurate reflection of speeds that patrons and staff experience on a daily basis.*

Wi-Fi test results for DOWNLOAD speed (Mbps): \_\_\_\_\_

Wi-Fi test results for UPLOAD speed (Mbps): \_\_\_\_\_

17. How often does your library's public internet connection speed meet patron needs?

	<b>Rarely</b> (e.g., Web pages consistently delayed in loading)	<b>Sometimes</b> (e.g., Web pages delay in loading at different times of the day)	<b>Often</b> (e.g., patrons consistently can access the content they want when they want it)
Internet connection on public computers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wi-Fi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

a. Please share any specific comments you have about the adequacy of your library's current internet connection speeds.

18. Do any of the following factors affect your library's ability to increase its broadband connectivity?

	<b>Yes</b>	<b>No</b>
The library cannot afford the cost of increasing bandwidth to support faster speeds.	<input type="radio"/>	<input type="radio"/>
City/county/other entities influence or make decisions regarding the library's bandwidth.	<input type="radio"/>	<input type="radio"/>
The library lacks the technical knowledge to increase bandwidth.	<input type="radio"/>	<input type="radio"/>
A faster speed is not available in our service area.	<input type="radio"/>	<input type="radio"/>
The library is currently locked into contract for a particular speed, including E-rate.	<input type="radio"/>	<input type="radio"/>
Other factors <i>(please specify)</i>		

19. Within the **past 2 years**, were the following components of your library’s technology infrastructure **added, replaced, or upgraded**?

	Yes	No
Public access computers (desktops)	<input type="radio"/>	<input type="radio"/>
Public access laptops	<input type="radio"/>	<input type="radio"/>
Public access tablets (e.g., iPads, Galaxy)	<input type="radio"/>	<input type="radio"/>
On-site computer lab	<input type="radio"/>	<input type="radio"/>
Mobile computer lab (e.g., cart that can be transported out of the building, cybermobile)	<input type="radio"/>	<input type="radio"/>
Staff computers, laptops, or tablets	<input type="radio"/>	<input type="radio"/>
Bandwidth (e.g., improved speeds)	<input type="radio"/>	<input type="radio"/>
Internal network (e.g., cabling, routers, or wireless access points)	<input type="radio"/>	<input type="radio"/>
Firewalls or other security measures	<input type="radio"/>	<input type="radio"/>
Cloud-based server management	<input type="radio"/>	<input type="radio"/>
Physical servers	<input type="radio"/>	<input type="radio"/>
Videoconferencing software license or equipment for public or staff (e.g., web cameras, speakers, TV monitors)	<input type="radio"/>	<input type="radio"/>
Digital signage (e.g., scrolling tickers of information, calendars)	<input type="radio"/>	<input type="radio"/>
Other components ( <i>please specify</i> )		

## Section 4: Staff Support and Budget for Technology

20. What type(s) of IT support staff are utilized by your library?

	Yes	No
Full-time library IT staff	<input type="radio"/>	<input type="radio"/>
Part-time library IT staff	<input type="radio"/>	<input type="radio"/>
IT support through a consortium, state library system, or other administrative entity	<input type="radio"/>	<input type="radio"/>
Contracted IT support (includes hourly or as needed)	<input type="radio"/>	<input type="radio"/>
City/county IT support	<input type="radio"/>	<input type="radio"/>
Volunteer IT staff	<input type="radio"/>	<input type="radio"/>
<b>None:</b> IT support provided by staff without IT titles or roles.	<input type="checkbox"/>	--
Other IT support ( <i>please specify</i> )		

21. Does your library have staff **dedicated** to any of the following technology-related activities?

	Yes	No
Website development and management	<input type="radio"/>	<input type="radio"/>
Social media account management	<input type="radio"/>	<input type="radio"/>
Digital literacy training for patrons	<input type="radio"/>	<input type="radio"/>
Technology programming for patrons (e.g., STEM classes)	<input type="radio"/>	<input type="radio"/>
Digital Navigators to assist patrons	<input type="radio"/>	<input type="radio"/>
Other technology-related activities ( <i>please specify</i> )		

22. How do **library staff** receive technology training to assist patrons or for professional development? *Check all that apply.*

- Dedicated library staff deliver in-house technology training
- Local, consortium, regional, or state library training (at conferences, online, or in-person)
- National conference sessions or webinars
- Self-paced, web-based courses
- Other staff training methods (*please specify*)



23. Take a moment to think about how you select digital content subscriptions for your library. Have any of the following influenced your ability to offer the digital content that you would like to provide?

	Yes	No
Digital content is curated by a consortia, regional system, or state library	<input type="radio"/>	<input type="radio"/>
Subscription cost or payment terms	<input type="radio"/>	<input type="radio"/>
Broadband limitations within the library service area	<input type="radio"/>	<input type="radio"/>
Duplication of content across vendors	<input type="radio"/>	<input type="radio"/>
Vendor licensing terms or restrictions (e.g., embargo, non-simultaneous usage, lack of remote use)	<input type="radio"/>	<input type="radio"/>
Concerns about privacy protections for patron data	<input type="radio"/>	<input type="radio"/>
Inability to obtain local data about patron usage	<input type="radio"/>	<input type="radio"/>
Other influences ( <i>please specify</i> )		

24. How much of a priority is internal data and network security to your library? For example, the library's ability to protect its online assets and patron privacy from cyber-attacks.

- Low priority
- Medium priority
- High priority

Please provide an explanation for your rating.

25. Does your library have a budget line item(s) or funding designated specifically for public access technology, such as hardware, programming, training, and online services?

- No [*skip to question 27*]
- Yes

26. [*If yes to question 25*] How much control does your library leadership have over the decision making of those technology expenditures?

- No control
- Some control
- Full control

27. Outside of the operating budget, does your library pay for technology needs from any of the following sources?

	Yes	No
Library Services and Technology Act (LSTA) funds distributed by your state library agency	<input type="radio"/>	<input type="radio"/>
Federal E-Rate	<input type="radio"/>	<input type="radio"/>
State universal service fund	<input type="radio"/>	<input type="radio"/>
City/county funds	<input type="radio"/>	<input type="radio"/>
Grants (e.g., local, state aid, federal sources)	<input type="radio"/>	<input type="radio"/>
Library foundation or endowment	<input type="radio"/>	<input type="radio"/>
Donations or fundraisers	<input type="radio"/>	<input type="radio"/>
Other sources ( <i>please specify</i> )		

28. Did your library apply for Federal E-Rate program funding for FY2023?

- Yes, individually [**continue to question 29, skip question 30**]
- Yes, as part of a consortium [**continue to question 29, skip question 30**]
- No [**skip question 29**]

29. [**If yes to question 28**] For which category of Federal E-rate program funding did your library apply?

- Category One (i.e., broadband service)
- Category Two (i.e., internal network, routers)
- Both

30. For what reason(s) did your library not apply for E-rate funding for FY 2023?

	Yes	No
The library did not comply with Children’s Internet Protection Act (CIPA) filtering requirements	<input type="radio"/>	<input type="radio"/>
The total discount was not worth the time needed to participate in the program	<input type="radio"/>	<input type="radio"/>
Lack of staff capacity to complete the application (e.g., it was too complex or time consuming)	<input type="radio"/>	<input type="radio"/>
Staff did not believe the library would qualify or felt discouraged from applying due to a previously denied application	<input type="radio"/>	<input type="radio"/>
The library does not find it necessary to apply (e.g., it has sufficient funding or is provided free internet service)	<input type="radio"/>	<input type="radio"/>
Other reasons ( <i>please specify</i> )		

**Thank You and Final Thoughts**

Thank you for taking the time to complete the 2023 Technology Survey!

Please take a moment to describe any other technology issues or concerns that were not reflected in this survey. In particular, please explain challenges or successes you see with library technology services as your community continues to recover from the COVID-19 pandemic or trends you are watching for the future.

## Appendix C. Survey Instructions and Glossary

### 2023 Technology Survey



#### Instructions

Log into your library's Benchmark account ([librarybenchmark.org](https://librarybenchmark.org)) to enter your responses for the 2023 Public Library Technology Survey. Please submit your responses by Saturday, **December 16, 2023**.

Click on "Surveys" in the menu at the top and select "2023 PLA Technology Survey" under "Open Surveys." You do not need to complete the survey in one session. Rather, you may save your responses and return to the survey at another time. We estimate it will take 30 to 45 minutes to complete this survey.

We recommend using the **Survey Worksheet** (a PDF form) to review the questions and collect responses before entering them in the online form. This worksheet is provided for your convenience and contains FAQs about the survey.

We ask that you respond to questions at the **library administrative entity** level. This is the same level at which you report annual statistics to your state library agency. Some questions ask about whether your library offers resources/services in "at least one location." A **location** refers to your single main library or any of your library branches that are usually open to the public and provide services to the community (e.g., lends books, offers public access to computers, etc.).

Unless otherwise stated, your responses should reflect the **current situation** within your library at the point in time when you are completing this survey.

One person should submit the survey on behalf of a single library administrative entity. Often that person is the library director, administrator, or data coordinator. However, you may need to work with other staff or library departments, such as IT, to complete some of these questions.

A glossary of terms can be found below.

If you have any questions about the survey, please contact the project team at [plabenchmark@ala.org](mailto:plabenchmark@ala.org).

## **Glossary**

The terms below are organized alphabetically.

### **App**

Abbreviation for “mobile application.” A software application designed to run on mobile devices, such as smart phones and tablet computers. Apps are commonly used for information retrieval, communications, and gaming.

### **Assistive Technology**

Technologies that help people with disabilities adapt to processes or complete tasks that would otherwise be difficult or impossible. Examples include hearing aids, wheelchairs, speech to text reader software, etc.

### **Bandwidth/Connectivity Speed**

The speed or capacity of a data transmission rate, usually measured in bits per second (i.e., Megabits per second [Mbps] or Gigabits per second [Gbps]).

### **Broadband**

A term used to describe high-speed Internet access.

### **Cloud-Based Server Management**

Hosting information or files on remote servers not owned by the library. Examples include Microsoft Azure or Amazon Web Services (AWS).

### **Computer Software**

Programs that run on a computer.

### **Digital Literacy**

The ability to identify, locate, evaluate, manage, interpret, integrate, and create information effectively and critically using digital technology, or media that is presented in digital formats.

### **Digital Media Production Equipment**

Digital media is any type of media content (images, audio, or video) that is enabled for machine-accessible arrangements and requires specific technology devices or software to create. Examples include the hardware or software for music and video production, podcasting, scanning content, editing digital photos, etc.

### **Digital Navigators**

Individuals who address the whole digital inclusion process – home connectivity, devices, and digital skills – with community members through repeated interactions. (Definition from [NDIA](#))

### **Digital Signage**

An interactive digital sign or display that allows patrons to see or interact with information on a large, mounted screen.

**E-Books/E-Audiobooks**

Digital documents – licensed or not – that act as substitutes for print books/periodicals or audiobooks on physical media and can easily be read or listened to on a personal computer, tablet, or other device.

**E-Rate**

A program of the Federal Communications Commission’s Universal Service Fund that provides discounts to eligible public libraries and schools on telecommunications services, internet access, and related infrastructure.

**Fiber Optic**

A high-speed data transmission medium that uses pulses of light.

**Formal Services**

Services specifically planned, promoted, and offered by the library. The service may occur in the library or another facility, and the person providing the support may or may not be a member of the library staff. These services are often delivered one-on-one, including by appointment.

**Hotspot**

A wireless access point that uses wireless data from a cellular provider to provide internet access for phones, computers, tablets, and other Wi-Fi enabled devices.

**Informal Point-of-use Training**

One-on-one technology help (e.g., with Web browsing, using library databases, library equipment, etc.) upon patron request. Assistance may or may not be provided by a member of the library staff (e.g., by a volunteer).

**Internet Service Provider (ISP)**

A communications carrier that provides access to the Internet; an entity from whom a customer buys internet service.

**IT (Information Technology) Staff**

Staff dedicated to the responsibility of maintaining the information technology services and resources available at the library or assisting library patrons with using these products. May include staff who are contracted through the city/county or support staff assigned to the whole library or several branch locations.

**Large-format Printer**

A printer with a print width between 17” and 100”. It can be used to print banners, posters, or signs.

**Library Administrative Entity**

A public library with a legal service area that may have one or more library locations. For the purposes of this survey, “your library” responses should reflect your library administrative entity at the same level as your annual statistics report to your state library agency for the national Public Libraries Survey.

**Library Location**

A library building that is open to the public and provides services to the community (e.g., lends books, offers public access to the Internet and computers, etc.). In the case of some public libraries, there is only one location, while others have several branch locations.

**Maker Production Equipment**

Hardware, machines, or tools used in physical maker production. Examples include computer numerical control (CNC) carvers, routers, and vinyl cutters, sewing machines, 3D printers, etc.

**Megabits per second (Mbps or Mb/s)**

A unit of measure describing the rate of data transfer equal to 1,000,000 bits per second; 125,000 bytes per second; or 1,000 kilobits per second. Download and upload speeds from an Internet Service Provider are usually measured in Megabits per second or Gigabits per second.

**Mobile-Optimized Website**

A website which is optimized to work on cell phones and other devices with smaller screens, limited connection speeds, or less processing power than typical personal computers.

**Mobile or Wireless Printing Services**

A service that allows library patrons the ability to print documents directly from mobile devices (either personal or library-owned) originating within the library or remotely.

**Open Data**

An archive or database in which all of the data stored is completely accessible to anyone who wants to download, use, or manipulate it. There are no legal restrictions on re-usage of the data. An example would be a collection of data about a local public transit system, which an independent programmer could then use to develop a public transit navigation cell phone app.

**Partner Organization**

An entity or institution separate and distinct from the library that collaborates with the library on programs, training, or initiatives. May include government agencies, non-profit organizations, or private companies.

**Partnership**

A mutually beneficial arrangement between the library and another entity where both parties assist or support one another and work together toward a shared goal. Partnerships are different from professional courtesy or cooperation, where the library assists another entity but does not receive assistance in return (or vice versa). Examples of partnerships may include (but are not limited to) sponsoring activities or events together; working together jointly to develop and deliver programs or services; and sharing costs for staff, resources, or programming. Partnerships do not include grants received, contractors or vendors hired by the

library, or in-kind donations. They may be formal (with a written agreement) or informal (non-binding agreement or longstanding relationship).

### **Program**

Events, or a series of events, that are organized by the library or its partners, open to the library's patrons and community members, held in-person or virtually, on- or off-site, and are offered to a group of patrons, not one-on-one or passively.

### **Public Access Computers and Laptops**

A public access computer or laptop that provides public access to the Internet, including those that provide access to a limited set of Internet-based services such as online databases. This includes circulating laptops but excludes computers or laptops that only access the library's web-based public access catalogs.

### **QR Codes**

Graphical codes that can be read by an imaging device (i.e., cameras on smart phones or tablets, or code readers), which represent encoded information. These usually link to website URLs.

### **Recreational Video Gaming Consoles**

Recreational video gaming includes modern consoles like current versions of Microsoft Xbox, Sony Playstation, or Nintendo Switch; retro consoles like Atari, NES/SNES, or Sega Genesis; and personal computers with software like The Sims or World of Warcraft. It does not refer to gambling.

### **Scanner**

A peripheral machine that converts physical printed documents, images, or other two-dimensional objects into a digital image that can be viewed on a machine, such as a computer.

### **Smartboard**

An interactive whiteboard that uses touch detection for user input. It can be used the same way as a computer, with fingers or a stylus instead of a mouse, to edit a document, browse websites, and collaborate on projects.

### **Staff**

Employees or contractors of the library.

### **Streaming Devices**

A digital media player (a set-top box or dongle plugged into an HDMI port) is a type of consumer electronics device designed for the storage, playback, or viewing of digital media content. They are typically designed to be attached to a television or AV receiver and are often used to consume content from streaming media services and subscription-based content services. Common dongle varieties include Roku Streaming Stick, Amazon Fire TV Stick, and Chromecast with Google TV.



**Tablet**

A flat computer that is controlled by a touchscreen with varying degrees of computing functionality. Tablets are differentiated from smart phones by their larger screen size, and from E-readers by their computing ability. Common varieties include Apple iPad, Amazon Kindle Fire, and Samsung Galaxy Note.

**Videoconferencing Software/Technologies**

Computer-mediated telecommunications technologies that let people in two or more different locations talk to and see each other on computers or comparable devices.

**Volunteer**

Unpaid person under the supervision of library staff.

**Wireless (Wi-Fi) Internet Access**

Internet access that does not require a direct connection (e.g., Ethernet) for access. Most typically, wireless access adheres to the IEEE 802.11 standard (typically b, g, n, ac, ax) for interoperability and compatibility.

**Additional Questions?**

If you need further clarification on a question or response option, please contact the project team at [plabenchmark@ala.org](mailto:plabenchmark@ala.org).