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Collaboration: Success for the Future

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Abstract

As we focus on the 21st century, new information technologies and accelerated knowledge growth are creating new ways to collaborate in achieving research and development goals. The role of the Library is changing from being an archive and information provider to being a partner in research and development.

Background

The Los Alamos National Laboratory (LANL) Research Library is responsible for providing science and technology research information in support of the Laboratory's mission. Today, that mission is to reduce the global nuclear danger, which requires innovative science. The underlying principles that determine the Research Library's success are customer focus, product innovation and operational excellence.

Key factors that allow the LANL Research Library to provide an effective network of information to scientific researchers include the following:

- Offering R&D products/services where and when researchers need them
- Anticipating the technologies that will be needed to provide future products/services
- Developing collaborations to bring future products/services to researchers

The last factor—collaboration—is becoming increasingly important to our success as a research library.

Collaboration is a professional relationship between two (or more) organizations that work together to accomplish mutual goals. The outcome of the relationship provides a win/win benefit to all participating organizations. This paper will focus on three key types of collaboration important to libraries: knowledge sharing, resource sharing and research and development (see Table 1). Success criteria for these collaborations will also be identified.

Table 1. Three Types of Collaboration Important to Libraries

Collaboration	Collaborators
Knowledge Sharing	Customers Other libraries Information suppliers Information science researchers
Resource Sharing	Government report libraries Los Alamos electronic preprint project Library consortia
Research and Development	Information technology staff Information industry

Knowledge Sharing

Knowledge sharing is an important collaboration because it enables the Library to better serve customers. Los Alamos National Laboratory customers want more and better information delivered faster to their desktops. Two-way communication is fundamental to knowledge sharing. In the Research Library, we communicate daily with our customers. Learning what is important to our customers and how satisfied they are with our current products and services allows us to improve those products and develop new ones. Our customers also learn from us about new or improved products and services and how to better use them. Customers also value products and services with features that match what’s important to them.

During the past year, we completed in depth interviews with our electronic database customers to identify what would be most important to improve about electronic databases. According to the customers, the top priority need was the ability to search across multiple databases efficiently. The [Library Without Walls](#) team analyzed this customer need and identified two technical directions to focus on:

1. Increase the number of databases that results can be manipulated together.
2. Increase the number of databases that can be searched simultaneously.

As a result, the project focused its resources on meeting this important need identified by customers.

Libraries also share knowledge with each other to better serve customers. For example, the Department of Energy’s Library Operations Working Group (LOWG) meets annually to report on specific library progress and issues occurring during the year. In addition, this group of library managers uses a listserv to discuss issues that come up during the year. The group also keeps budget and product data for participating sites, which is beneficial for individual libraries in making budget and planning decisions.

Information product suppliers also add value by sharing knowledge. These suppliers include those who provide technology, databases and journals. Several suppliers (e.g., [OSTI](#) and [Elsevier Science](#)) sponsor conferences to share knowledge about new technologies and developments in the industry. In addition, database producers and journal publishers regularly visit our Library to collaborate and share knowledge about how products and services can best serve Laboratory needs.

Information science researchers are critical knowledge sharers for our Library. The researchers who collaborate with our Library Without Walls project give presentations about their research and sponsor speakers to increase Library staff members' knowledge about research that may impact future products. In addition to developing new information products, these researchers also serve as "technology watchers" by looking for new technologies that will enhance future Research Library products.

Resource Sharing

Resource sharing increases accessibility to information for science and technology researchers. At Los Alamos National Laboratory, we are in a unique position to promote resource sharing in two areas. First, the Laboratory has published approximately 30,000 unclassified/unlimited-release technical reports that are publicly available in digital format through our Library online catalog. In addition, our researchers can access these reports through the Los Alamos Unclassified Publication database or through the LANL Research Library DOE Energy database. These reports are accessed using bibliographic citation information including author, title, report number and subject. The Research Library is currently collaborating with the Office of Scientific and Technical Information (OSTI), Sandia National Laboratories, the Air Force Research Laboratory and Lawrence Livermore National Laboratory in exchanging database access to unclassified/unlimited-release reports from each institution. This exchange allows researchers greater access to important literature on government-sponsored research.

The second area that demonstrates the Laboratory's unique position in enabling effective resource sharing is electronic preprints. The High Energy Preprint Database was started at the Los Alamos National Laboratory by Paul Ginsparg in 1991. The database includes preprints in mathematics, computer science and a broad range of physics fields. The Library Without Walls project is now creating a Web-based interface to the preprint archive that will be integrated with the Library's current citation databases. This new interface will give researchers worldwide access to preprints in key scientific fields through a consistent format. A prototype of the interface is presently being tested. The Library Without Walls team and Paul Ginsparg are also collaborating on a long-term project to align preprint initiatives in other disciplines, such as biology and medicine, in order to create a universal preprint database. Crucial partners are being identified for this ambitious project.

Library consortia are forming to share publishing and database resources in a cost-effective manner. For example, members of the New Mexico Library Alliance have completed agreements with the Institute of Scientific Information (ISI) for member access to the Science Citation Index through the LANL SciSearch interface. In addition, members now have access to electronic Academic Press journal articles held by any

Alliance member at a cost-saving consortium price. Several database producers and journal publishers have approached the Alliance to negotiate consortium licenses for their products, as they begin to focus marketing efforts on such library groups.

Research & Development

Collaboration is key in the research and development of information products and services that meet scientific researchers' needs. Information technology (IT) staff at the Laboratory who are developing tomorrow's information products work with Library staff who will use those products. Library staff assist in product testing and evaluation. Library staff also provide meaningful comments from customers to IT staff, so that the products being developed meet researchers' needs. The information science staff working on the Library Without Walls project are also located with IT staff so that cross-fertilization of ideas takes place regularly.

Collaborations with the information industry allow the Library to develop more effective products for customers. For example, Elsevier Science has selected the Library Without Walls project to be an Advanced Technology Partner. Under terms of the agreement, LANL has received all 1,200 Elsevier Science electronic journal titles beginning with 1995 publications. Access to Elsevier Science titles for LANL researchers is provided through links in our citation databases, as well as through the journal server application. This has been a popular product for LANL scientists. During the first quarter of 1999, approximately 1,300 researchers accessed Elsevier Science journal articles and looked at over 10,000 articles. The company ScienceServer LLC has been selected to provide the journal server application, which will manage roughly 700 GB of Elsevier Science data. The Library Without Walls project has developed and supports the capability to provide access to Elsevier Science titles to researchers in the New Mexico Library Alliance and the Department of Energy complex.

The Research Library is currently collaborating with Information Assets Management, Inc. (IAM), a small Los Alamos technology development firm, to develop a database warehouse that will contain information on Library customers, products and suppliers. IAM's primary business is to transform information into a product of value for customers who use IAM's electronic document management services. This warehouse will assist the Library in managing and analyzing information needed to improve decision-making processes for future Library products.

Collaboration Success Criteria

There are three main criteria that define the success of a collaboration:

- Goals/planning—Collaboration goals and the plan for reaching them must be shared by all participating organizations. The collaboration must also be aligned with the missions and visions of all participating organizations. Resources must be identified to accomplish the plan, and the plan must be frequently reviewed and updated as new information becomes available.

- Trust—The professional relationship between collaborators must be based on mutual respect and an interest in collaborating in a win/win manner. A collaboration may take years to develop to the point that all participants possess the trust needed to share organization-related information and maximize their core competencies.
- Impact—The result of collaboration must be that all participating organizations can better serve their customers. However, collaborators must be flexible in realizing mutual benefits. Although a collaboration must provide tangible benefits to each organization, it must also focus on complementary core competencies and strengths in order to generate a win for all customers.

Why We Collaborate

Building collaborations is currently a way we do business to leverage our resources in order to provide more effective products for our customers. Collaborations allow us to gain a competitive advantage by pooling our core competencies with those of other information providers. Because of mutual interests and complementary skills, collaborations bring better solutions to our customers.

During the past four years, we have focused on improving productivity within our Library. Our processes have been refined, examined, evaluated and improved. To complement this track, our emphasis now is to work collaboratively to reach our vision: to combine the best information resources, staff and technology to deliver world-class service to our research community.