Chapter 3

Industry Vendor Consolidation Study

This report documents the current state of consolidation in the library technology industry. Much of the revenue for core technology products is concentrated in few very large-scale organizations. The history of the industry is told in the rise and fall of companies and in the disposition of the products created. The life cycle of a product from launch, to general use in libraries, to a legacy status where new sales and installations decline, to eventual extinction is incredibly long. The emergence of a successful new product is a rare event.

In the context of ongoing industry consolidation, it is essential to be able to compare the competitive environment today to previous periods in the industry. Are fewer or more products available for libraries to choose from than in previous times? Are there fewer or more active vendors? To answer these questions regarding the competitiveness of the industry over time, an analysis was conducted using data from the libraries.org directory of libraries to measure the products implemented each year from 1990 through 2020 and the number of associated vendors. This study focused on academic libraries in the United States. The same methodology can be applied to other library sectors but would require the collection of additional data.

libraries.org
https://librarytechnology.org/libraries/

The key intent of the study lies in identifying the number of vendors and products active each year to be able to assess the relative levels of competition seen each year and to identify trends. These results and trends will provide important perspective on the degree of competition in today's heavily consolidated industry.

Methodology

The libraries.org directory has been developed as a data repository for the study and analysis of the technology products used by libraries. A variety of reports and visualizations have been developed that illustrate trends related to technology products currently used in libraries and general migration patterns. This study approaches the data somewhat differently to understand the technology trends as they have developed over the last three decades. Each libraries.org entry includes the automation system used by the library and those used previously (table 3.1). The data for the current and past automation systems has been collected since the inception of the database in 1997. While unevenly available for many sets of libraries, this data is most accurate for academic and public libraries in the United States.

The fields for automation systems are structured in libraries.org to portray the sequence of technology products used by each library, as shown in table 3.2. This study focuses on the fields related to tracking the integrated library systems or library services platforms and their respective implementation dates (ILS, InstallDate, PreviousILS, PrevInstallDate, PreviousILS2, PrevInstallDate2, PreviousILS3, PrevInstallDate3, PreviousILS4, PrevInstallDate4). While this structure can display the sequence of systems used, it is not conducive to supporting queries related to the systems used in a given year.

To support analysis related to the systems used in past years, the system sequence data needed to be converted into an annual chronology. The script that performed this analysis, shown in figure 3.1, dynamically created a secondary table that converted the sequences to annual data from 1980 to the current year for each of libraries targeted by the query.

This study addresses the dynamics between the automation products and the vendors responsible for them. Do the patterns of expansion and consolidation

Table 3.1
Original format for technology product sequences for a library

Technology Profile		
	Product Name	**Year Contracted**
Current Automation System	Alma	2017
Previous Automation System	Symphony	1996
Previous Automation System	NOTIS	1985
Previous Automation System	None	
Discovery Service (w/index)	Primo Central	2007
Discovery Interface	Primo	2007
Reading List Manager	Leganto	2017
OpenURL Link resolver	SFX	2004
Federated search product	MetaLib	
Electronic Resource Management	Verde	
Institutional Repository	DSpace	
Digital Asset Management	Locally Developed	
Item ID Type	Barcode	
RFID Provider	None	
Self-Check	3M SelfCheck System V-Series	
Automated Materials Handling	None	

The library's automation system is hosted by the vendor through an Software-as-a-Service (SaaS) arrangement. This library is responsible for the procurement of the library automation system.

Table 3.2
Year-by-year product use for a library

Vanderbilt University Libraries	
2020	Alma
2019	Alma
2018	Alma
2017	Alma
2016	Symphony
2015	Symphony
2014	Symphony
2013	Symphony
2012	Symphony
2011	Symphony
2010	Symphony
2009	Symphony
2008	Symphony
2007	Symphony
2006	Symphony
2005	Symphony
2004	Symphony
2003	Symphony

Vanderbilt University Libraries	
2002	Symphony
2001	Symphony
2000	Symphony
1999	Symphony
1998	Symphony
1997	Symphony
1996	Symphony
1995	NOTIS
1994	NOTIS
1993	NOTIS
1992	NOTIS
1991	NOTIS
1990	NOTIS
1989	NOTIS
1988	NOTIS
1987	NOTIS
1986	NOTIS
1985	NOTIS

```
foreach my $LibraryID (@LibraryIDlist) {
        $SqlStatement="SELECT COUNT(*) AS librarycount FROM ilsdata WHERE
LibraryID = $LibraryID";
        &executeSQL($SqlStatement);
        $db->FetchRow();
        my $ExistingEntries = $db->Data("librarycount");

        if ($ExistingEntries > 0) {
                print "<p>There are already $ExistingEntries ilsdata records for
$LibraryID</p>\n" if ($debug eq "on");
                my $SqlStatement = "DELETE FROM ilsdata WHERE LibraryID =
$LibraryID";
                &executeSQL($SqlStatement);
        } else {
                print "<p>There are no ilsdata records for $LibraryID</p>\n" if ($debug
eq "on");
        }

        my $SqlStatement = "SELECT
Institution,ILS,InstallDate,PreviousILS,PrevInstallDate,PreviousILS2,PrevInstallDate2,Previous
ILS3,PrevInstallDate3,PreviousILS4,PrevInstallDate4 " .
          "FROM lwc " .
          "WHERE RecordNumber = $LibraryID";
        &executeSQL("$SqlStatement");
        $db->FetchRow();
        my (%data) = $db->DataHash();
        if (length($data{'ILS'}) > 0) {
                # proceed only if we have basic ILS data
    push(@MissingDates,$LibraryID) if ((length($data{'ILS'}) > 0)          &&
(length($data{'InstallDate'}) == 0)      && ($data{'ILS'} ne "None"));
    push(@MissingDates,$LibraryID) if ((length($data{'PreviousILS'}) > 0)  &&
(length($data{'PrevInstallDate'}) == 0)  && ($data{'PreviousILS'} ne "None"));
    push(@MissingDates,$LibraryID) if ((length($data{'PreviousILS2'}) > 0) &&
(length($data{'PrevInstallDate2'}) == 0) && ($data{'PreviousILS2'} ne "None"));
    push(@MissingDates,$LibraryID) if ((length($data{'PreviousILS3'}) > 0) &&
(length($data{'PrevInstallDate3'}) == 0) && ($data{'PreviousILS3'} ne "None"));
    push(@MissingDates,$LibraryID) if ((length($data{'PreviousILS4'}) > 0) &&
(length($data{'PrevInstallDate4'}) == 0) && ($data{'PreviousILS4'} ne "None"));
                my $CurrentField;
                my $ILS = "";
                my $FirstYear = 0;
                $FirstYear = $data{'InstallDate'}      if (length($data{'InstallDate'}) > 0);
                $FirstYear = $data{'PrevInstallDate'}  if (length($data{'PrevInstallDate'})
> 0);
                $FirstYear = $data{'PrevInstallDate2'} if
(length($data{'PrevInstallDate2'}) > 0);
```

```
                $FirstYear = $data{'PrevInstallDate3'} if
(length($data{'PrevInstallDate3'}) > 0);
                $FirstYear = $data{'PrevInstallDate4'} if
(length($data{'PrevInstallDate4'}) > 0);

                $FirstYear = 2010 if (($FirstYear == 0) && (length($data{'ILS'}) > 0));

                for (my $statyear=$fullyear; $statyear >= $FirstYear ; $statyear--) {
                        #Count down from current year through 1980
                        $data{'InstallDate'}      = 1980 if ($data{'ILS'}          eq "None");
                        $data{'PrevInstallDate'}  = 1980 if ($data{'PreviousILS'}  eq
"None");
                        $data{'PrevInstallDate2'} = 1980 if ($data{'PreviousILS2'} eq
"None");
                        $data{'PrevInstallDate3'} = 1980 if ($data{'PreviousILS3'} eq
"None");
                        $data{'PrevInstallDate4'} = 1980 if ($data{'PreviousILS4'} eq
"None");
                        $ILS = $data{'ILS'}          if (($statyear <= $fullyear)
&& ($statyear >= $data{'InstallDate'}));
                        $ILS = $data{'PreviousILS'}  if (($statyear <  $data{'InstallDate'})
&& ($statyear >= $data{'PrevInstallDate'}));
                        $ILS = $data{'PreviousILS2'} if (($statyear <
$data{'PrevInstallDate'})  && ($statyear >= $data{'PrevInstallDate2'}));
                        $ILS = $data{'PreviousILS3'} if (($statyear <
$data{'PrevInstallDate2'}) && ($statyear >= $data{'PrevInstallDate3'}));
                        $ILS = $data{'PreviousILS4'} if (($statyear <
$data{'PrevInstallDate3'}) && ($statyear >= $data{'PrevInstallDate4'}));

                        #Insert values into ilsdata tabel
                        if ($ILS ne "None") {
                                my $SqlStatement = "INSERT INTO ilsdata
(LibraryID,Year,ILS,DateCreated) VALUES ($LibraryID,$statyear,\'$ILS\',NULL)";
            print "<p>SQL: $SqlStatement</p>\n" if ($debug eq "on");
                                &executeSQL("$SqlStatement");
                                print "<p>$data{'Institution'} Year: $statyear $ILS</p>\n"
if ($debug eq "on");
                        }

                }
        } else {
    push(@MissingILSinfo,$LibraryID);
  }
    }
```

Figure 3.1
Segment for Perl script, which transforms system sequences to annual implementations

of the products differ from those related to the vendors involved? A year-by-year record of what vendor was associated with each system represents another factor in the analysis. This information was encoded in a two-dimensional hash that can be used to return the vendor associated with a product for any year between 1990 and the present.

Analysis of Academic Libraries in the United States

The libraries.org directory includes 3,016 academic libraries in the United States. This is the number of academic library organizations and does not count individual branches. These libraries vary from large research universities to smaller four-year colleges and include community colleges and small religious institutions. They do not include for-profit educational institutions, which often do not have formal libraries.

In 2020, fifty-nine ILS products are used among US academic libraries:

- Alma (956)
- Sierra (395)
- WorldShare Management Services (321)
- Symphony (314)
- Koha—ByWater Solutions (133)
- Koha—Equinox Software (7)
- Koha—LibLime (22)
- Koha—Nucsoft (1)
- Library.Solution (67)
- Voyager (62)
- Polaris (47)
- Millennium (44)
- Horizon (42)
- Destiny (40)
- EOS.Web (39)
- VERSO (35)
- Atriuum (31)
- LibraryWorld (27)
- OPALS (26)
- ALEPH 500 (22)
- Evergreen—Independent (18)
- Koha—Independent (11)
- Evergreen—Equinox Software (8)
- CyberTools for Libraries (7)
- FOLIO—EBSCO Information Services (6)
- FOLIO—Index Data (5)
- FOLIO—ByWater Solutions (3)

- TIND ILS (4)
- Insignia (4)
- Kuali OLE (1)
- Liberty (1)
- Evolve (1)
- Colleague (1)
- Virtua (5)
- Spydus (1)
- Winnebago Spectrum (2)
- Small Library Organizer Pro (1)
- EOS e-Library Service (1)
- SA3000 (1)
- GLAS (1)
- Infocentre (1)
- Accessit Library (1)
- OpenBiblio (3)
- TinyCat (1)
- campusSIS (2)
- Locally developed (2)
- ResourceMate (3)
- Surpass (1)
- Bibliovation (2)
- Circulation Plus (1)
- Mandarin M3 (1)
- Mandarin Oasis (12)
- Mandarin M5 (9)
- Populi (7)
- Athena (1)
- OasisSIS—Library Module (3)
- Alexandria (9)
- Librarika (2)
- Mandarin (1)

These products are supported by a total of thirty-six vendors:

- ProQuest (1,531)
- SirsiDynix (397)
- OCLC (321)
- ByWater Solutions (136)
- The Library Corporation (67)
- Follett (45)
- Independent (35)
- Auto-Graphics (35)
- Book Systems (31)
- LibraryWorld (27)
- Media Flex (26)
- PTFS (24)
- Equinox (15)
- COMPanion Corporation (9)
- CyberTools (7)
- Populi (7)
- EBSCO Information Services (6)
- TIND (4)
- Index Data (5)
- Insignia Software (4)
- Softlink International (1)
- InfoVision Software (1)
- Ellucian (1)
- Civica (1)
- PrimaSoft PC, Inc. (1)
- Space Amazing (1)
- Accessit Library (1)
- LibraryThing (1)
- Nucsoft (1)
- Equinox Software (7)
- Kanopy Apps Technologies (2)
- Jaywil Software Development (3)
- Surpass Software (1)
- Mandarin Library Automation (23)
- Oasis Technologies (3)
- Librarika (2)

See tables 3.3 –3.8 for lists of systems and vendors and how they've changed over the years.

In 1990 the library technology was more fragmented, with forty-three vendors offering a total of fifty-four products. No single vendor was dominant across the entire US academic library sector. The most popular product, NOTIS, still under the ownership of NOTIS Systems, Inc., had been implemented by about 20 percent of libraries in this sector. No other product held more than 10 percent market share. DRA (9.7 percent), PALS (9.4 percent), Dynix (8.8 percent), and Innopac were other popular products. The other products were implemented in smaller numbers. Figure 3.2 shows the trend lines since 1990 in vendors and products.

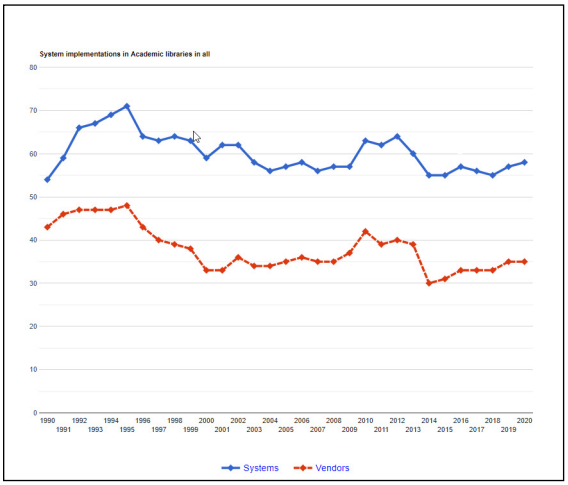

Figure 3.2
Product and vendor trends in US academic libraries: 1990–2020

Table 3.3
Products and vendors active in 2020

Year	Category	Count	Systems/Vendors
2020	Systems	58	TIND ILS (4); FOLIO—EBSCO Information Services (6); FOLIO—Index Data (5); Sierra (395); Symphony (314); ALEPH 500 (22); Insignia (4); Bibliovation (2); Evergreen—Equinox Software (8); Kuali OLE (1); Liberty (1); Horizon (42); LibraryWorld (27); Library.Solution (67); Atriuum (31); Evolve (1); Polaris (47); Koha—LibLime (22); Colleague (1); Virtua (5); Spydus (1); Winnebago Spectrum (2); Small Library Organizer Pro (1); EOS e-Library Service (1); SA3000 (1); Voyager (62); Infocentre (1); Accessit Library (1); VERSO (35); CyberTools for Libraries (7); Millennium (44); OpenBiblio (3); TinyCat (1); Koha—Nucsoft (1); FOLIO—ByWater Solutions (3); Koha—Equinox Software (7); WorldShare Management Services (321); campusSIS (2); Locally developed (2); ResourceMate (3); Evergreen—Independent (18); Surpass (1); Circulation Plus (1); Mandarin M3 (1); Mandarin Oasis (12); Mandarin M5 (9); Destiny (40); Alma (956); Populi (7); EOS.Web (40); Athena (1); OasisSIS—Library Module (3); Alexandria (9); Librarika (2); Koha—ByWater Solutions (133); OPALS (26); Mandarin (1); Koha—Independent (11)
2020	Vendors	35	TIND (4); EBSCO Information Services (6); Index Data (5); ProQuest (1,531); SirsiDynix (397); Insignia Software (4); PTFS (24); Equinox (15); Independent (35); Softlink International (1); LibraryWorld (27); The Library Corporation (67); Book Systems (31); InfoVision Software (1); Ellucian (1); Civica (1); Follett (45); PrimaSoft PC, Inc. (1); Space Amazing (1); Accessit Library (1); Auto-Graphics (35); CyberTools (7); LibraryThing (1); Nucsoft (1); ByWater Solutions (136); OCLC (321); Kanopy Apps Technologies (2); Jaywil Software Development (3); Surpass Software (1); Mandarin Library Automation (23); Populi (7); Oasis Technologies (3); COMPanion Corporation (9); Librarika (2); Media Flex (26)

Table 3.4
Products and vendors active in 2014

Year	Category	Count	Systems/Vendors
2014	Systems	55	WorldShare Management Services (211); Sierra (359); BiblioFile (1); Symphony (441); Horizon (73); Alexandria (10); Kuali OLE (2); Surpass (5); Alma (96); Millennium (327); ALEPH 500 (251); Evergreen—Equinox Software (14); Liberty (1); LibraryWorld (27); Voyager (401); Library.Solution (98); Insignia (1); Carl.X (2); Athena (3); Koha—PTFS (1); Koha—ByWater Solutions (57); Mandarin Oasis (14); Polaris (54); Virtua (7); Locally developed (2); Spydus (4); Koha—LibLime (26); Winnebago Spectrum (5); Small Library Organizer Pro (1); EOS e-Library Service (1); SA3000 (1); Destiny (43); Atriuum (19); OpenBiblio (2); VERSO (36); CyberTools for Libraries (8); Evergreen—Independent (19); Koha—Nucsoft (1); Circulation Plus (3); Infocentre (3); OPALS (15); Koha—Equinox Software (4); Koha—Independent (12); campusSIS (2); ResourceMate (4); Bibliovation (1); Mandarin M3 (3); Mandarin M5 (6); Librarika (1); Mandarin (2); Populi (5); EOS.Web (45); OasisSIS—Library Module (3); Evolve (1); Concourse (4)
2014	Vendors	30	OCLC (211); Innovative Interfaces, Inc. (747); The Library Corporation (101); SirsiDynix (560); COMPanion Corporation (10); Independent (37); Surpass Software (5); Ex Libris (748); Equinox (18); Softlink International (1); LibraryWorld (27); Insignia Software (1); Follett (57); PTFS (28); ByWater Solutions (57); Mandarin Library Automation (25); Civica (4); PrimaSoft PC, Inc. (1); Space Amazing (1); Book Systems (23); Auto-Graphics (36); CyberTools (8); Nucsoft (1); Media Flex (15); Kanopy Apps Technologies (2); Jaywil Software Development (4); Librarika (1); Populi (5); Oasis Technologies (3); InfoVision Software (1)

Observations for US Academic Libraries

The data from this analysis reflects some interesting trends and enables us to make interesting observations regarding the vendors and automation products during the last three decades. Figure 3.2 highlights the consistent pattern of the number of products active each year exceeding the number of vendors. Throughout the entire period, there were vendors supporting multiple products, gained either via previous acquisition or through new generation offerings.

This view of the data indicates that despite the consolidation of the industry, the number of competitors

Table 3.5
Products and vendors active in 2010

Year	Category	Count	Systems/Vendors
2010	Systems	63	Innopac (3); Millennium (764); BiblioFile (1); Symphony (493); Horizon (113); Voyager (503); Surpass (6); Evergreen—Equinox Software (6); Librarians Edge (1); LibraryWorld (19); Alexandria (7); Polaris (29); Library.Solution (98); Portfolio (1); Virtua (11); C2 (1); Dynix (12); Carl (2); GLAS (2); Atriuum (9); Mandarin M3 (6); Sierra (1); WorldShare Management Services (6); Koha—By-Water Solutions (10); Spydus (4); Koha—Equinox Software (2); ALEPH 500 (287); Small Library Organizer Pro (1); Winnebago Spectrum (14); ResourceMate (6); EOS e-Library Service (1); SA3000 (1); Liberty (1); Populi (1); Destiny (23); EOS.Web (32); Mandarin M5 (2); OpenBiblio (1); VERSO (28); OPALS (4); Advance (2); Evergreen—Independent (4); Koha—LibLime (38); Koha—Nucsoft (1); Circulation Plus (13); Mandarin (3); Athena (17); Unknown (1) No Vendor data for [Unknown]; Koha—Independent (7); LibrarySoft (1); campusSIS (1); Athenaeum (1); Locally developed (1); Bibliovation (1); Infocentre (16); Librarika (1); Mandarin Oasis (10); CyberTools for Libraries (8); Concourse (6); OasisSIS—Library Module (1); Readerware (1); BookCat (1); Evolve (1)
2010	Vendors	42	Innovative Interfaces, Inc. (768); The Library Corporation (101); SirsiDynix (618); Ex Libris (790); Surpass Software (6); Equinox (8); Hunter Systems (1); LibraryWorld (19); COMPanion Corporation (7); Polaris (29); BiblioMondo (1); VTLS (11); Contec Group (1); EOS International (35); Book Systems (15); Mandarin Library Automation (21); OCLC (6); ByWater Solutions (10); Civica (4); PrimaSoft PC, Inc. (1); Follett (83); Jaywil Software Development (6); Space Amazing (1); Softlink International (1); Populi (1); Independent (13); Auto-Graphics (28); Media Flex (4); Infor (2); LibLime (38); Nucsoft (1); New Generation Technologies (1); Kanopy Apps Technologies (1); SumWare Consulting (1); PTFS (1); Librarika (1); CyberTools (8); Oasis Technologies (1); Readerware Corporation (1); FNProgramvare (1); InfoVision Software (1)

Table 3.6
Products and vendors active in 2006

Year	Category	Count	Systems/Vendors
2006	Systems	58	Locally developed (5); Innopac (24); Millennium (697); BiblioFile (1); Symphony (464); Horizon (176); Voyager (527); Dynix (26); Surpass (5); Advance (5); Virtua (12); CyberTools for Libraries (6); Infocentre (18); Librarians Edge (1); PALS (6); Athena (26); DRA (9); Galaxy (6); Circulation Plus (19); Alexandria (7); Polaris (16); Library.Solution (96); C2 (2); Q Series (2); VTLS (1); GLAS (4); LibraryWorld (19); Mandarin M3 (6); Portfolio (3); Spydus (1); ALEPH 500 (281); Atriuum (2); Winnebago Spectrum (26); ResourceMate (4); EOS e-Library Service (1); SA3000 (1); Liberty (1); Populi (1); Destiny (18); Concourse (9); Koha—LibLime (1); Mandarin (4); Highland Library System (1); Mandarin M5 (1); OpenBiblio (1); Carl (9); MultiLIS (1); Koha—Independent (2); DB/TextWorks (1); Columbia Library System (1); Unknown (1) No Vendor data for [Unknown]; Amlib (1); LibrarySoft (1); Athenaeum (1); EOS.Web (18); Librarika (1); Mandarin Oasis (7); VERSO (6)
2006	Vendors	36	Independent (8); Innovative Interfaces, Inc. (721); The Library Corporation (106); SirsiDynix (675); Elsevier (527); Surpass Software (5); Infor (5); VTLS (13); CyberTools (6); Follett (107); Hunter Systems (1); Ameritech Library Systems (6); Polaris (22); COMPanion Corporation (7); Contec Group (2); EOS International (25); LibraryWorld (20); Mandarin Library Automation (18); BiblioMondo (3); Civica (1); Ex Libris (281); Book Systems (11); Jaywil Software Development (4); Space Amazing (1); Softlink International (1); Populi (1); LibLime (1); Highland Library System (1); Sirsi (1); Inmagic (1); OCLC (1); New Generation Technologies (1); SumWare Consulting (1); Librarika (1); Auto-Graphics (6)

active now is lower than some phases, but is not at its lowest point. The number of active vendors reached its lowest point in 2014 and has steadily increased since. Table 3.4 presents the products and vendors active in 2014.

Trends among the ARL Member Libraries

A data set of all academic libraries in the US represents a very broad group of libraries. Technology needs and favored products vary considerably for each tier of libraries organized by collection size, type of

Table 3.7
Products and vendors active in 2000

Year	Category	Count	Systems/Vendors
2000	Systems	59	Innopac (301); Symphony (282); Horizon (104); Carl (37); DRA (318); INLEX/3000 (6); Voyager (353); Dynix (155); Advance (22); NOTIS (95); ALEPH 500 (32); Locally developed (9); VTLS (22); Taos (4); KLAS (1); PALS (90); Athena (30); C2 (2); BiblioFile (5); Galaxy (25); Library.Solution (82); Millennium (220); Manager Series (1); Professional Series (1); PLUS (9); Circulation Plus (18); LibraryWorld (15); LS/2000 (1); Virtua (7); Portfolio (3); GLAS (5); CLSI (1); Polaris (6); LibraryCom (1); Librarians Edge (2); AARCS (1); OTHER (1); DataTrek (2); Infocentre (5); Amlib (1); Mandarin M3 (5); Winnebago Spectrum (32); Q Series (6); EOS.Web (13); Concourse (6); MultiLIS (44); Highland Library System (1); Mandarin M5 (1); DB/TextWorks (2); Columbia Library System (2); Mandarin (2); Unknown (1) No Vendor data for [Unknown]; Mandarin Oasis (5); Spydus (1); Destiny (3); GLIS (1); Alexandria (2); VERSO (1); CyberTools for Libraries (3)
2000	Vendors	33	Innovative Interfaces, Inc. (521); Sirsi (282); Ameritech Library Systems (194); The Library Corporation (124); Data Research Associates (372); Elsevier (353); epixtech (250); Geac Library Solutions (32); Ex Libris (32); Independent (9); VTLS (29); Keystone Systems (1); Sagebrush Corporation (67); Contec Group (2); Gaylord Information Systems (31); EOS International (28); Follett (21); LibraryWorld (18); OCLC (2); BiblioMondo (3); Geac Library Systems (1); Hunter Systems (2); NSC, Inc. (1); Unknown (1); Mandarin Library Automation (13); Book Systems (6); Highland Library System (1); Inmagic (2); Civica (1); COMPanion Corporation (2); Auto-Graphics (1); CyberTools (3)

Table 3.8
Products and vendors active in 1990

Year	Category	Count	Systems/Vendors
1990	Systems	54	Millennium (4); INNOVAQ (1); Ulisys (5); DataPhase (8); LIAS (1); Innopac (61); DOBIS (2); Symphony (20); NOTIS (211); Advance (23); LS/2000 (43); INLEX/3000 (19); LCS—Library Control System (8); PALS (101); DRA (104); Highland Library System (47); Voyager (1); Horizon (3); Dynix (94); MultiLIS (6); TOMUS (7); VTLS (46); OTHER (1); OCAT (1); BLISS (3); GLIS (51); Locally developed (22); PLUS (34); C2 (1); Galaxy (12); Manager Series (1); Professional Series (1); Q Series (2); BiblioFile (14); ALEPH 500 (2); Georgetown LIS (2); DataTrek (4); CLSI (28); GLAS (2); Micro-VTLS (1); UTLAS (4) (1); DB/TextWorks (1); Blue Star Library System (1); Gaylord System 100 Circulation (1); Mandarin M3 (1); Winnebago Spectrum (7); Circulation Plus (9); Columbia Library System (1); Inmagic (1); Unknown (1); LibraryWorld (1); VERSO (1); Carl (42)
1990	Vendors	43	Innovative Interfaces, Inc. (66); ULISYS Software Group (5); DataPhase (8); Penn State University (1); IBM (2); Sirsi (20); NOTIS Systems (211); Geac Library Solutions (108); OCLC (43); INLEX (19); Ohio State University (8); Unisys (101); Data Research Associates (104); Highland Library System (47); Carlyle Systems (8); Ameritech Library Systems (3); Dynix Systems (94); MultiLIS (6); VTLS (47); Unknown (1); OCAT (1); Biblio-Techniques (3); Independent (22); Contec Group (1); Gaylord Information Systems (13); Data Trek, Inc. (6); IME (2); The Library Corporation (14); Ex Libris (2); Georgetown University Medical Center (2); CLSI (28); EOS International (2); UTLAS Corp (4) (2); Inmagic (2); Ruf Corp (1); Mandarin Library Automation (1); Winnebago Software Company (7); Follett (9); McGraw-Hill School Systems (1); LibraryWorld (1); Auto-Graphics (1); Carl Corporation (42)

institution served, or other factors. Additional insight can be gained by looking at specific subsets. The members of the Association of Research Libraries constitute an important subset of academic libraries, representing those with the largest collections and most complex operations.

In 2020, among the 125 ARL members, thirteen different systems were in use or recently selected. Note that in the libraries.org database, new systems are recorded once the library has made a formal and binding selection, even if the system has not yet been placed into production. Table 3.9 presents the products currently in use.

Among this group, ProQuest holds an 84 percent market share, including the products within both Ex Libris (71.2 percent) and Innovative (13 percent).

Table 3.9
Vendors and products in ARL libraries, 2020

Product Distribution			
Company	**Product**	**Count**	**Percent**
Ex Libris	Alma	74	(59%)
Innovative Interfaces, Inc.	Sierra	15	(12%)
Ex Libris	Voyager	10	(8%)
SirsiDynix	Symphony	8	(6%)
OCLC	WorldShare Management Services	5	(4%)
Ex Libris	ALEPH 500	5	(4%)
SirsiDynix	Horizon	2	(2%)
EBSCO Information Services	FOLIO—EBSCO Information Services	1	(1%)
ByWater Solutions	Koha—ByWater Solutions	1	(1%)
Innovative Interfaces, Inc.	Millennium	1	(1%)
Kuali Foundation	Kuali OLE	1	(1%)
Innovative Interfaces, Inc.	Polaris	1	(1%)
Not Automated	None	1	(1%)

It is also helpful to look at the implementation trends of the ARL members over time. One view of this trend was compiled by constructing a retrospective tabulation of system implementation statistics published on Library Technology Guides from the Internet Archive. The data is shown in table 3.10. A graphic representation of the system implementation trends is available on Library Technology Guides: https://librarytechnology.org/libraries/arl/ils-marketshare-trends.pl.

Library Technology Guides implementation statistics
https://librarytechnology.org/libraries/arl/ils.pl

Internet Archive
https://archive.org

Another view of the market share trends among ARL member libraries was created with the system data in libraries.org, using the same process as for the full US academic library group (described above). This analysis reveals that the period with the fewest active systems and vendors was from 2008 through 2011 (figure 3.3). Table 3.11 presents the active products and vendors in 2008.

Study Results

Based on data describing the products implemented in academic libraries since 1990, this analysis suggests that the library technology industry is more competitive today than it has been in previous phases. More products are active today, and they represent a more diverse profile of technology and business arrangements than in some previous periods.

Among the ARL members, products active today include proprietary library services platforms (Alma and WorldShare Management Services), open source library services platforms (FOLIO, Kuali OLE), and proprietary integrated library systems (Symphony, Sierra, Millennium, Polaris), as well as open source integrated library systems (Koha). Vendors include a nonprofit (OCLC) and several for-profit companies (ProQuest, EBSCO Information Services, SirsiDynix, and ByWater Solutions). By comparison, in 2009 all six active products were proprietary integrated library systems (Aleph, Voyager, Innopac, Millennium, Horizon, and Symphony), and all the vendors were for-profit (Innovative, SirsiDynix, and Ex Libris).

While consolidation has skewed the total number of implementations toward a lower number of vendors, the overall field of products and vendors is more diverse in 2020 than it was in 2009. The results of this analysis differ from an intuitive impression that the library technology industry has become less competitive in recent years.

Table 3.10
ILS products used in ARL libraries, 2000–2020

ILS Products used by ARL Libraries																					
ILS	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Advance	2	1	1	2	1	1	1	1	1	1	1										
Aleph	6	9	17	20	20	21	21	22	22	23	24	26	25	22	19	18	13	12	9	8	5
Alma													5	8	17	21	31	35	57	67	73
Amicus	1	1	1	1	1	1	1	1	1	1	1	1									
Carl	1	1																			
DRA	12	12	4																		
FOLIO																					2
Horizon	10	10	9	7	7	7	7	7	7	6	4	4	3	3	2	2	2	2	2	2	2
Koha																					1
KualiOLE															1	1	1	1	1	1	1
LocallyDeveloped	2	2	2	2	2	2	1	1													
Millennium	33	34	34	35	36	37	38	38	39	39	40	40	27	25	21	20	16	12	5	2	2
MultiLIS	1	1	1																		
NOTIS	12	10	2	1	1																
Sierra													10	11	12	13	17	19	15	14	14
Symphony	13	13	17	19	18	18	18	18	18	18	20	19	18	18	17	17	16	15	13	11	8
Taos	1	1	1																		
VTLS	2	2	1	1	1																
Virtua					1	1	1														
Voyager	26	26	33	35	35	35	35	35	35	35	35	35	35	35	31	27	24	24	18	14	10
WorldShare															2	3	3	3	3	4	5
Ex Libris	6	9	17	20	20	21	21	57	57	58	59	61	65	65	67	66	68	71	84	89	88
Ex Libris MS	5%	7%	14%	16%	16%	17%	17%	46%	46%	47%	47%	49%	53%	53%	55%	54%	55%	58%	68%	72%	72%
Innovative	33	34	34	35	36	37	38	38	39	39	40	40	37	36	33	33	33	31	20	16	16
Innovative MS	27%	28%	28%	28%	29%	30%	31%	31%	32%	32%	32%	32%	30%	30%	27%	27%	27%	25%	16%	13%	13%
SirsiDynix	25	25	21	19	18	25	25	25	25	24	24	23	21	21	19	19	18	17	15	13	10
SirsiDynix MS	20%	20%	17%	15%	15%	20%	20%	20%	20%	20%	19%	18%	17%	17%	16%	16%	15%	14%	12%	11%	8%
OCLC															2	3	3	3	3	4	5
OCLC MS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%	2%	2%	3%	4%
Totals	122	123	123	123	123	123	123	123	123	123	125	125	123	122	122	122	123	123	123	123	123

Table 3.11
Products and vendors active in ARL member libraries in 2008

Year	Category	Count	Systems/Vendors
2008	Systems	6	Innopac (1); Horizon (6); Symphony (19); Voyager (35); ALEPH 500 (24); Millennium (39)
2008	Vendors	3	Innovative Interfaces, Inc. (40); SirsiDynix (25); Ex Libris (59)

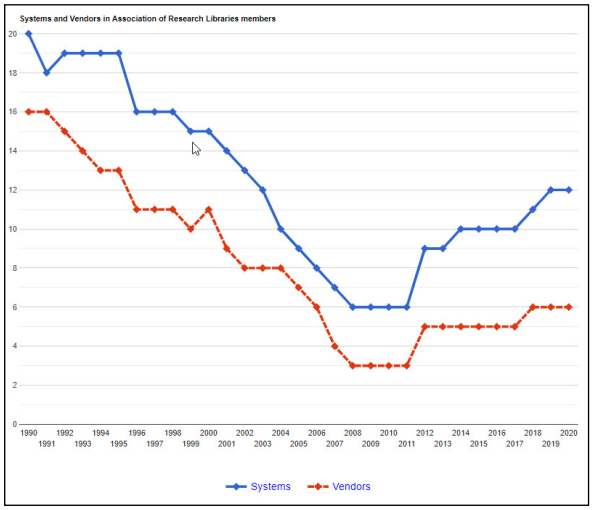

Figure 3.3
Products and vendors in ARL Libraries 1990–2020