

# Technology to power innovation and Engagement in Public Libraries

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Annual Technology Roadshow

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Civica Libraries: 2018 Annual Technology Roadshow

# Abstract



- Topics discussed will include
  - ▣ persisting needs to provide efficient access to dynamic collections of print materials while also responding to ever increasing interest in digital services,
  - ▣ using big data concepts to inform personalized services,
  - ▣ Concerns for privacy and security, and
  - ▣ the potential to leverage social media to strengthen engagement with their communities.

# Library Technology Guides

## Documents, Databases, News, and Commentary

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**Library Technology Guides** provides comprehensive and objective information surrounding the many different types of technology products and services used by libraries. It covers the organizations that develop and support library-oriented software and systems. The site offers extensive databases and document repositories to assist libraries as they consider new systems and is an essential resource for professionals in the field to stay current with new developments and trends. Relevant news items are posted daily on Twitter:

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### GuidePosts

Perspective and commentary by Marshall Breeding

[Blog Archive](#) [RSS](#)

**Library Systems Report 2017: Competing visions for technology, openness, and workflow**



The 2017 edition of the annual **industry report** that I have produced since 2002 has been published by **American Libraries**. The report is available online and in the May 2017 print issue. The 2002 through 2013 editions of this report were published by Library Journal.

The library technology industry has entered a new phase: business consolidation and technology innovation. Development



### Industry News

Monday May 8, 2017 [RSS](#)

#### Full Automation News Report

20 most recent items:

May 8, 2017. **Ex Libris increases library connectivity with implementation of BIBFRAME roadmap.** Ex Libris announced that it is carrying out its BIBFRAME roadmap, designed to enable institutions to gradually implement BIBFRAME with minimal disruption to their workflows. Using BIBFRAME, libraries ... [<<more>>](#)

May 5, 2017. **LYRASIS receives \$100,000 IMLS grant for open source sustainability forum.** The Institute of Museum and Library Services recently awarded LYRASIS a \$100,000 National Leadership Grant for Libraries award for the project "It Takes a Village: Open Source Software Models of Coll ... [<<more>>](#)

May 5, 2017. **Innovative provides top choice solution for John B. Coleman Library at Prairie View A&M University.** Innovative Interfaces announced that John

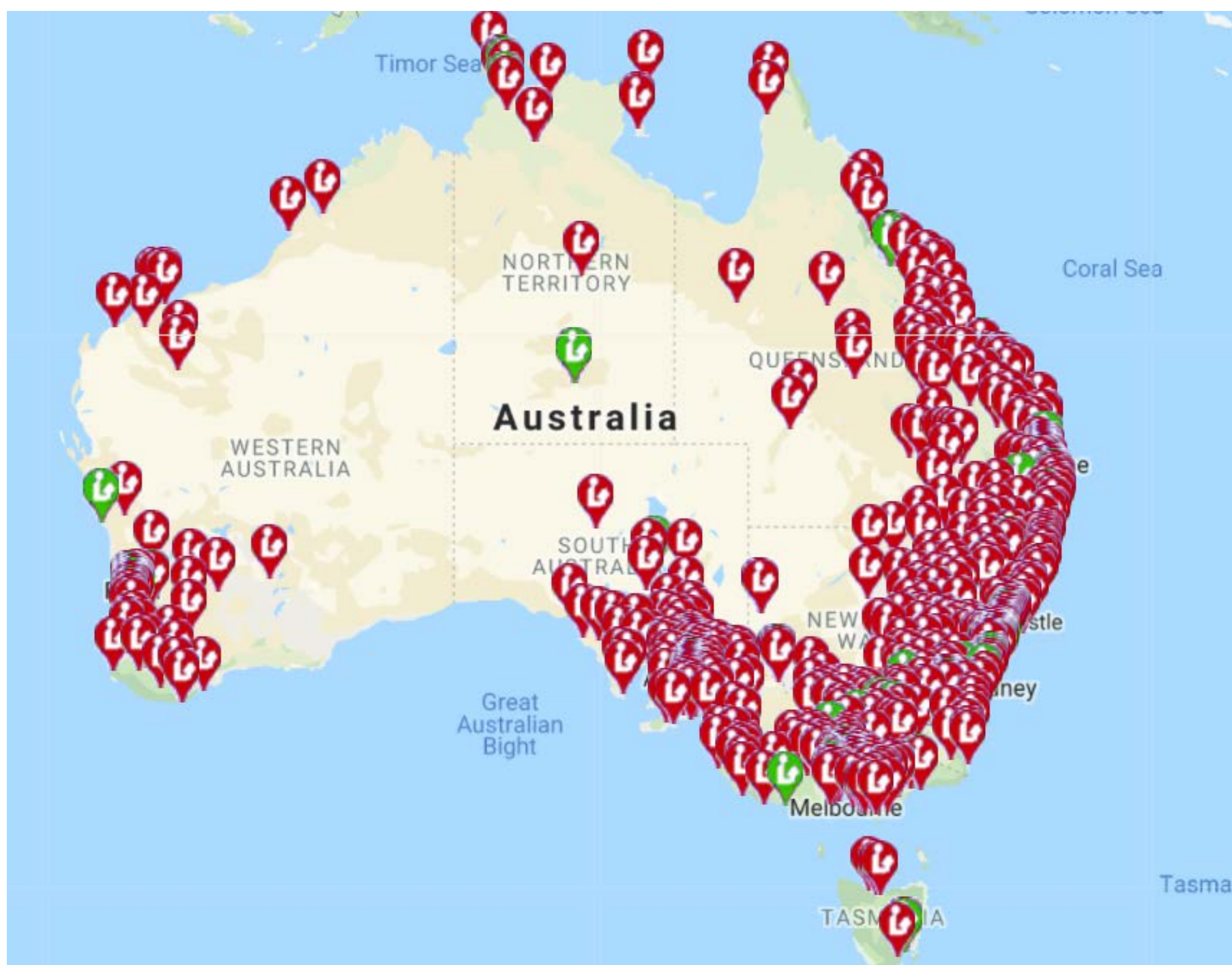
# Library Technology Industry Reports

## American Libraries

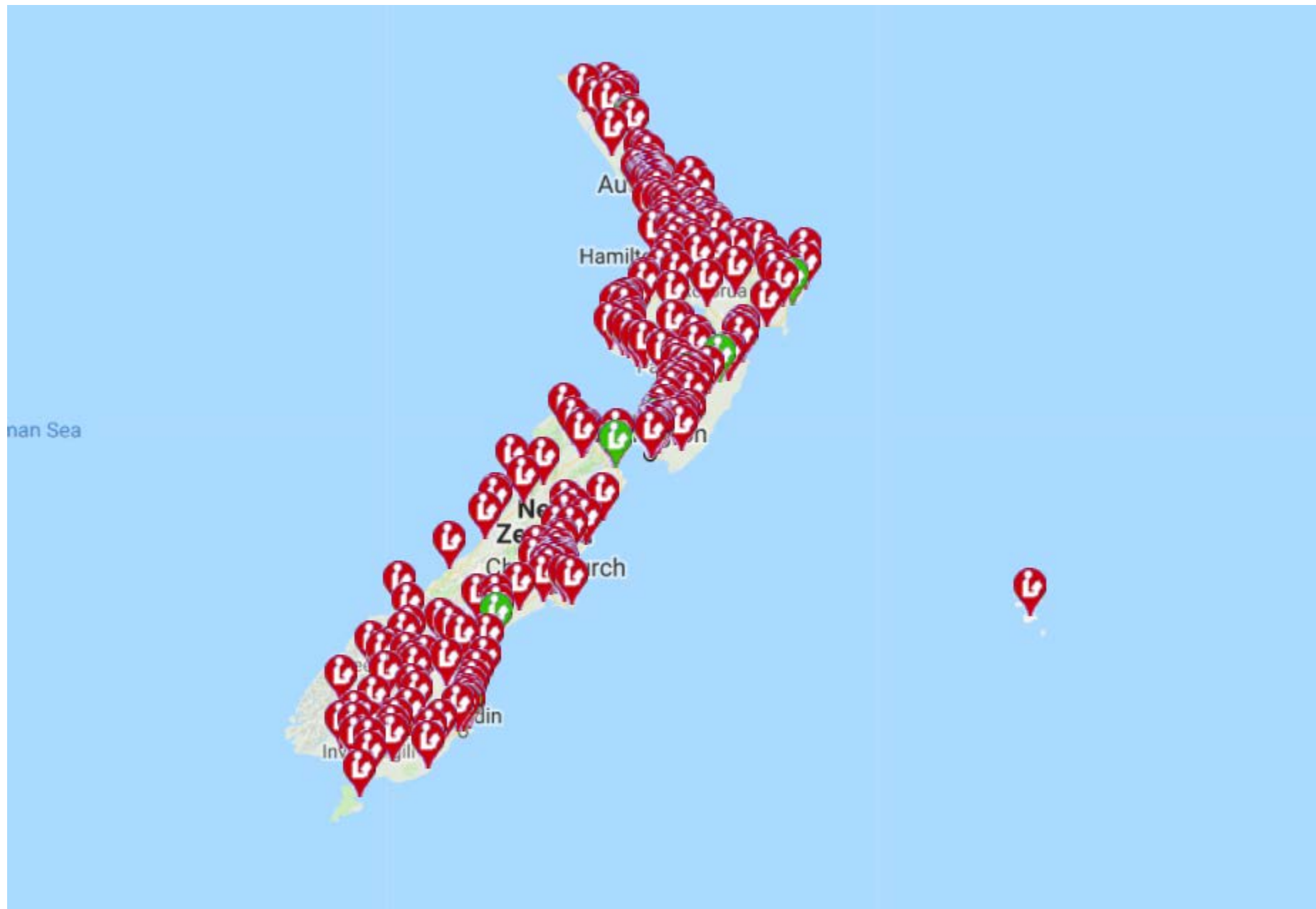
- 2014: Strategic Competition and Cooperation
- 2015: Operationalizing Innovation
- 2016: Power Plays
- 2017: Competing visions for Technology, openness, workflows

## Library Journal

- 2013: Rush to Innovate
- 2012: Agents of Change
- 2011: New Frontier
- 2010: New Models, Core Systems
- 2009: Investing in the Future
- 2008: Opportunity out of turmoil
- 2007: An industry redefined
- 2006: Reshuffling the deck
- 2005: Gradual evolution
- 2004: Migration down, innovation up
- 2003: The competition heats up
- 2002: Capturing the migrating customer









# International Perceptions Report

- <http://librarytechnology.org/perceptions/2016/>
- Based on a series of annual surveys addressed to libraries
- Probes levels of satisfaction with their automation systems
- 4,042 responses to 2016 survey
- 1,050 narrative comments
- Conducted since 2007: view trends over time
- Data collected Nov-Dec, published early the following year
- Linked to entries in libraries.org





# Public Library Perspective

# Perspective

- Increasing divergence among library types regarding requirements for supporting technical infrastructure: Academic, Public, National, School, Special
- Approaches to library service vary according to international region
- Broad range of economic capacity or support across countries and regions and even within some countries. (especially United States)

# Each library type distinctive:



- ❑ Academic libraries: ever increasing proportions of electronic content, print diminishing rapidly
- ❑ National libraries: large unique collections of historical and cultural materials
- ❑ Public Libraries: Mostly print collections to meet the reading and research needs of diverse patrons

# Public Library Trends

- Operational strategies distinct from academics
- Vigorous lending services of physical materials
- Emphasis on customer engagement
- Lending of downloadable e-books and audiobooks; streaming of digital content
- Requirements for organically integrated environments which promote the brand and services of the library
- Comprehensive and seamless digital presence

# Size matters



- ❑ Large libraries tend to have more resources and better access to technologies
- ❑ Small libraries are not well served by current technical and business environment
- ❑ Important to focus on ways to make collections, electronic content, and technology available to under-resourced libraries



# Key Issues for Public Libraries

- Ongoing reliance on print collections
  - ▣ Majority of collection budgets allocated for print
  - ▣ Minority on electronic materials
- Circulation of physical materials continues at vigorous levels
- Steady if not rising circulation statistics
- New services for e-book lending

# Two vectors of Technology

- Enhance experience within physical facilities
  - ▣ Self-service kiosks
  - ▣ Featured print materials
  - ▣ Enhance face-to-face service
  - ▣ Promote programs and events
- Deliver library services and collections virtually
- Common goals of customer delight and engagement

# Maximize use of Physical Collections

- Provide efficient support for lending materials
- Technology support through:
  - ▣ Advanced self-service stations
  - ▣ Automated material handling (returns, sorting, etc)
  - ▣ Security and control
- Find the right balance of high-tech versus personal service
- Balance depends on cultural and economic context

# Building and Managing Collections

- Tools for acquiring and deploying collection materials
- Reports and analytics to support collection development and management decisions
- Identify weak segments of the collection
- Balance content among branches
- Anticipate demand of new collection materials

# Support for Service Delivery

- Better tools for all aspects of public service
  - ▣ Circulation, Reference, Interlibrary Loan, etc
- Follow a customer relationship management approach
- Ability to measure, assess, and improve service quality
- Tailored to the profile of the patron



# Library Management Systems

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- (aka: integrated library systems)
- Many longstanding systems with continuous development
- Rich and mature functionality
- Expanding into new areas of service and interest for public libraries

# Public Library LMS expectations

- Strong functionality for circulation
  - ▣ Far beyond check-outs and returns
  - ▣ Maximize the impact of the collection
  - ▣ A single collection distributed among multiple facilities
  - ▣ Floating collections
  - ▣ Manage access to high-demand items

# Public Library Discovery Strategies



- Emphasis on engagement and user experience
- Beyond search and retrieval
- Help library users discovery what to read next
- Highlight featured resources
- Personalized experience

# Public Library Discovery

- Beyond simple search and retrieval
- Multiple discovery scenarios
  - ▣ Serious research: find all relevant materials on a topic
  - ▣ Serendipity: Help patrons come across interesting items to read
  - ▣ Virtual experience of browsing library shelves
    - Random points of entry
    - Related materials gathered together

# The Virtual Branch

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- More than a Web site, but a vehicle for remote delivery of services and fulfillment of content
- Requirements for organically integrated environments which promote the brand and services of the library



# Emphasis on Digital Lending Services

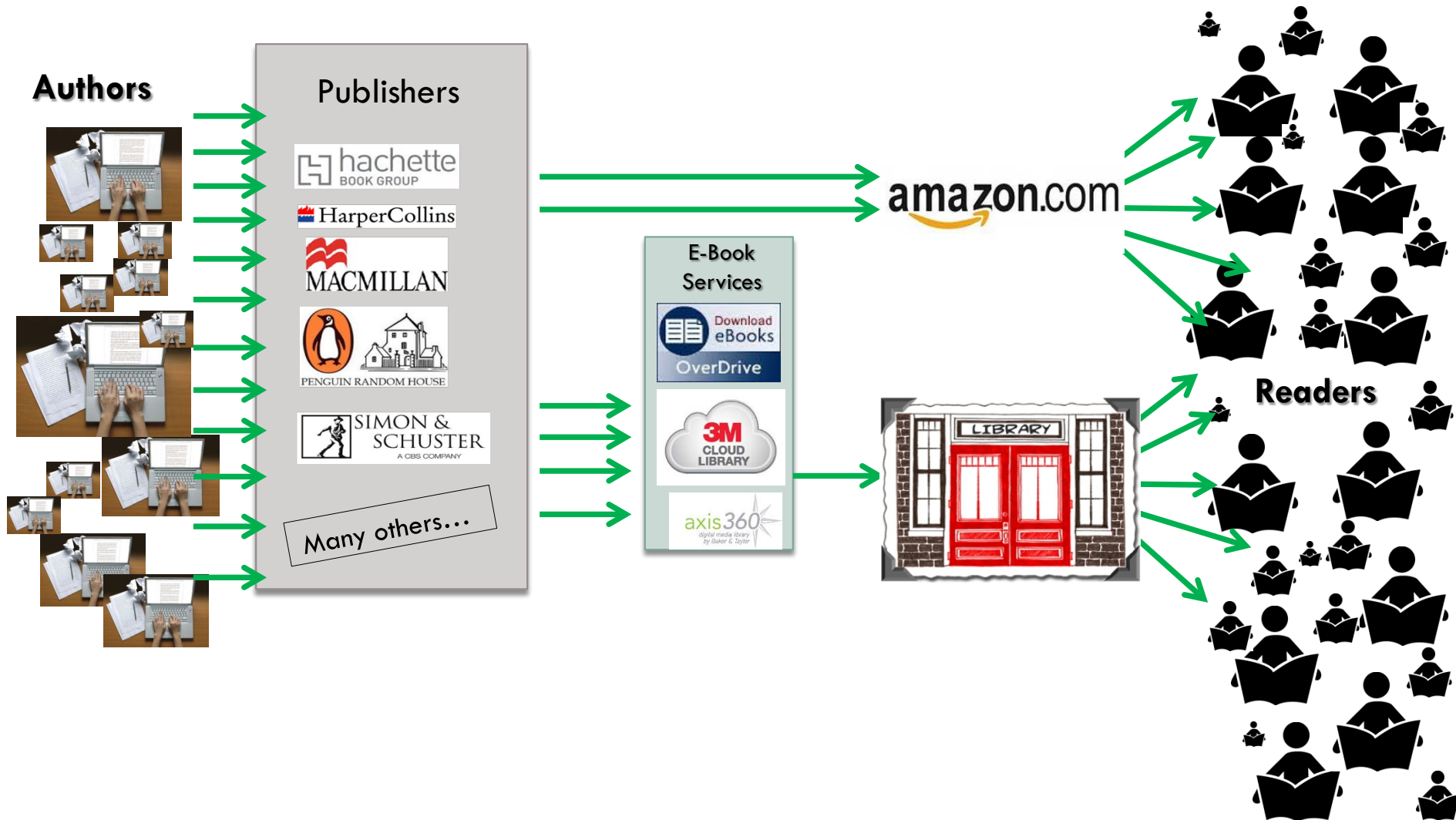
- Most public libraries offer some type of e-book lending service
- Ongoing reliance on content provided by OverDrive, Recorded Books, Bibliotheca, Odilo and others
- Interest in library centered e-book lending solutions
  - ▣ NYPL: SimplyE App (created as part of the Library Simplified initiative)

# E-book integration

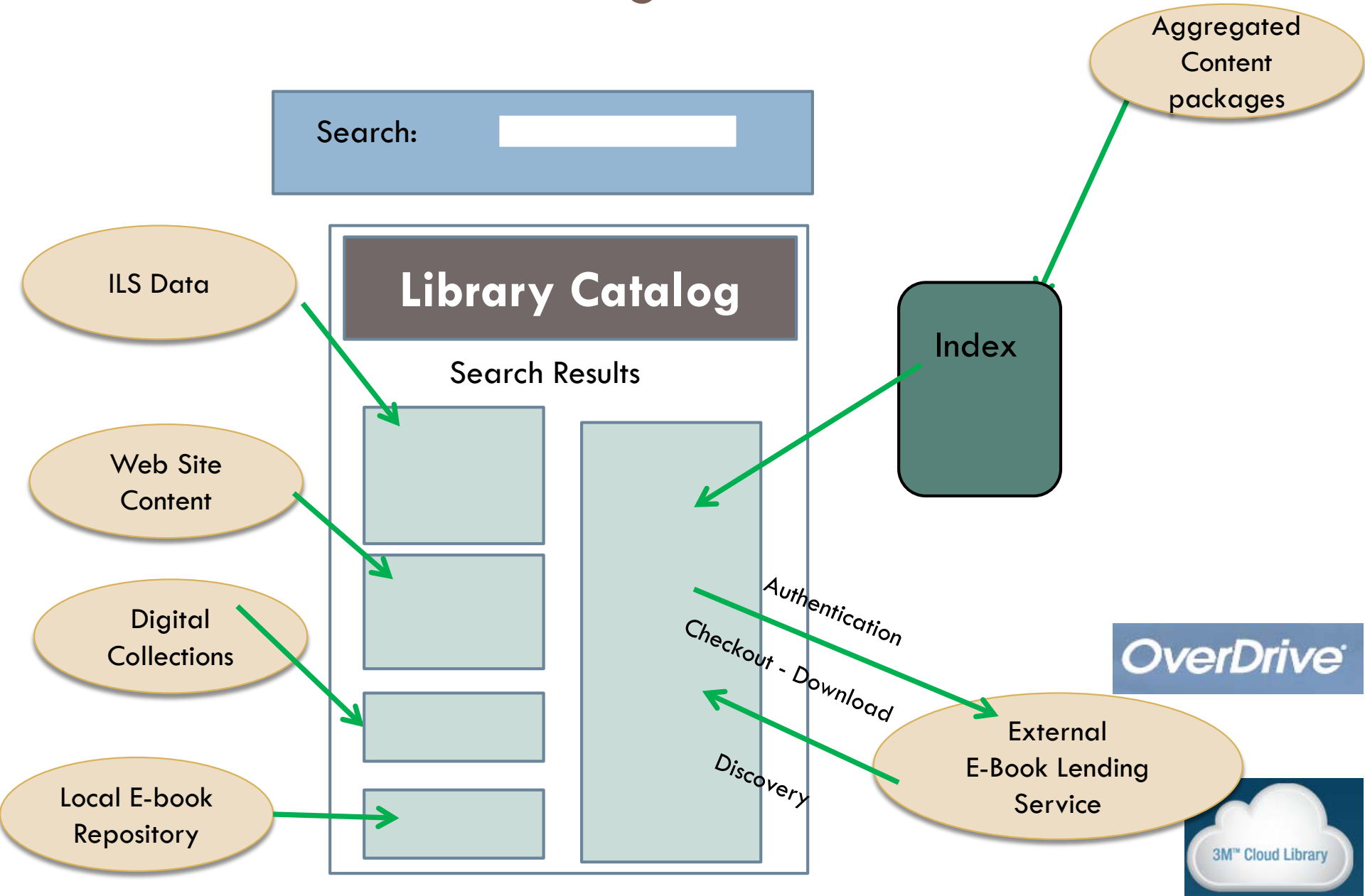


1. link to provider's platform
2. Load bibliographic records in catalog
3. API integration to enable full discovery, search, and download from library catalog

# Connecting e-books to readers



# E-Book Integration Model



# Emphasis on Mobile

- Ever increasing proportions of access by smartphones
- Sales of desktop and laptop computers falling
- Essential for library services to be mobile-friendly:
  - ▣ Mobile Apps
  - ▣ Responsive Web Design



# Privacy and security

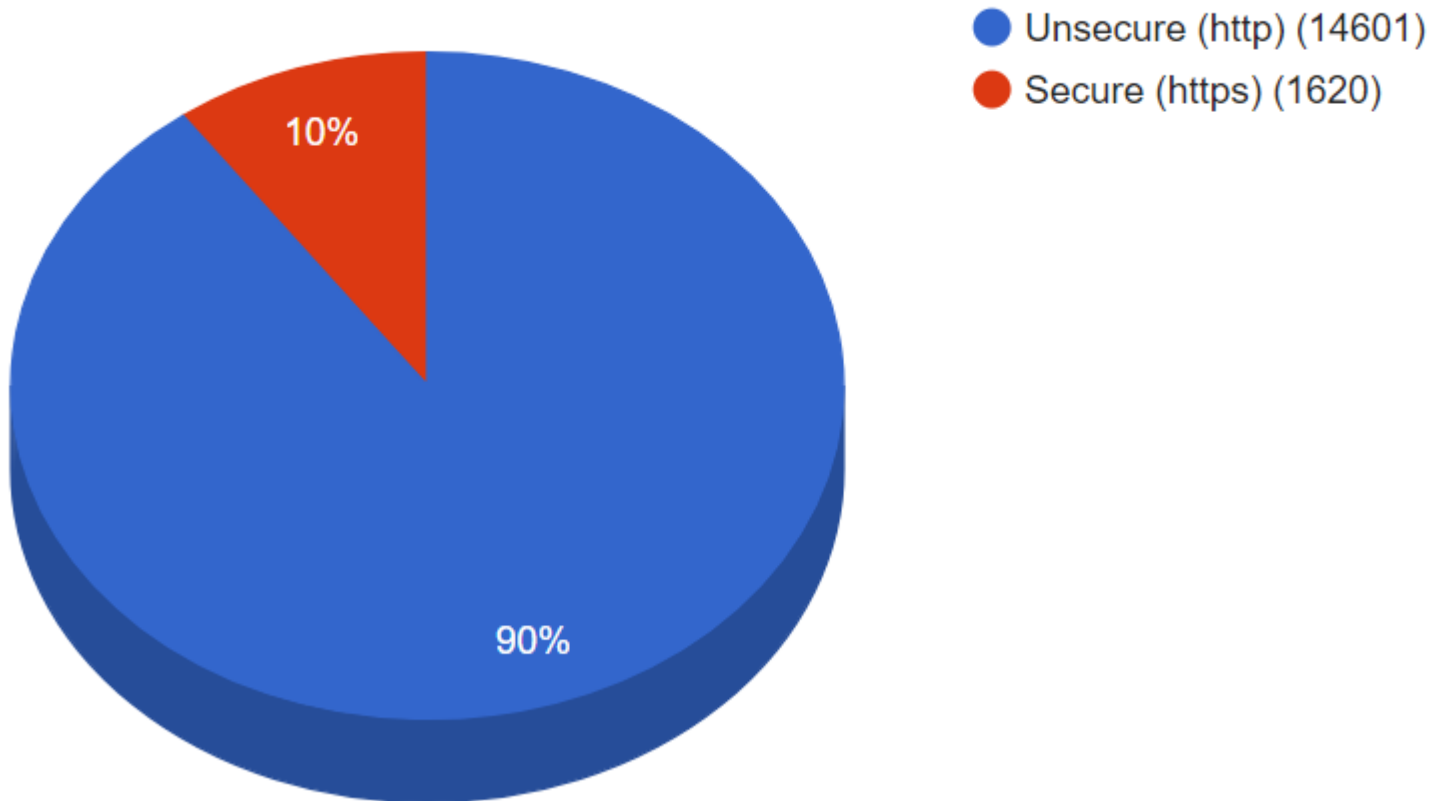
- Expectation that libraries will be a safe haven for private and anonymous access to information
- Important to implement technologies which meet this expectation
- Avoid possibility that patron communications can be captured by a third party
- Information sent by https can be easily captured and viewed: query text, results, items selected or downloaded

# https vs http to strengthen privacy

- http: data transmitted as clear text
- https: communications encrypted between browser and server
- http increasingly flagged as unsafe
- Chrome and other browsers already warn about sensitive pages; will soon flag all http sites as untrustworthy

# https in US public library websites

Percentage of 16221 library sites using https



# Big data concepts

- ❑ Commercial web sites aggressively collect data describing every aspect of consumer behavior
- ❑ Big data drives personalized services and advertising
- ❑ Little regard for privacy
- ❑ Some mechanisms provided for opt-out of data collection

# Benefits of big data and analytics

- Inform collection development processes
  - ▣ Purchase, de-selection, or transfer of print materials
  - ▣ Licensing of electronic resources
- Design and configuration of physical facilities
  - ▣ People-counting technologies to optimize in-library experience
  - ▣ iBeacon and other technologies
  - ▣ Targeting messaging (opt-in)
- Personalized digital services

# Big data in libraries

- Tension between interest in personalized services and protection of patron privacy
- Contrasting values between libraries and commercial organization
  - ▣ Often library values for privacy contrasts with parent organizations: universities and local government agencies may not have same degree of concern

# Protecting patron privacy



- Anonymous data collection by default
- Opt-in to services which collect and use personally identifiable data
- Anonymize personal data whenever possible
- Retain categories and demographic data, not personally identifiable



# Questions and discussion