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Los Alamos National Laboratory

Research Library

Year in review 2016

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Message from the Library Director

2016 was a year of strategy, analysis and moving forward. We launched January with a strategic planning process. Building on the Lab's Strategic Plan and Purpose Statement, we created a process that reached out to Lab leadership, scientists & engineers, and Research Library (RL) staff. An external consultant was engaged to help drive the process and to lead a full-day staff retreat. A survey was created and administered to staff, seeking feedback on priorities and direction. A parallel survey was created for stakeholders. Stakeholder questions began with the macro – from the external climate to Lab and division priorities – to the micro concerning priorities and directions for the RL. Stakeholders were personally interviewed by teams of two that included an interviewer and a scribe. These thirty-plus interviews were collated into a spreadsheet. A sociologist provided semantic analysis for the feedback, creating an impact document of the interviews. The full day retreat provided an opportunity for staff to build on their feedback as well as stakeholder feedback. A great deal of brainstorming led to categorized priorities and scenarios. The RL Compass Team, encompassing library leadership, moved the next stage of the process forward by taking retreat feedback and creating a first draft of a plan. Two more rounds of feedback with smaller staff groups as well as the Library Advisory Board led to the final plan. The core plan is included in this report.

In order to execute a strategic plan, encouraging, developing and hiring the right staff with the right skills is critical. Library staff underwent a competency assessment and structuring process in parallel to the strategic planning process. Industry competencies were collected and evaluated. Team leaders contributed critical competencies that were present, as well as those that were emerging. Core attributes that all staff should strive to attain were identified, along with specialized competencies for the many RL functions. Basic, advanced and expert definitions were created. Core uses of the competencies would include:

- Individual staff development. A person can identify specific areas to develop, either choosing a new competency area or gaining depth in an existing competency.

- Group analysis. Collecting the competencies and levels of everyone in the group, a grid of strengths and weaknesses is developed. RL leadership can use this for learning and growth opportunities for the group.

- Recruitment. Using the group grid and the strategic plan, future skills and recruitment needs are identified.

- Mapping competencies to the strategic plan. Turning the strategic plan into an action item involves the development of a roadmap. Critical competencies are identified with tasks.

With strategy in place and current and future competencies mapped, the RL turned to team building and team effectiveness. We worked with Talent Management to administer the DiSC profile to the group. This working-styles tool helps teams understand how colleagues approach projects and

relationships and how best to work with a diversity of styles. After staff took the profile, the group had a ½-day workshop to go over results and develop deeper style understandings.

There were two space highlights in 2016. The RL service desk and the Collaboration Space service desk were combined. Collaboration Space staff are physically present to answer basic questions, and RL staff are on call for reference questions and research consultations. This change allows librarians and other service staff to focus time on work projects, while still maintaining a research link. Outreach beyond the RL walls is a key piece of the strategic plan, and will be a core 2017 initiative.

A new initiative for the Study Center was planned with ADBI and Lab leadership to bring many core technology services into the Study Center. Seeing a collaboration opportunity, RL staff met with ADBI staff to discuss partnering options. Information will flow between these two spaces, and Lab personnel will benefit from the greater visibility of a broad range of services, tools and content.

RL staff accomplished a great deal in the area of scholarly communications, as is detailed throughout this report. A Los Alamos ORCiD landing page was developed, data management services took shape, and RASSTI advanced in design and functionality. Core library services such as collections, consultations and metrics all had strong use.

The Los Alamos Research Library has an incredibly talented group of staff dedicated to mission success. With a strategic plan in place and competencies mapped, RL staff truly embodies the Lab's focus to be essential.

Dee Magnoni
Research Library Director

Strategic Investments: Collections

Since the mid 1990's the Research Library has been focused on building carefully crafted digital collections that maximize access to electronic information resources for LANL staff. Information resources that can be accessed from the desktop provide advantages such as accessibility from any computer on or off site, immediate availability, searchable fulltext, links to related resources and the provision of added services. The digital collections provided by the Researc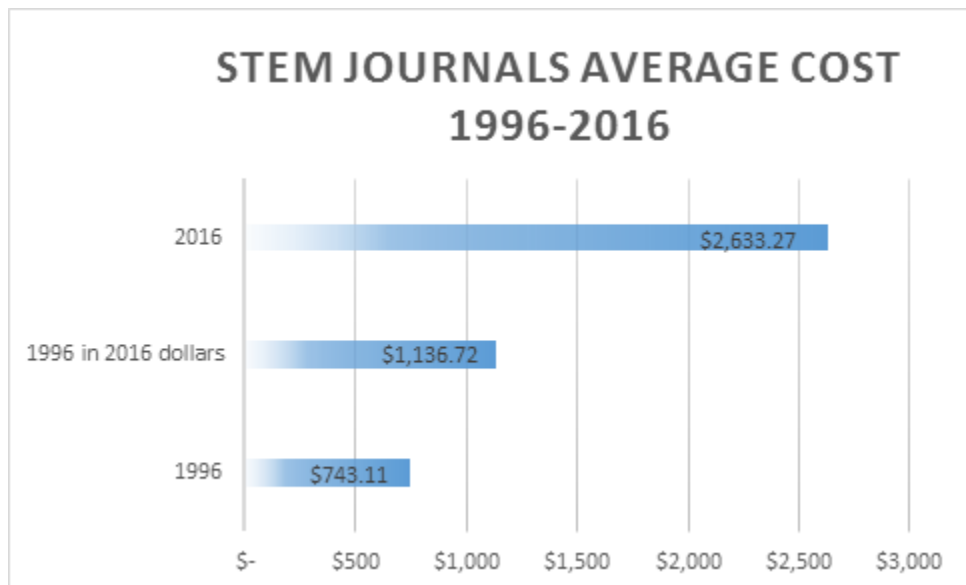h Library are aligned with the mission of the Lab and needs of staff and are an essential part of the foundation of research at LANL.

FY16 Collections Budget, by content type
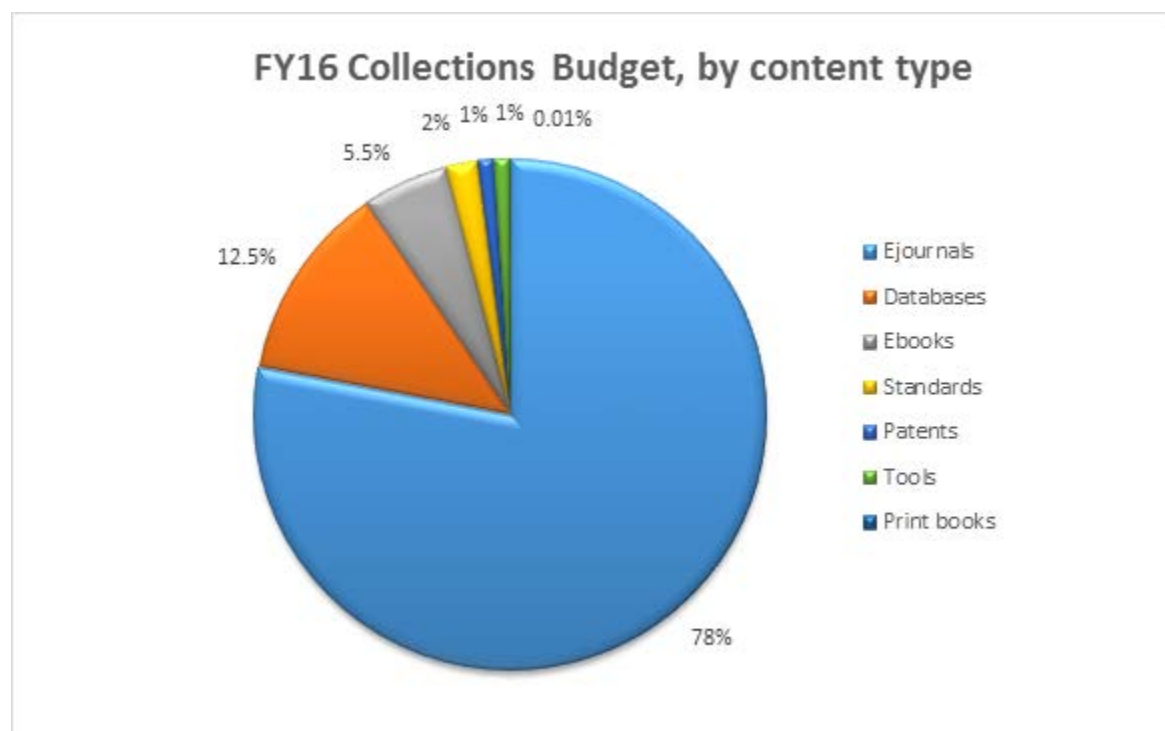
Scientific output grows at a rate of 8-9% per year, doubling roughly every nine years. The challenge of meeting demand for access to an ever-increasing body of scientific knowledge requires flexibility and collaboration. Consortial licensing agreements with libraries across the DOE complex continue to allow the Research Library to increase access to information resources while also lowering and containing current and future costs. The 2016 Collections Refresh exercise is another method the Research Library successfully used to meet demand for access to new or additional information resources. The process involved identification of underutilized information resources and repurposing of funds for access to new resources. Titles for inclusion in this process were based solely on feedback from LANL staff which ensures that information resources continue to meet their needs.

In an era when many believe that information is (or should be) free, costs for information resources nevertheless continue to rise. Journal inflation has long outpaced general consumer inflation. The chart below shows the average price of an STEM (Science, Technology, Engineering and Mathematics) journal in 1996 was $743. By 2016 that price had increased to $2,633, at a rate 2.3 times the overall Consumer Price Index during the same period.

STEM JOURNALS AVERAGE COST 1996-2016

Year	Average Cost
2016	$2,633.27
1996 in 2016 dollars	$1,136.72
1996	$743.11

Report Collection

The Reports Library has an extensive collection of Los Alamos reports and reports from other agencies, in both print and digital formats. New Los Alamos documents are collected electronically in RASSTI, and older Los Alamos documents are being scanned and made accessible.

In 2016 the Reports team finished scanning the Library's print collection of boxed, recent LA-CP Los Alamos reports. This catches up our digital content to the time when RASSTI began handling CUI (controlled unclassified) documents, meaning that all unclassified LA-CPs for the last seventeen years are now in digital format and available for quick delivery upon request. In total, including regular scanning per customer request, 2895 digital reports were added to the Los Alamos Authors database.

Customer Services

The Research Library Customer Engagement Team connects with Laboratory staff to provide them with the information and resources they need. The reference librarians and technical report experts engage in daily one-on-one interactions with Lab researchers. Services include broad or in-depth literature searching, training on current research tools, and assistance navigating the Library's web resources and subscribed content. This past year the Customer Engagement Team achieved a number of goals, including (and helped by) the hiring and onboarding of two new reference librarians.

The biggest change was the consolidated service desk. The Library combined its main floor service desk with the nearby Collaboration Space information desk, simplifying the area for customers. Library staff remains on-call (at extended hours) to assist with in-person reference questions, and will continue to answer phone calls and emails as usual. Members of the team also created a competencies chart for the Library, mapping the expertise of our staff. This knowledge will be instrumental in the future as we develop new skills, form working teams, etc.

The Research Library continues to fulfill customer requests on demand. Articles from our print journal collection are scanned and emailed to customers each day. Document Delivery service is offered for articles that are not in our collections, and Interlibrary Loan service for books. The Reports Team handles dozens of report requests each week, while regularly scanning our vault collections to make full-text available in the Los Alamos Authors database.

Research Library staff members provide training on the Library's resources and services at group meetings, in one-on-one sessions in researchers' offices, through online Research Guides and video tutorials.   Training can cover using library resources and systems, or scholarly communication issues such as open access, copyright, citation management, and ways to increase the impact of research.

Broad Support for Research: Systems and Tools

External facing databases

Los Alamos Research Online

We continue to host and maintain LANL's public institutional repository, which features journal articles and conference proceedings with links to the most widely accessible versions of full text. The collection continues to grow, with 27851 records as of 2/2/17, including 330 special collections records, and 1422 accepted manuscripts. Usage is healthy, including broad international use.

Two enhancements were introduced this year. An Altmetrics "donut" now appears next to published articles which have an altmetrics score—a measure of the immediate impact of an article based on the social Web. The altmetrics badge provides a distinctive and instantly recognizable visualization to help showcase the wider influence and dissemination of the Laboratory's published content.

Also, content was enhanced with the first special collection of documents from notable Los Alamos National Laboratory research projects. The Hot Dry Rock (HDR) collection presents the record of the Hot Dry Rock program. This program explored geothermal energy development, with field work conducted at Fenton Hill, New Mexico, and was most active from 1970 to 1996. The collection is comprised of informal documents, reports, journal and conference papers, and experimental data. The collection will be updated by batch uploads until the entire historical, collection is represented in the repository.

⌐ Publisher Version

🔲 Accepted Manuscript

☐ 7. **Oxidation of manganese in an ancient aquifer, Kimberley formation, Gale Crater, Mars**
Lanza, Nina Louise 🆔 ; Wiens, Roger Craig 🆔 ; Arvidson, Raymond ; Fischer, Woodward ; Gellert, Ralf ; et al.
Geophysical Research Letters ; Vol.43, iss.14, p.7398-7407 ; July 28, 2016

EPRR – Electronic Public Reading Room

This essential dataset is managed by the Research Library for the Laboratory's environmental efforts, providing environmental documents and reports and supporting compliance with environmental regulations. It is a collaborative effort with the ADEM and ADESH directorates. Approximately 500 records were loaded during 2016, comprised of a mix of correspondence and technical reports. The EPRR search interface had 15,000 visits, 983,000 pageviews, and over 130,000 downloads in 2016.

Internal Databases and Systems

We continue to support and develop laboratory specific datasets for researchers – Los Alamos Authors (LA Authors), which provides access to LANL reports, LA in the Red, and LDRD Connexion.

LA Authors was enhanced with Altmetric "donuts" and the Hot Dry Rock special collection. ORCiD icons are now displayed for LANL authors. Searching was enhanced with the creation of specific search fields for source/publication and sponsor. These changes were driven by new data coming from RASSTI.

Full text content is continually being added to LA Authors. In 2016, 2895 pdfs were linked to records. These are pdfs scanned by Research Library and SAFE-IP staff, due to user requests or different scanning efforts.

Report PDF Downloads, 2016

- 50,000 +
- 10,000 - 49,999
- 5,000 - 9,999
- 1,000 - 4,999
- 500 - 999
- 100 - 499
- 1 - 99
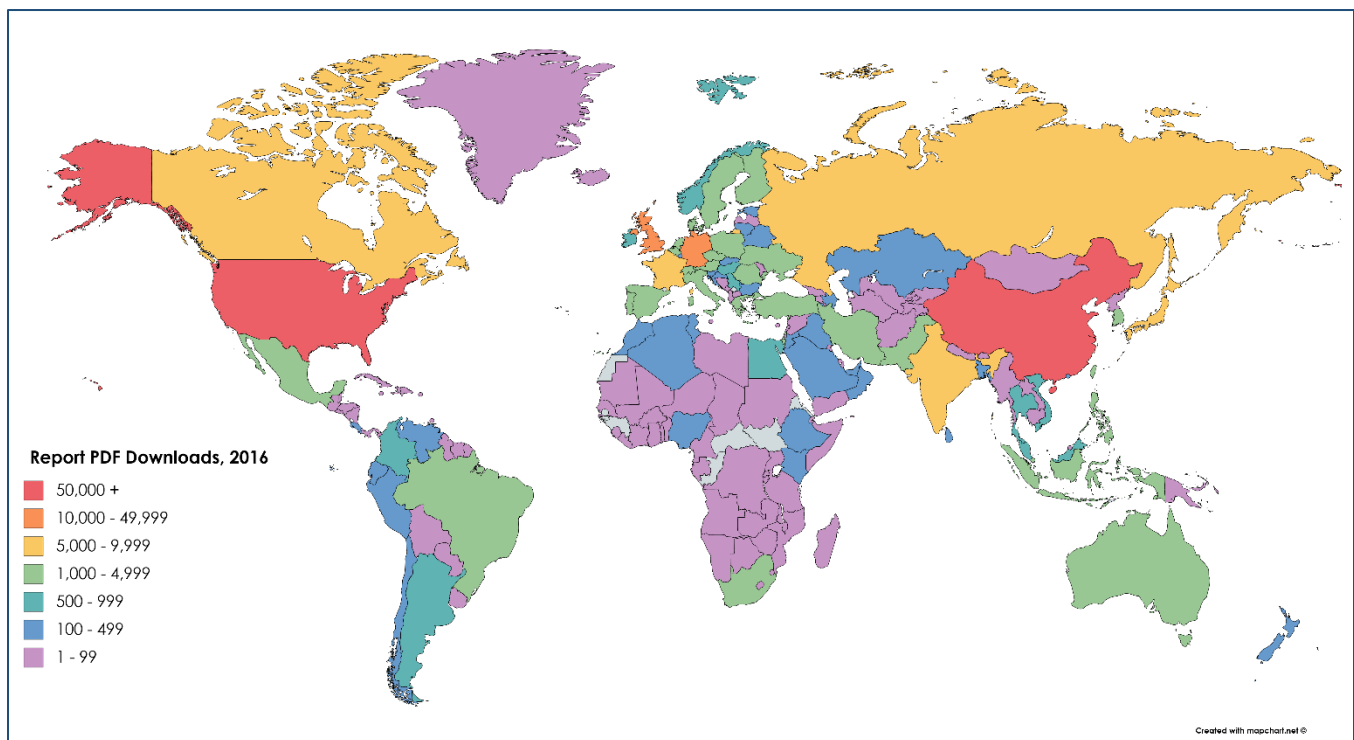
PDF Downloads, LANL Reports, for 2016 by Location (worldwide) and Frequency

RASSTI (Review and Approval System for Scientific and Technical Information)

Use of RASSTI continues to grow. Several enhancements were rolled out during 2016. The selection of publication sponsor was significantly enhanced, to include specific DOE offices and suboffices as well as non-DOE sponsors. This modification was driven by OSTI requirements and by increasing requests by funding sponsors. Requests for custom data reports continue to increase.

Much energy was spent in developing an authoritative journal list. This vetted list is accessible in RASSTI and is employed by the metrics efforts for improved metadata. This will have positive results when ported into Los Alamos Published Research and Los Alamos Authors.

Usability for authors was improved by modifying submission listing pages to show publication intent, differentiating journal submissions, meeting presentations and other document types.

ORCiDs are now linked to RASSTI records via a connection to ORCiD @ LANL (more below).

Metrics / LAPR

A multistep/multi-approach to compare whether a Los Alamos Published Research (LAPR) record can be matched to a Los Alamos Unrestricted Report (LAUR) is being developed. Digital Object Identifiers (DOIs) and fuzzy matching are employed to determine matches. The next level of analysis focuses on identifying a responsible division for each publication. The objective of this effort is to get a quantitative understanding of the matching of LAPR-LAUR records.

Accepted Manuscripts for Public Access

The Research Library continued to collect accepted manuscripts, enabling the laboratory to meet requirments for public access to federal research.

Processing of accepted manuscripts grew strongly through the year. This was supported by improvements to the RASSTI submission pages, addition of DOI metadata lookup, and the development of ways to acquire accepted manuscripts directly from publishers. A new custom tool for the accepted manuscript "editors" was also developed to track journals, publisher policies and embargo dates. This has streamlined and improved the processing of accepted manuscripts.

Library Management Systems

Research Library operations and services are supported by multiple systems, including a suite of Ex Libris products: Aleph ILS, SFX link resolver, Verde electronic resources management system, and Primo discovery service. In 2016 we chose the Alma library management system to replace these multiple locally hosted systems with an integrated, cloud-based next generation system. Alma facilitates acquisition and management of library materials in a world of electronic resources, with simpler, more efficient processes and provision of analytic data. After analysis of library needs and information technology issues, a contract was completed, data from existing systems migrated. Training, configuration and integrations will continue in 2017 for a go-live date in April.

ORCiD

The library debuted its "ORCiD@LANL" tool in July 2016. This tool allows researchers to leverage Laboratory systems, LDAP and LAPR, to create and/or update their ORCiD profiles. Additionally, ORCiD icons are now being displayed in LA Authors and Los Alamos Research Online (LARO) search results.

ORCiD adoption continues to increase across the research community and publishing industry. On a local level, LDRD is requiring ORCiDs for LANL for all employees on proposals for FY2017. To enable

researchers to easily access the tool, there are multiple links from Library webpages and from within tools like RASSTI and LDRD's Q system. A marketing video was produced which has been inserted into the rotation on the TVs/monitors in the Study Center Lobby and at Hot Rocks café.

Registrations were slow, but steady, for calendar year 2016. However, data from the first weeks of 2017 reveal a tremendous increase. In great part, this must be attributed to the LDRD requirement. But feedback also points to publisher requirements.

As awareness and adoption increases, our next effort will be to add ORCiDs to the information presented in the Lab's internal phonebook display.

By the Numbers

39,910	Materials borrowed and renewed
137	Interlibrary Loan requests filled
453	Document delivery orders (external and in-house)
5,613	Questions answered
198,420	Searches in Primo discovery system
600,000	Article downloads
2,801,849	Report downloads
66,083	Searches in LA Authors (internal)
238,308	Searches in Los Alamos Research Online, public repository
3,703	Searches in LDRD Connexion, internal system
194,034	Searches in EPRR , external database
81,875	Seaches in BRD, external database
27,000	Records in Los Alamos Research Online
10,873	Los Alamos document records added in RASSTI
1,047	Accepted Manuscripts added

Data Management

Over the course of 2016, the Research Library Data Working Group had three primary goals and objectives:

1.) Conduct an environmental scan of external institutions to benchmark budgets, infrastructure, and personnel dedicated to data management.
2.) Perform a survey of the data management landscape at Los Alamos National Laboratory in order to identify local gaps in data management services.
3.) Draft a research data infrastructure model that aligns with the current workflow and classification restrictions at Los Alamos National Laboratory.

The first phase of data collection consisted of contacting data librarians and managers at 12 institutions, universities, and national laboratories during the spring of 2016 for benchmarking purposes. The second phase of data collection consisted of 24 in-depth interviews with researchers from across all lab divisions and career stages and was completed during the summer of 2016.

In response to these findings, a proposal was crafted to pilot institutional infrastructure that facilitates management of research projects, research collaboration, and management, preservation, and discovery of data. Deploying such infrastructure will amplify the effectiveness, efficiency, and impact of research, as well as assist researchers in regards to compliance with both data management mandates and LANL security policy. This will facilitate discoverability of LANL research both within the lab and external to LANL. Paramount to this proposal is helping researchers throughout the entire lifecycle of their research by:
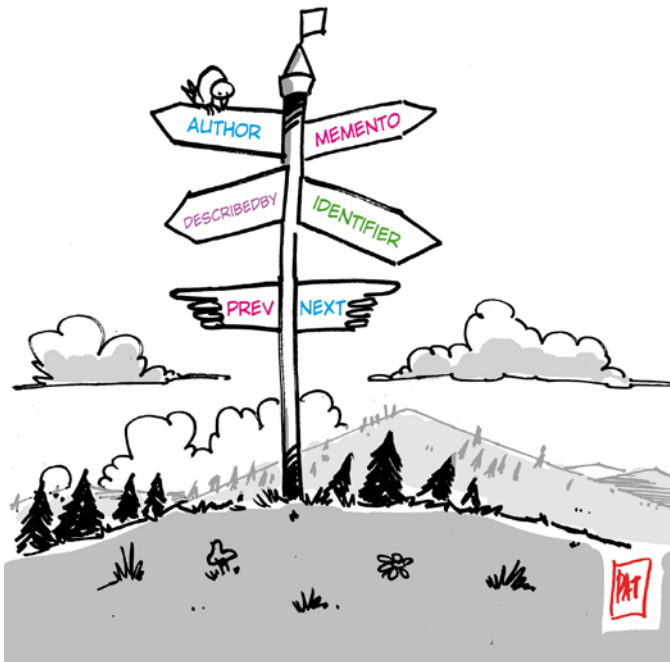
1) Facilitating sharing to help ameliorate the group, institutional, and disciplinary barriers that inhibit true cross-collaboration on research projects
2) Integrating tools that are commonly used for research purposes into the proposed platform to ensure utility
3) Providing an integrated, seamless, and uncomplicated platform for effortless compliance with all LANL data management, review and release, and security policies
4) Improving documentation and preservation of research data to prevent institutional memory loss
5) Providing a straightforward method for LANL researchers to fulfill funder and publisher mandates regarding data management

This pilot project was initiated in January 2017.

Digital Library Research & Prototyping

The Prototyping Team, in partnership with the Computer Science Department at Old Dominion University, has received $830,000 from the Andrew W. Mellon Foundation for the 3-year project **"Towards a Web-Centric Approach for Capturing the Scholarly Record"**. The goal of the project is to explore the technical underpinnings of a web-centric capture paradigm for the scholarly record that is inspired by web archiving practice, but is augmented with components to accommodate and leverage the distinct aspects of web-based scholarship.

The Prototyping Team has further started work on the **Signposting** effort with the goal to increase the levels of web-centric interoperability by defining technical methods that describe relationships between objects and resources in web-based scholarly communication.

This proposed solution is based on using IANA-registered link relation types to establish coarse-grained interoperability among scholarly communication and research nodes. By using typed links in HTTP link headers, Signposting is an approach to make the scholarly web more friendly to machines and interoperability is enhanced as patterns that occur repeatedly in scholarly portals are clarified. Examples for such patterns are to help machines find the authors of a publication, find the bibliographic metadata that describe a publication, and find the (compound) resources that make up a publication. Signposting principles have found early adopters in DataCite, Pangaea, DANS, and the University College Dublin Digital Library.

The **ResourceSync specification**, which describes a synchronization framework for the web consisting of various capabilities that allow third-party systems to remain synchronized with a server's evolving resources, has been updated and the new specification document (ANSI/NISO Z39.99-2017) has been published on the website of the Open Archives Initiative. The ResourceSync Framework is currently being deployed and under consideration for adoption by multiple international organizations (DANS, CORE) and technical frameworks (IIIF).

The **Memento** Protocol is now supported by the W3C MediaWiki instance . The adoption of Memento for the content management system allows for streamlined access of all its versioned resources via our TimeTravel Service, for example. In addition, The W3C Data on the Web Best Practices document recommends the use of Memento to express temporal versioning of datasets and to access a desired version.

The **Open Annotation** work that had its roots in the Prototyping team is now a W3C recommendation.

[Robust Links](), a concept developed by the Prototyping Team, and the specified [Link Decoration]() approach is currently being adopted by ASTM International. ASTM's editors are very concerned about reference rot in their publications and, after consulting with members of the Research Library, have decided to implement Robust Links.

Novel Research

Late in 2016, members of the Prototyping Team published **"[Scholarly Context Adrift: Three out of Four URI References Lead to Changed Content]()"** in PLOS ONE. This article investigates the notion of reference rot in scholarly communication, which is defined as the combination of link rot and content drift. In a previous study in 2014, the team evaluated [link rot]() and this recent work provides a reliable quantification of content drift. The study is based on textual comparisons of Mementos available from 19 different web archives around the world that were created around the time of publication of the scholarly articles in the datasets. The figure shows the results of the comparison for URI references extracted from articles in the arXiv corpus published between 1997 and 2012. The colours correspond with ranges of the computed similarity where the lightest blue indicates the maximal similarity. As similarity decreases, the blue gets darker. URI references that are subject to link rot are shown in black. The publication year of the referencing article is shown on the x-axis, and the percentage of URI references is shown on the y-axis. Several alarming observations can be made from this graph. First, the large percentage of link rot confirms our 2014 findings. Second, the content of only one out of four URI references from most recently published articles has not drifted. That means, for papers published in 2012, 75% of referenced content had changed by the time of our study in August 2015. This ratio gradually gets worse for URI references from articles published further in the past. These results raise significant concerns regarding the long term integrity of the web-based scholarly record and call for the deployment of techniques to combat these problems.
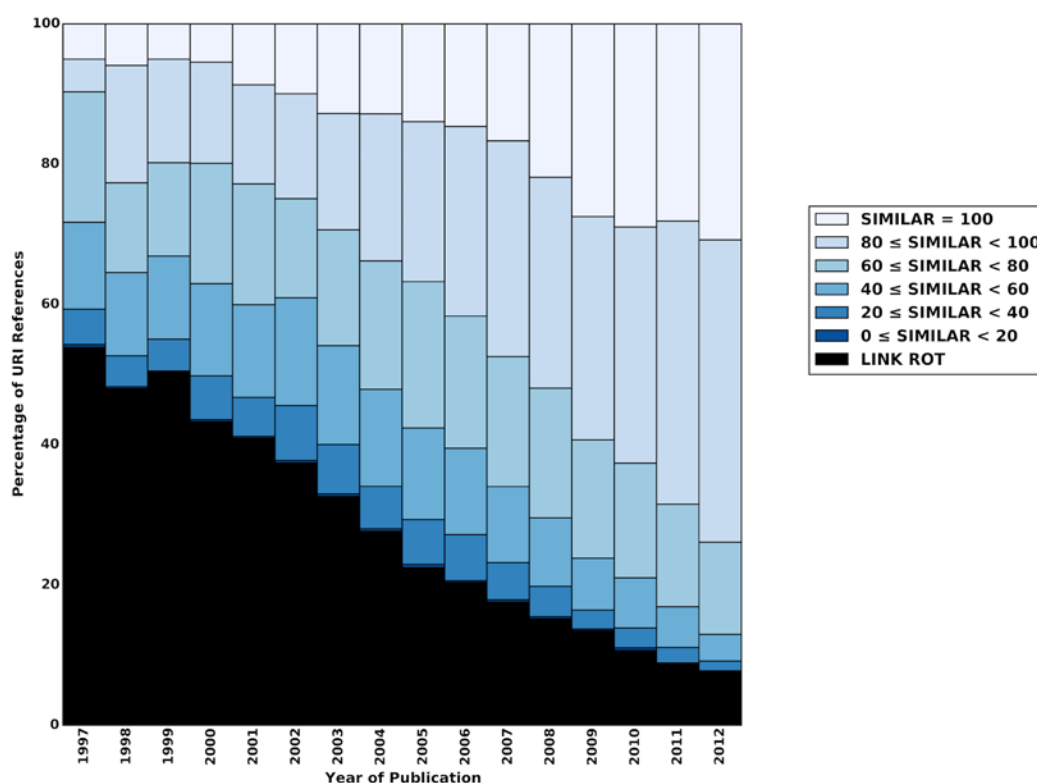
Staff Notables

In 2016, over Research Library staff members attended over 20 national and international educational conferences. Many presented keynote addresses, gave presentations and served on panel discussions.

Library staff were elected to serve on over 15 scientific advisory boards and working groups, along with memberships to several professional associations. Dee Magnoni, Library Director, was elected as President of the Special Libraries Association (SLA), international association of information professionals and special librarians in corporations, business, science, government and academic institutions, a first-time honor for the LANL Research Library.

Frances Knudson is LANL's main point of contact with OSTI's (Office of Scientific and Technical Information) STIP (Scientific Technology Information Program). This involves the monitoring and submission of LANL publications to ensure that the results of DOE–funded research and development and other science and technology activities at LANL are identified, disseminated and preserved.

Awards: A National Leadership Grant was awarded to Dr. Martin Klein by the Institute of Museum and Library Services (IMLS) for a Project Proposal. Josh Finnell received a LANL Foundation Education Outreach Small Grant, and Kelly Durkin Ruth was awarded the Louise Leckner Memorial Travel Stipend award by the Special Libraries Association PAM division (Physics-Astronomy-Mathematics)

Selected Presentations and Publications

Alam, Sawood, Michael L. Nelson, Herbert Van de Sompel, Lyudmila L. Balakireva, Harihar Shankar, and David S. H. Rosenthal. "Web Archive Profiling through CDX Summarization." *International Journal on Digital Libraries* 17, no. 3 (September 2016): 223-38. http://dx.doi.org/10.1007/s00799-016-0184-4.

Alam, Sawood, Michael L. Nelson, Herbert Van de Sompel, and David S. H. Rosenthal. *Web Archive Profiling through Fulltext Search*. Research and Advanced Technology for Digital Libraries: 20th International Conference on Theory and Practice of Digital Libraries, TPDL 2016, Hannover, Germany, September 5–9, 2016, Proceedings (2016): 121-132. http://dx.doi.org/10.1007/978-3-319-43997-6_10.

Bornand, N. J., L. Balakireva, and H. Van de Sompel. *Routing Memento Requests Using Binary Classifiers*. 2016 IEEE/ACM Joint Conference on Digital Libraries (JCDL '16). Newark, NJ, USA, June 19 - 23, 2016, Proceedings (2016): 63-72. http://dx.doi.org/10.1145/2910896.2910899.

Finnell, Josh and Brian Cain. "Research Data Services at LANL," Eighth Plenary Meeting of the Research Data Alliance, September 11-17, 2016, Denver, CO.

Finnell, Joshua. "Open Data and the Free Access to Law Movement in the United States." *SCRIPTed: A Journal of Law, Technology & Society*, March 28, 2016, 2016. (Blog Post) https://script-ed.org/blog/open-data-and-the-free-access-to-law-movement-in-the-united-states/

Finnell, Joshua. "Open Data and the Free Access to Law Movement in the United States." *The Winnower* (2016). https://thewinnower.com/papers/4871-open-data-and-the-free-access-to-law-movement-in-the-united-states.

Finnell, Joshua. "Open Data and the Free Access to Law Movement in the United States." *e-LIS: e-prints in Library & Information Science* (19 Apr 2017). http://hdl.handle.net/10760/30972.

Hoover, Carol. Invited speaker, Libraries Transform New Mexico Statewide Conference, November 1, 2016, Albuquerque, NM.

Jones, Shawn M., Herbert Van de Sompel, Harihar Shankar, Martin Klein, Richard Tobin, and Claire Grover. "Scholarly Context Adrift: Three out of Four URI References Lead to Changed Content." *PLOS ONE* 11, no. 12 (2016): e0167475. http://dx.doi.org/10.1371/journal.pone.0167475.

Klein, Martin, Peter Broadwell, Sharon E. Farb, and Todd Grappone. *Comparing Published Scientific Journal Articles to Their Pre-Print Versions*. 2016 IEEE/ACM Joint Conference on Digital Libraries (JCDL). Newark, NJ, USA, June 19-23, 2016, Proceedings (2016): Newark, NJ, USA, June 19 - 23, 2016, Proceedings (2016): 153-62. http://dx.doi.org/10.1145/2910896.2910909. 2016 Vannevar Bush Best Paper Award

Klein, Martin and Edward McCain. "Panel: Preserving Born-digital News," Joint Conference on Digital Libraries (JCDL), June 19-23, 2016, Newark, NJ.

Magnoni, Dee**.** "Communicating Science at a Research Laboratory: Policy, Tools and Services," *Purdue University e-Pubs, Proceedings of the IATUL Conferences*, *2016 IATUL Proceedings,* Paper 2, June 5-9, 2016, Halifax, Nova Scotia, Canada. http://docs.lib.purdue.edu/iatul/2016/chngroles/2/

Magnoni, Dee**.** "Report from the Usage Dimensions of Open Workgroup," *Open Scholarship Initiative Proceedings, Vol. 1, 2016*, Eric Archambault, Lorcan Dempsey, Christopher Erdmann, Stephanie Fulton, Dee Magnoni, Emily McElroy, Amy Nurnberger, Ginger Strader, Michael Van Woert (authors listed alphabetically). dx.doi.org/10.13021/G8FK5D

Van de Sompel, Herbert, Martin Klein, and Shawn M. Jones. *Persistent URIs Must Be Used to Be Persistent*. 25th International Conference Companion on World Wide Web. Montréal, Québec, Canada, April 11-15, 2016. Proceedings (2016): 119-120. http://dx.doi.org/ 10.1145/2872518.2889352.

Varjabedian, Kathy, "The ELUNA/IGeLU Knowledge Base Advisory Board," ELUNA 2016 Annual Meeting, May 3-6, 2016, Oklahoma City, OK.

Varjabedian, Kathy, "Walking on shifting sand: public access in institutional repositories," Snapshot sessions, NASIG 31st Annnual Conference, June 9-12, 2016, Albuquerque, NM.

Verborgh, Ruben, Miel Vander Sande, Harihar Shankar, Luda Balakireva, and Herbert Van de Sompel. "Devising Affordable and Functional Linked Data Archives. (WADL 2016: Third international workshop on Web archiving and digital libraries Newark, NJ, USA June-23, 2016)" *Bulletin of IEEE Technical Committee on Digital Libraries* 13, no. 1 (April 2017). http://www.ieee-tcdl.org/Bulletin/current/papers/verborgh.pdf.

Looking Ahead

As the Research Library moves into and through 2017, the strategic plan and roadmap will guide the work and focus of staff. Increasing services, tools and collaborations with the classified side of the Lab is a core focus. An additional collaboration is the RL work with the Feynman Center around the *lifecycle of an idea*. This project connects the dots of innovation at the Lab from idea to article to patent and other IP. Researchers and, where possible, the public, will be able to access Lab content. Connections to workflow and output as well as to collaboration tools will save researcher time and decrease redundancies.

New services and tools demand new skills and capabilities. Staff members are gaining visualization skills and developing dashboards and tools that benefit RL staff as well as Lab personnel. Taxonomy and ontology projects are under development, once again building partnerships as well as competencies. Here the impact will cross the DOE complex. Impact and assessment expertise continues to deepen, and RL staff work closely with SRO leadership and other Lab partners to develop individual and Lab metrics. The prototyping team continues to push the research envelope in the area of scientific communication and knowledge management. Web-centric tools and scholarly repositories are key focuses of this research.

The Research Library leads scholarly communications initiatives at Los Alamos, helping to ensure mission success and research excellence through innovation, passion and partnerships across the Lab, the DOE complex and the research landscape.

Research Library Strategic Plan

Fiscal Years 2017 – 2019
version 7.0

Vision

Providing essential knowledge services that enable delivery of innovative science and technology to protect our nation and promote world stability.

Mission

We deliver agile, responsive knowledge services, connecting people with resources, tools and expertise that contribute to the Lab's mission to solve national security challenges through scientific excellence.

Goals

Goal 1 Support the research lifecycle

Strategic Objective 1.1 *Evaluate, create, develop and implement research infrastructure, tools and processes*

Strategic Objective 1.2 *Enhance communication, dissemination and preservation of the Lab's research output*

Strategic Objective 1.3 *Deliver enhanced discovery and access to the electronic and print resources provided by the Research Library*

Goal 2 Provide strategic intelligence to quantify, analyze and illustrate research impact

Strategic Objective 2.1 *Investigate, enhance and create tools for individual researchers & output products*

Strategic Objective 2.2 *Investigate, enhance and create impact tools for Divisions and the Lab*

Goal 3 Advance research by facilitating a network of expertise and services that promote collaborative science

Strategic Objective 3.1 *Recommend, help test and collaborate around adoption of Lab research collaboration tools*

Strategic Objective 3.2 *Develop knowledge of Lab expertise and services to coordinate and connect content to researchers*

Strategic Objective 3.3 *Provide expertise and assistance for Lab knowledge management initiatives*

Strategic Objective 3.4 *Develop and implement robust outreach program*

Goal 4 Deliver services, tools and outreach to the classified research environment

Strategic Objective 4.1 *Implement adaptation of library supported services/infrastructure/tools for the classified environment*

Strategic Objective 4.2 *Collaborate with classified management to propose and execute a staff pipeline from the Research Library to classified areas requiring information professionals*

Strategic Objective 4.3 **Engage embedded library staff in support of classified projects**

Goal 5 Enhance research communications by helping to shape and influence the future of scientific communication and knowledge management

Strategic Objective 5.1 *Advance research on web-centric approaches for identifying, capturing, and archiving scientific communication*

Strategic Objective 5.2 *Devise, implement, test, and promote advanced features for scholarly repositories*

Strategic Objective 5.3 *Design, implement, evaluate, and specify advanced interoperability features for library and archival systems and frameworks*

Assumptions & Beliefs:

- Copyright and e-learning cut across goals.
- Core activities are important operational tasks, yet fall outside strategic objectives. Activities include customer service; systems/tools maintenance; cataloging/metadata curation; DOE, OSTI and other government mandates; and other core areas.
- The management and curation of scholarly information resources, i.e. collections, provided for the Lab by the Research Library is a fundamental and continual activity supporting mission and researcher needs and constantly seeking optimal models that support budget constraints and maximum information access.
- Outstanding staff members are essential for mission success. Staff:
  - Continually learn and develop
  - Commit to a team focus with an environment of respect, trust and passion for work
  - Interact with national and international colleagues to share and bring back ideas