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Digital Public Library Ecosystem 2023

Executive Summary

The **Digital Public Library Ecosystem** is the network of digital book collection and circulation specifically through public libraries.

Digital book collection and circulation have never been more important than they are today. Nearly 1 in 3 Americans has read an ebook in the last 12 months. Audiobook listening is also high; nearly 1 in 4 Americans has listened to an audiobook in that same time period.¹ Libraries are one way in which readers gain access to ebooks and audiobooks. Despite this, a holistic view of the digital library ecosystem is largely opaque.

Three factors contribute to current confusion about the digital public library ecosystem. One,

essential terms like **reading**, **library use**, **circulation**, and **holds** have been inconsistently defined across the industry and in other reports. Two, the digital public library ecosystem is complex, and different elements of the ecosystem do not necessarily work or communicate with each other directly. Three, availability of books in the digital public library ecosystem is limited by digital licensing and the contractual limitations for digital materials.

This report:

- Defines terms related to digital library lending and licensing
- Identifies the current players and processes in the digital public library ecosystem

- Explains how digital licensing and circulation work
- Contextualizes why these matter:
 - Digital book borrowing has increased 34% since 2019, with a 10% growth “post-pandemic” between 2021–2022.²
 - Gen Z and millennials don’t understand that digital books provided through services like OverDrive’s Libby app are connected to their local public library.³ As the book industry competes in an increasingly crowded entertainment

marketplace, flexible licensing terms of digital books reduce patron waits, and allow libraries to maximize their digital collections budgets.⁴

This *Digital Public Library Ecosystem 2023* report offers a comprehensive overview of the current state and operations of the Digital Public Library Ecosystem, including an introduction to the relationships and roles of the many stakeholders: authors, agents, publishers, distributors, library community, governments, and trade organizations, as illustrated in the infographic below (**Figure 1**).

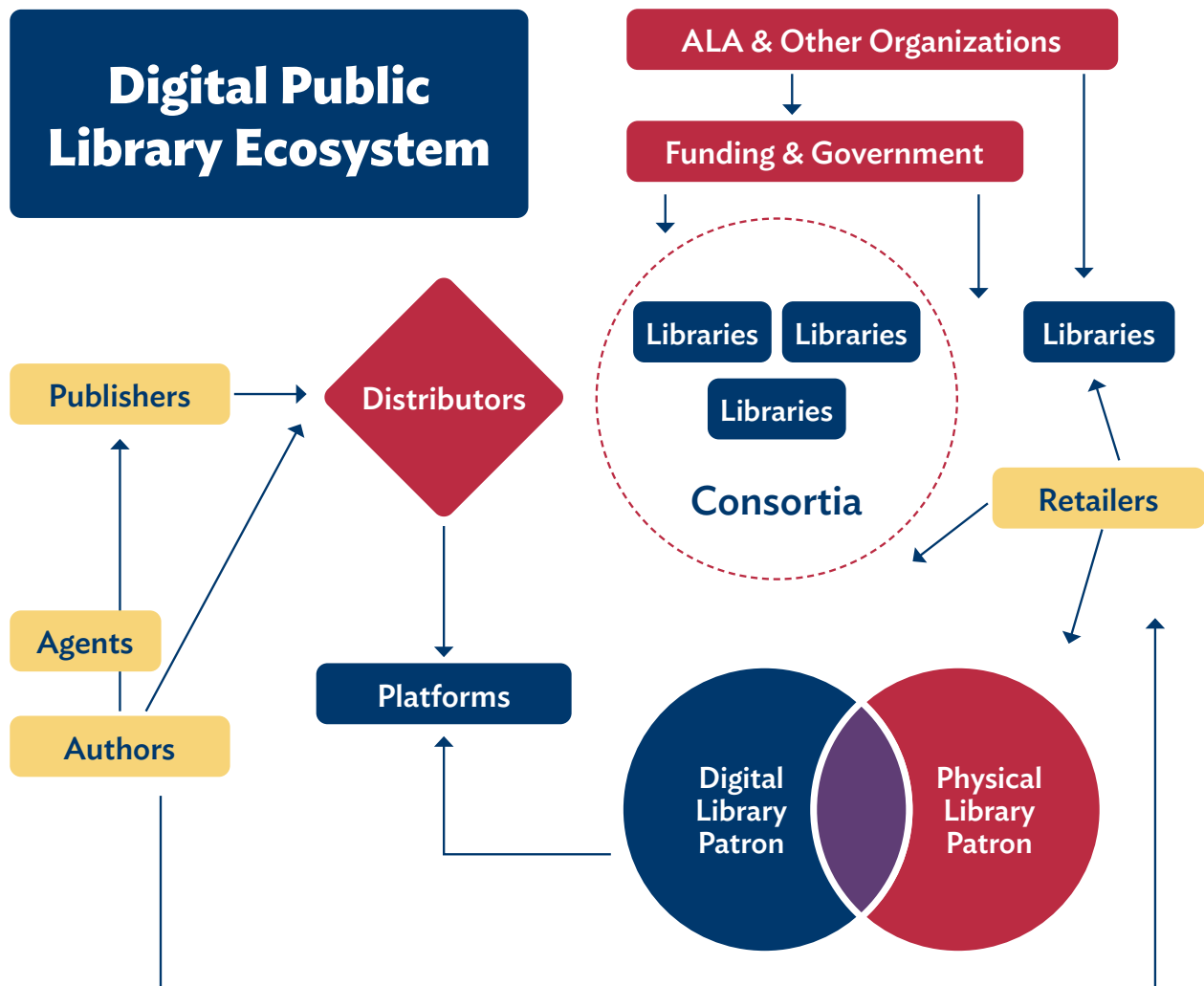


Figure 1. The digital library ecosystem is complex. Different actors in the ecosystem do not necessarily understand how others outside their sphere operate. This report aims to increase transparency and communication among the actors.

Introduction

The Digital Public Library Ecosystem is the interconnected network of digital book consumption specifically through public libraries.⁵ This *Digital Public Library Ecosystem 2023* report offers a comprehensive overview of the current state and operations of the Digital Public Library Ecosystem, including the relationships and roles of the many stakeholders: authors, agents, publishers, distributors, library community, governments and trade organizations. Knowing the full ecosystem helps foster communication between stakeholders. It will be easier to find consensus and identify challenges if people understand the various actors and their needs in the system.

This report addresses what previous studies and other research about the digital public library ecosystem have lacked. First, this report does not conflate physical library visits with “library use;”⁶ it validates that digital library use should be factored into how communities measure libraries’ impact. Second, this report acknowledges digital reading and consumption of ebooks and audiobooks is reading (listening is reading).⁷

Despite the growing importance of this ecosystem, it is challenging to comprehend. There is no singular, comprehensive dataset that could capture more than a set of snapshots of digital public library ecosystem activity. The Institute of Museum and Library Services (IMLS) captures only national library data, and its data on digital books is limited. Meanwhile, NPD BookScan does not capture sales to the library market. This makes proprietary data from publishers, distributors, or Amazon (which is

both) the only option—but those organizations do not publicly share data. Individual library systems have their own data collected in their Integrated Library Systems (ILS), but ILSs are not constructed to gather longitudinal borrowing histories due to library protection of patron data and privacy. Individual library systems can collate their ILS data with digital collection use-data from OverDrive (the

This report

1. Begins by defining key terms and concepts;
2. Maps central players in the ecosystem;
3. Ends with other important topics such as collections spending and data privacy.

most commonly used digital content distributor in the library sector), but there is no sharing of this comparative data between library systems. The specifics are discussed below in the section *Data Privacy*.

The *Digital Public Library Ecosystem 2023* report redresses the lack of a comprehensive view by providing an overview of both the nuts-and-bolts of digital lending and the big picture: how digital collection licensing terms affect patron access to digital books; and how mobile computing changes readers’ expectations of access, in-app customization, and data privacy.

1 DEFINITIONS AND KEY CONCEPTS

To understand the digital public library ecosystem we must define its components clearly. Too often different actors are not on the same page when it comes to defining these basic elements, which makes discussion confusing and ineffective.

At a basic level, the heart of the digital public library ecosystem lies in the licensing of rights from the author or publisher for the use of the intellectual

property of the ebook or audiobook. Distributors/aggregators then connect the author and publisher to the reader, often through libraries. To maximize their purchasing power and pricing leverage, individual libraries often band together in consortia. This section defines key concepts and terms including **reading, library use, rights, lending/licensing models, distributors, and library consortia.**

Reading

What counts as **reading**? Format, linearity, and portion of the book read are often key variables in the definition of reading. Various companies, organizations, and researchers define reading in different ways. WordsRated researchers define reading as finishing an entire book and do not count audiobook listening as reading. In the *Immersive Media and Books 2020* study sponsored by the Panorama Project⁸, written by this report's authors, we used **engaging**, rather than reading, to be inclusive of the many ways that people interact with books: reading in whole or in part, reading in different formats (print, ebook, audiobook), reading non-linear non-fiction texts (dictionaries, cookbooks, etc.), and buying (collecting, displaying, gifting). The narrower the definition of reading used, the more likely that ways of interacting with books will be missed.

Library Use

Patron data privacy is important to libraries. For this reason, libraries and library distributors (like OverDrive) do not collect specific identifiable patron behavior data. While laudable for privacy reasons, this lack of data inhibits the analysis of the use of ebooks and audiobooks.

Measuring library use. There are many ways that library use can be measured, which is problematic when organizations and researchers are all talking about library use but not using the same definition. The only way to capture a holistic picture is to not define library use with one variable. Number of library card holders, visits to the physical library location, and circulation numbers have all been used as variables to measure library use. For example, the Freckle Report defines library use as visits to the physical library location and excludes use of digital library collections, which misses a large segment of library use.

Circulations. When a library patron borrows a book—in the digital public library ecosystem, this typically means clicking “borrow” on the app—that is a circulation (circ). A circ/borrow does not

necessarily mean the library patron read/opened the digital book, only that they checked it out. Renewals also count as circs. A library patron might initially borrow the digital book and then renew the book when the borrowing period expires; this would count as two circs.



Holds. Hold ratios for digital books differ across library systems. Hold ratios are determined by the digital collections librarian on a title-by-title basis, if the library system has funding to support a staff position dedicated to managing the digital collection. Lacking a dedicated staff person, the holds ratios are likely to stay at a preset ratio the library has deemed affordable. Cuyahoga County (Ohio) Public Library has an average wait time of 27 days for digital books, but the Digital Collections manager customizes hold ratios on a per-title basis. The prompt for a librarian to buy another license is triggered when the holds request exceeds the librarian's specified “hold ratio”; librarians can choose to purchase additional licenses to meet demand, or not. For libraries with fewer resources, wait times for popular items can be several weeks or even months. There are often longer waits for digital formats than for print. At Cuyahoga, the print hold ratio is 3:1, and twice that (6:1) for an ebook or audiobook.

Rights

Authors and publishers license the copyright of ebooks and audiobooks. Authors can decide to sell rights and to whom; often an author will license rights to a publisher, who will in turn license rights to libraries through distributors/aggregators. Not all publishers or distributors work with libraries, and it is important that authors understand for which rights licensing is **exclusive**. For example, Audible, the largest distributor in the audiobook space (owning at least 50%⁹ of the market, and more like 90% in some sectors¹⁰), typically requires exclusive audiobook licensing rights from authors and publishers, which excludes retailers and libraries.¹¹

Lending/Licensing Models

Unlike in the print public library ecosystem where copies of each book are *owned*, copies of digital materials such as ebooks and audiobooks are generally *licensed*. The different licensing models have access that is either *limited* or *unlimited* in terms of duration of the license and number of borrowers or loans allowed. Lending models are also either simultaneous or not, meaning that one copy can be loaned to multiple borrowers at the same time or must be loaned one borrower at a time. OverDrive built a table summarizing 2023 digital book licensing terms itemized by publishing company, which they permitted us to reprint below; see **Figure 2** on pages 9–10 of this report. Common lending/licensing models for library digital content include:

One copy/one user: This lending model requires one license/copy per library patron that checks out the book. In other words, just like with a print book, only one patron can check out the digital copy at one time. This can quickly become very expensive for highly borrowed items (if libraries purchase many digital copies) or may entail long wait times if there is high demand but a library cannot afford multiple digital copies.

If, in the one copy/one user model library access to the digital content does not expire after a given period, the item is **perpetually** in the library's collection.

Metered access: In metered access models, after a particular number of library circulations/check-outs or a set window of time, a license expires and must be repurchased/renewed. An early model of digital library lending was the 2011 HarperCollins Publishers metered access model which allowed 26 circulations before license expiry.¹² In 2019, Hachette Book Group implemented a two-year metered access model to libraries, joining Penguin Random House and Macmillan Publishers with similar models.¹³ This model can be a useful option for new books and bestsellers which have high demand upfront, which tapers over time.

Pay-per-circ: In this model, libraries only pay for books once they've been borrowed by patrons, and then the library pays for each loan. This can be economical for titles with low circulation; but can be very expensive if a title becomes suddenly in demand. If a library needs an influx of copies for a new and popular title but doesn't need them beyond a short window of popularity, pay-per-circ can be more effective than getting a one- or two-year metered license.

Controlled Digital Lending (**CDL**) lends one digital copy at a time for each printed copy that's been scanned and digitized. The digitized copy, which is DRM-protected, takes the place of the printed copy acquired legitimately either through purchase or donation. CDL's one-to-one, "owned-to-loan" ratio is the mechanism by which the Open Library of the Internet Archive (IA) makes books available. IA loans about 5% of the volume of books (25 million in 2021) loaned through OverDrive (500 million in 2021).¹⁴ Some public libraries utilize CDL, as this list of signatories on the Position Statement on Controlled Digital Lending by Libraries suggests.¹⁵ However, a large majority of public libraries do not use CDL.

Whether or not CDL is protected by Fair Use law was the central issue in the court case brought against IA by Hachette Book Group, HarperCollins Publishers, John Wiley & Sons, and Penguin Random House, and coordinated by the Association of American Publishers.¹⁶ On March 24, 2023, Judge John G. Koetl of the U.S. District Court for the Southern District of New York found in favor of the publishers.

Costs; Embargoes

The type of lending/licensing model available for a given book depends on the publisher, as well as distributors/aggregators. Notably, libraries are typically required to pay 3–4 times the consumer price for an ebook or audiobook license of a popular title, even if that license later expires. Some argue that this price difference is intended to accommodate the number of readers that can borrow one ebook or audiobook (in contrast to one consumer).¹⁷ However, the prices are high even for the one-copy/one-user model, which is the closest emulation of a print circulation. These costs make it very expensive for libraries to license digital materials.

Finally, beyond stipulating lending/licensing models and pricing, publishers may institute an **embargo**—a gap of time between when the ebook or audiobook is first available for purchase by consumers and when it is available to be licensed to libraries. For example, Macmillan Publishers implemented an eight-week embargo on digital sales to libraries on November 1, 2019. The embargo was later lifted in conjunction with Covid-19 pandemic lockdowns, on March 17, 2020.

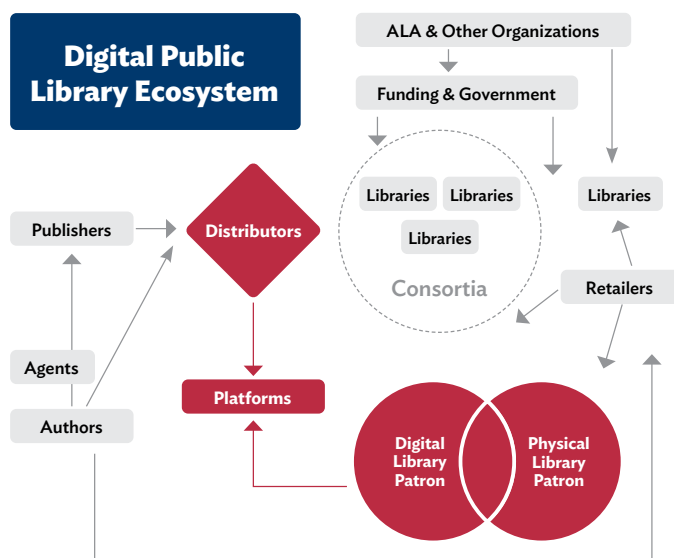
Distribution Partners and Platforms

Distributors connect publishers and libraries. Some distributors and partners are more library-friendly

than others. For example, OverDrive and Baker & Taylor specifically distribute digital content to libraries and schools, whereas Audible’s contracts with authors typically exclude libraries. Ebook and audiobook distribution partners/platforms are sometimes called **aggregators** as they aggregate digital content from a variety of publishers/distributors which can be then purchased by libraries.

Ebook distribution partners or aggregators that work with libraries include OverDrive, Baker & Taylor, Smashwords, bibliotheca cloudLibrary, and PublishDrive. Audiobook distribution partners to libraries include Axis 360, hoopla, OverDrive, bibliotheca cloudLibrary, Findaway Voices (now owned by Spotify), Kobo Writing Life, and Author’s Republic. Some aggregators not only sell digital content to libraries, but also facilitate library patrons’ access to that content. For example, distributors sell books to libraries via distributors/aggregators, most commonly OverDrive. Libraries purchase licenses for digital books through a dashboard owned by the vendor (OverDrive, cloudLibrary, hoopla, etc.). Following license purchase, the ebook is then distributed to the library, and made accessible to public library patrons through a reading app, such as Libby, hoopla or cloudLibrary.

While the biggest players in the library digital content distribution space are commercial, there are some notable nonprofit initiatives. The **Digital Public Library of America (DPLA)** makes more than 47 cultural heritage materials from 5,000 libraries, archives, museums, and other cultural institutions across the country available via the dp.la website.¹⁸ In June 2022, DPLA partnered with Lyris and Knight Foundation to launch The Palace Project, a not-for-profit e-reader app, platform, and marketplace that allows libraries to serve e-content from all their vendors to patrons via a single app, available for iOS or Android. DPLA also runs Palace Marketplace, with an emphasis on providing libraries with flexible licensing models. Palace Marketplace includes more than 1.2 million ebook and audiobook titles from all of the Big 5 publishers, Amazon Publishing, Audible, hundreds of mid-size and independent publishers, and independent authors. So far, Palace Marketplace is the only platform that has negotiated access to titles from Amazon Publishing and Audible.¹⁹ The New York Public Library has introduced the **Library**



Simplified initiative, accessible through its Simple app, built on open source software.²⁰ The **Internet Archive’s Open Library** was discussed above in the context of CDL (Controlled Digital Lending); see *Lending/Licensing Models*, above.

Consortia

Many individual libraries, usually within the same state, band together to form **library consortia**, a collection of libraries who share and centralize resources, purchasing, etc., including both physical and digital materials. For small and rural libraries, consortia models can be even more important

gateways to library access because the administrative costs may be prohibitive and consortia membership can give these library patrons access to a wider range of resources than otherwise possible. As almost four out of ten of America’s public libraries are located in rural communities,²¹ consortia are crucial alliances for rural patrons.

In the digital public library ecosystem, shared digital books can be prioritized for certain libraries in the system. These are called *Advantage copies*, developed by OverDrive in 2009. The library patrons from the prioritized library/libraries will get priority for the available copies, helping to ensure access.

2 MAPPING THE ECOSYSTEM

The digital public library ecosystem involves many players—including authors and agents, publishers, distributors and aggregators, libraries, and retailers which have both common and competing interests. Therefore, understanding their various roles and challenges, and how they can work together is important. While the ecosystem is dominated by large companies—publishers, distributors, aggregators—and often prioritizes bestselling authors, there are a myriad of smaller actors, such as indie authors and local bookshops, that play a role as well. This section offers an overview of these groups and their relationship within the digital public library ecosystem.

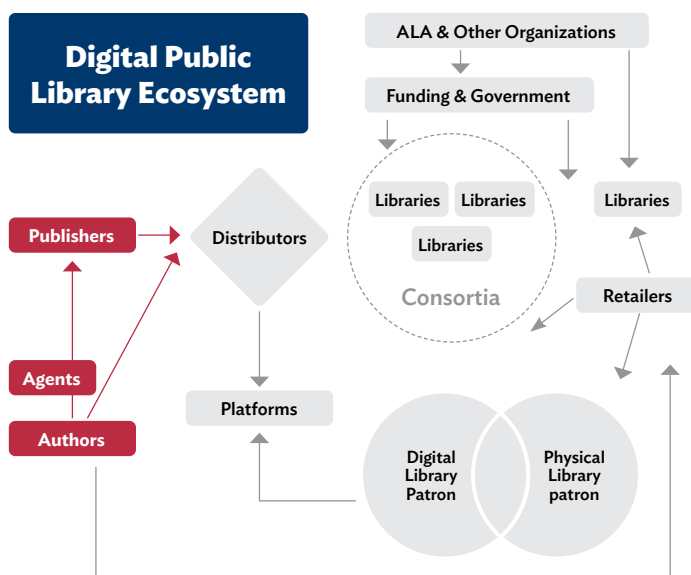
the increased licensing fees paid by libraries are passed along to authors and agents via royalties.

Midlist and Début Authors

Cost is the largest barrier to the provision of digital library resources in public libraries. The relative cost of digital books has an impact not only on the number of titles purchased, but also on the content of library collections. This prompts concern among state legislatures about high prices.²² As Blackwell,

Authors and Agents

Authors and agents are essential entities in the digital public library ecosystem. However, communication from publishers and distributors to authors and agents regarding digital library sales is opaque. Digital sales are typically lumped together rather than broken down into library sales and trade/consumer sales in royalty statements. While ebook and audiobook licenses often cost libraries more money than purchasing a print copy, publishers’ royalty statements often do not break out royalties obtained from libraries in a way that would show how authors and agents benefit from the increased price, or whether



Mason, and May ask: “While we might never expect library digital cost-per-title to be as low as print, the metered models’ higher title costs suggest that cost-per-use for digital on average is certainly higher—likely much higher—than print. . . . Are current publisher practices squeezing libraries into a popular-title-only collection model, even when we might wish to provide and conserve more in digital?”²³

In other words, if current pricing models tend to drive libraries to focus primarily on big titles, to what extent are midlist and debut authors losing out? Already, backlist sales in trade publishing are the majority of sales, making it harder for debut authors to break out and find audience. Similarly, the 2020 *Immersive Media & Books* data illustrates that author brand is the #2 preferred way for readers to discover books. Nearly one quarter (23%) of readers bought a book specifically because of the author brand, meaning that those authors who do not yet have name recognition are at a disadvantage—a hurdle exacerbated by libraries spending their limited digital budgets on known authors.

Self-Published Authors and Library Collections

While self-published (or “indie”) authors have made inroads in the book market in recent years, they are even more disadvantaged than traditionally published debut authors when it comes to standing out in the digital library landscape. The lack of marketing around almost all self-published titles may mean that few ebooks will have sufficient reach to attract a readership beyond people the author personally knows. In this context, how can libraries and local/indie authors work together to break down barriers to digital access?

Initiatives to invite local, self-published writers into locally-curated digital collections, such as the Indie Authors Project and the Multnomah County (OR) Library (MCL) Writers Project, may be one answer. Projects like these have potential to strengthen connections between local libraries and local writer communities. Libraries can help the writers reach readers. And the writers, in turn, can draw the community into library spaces by hosting readings and other events at the library.

The Library Writers Project team at MCL, for example, has curated a collection of self-published works on OverDrive by local authors.²⁴ At the time of this writing, the collection has 125 titles across genres. Authors must publish their works on Smashwords, Kobo Writing Life, or Draft-2Digital (all services that are available for free)

and fill out a submission form, including their library card number. Each book is reviewed independently by two library staff members with a wide range of reading interests. After library staff review submissions, the best ones are added to the library’s ebook collection on the OverDrive platform, which the MCL website notes is “visited by over 8,000 MCL patrons every single day.”²⁵ Meanwhile, eighteen states and provinces across the U.S. and Canada participate in the Indie Authors Project, indicating significant potential reach.²⁶ Inclusion in the Indie Authors Project is recognition from libraries that “creates credibility and visibility for indie authors in a growing marketplace of digital content and indie-published books.”²⁷



Publishers

Trade publishing in the United States is highly consolidated, which impacts libraries and digital book lending. The largest 5 trade publishers (called the Big 5) are Penguin Random House, Simon & Schuster, HarperCollins Publishers, Macmillan Publishers, and Hachette Book Group. The trade book sales of these 5 publishers accounts for approximately 60% of the overall market.²⁸ In 2021, Big 5 titles accounted for 91% of bestselling adult hardcover sales and 77.4% of bestselling adult paperback sales.²⁹ Since the Big 5 control so much of the trade book market, the terms they set for digital library loans impact a wide swath of books (see **Figure 2**). Based on data from OverDrive, the Big 5 offer digital material licensing terms to libraries, as depicted in Figure 2, as of July 2023.

Library Access to Ebooks and Audiobooks (as of July 2023)

Model	Description	Expiration	Examples
One-Copy/One-User (OCOU)	Libraries or schools purchase one unit at a time to serve one patron or student at a time (like physical loan)	None	More than 3 million titles from thousands of publishers
Metered Access OCOU	Same as OCOU with term limits	Title must be repurchased after “term limit” based on time (e.g., 24 months) or checkouts (e.g., 52)	See table below
Class Set	EDU & Academic—access limited by single assignment and time limit (typically 90 days)	Varies, typically 90 days	Thousands of titles key to learning success in K12 and College/University. Includes catalogs from: <ul style="list-style-type: none"> ▪ Penguin Random House ▪ HarperCollins ▪ Hachette ▪ Macmillan ▪ Simon & Schuster ▪ Lerner ▪ Rosen ▪ Blackstone ▪ Scholastic ▪ Capstone ▪ RBmedia
On Demand Models			
Metered Access Concurrent Use (MACU) (a.k.a. OverDrive Max)	Bundles of loans (often 100) that can be used concurrently	None	<ul style="list-style-type: none"> ▪ RBmedia ▪ Open Road Media ▪ Lerner publishing ▪ Blackstone Audiobooks ▪ Dreamscape Media ▪ IPG (Independent Publishers Group) ▪ Planeta ▪ Springer
Simultaneous Use	Concurrent use for single title or collection for specific period (typically 1 year)	Varies, typically 1 year for title collections and 1 or more months for single titles	<ul style="list-style-type: none"> ▪ All Access Comics ▪ OverDrive Magazines ▪ Blackstone Audiobooks ▪ Lerner Publishing ▪ Britannica Digital Learning ▪ getAbstract ▪ IPG ▪ Lonely Planet ▪ Open Road Media
Cost-per-checkout	Library or school incurs a charge for every loan. Limited to one patron at a time	None	<ul style="list-style-type: none"> ▪ Penguin Random House ▪ HarperCollins ▪ Simon & Schuster ▪ Kobo Writing Life ▪ Chronicle Books ▪ Kensington ▪ Sourcebooks ▪ Harlequin ▪ W.W. Norton

Figure 2. Library Access to Ebooks and Audiobooks (continued on following page)

Big 5 Publishers (U.S. divisions) Access Models for Public Libraries (as of July 2023)

Publisher	Ebook		Audiobook	
	Purchase Model(s)	Lending Model	Purchase Model(s)	Lending Model
Hachette Book Group	Metered Access: Two-year term.	One-Copy/ One-User	Metered Access: Two-year term.	One-Copy/ One-User
HarperCollins	<p>Metered Access: 26 circulations per purchase.</p> <p>AND (therefore, some titles have multiple options)</p> <p>Cost-per-Circ</p> <ul style="list-style-type: none"> Each circulation is paid for separately by the library. Select catalog <p>OverDrive MAX (pilot Apr – Oct 2023)</p> <ul style="list-style-type: none"> Bundle of 100 circulations Circulation can be concurrent Select catalog <p>Curriculum</p> <ul style="list-style-type: none"> Supports Class Set sales with individual student assignment of titles. 	One-Copy/ One-User	<p>Standard purchase, no term or circulation limits.</p> <p>AND (therefore, some titles have multiple options)</p> <p>Cost-per-Circ</p> <ul style="list-style-type: none"> Each circulation is paid for separately by the library. Select catalog, generally backlist. 	One-Copy/ One-User
Macmillan	<p>Metered Access: Two-year term.</p> <p>Curriculum</p> <ul style="list-style-type: none"> Supports Class Set sales with individual student assignment of titles. 	One-Copy/ One-User	Standard purchase, no term or circulation limits.	One-Copy/ One-User
Penguin Random House	<p>Metered Access: Two-year term.</p> <p>Also supporting</p> <ul style="list-style-type: none"> Metered Access: One-year term. Cost-per-Circ Curriculum Supports Class Set sales with individual student assignment of titles. 	One-Copy/ One-User	<p>Standard purchase, no term or circulation limits.</p> <p>Also supporting</p> <ul style="list-style-type: none"> Metered Access: One-year term. Cost-per-Circ 	One-Copy/ One-User
Simon & Schuster	<p>Metered Access: Two-year term.</p> <p>AND (therefore, some titles have multiple options)</p> <p>Cost-per-Circ</p> <ul style="list-style-type: none"> Each circulation is paid for separately by the library. Select catalog, generally backlist. <p>Curriculum</p> <ul style="list-style-type: none"> Supports Class Set sales with individual student assignment of titles. 	One-Copy/ One-User	<p>Metered Access: Two-year term.</p> <p>AND (therefore, some titles have multiple options)</p> <p>Cost-per-Circ</p> <ul style="list-style-type: none"> Each circulation is paid for separately by the library. Select catalog, generally backlist. 	One-Copy/ One-User

In addition to the models noted above

- Under the One-Copy/One-User lending model, circulation is limited to one patron at a time for each unit of a title the library has purchased.
- HarperCollins, Macmillan, Hachette, and Penguin Random House also support special sales to libraries who have selected their titles for book clubs and community reading initiatives.

Figure 2. Library Access to Ebooks and Audiobooks (continued)

HarperCollins and Penguin Random House offer the most licensing flexibility to libraries, while Hachette and Macmillan offer the least. Library access to audiobooks is influenced by whether or not Amazon’s Audible, which holds up to 90% market share for trade audiobooks, has exclusive rights to distribute a particular title. More on this below in the section “Retailers.”

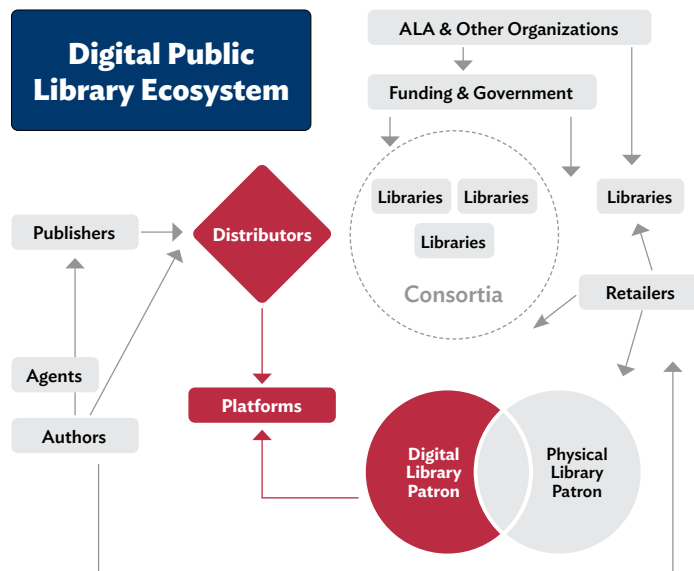
Notably, the ultimate control of U.S. book publishing is not centralized in New York as one might assume, but in Europe. Due to the multimedia and multinational conglomeration of the U.S. publishing industry starting in the 1960s, 3 of the 5 largest trade U.S. publishers are owned by companies outside of the country. Penguin Random House is owned by German Bertelsmann, Hachette Book Group is owned by French Lagardère Group, and Macmillan Publishers is owned by German Holtzbrinck Publishing Group.

Distributors/Platforms

Surging Demand; OverDrive Is the Dominant Player

Increased demand for digital book materials during COVID lockdowns has not just been sustained, but surpassed post-lockdowns. From 2019 to 2020, OverDrive saw 33% growth for digital book lending, with an increase from 366 million to 430 million loans³⁰, and another jump to 500 million in 2021.³¹ Marshall Breeding, a library technology consultant, notes that “other players in the sector—such as bibliotheca cloudLibrary, ODILO, Baker & Taylor’s Axis 360, and hoopla—represent ‘significant’ competition.”³² But for library systems that can’t afford to offer more than one digital platform to patrons, the extent to which the rivals present a “significant” challenge to OverDrive is unclear.

OverDrive is the largest commercial provider of ebooks, audiobooks, and other digital content such as streaming movies (via Kanopy) to public libraries in North America. The for-profit media company is owned by the investment firm KKR, and had a market value estimated at \$775 million in 2019. Around 17,000 public libraries subscribe to OverDrive’s content-lending platform, as do 55,000 K-12 school libraries, representing a market share perhaps



upwards of 90% for both library types. bibliotheca offers technology solutions globally with 30,000 library customers around the world. hoopla pioneered the pay-per-use model in 2013, which OverDrive then adopted as an option for libraries. hoopla has also adopted the standard one copy/one user model. For hoopla’s pay-per-use approach, libraries can offer a collection (currently 1.2 million titles) to their patrons. The full collection, or the collection as customized by a library, is available to patrons with no waiting. The library only pays when a patron completes a loan.

OverDrive’s practices, tools, and policies are what the majority of librarians and library patrons experience when it comes to ebooks and audiobooks. Readers access digital collections via apps, which have been curated by their local librarians or consortia through the distributor’s dashboard. OverDrive is the only library platform that provides in-app support for reading via Amazon’s Kindle app or on the Kindle ereader device, a differentiator for some librarians seeking to provide loaned ebooks on patrons’ preferred reading apps.

Privacy Implications of Kindle Integration with Libby

What the Kindle integration into OverDrive’s Libby app means for the sharing of library patron data is unknown. OverDrive “sends minimal, anonymized information to the third party service so they can

authorize you as a valid library patron. You may be required by the third party service to create an account. Any information you submit to the third party is not shared with OverDrive.³³ If library patrons are reading ebooks borrowed through Libby on their Kindle apps, then Amazon—a third party to OverDrive’s policies—is likely to have access to the patron’s Kindle-specific borrowing history and book completion data. OverDrive’s published privacy policies indicate that it does not control what Amazon does with this information; though there could be an agreement between OverDrive and Amazon about Libby users’ data privacy that is beyond the scope of this report’s review of publicly available information. While several third parties are named in OverDrive’s privacy policies, such as Google Analytics, Salesforce, Alchemer and OnceHub, Amazon is not.

Presumably, patrons who opt to read Libby-loaned books via Kindle are already Amazon customers. But when patrons opt-in to connecting their Libby app with Kindle in Libby’s preferences, they may not realize they are also opting into sharing their Kindle-specific library use data with Amazon. OverDrive enables readers to use third party service providers like Amazon via Libby.³⁴ Reader completion data is valuable to publishers, and it’s usually inaccessible, locked away in proprietary ereader apps such as Kindle, Nook and iBooks. OverDrive has a mandate to maintain the privacy of patrons’ data, but Amazon does not have such a mandate. OverDrive’s privacy policies list a number of valuable safeguards to keep patron data private, such as encrypted transfer of information via SSL, employee access to personally-identifiable information limited to those who require it to perform their job activities, and firewalls to prevent authorized disclosures. However, Amazon’s mandate is different than OverDrive’s. It

is unclear how library-guaranteed privacy protections fare when patrons use Kindle to read books borrowed through Libby.³⁵

Competition and Innovation Improve App User Experience

The 2010s were an important era of growth and innovation in the digital library space during which

OverDrive’s market innovations were sharpened by challenges from cloudLibrary, Axis 360, and to a lesser extent, New York Public Library’s then-nascent SimpleE app.

In 2014, cloudLibrary strengthened its offering by developing cloudLink, and this remains its preeminent product. cloudLink facilitates digital title sharing among participating libraries and helps libraries bolster the breadth and depth of their digital collections, a long-standing challenge given the high prices of digital licenses. In 2016, two California library systems (Huntington Beach and San Diego) linked their digital collections using cloudLink, increasing circulation by 83% for those libraries.

Libby (public libraries) and Sora (school libraries) have helped to significantly simplify and streamline the digital loan process. As ebooks became easier to access, librarians began more frequently recommending digital book formats. “I went from staff telling me that they actively discourage people from checking out eBooks to branch librarians telling us they recommend Libby to patrons daily,” said the digital collections manager at Cuyahoga County Public Library (CCPL). “[They now recommend digital books to] everyone from elementary kids to adults who need audio or the large print a Kindle or iPad can provide.”



Demand for digital collections grew 33% between 2019–2020. Digital is the fastest-growing sector of library borrowing.

Patron Confusion that Libby Is Paid for by Their Local Library

Many digital patrons do not understand that Libby is a virtual branch of their local public library.

For Gen Z and millennials especially, the messaging and awareness disconnect between the digital book app and a patron's local public library is particularly apparent. According to data from *Gen Z and Millennials: How They Use Public Libraries and Identify Through Media Use*, just 37% of physical library users aged 13–40 said they'd borrowed books from digital collections.³⁶ That number plummets to 17% for those who hadn't visited a library. However, usage data from OverDrive shows that digital collection borrowing is surging, and there is some evidence that millennials are borrowing the most ebooks and audiobooks of any demographic, according to CCPL digital circulation data.

OverDrive's apps have a strong overall positive impact on library patron access to digital books. But patrons may not be sure who or what "Libby" is, and may not understand that Libby provides access to the digital collections of one's local public library. Though local library or consortia names and logos appear in Libby's in-app branding, there are no external links leading to the local library system's website. This lack of connection between the Libby app and the local, physical library can confuse patrons. They may not understand that their tax support for local libraries also pays for access to digital collections. This goes back to a theme of this report, namely that the public needs to understand that digital library services are one part of local library services.

In states where digital book access is paid for by consortia rather than individual library systems, it can be even harder for patrons to understand that taxed support for local libraries buys access to digital collections through Libby. For example, in Oregon the branding on the Libby app's mobile home page lists "Oregon Digital Library Consortium" and makes no mention of the local library systems that

fund access. Options for digital shelf talkers (librarian book recommendations) and other customization features are available to digital collections managers, but not all libraries have sufficient funds to pay a designated digital collections staff member to take full advantage of the curation possibilities to create a successful, integrated library experience. Therefore, it is not surprising that patrons may not understand that using the digital book app is "visiting" a locally funded library resource.

Libraries and Subscription Services

Content Owned by Private Subscription Services Can't Be Accessed by Libraries

Though this report focuses on digital books, we include an introductory characterization of the challenges presented by digital, proprietary subscription services, which are formidable. Many of the most popular subscription services and their content are inaccessible to libraries unless those products

are available in physical formats such as DVD. These include: Webtoon; Amazon's Kindle Unlimited, Prime Video, and Audible; Spotify; Netflix; Hulu; Substack; Disney+; HBO Max; Apple+; and Paramount+. These are just a few of the subscription-only digital media content providers that don't license content to libraries at any price (see below, "Retailers").

Streaming became a high-quality mobile viewing experience when low-latency HLS [HTTP live streaming]³⁷ greatly reduced lag time and buffering starting in June 2019. In the past, libraries would eventually gain access to films and music when DVDs and CDs were offered for sale to the general public. This is less likely now that



Usage data from OverDrive shows that digital collection borrowing is surging, and that millennials are borrowing the most ebooks and audiobooks of any demographic.

many shows and songs are never released in physical formats. Lack of library access to new content exclusive to subscription services may become bothersome, particularly as Gen Z and millennials age. Data from *Gen Z and Millennials: How They Use Public Libraries and Identify Through Media Use* show that people of those generations look first to digital apps on their mobile devices to discover new content.

Perhaps most urgently, as noted earlier, Audible-exclusive titles are mostly not available to libraries.³⁸ Amazon licenses a smattering of its Originals to the approximately 400 libraries that use the Palace Marketplace Exchange.³⁹ This is problematic, given that Audible (a subscription service) commands at least 50%⁴⁰ and in some sectors as much as 90% of the digital audiobook market.⁴¹ In other words, despite significant audiobook market growth over the last 10 years, a large portion of audiobook titles cannot be licensed to libraries and aren't available to readers there. Authors aren't always aware that Audible-exclusive audiobook deals exclude libraries.

Library-Friendly Subscription Services

While some subscription services exclude libraries, others welcome them. For example, many libraries use aggregator services such as Libby, Axis-360, cloudLibrary, Flipster, and Rivistas to provide patrons simultaneous-use licenses to access digital magazines. Other services, such as hoopla's Binge Pass, give library patrons seven-day access to bundles of unlimited content with one borrow. hoopla's Curiosity Binge Pass, for example, offers curated non-fiction and documentary video content, while the Binge Pass offers educational content for 2–8-year-olds.

Libraries also make use of Comics Plus, a Library-Pass database of new and backlist comics, graphic novels, and manga. The platform makes new content available every Wednesday, following the comics industry standard practice. In the first half of 2022, Comics Plus logged nearly 500,000 downloads “through more than 2,000 schools and libraries in the US and around the world.”⁴² Its publisher partners offers simultaneous use licenses, which means it can meet unlimited demand with no wait times. The ability to provide instant access to digital materials is a key differentiator for Comics Plus. Instant

access establishes credibility for Comics Plus among Gen Z patrons using school libraries and who are accustomed to Amazon's Comixology or apps like MangaFox, Webtoon, and CrunchyRoll, subscription services that provide access to manga and anime. OverDrive offers All Access Comics including Marvel, Disney, Dark Horse and others.⁴³



With the growing demand and use of digital collections, Gen Z and millennials read more on their phones than older generations, how well libraries serve digital collections to them will inevitably be compared to other, non-library reading apps like Webtoon or Wattpad. Long wait times associated with ebooks and audio can deter Gen Z from borrowing materials, and this may have a long-term impact of causing them to disengage from libraries, or never give them a try. Graphic fiction/nonfiction and manga are high-growth categories for these age groups. More than half (59%) of Gen Z and millennials would choose the graphical version of a story over the text-only version.⁴⁴

Retailers

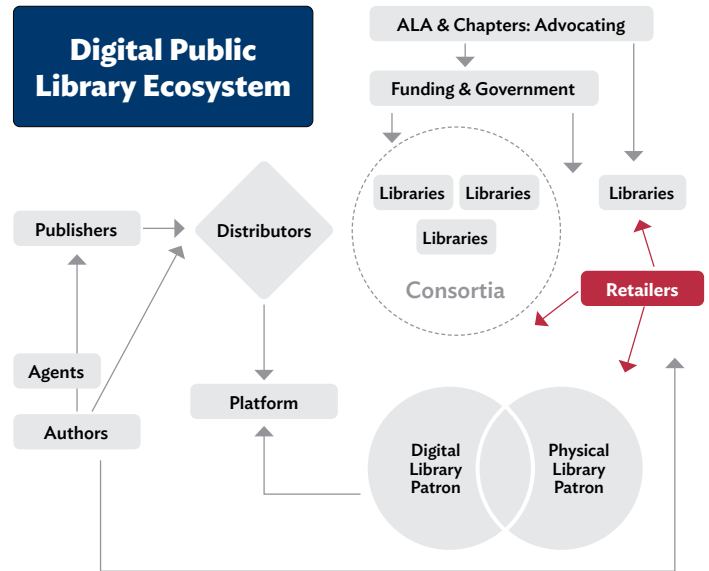
The *Immersive Media and Books 2020* study showed that book discovery is largely format- and platform-agnostic: people find books in one space and buy or borrow in another. It's entirely possible that patrons borrowing books from digital collections would be incentivized to visit their local library for an

author event coupled with a book signing; likewise, library patrons may discover a new book or author via an in-person author event or a librarian's recommendation and go on to borrow or buy the ebook or audiobook.

Libraries often work directly with retailers, such as local independent bookstores, for author events held in the public library building. The 2019 Public Library Events and Book Sales Study from the Panorama Project revealed the following about library partnerships with bookstores for author events at the library:

- 89.5% of libraries sell books at events
- 42.4% of libraries typically partner with booksellers to engage authors for events
- 61.2% of libraries said the bookstore partner handles the sale of books during the library event
- 52.9% of libraries acquire the books that they sell at events through their local bookstores.⁴⁵

The Center for the Book at the Library of Congress maintains a list of “One Book Projects” in which libraries lead members of a community (a city, a region, a library system) in reading the same book, and facilitating author events, conversations, and other kinds of programming around that book.⁴⁶ There are hundreds of such events across the U.S. each year. But how to take the measure of the role



played by specifically *digital* library books in such events?

When George Floyd was murdered on May 25, 2020, many libraries quickly provided free, unlimited ebook and audiobook access to antiracism titles, donated by OverDrive.

Because the nation was still in lockdown, patron borrowing of ebook and audiobook formats was the simplest and fastest to access.

Pervasive public library access across the U.S. didn't dampen sales. “Sales of top books about race increased by up to 6,800% in the aftermath of George Floyd's death,” reported Jemima McEvoy of *Forbes*, citing data from NPD BookScan.⁴⁷ “Ibram X. Kendi's *Stamped From the Beginning* and Ijeoma Oluo's *So You Want to Talk About Race* both sold around 3,000 copies over the two-month period from March to April 2020, and then 139,928 and 191,262, respectively, from May to June (percentage increases of 3926% and 6895%).” This is a variant on a “One Book” project, responding to emergent and urgent social conditions. Library digital book access worked in tandem with retail book sales.

Library access across the U.S. didn't dampen sales. Sales of top books about race increased by up to 6,800% in the aftermath of George Floyd's death.

3 HOW DIGITAL COLLECTIONS WORK

In the preceding two sections we have discussed key terms and key players in the digital public library ecosystem. But, how do digital loans work in practice? And what related challenges, barriers, and opportunities exist for libraries?



Digital Holds, Circs, and Reads

At the most basic level, the digital public library ecosystem is driven by library circulation of digital materials. For some licensing models, circulations also determine how fast the license expires or how much the library is charged.

With OverDrive a digital circulation is counted against a library's account when a patron borrows a book. If a patron places a digital book on hold, it is not counted against the library's account until borrowed. Both digital loan periods and hold periods are set by the library. If a patron has had a digital book on hold, then once that book becomes available, the patron is given 72 hours to borrow the book, suspend the hold, or cancel the hold. Library patrons can choose the length of a hold suspension (anywhere from 1 to 180 days) and once that time has passed, the hold resumes. If library patrons do nothing during the 72-hour hold period, then the hold is automatically suspended for 7 days. After those 7 days, the library patron gets another 72 hours to choose whether to borrow the book or cancel the hold. This is called *automatic hold redelivery*.

Once a digital book is borrowed, libraries (using metered access or pay-per-circ) are charged for the digital circulation regardless of whether the patron

reads the book. Libraries do not have data about what patrons do with digital books and do not know if a particular book was read/listened to or how much was read/listened to.⁴⁸ It is unclear whether distributors like OverDrive collect such data. In contrast, one of Amazon's great competitive advantages (though not great for protecting individual privacy) in the publishing industry is its collection of data, not only about sales but also about digital reading behavior.

Library Control Over Collections and Licensing

As mentioned above, most librarians control their library's collection and spending through the distributor's marketplace dashboard, selecting the lending model on a per-title basis. Again, libraries with more resources might have a dedicated staff member who manages digital collections. Such positions can reduce overall spending because the manager can adjust the lending model to reflect actual patron demand rather than anticipated patron demand. Such calibrations are made not just by monitoring the holds ratio (holds:-copies), but by tracking how many of those holds are borrowed after they become available to the patron.

New releases might be highly in-demand for the first year after release, but demand often drops significantly after that initial surge has been fulfilled. In such cases, the flexibility of licensing terms makes ebooks and audiobooks more advantageous than print; but fulfillment can be expensive. A CPC (cost-per-circ) model is good for meeting big initial demand because holds can be filled simultaneously and instantly; but such licenses are expensive, and many libraries lack budget for such an expenditure. After clearing the holds queue, a different licensing model might be more appropriate, such as a 12- or 24-month period of metered access for the far fewer copies now needed.

As noted earlier, publishers' flexibility on licensing terms is not standardized. The range of licensing options varies by publishing house. While publishers with less flexibility do not necessarily earn less money—depending on the popularity of

their titles—less flexible licensing terms (metered v. CPC) create conditions where librarians need to make harder choices. This can include weighing the likelihood of longer hold times and patron frustration against spending too much on one title and having fewer funds to license a broader range of materials.

This is why expensive digital licensing disadvantages midlist authors: librarians are less likely to afford the digital version of a midlist title if the budget is gobbled up by high-visibility authors such as Stephen King or Emily Henry.

Increased Digital Collection Spend and Higher Digital License Costs

With the increased demand from readers for digital materials, libraries are spending more on digital. The cost difference between digital licenses and print materials limits how much libraries can meet these needs, even with larger digital materials budgets.

According to a *Library Journal* survey of library spending, materials budgets were up 1.3% on average for libraries in 2021, with an estimated 27% of materials spending going to digital content. Digital materials spending was even higher for suburban and urban libraries at 30%.⁴⁹ Since libraries pay on average 3 times the consumer price for ebooks and audiobooks, the price tag of increased digital spending adds up quickly.⁵⁰

These circumstances pose challenges for libraries. In the *New Yorker* article, “The Surprisingly Big Business of Library E-Books,” a Denver public library director observes: “Digital content gives publishers more power over prices, because it allows them to treat libraries differently than they treat other kinds of buyers. Last year, the Denver Public Library increased its digital checkouts by more than sixty per cent, to 2.3 million, and spent about a third of its collections budget on digital content, up from twenty per cent the year before.”⁵¹ Meanwhile, at Cuyahoga County Public Library, digital now accounts for 33% of total collection spend, serving the 12% of cardholders who use OverDrive services. These readers are voracious, checking out proportionally more books than patrons who are print-only.

Data Privacy

Libraries are data privacy shrines, but the general public and even library patrons are not always aware of how fiercely libraries both avoid collecting unnecessary data and protect the data that they do collect. Libraries’ commitment to data privacy is valuable and unusual when compared to big media companies’ use of leverage to collect all the data they can. Despite the many benefits of library data privacy, this practice does limit app customization and collection efforts to a degree.

Librarians, as a bedrock principle, do not collect personally-identifiable borrowing histories. While it’s possible that patron data collected and owned by libraries (such as patron names, addresses, and the like) could in theory be correlated to digital collection use via the patron’s library card number, such data profiling would not be consistent with library’s protection of reader privacy. Libraries have instructed OverDrive to not collect user data tagged to patrons’ card numbers. On its end, OverDrive has a user privacy customization tool, where patrons can request that one’s personally identifiable information (PII) be removed from OverDrive’s systems. This process doesn’t affect the status of one’s library card.

Librarians who manage digital collections through the OverDrive Marketplace have instantaneous access to real-time checkouts, holds, and unique users but not to personally-identifiable information. This, and other features of the interface, gives librarians curatorial enrichments of the library user experience. For example, librarians can curate digital collections that correspond with initiatives of the physical library. They can also curate collections that relate to digital phenomena, such as “Popular on Tik-Tok.” Patrons, in turn, can customize in Libby what they see in the digital collection by using filters and tags.

The tradeoff between privacy and customization that people make in all of their apps is true with library apps, too. Reader privacy as a library core value is currently not well communicated to patrons. On-site librarians report receiving requests from patrons to “look up my borrow history.”

Even if there were a shift in library ethos to permit data collection that patrons could opt into, such

work would be labor-intensive. It would require the collation of datasets from OverDrive (or another digital distributor) and the local library's ILS. Most libraries are barely able to fund their existing services, let alone a novel layer of data informatics. As an alternative, snapshots of depersonalized user data could guide or inform digital collection development. For example, super-users are easily identified by the volume of their checkouts. Their preferences can be examined in isolation (“what do super-consumers borrow?”) or they can be removed from a dataset, giving a more accurate picture of the behavior of average borrowers who consume 1-3 digital books/month.

More research needs to be done around attitudes toward data privacy, and demand for customization features, to learn whether generational differences affect the perception of data privacy as a core value.

Undeniably, digital collections are the fastest-growing sector of library borrowing. Librarians are well-positioned to think through the unique value of libraries' digital collections as a space free from surveillance compared to the commercial. How important is it to people that they can seek information on library computers and not have those searches part of their personally-identifiable search history? Intellectual freedom is a foundational library value.

CONCLUSION AND FURTHER RESEARCH

People's use of public libraries' digital collections has surged in recent years. Accelerated by COVID lockdowns, use of digital collections continues to grow and will likely persist as a behavioral change. As such, the need for stakeholders to comprehend the digital public library ecosystem—to understand each others' needs, and come to consensus—has never been more urgent. Commercial entertainment subscription services are competing for peoples' attention; and they make original content that

libraries often cannot license. The more habituated people become to consuming “content” on their phones, the more urgent it is for libraries to offer a compelling experience: simple access, short hold durations, and the freedom to sample books and other media robustly.

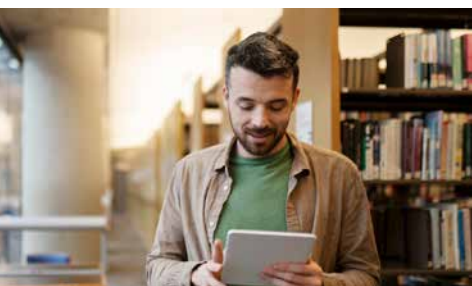
The digital public library ecosystem is complex, and this report has mapped the major actors,

defined key terms, and provided context for understanding how digital collections get books from publishers into readers' hands.

Beyond this descriptive report, there is research to be done:

- Do libraries cannibalize book sales? Boost sales with free marketing in every community in the U.S.? Have a net-neutral effect? If libraries and publishers were to collaborate in sharing circ and sales data for a select number of titles, the community could discern the financial impact of digital library book circulation on publishers' bottom line.
- To what extent do authors and agents know about library sales and circulation for their own titles?
- To what extent do people realize that Libby is their public library—and what are the most effective strategies to increase this understanding?

Libraries, publishers, distributors, authors, agents, book retailers: all are aligned in helping this 500-year old medium, the book, continue to exert its spell on readers. This report aims to make the quickly morphing digital public library ecosystem comprehensible. Next steps should be taken to assure libraries' continued vitality for the increasingly digital reading public.



Digital library stakeholders must understand each other and come to consensus as digital collection use continues to surge.

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