NIST Research Library Benchmark Study, 2001 Summary Report

Paula Deutsch
Diane Cunningham
Lisa Greenhouse
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Information Services Division
Technology Services

Abstract:
In 2002, the NIST Research Library of the Information Services Division, Technology Services, benchmarked itself against other science and technology libraries. These libraries had similar focus areas and were comparable in size. The study compared library budgets, collection sizes and costs, staffing, and library services. This report outlines the methodology used. Significant findings are documented and further implications for the Research Library are addressed. Lessons learned from the study are also discussed.

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1. Introduction

The NIST Research Library is one of three work units within the Information Services Division (ISD). ISD is in the organizational unit of NIST Technology Services. The Research Library has a staff of 16 and maintains a collection of about 300,000 volumes and 1,150 journal subscriptions. Its primary customers are the researchers in the laboratory programs at the Gaithersburg campus of the National Institute of Standards and Technology.

The Research Library initiated a benchmark study in the fall of 2001. It grew out of concerns expressed by the NIST Research Advisory Committee[1] (RAC) in April 2001 about the declining state of the Research Library's collections. In their annual report to the NIST director, the RAC indicated that it considered the Research Library to be a critical element of the NIST infrastructure however, its stagnant and inadequate funding was undermining its ability to maintain its high standard of service.

 In response to these concerns the NIST Director's Office asked ISD to undertake several assessment activities to determine if additional funding was warranted. Management agreed with RAC that the Research Library is indeed a vital NIST resource, however, determining spending priorities to fund all vital NIST overhead activities involved making difficult choices, given the limited overhead dollars. While the benchmark study was one of the requested activities, the exercise of benchmarking supports the goals of ISD and Technology Services to better understand and improve how it provides services to its customers. When the benchmark study was initiated in 2001, the Research Library's base operating budget for the purchase of all collection materials had been static since 1995. In FY 2002, the library received an increase to base of 11 percent However, over the last six years the cost of scientific journals has increased by 24 percent[2]. Using the research requirements and recommendations of the NIST scientific and research community, the Research Library canceled subscriptions to materials considered dispensable, and re-deployed expenditures to critical or core journal titles and databases during this time period.

Examination of the data collected from this study has enabled the library to assess how it compares with peer institutions, and to identify some best practices to emulate. The Library has used the findings from this study to guide program improvement. It continues to provide the basis for making changes in practices, procedures, and services to improve responsiveness to customer needs and stewardship of resources.

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[1] The NIST Research Advisory Committee was established in May 1976 by the NIST Director. Its roles include providing advice and recommendations to the Director and Executive Board on scientific issues; assessing the climate and status of forefront research activities at NIST; and acting as a spokesperson for scientific concerns and opportunities.
[2] Based on statistics supplied by the Association of Research Libraries at http://www.arl.org/stats/arlstat/graphs/2001/2001t2.html.

2. Method

As an initial step, a report was prepared for NIST management in the summer of 2001. This report compared Research Library data with data compiled by the Association of Research Libraries (ARL) on library materials budget expenditures and interlibrary loan/document delivery statistics. Because ARL libraries are much larger institutions than the Research Library, percentage comparisons were made of the differences (in terms of collection size and budgets) between ARL libraries and the Research Library. The report also included a description of the approach to be used for conducting a benchmark study. It outlined the criteria that would be used for selecting benchmark partners, included a list of suggested partners and, delineated what would be measured in the study.

After submitting this report, ISD management assembled a five-member Benchmark Team to conduct a study with libraries and information centers comparable to the Research Library. The team represented a cross section of the Information Services Division. Three people were members of the Research Library and Information Group, one person represented the Electronic Information and Publications Group, and one person came from the Museum and History Program. This provided representation and experience both within and external to the library field. The team met twice monthly for a one-year period. Meetings were used to develop a plan of action, design the survey instrument, coordinate communication with potential benchmark partners and then finally to evaluate and analyze the data received.

2.1 Developing the Survey

The Benchmark Team spent about four months developing a survey tool for this project. The team began by exploring survey instruments from several notable libraries and library organizations. Library staff focused on the survey instruments and data collected by the Association of Research Libraries (ARL)[3]; the U.S. National Commission on Library and Information Science (NCLIS); the National Library of Canada (NLC); and the U.S. National Center for Education Statistics (NCES). Staff also consulted existing standards including *ISO 2789: International Library Statistics*; *ISO 11620: Library Performance Indicators* and; *ANSI/NISO Z39.7-1995: Library Statistics*.

After careful examination, the team determined that the instruments developed by ARL were the most comprehensive, and provided clearly articulated standards for quantifying library resources. From these ARL models, the team formulated its own survey instrument. The final survey included 69 questions that assessed collections, services, staffing, budgets, and expenditures (see Appendix A).

As a means for pre-testing the survey instrument, the team completed the survey using data for the Research Library. By doing this, the team was able to identify questions that were unclear or

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[3] ARL, a not-for-profit membership organization comprised of the leading research libraries in North America, has continuously collected library statistics for the past 40 years and is widely respected for its progressive work on developing methods of measurement in the library field.

vague. Based on what was learned from this exercise, the team then made revisions to the survey.

2.2 Benchmark Partners

Based on information from the *American Library Directory* and input from the NIST Director's Office and the NIST Industrial Liaison Office, 15 potential benchmark partners were identified. These libraries and information centers appeared to be similar to the Research Library in the following ways: collection size, library materials budget, size of customer base, library staff size, and a target audience of researchers in the science/technology fields.

ISD included government, academic and private sector libraries in its benchmark survey. However, it is important to note that private sector libraries may be fundamentally different from the Research Library. The information needs of the customers supported by these libraries are more likely to be tied to short-term business goals and less focused on the broad needs of generic research and development.

Once potential partners were identified, each member of the team was assigned three libraries/information centers to contact by phone. The team agreed on a set of talking points that would be communicated to each potential partner (see Appendix B). If a library/information center agreed to participate, the team member who originally contacted it remained the contact point throughout the process. The team felt this was important for the comfort of the partners. The amount of interaction that occurred with benchmark partners while they were completing the survey varied from partner to partner.

Of the 15 libraries contacted, seven libraries were willing to participate in this study. These include: Naval Research Laboratory - Ruth H. Hooker Research Library, Sandia National Laboratories Technical Library, Oak Ridge National Laboratory Research Libraries, IBM - Thomas J. Watson Research Center Library, Xerox Corporation Technical Information Center, and two libraries who asked not to be identified as participants. The total group represents three federal libraries, two corporate special libraries, and two non-profit research/academic libraries. Two libraries did not provide any financial information and one library withheld salary information only. All libraries were guaranteed that they would not be identified with any particular set of data.

Each benchmark partner was asked to complete the survey in four weeks. Some partners returned the survey in less time and others needed more time. In cases where benchmark partners had not submitted a completed survey within the allotted time, they were contacted to verify that they were still planning to complete the survey and to see if they needed any help with the survey.

Incoming data were stored in a spreadsheet. Once all partners had returned their completed surveys, the team compared data from the benchmark partners to identify any area where it appeared that a partner had interpreted a question differently than other partners. From this, the team created a list of areas where it felt it needed further clarification from the benchmark partners. Many benchmark partners were contacted with follow-up questions. The entire

process, from making initial contact with potential benchmark process to finalizing the data, lasted about five months.

2.3 Understanding the Data

Once the team determined that it received all the data and clarification it was likely to get, it began looking at the data more closely. Each team member was assigned a process or function addressed by the survey to analyze in greater detail. This analysis was shared with all team members. In addition, spreadsheet software was used to create charts and graphs that helped present visual comparisons of the data.

All of this accumulated information was displayed on the walls of a conference room. Each team member was asked to review it and identify three areas where significant observations could be made about the data. Again, each member reported back to the group. From this exercise, the team was able to develop a list of topics it felt should be addressed in the team's report to management.

Due to the length and breadth of the survey, the team amassed a large quantity of data. The decision was made to report only on data that met two primary criteria. The first was that all benchmark partners reporting data on a specific question reported the data in a similar manner. For example, the survey asked benchmark libraries to indicate the size of their existing collections. Some libraries reported the number of journal volumes and others reported the number of journal titles. Some libraries included items in microform while others did not. Therefore, this report makes no comparisons based on collection size. The second criterion was that the data showed significant gaps that allowed ISD to identify best practices.

Each member of the team was assigned a section of the report to write. At this time, an editor was brought into the process in order to give the finished product a single voice and to ask probing questions about the details of what was being reported. In addition, feedback from ISD management as well as Technology Services management helped to formulate a well supported analysis of the data.

3. Findings

The benchmark study was conducted during the third quarter of FY2002 and was based on information from FY2001. This section of the report reflects the compilation, organization, analysis, and interpretation of the collected data.

3.1 Overall Budget

When looking at the Research Library's operations as a whole, the benchmark team noticed two aspects about the way resources are allocated. The Research Library has the lowest per-customer expenditures, and its budget distribution heavily favors its collections over all other expenses.

Of the libraries disclosing complete financial information (including materials or collections, salary, equipment and other costs) the Research Library spends the least per customer (see figure 1).

Figure 1. Average total expenditures per customer

NIST 3,140 customers*	LIBRARY 3 3,180 customers	LIBRARY 6 4,500 customers	LIBRARY 5 1,500 customers
$834.26	$841.87	$1,242.36	$2,525.47
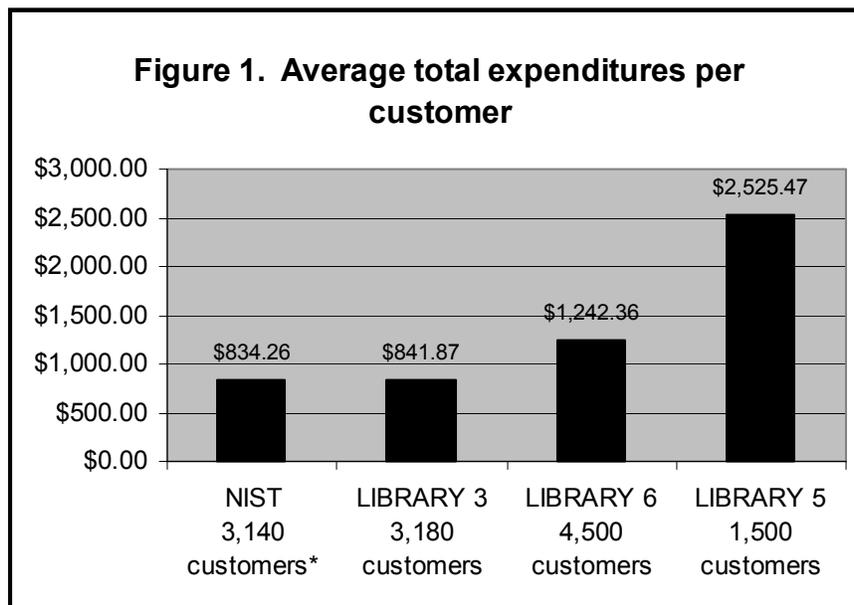
Libraries 1, 2, and 4 did not provide complete financial information. Library 7 is excluded because it counted its employees nationwide. This is because it operates nationwide. However, Library 7 is also supported by branch libraries whose budget information was not included in the survey.
*This number is based on data supplied by the NIST Human Resources Management Division and includes 1456 ZP (professional pay band) employees, 83 post-docs, and 1600 guest researchers in 2001.

The Research Library is spending far above the average percentage of its total allocation on materials, pulling from other areas of its budget to cover the Research Library's collections costs. (The term "materials" refers to the library collections and includes journals, books, electronic resources, and document delivery. In addition, it includes the costs of maintaining these collections, i.e., binding and bibliographic utilities used for cataloging. Salaries, training, equipment, and supplies are not included.) The Research Library works hard to control expenditures in other areas in order to put more funds into library collections and other areas that

directly impact customers. In comparison to its benchmark partners, its other operational expenditures are low (see figure 2).

Figure 2. Distribution of all expenditures shown as percentage of total

Category	NIST	Average
Materials	63.51%	46.83%
Salaries	35.24%	40.58%
Equipment	1.12%	5.95%
Other	0.13%	13.40%
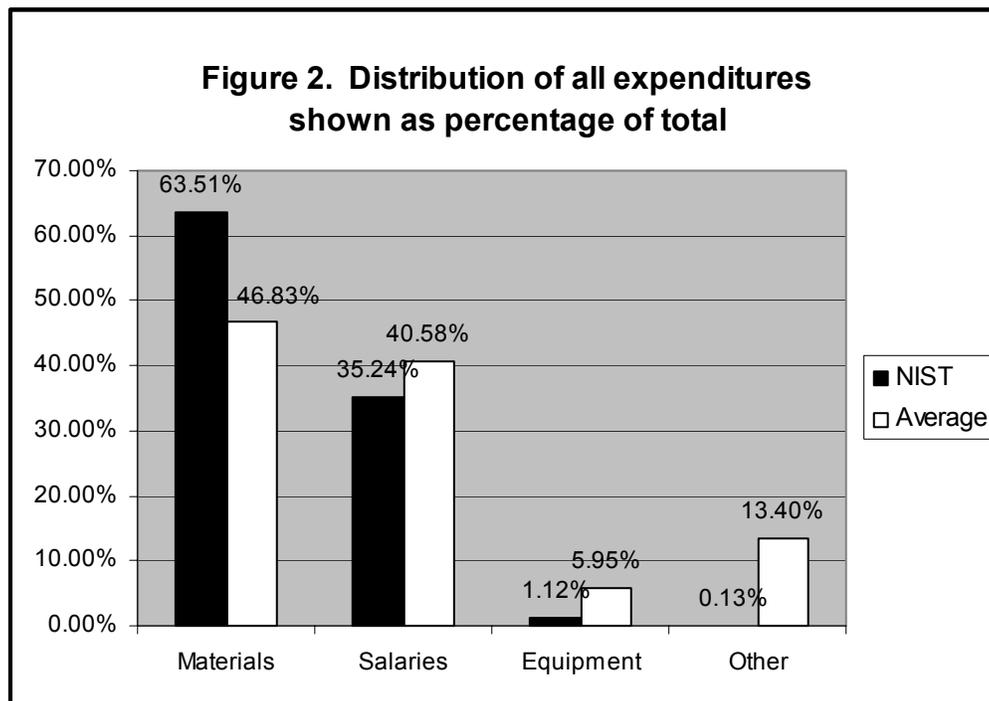
3.2 Materials

Two elements of the Research Library's collection stood out. The Research Library spent the largest percentage of its entire budget on materials of all its benchmark partners, and it purchased the fewest titles per customer.

The Research Library spent the equivalent of 102 percent of its collection allocation on journals and databases. (Journals and databases have been combined here because the increasing number of databases that include full text articles makes it difficult to separate these costs.) 2 percent of its allocation was spent on books. The difference between the collections allocation and the actual amount spent was taken from other areas of the division's budget. The average distribution of materials budgets among the benchmark partners was 89 percent for journals and databases, and 8 percent for books (see figure 3).

In FY2001 the Research Library purchased the fewest resources per customer; on an average, less than 0.77 items per customer. (For a comparison to other benchmark partners, see figure 4.) The average among benchmark partners was 5.24.
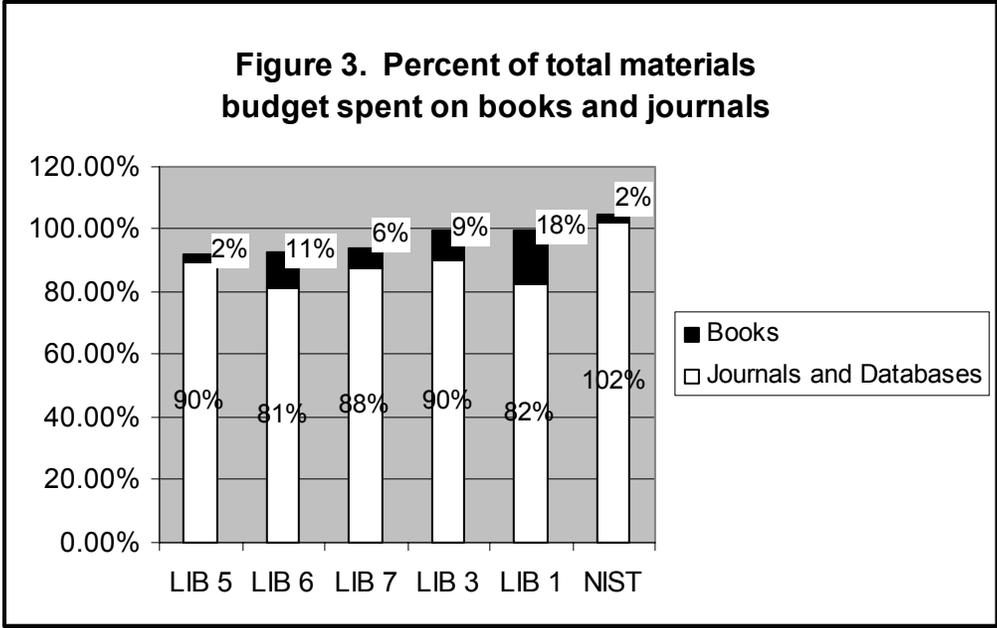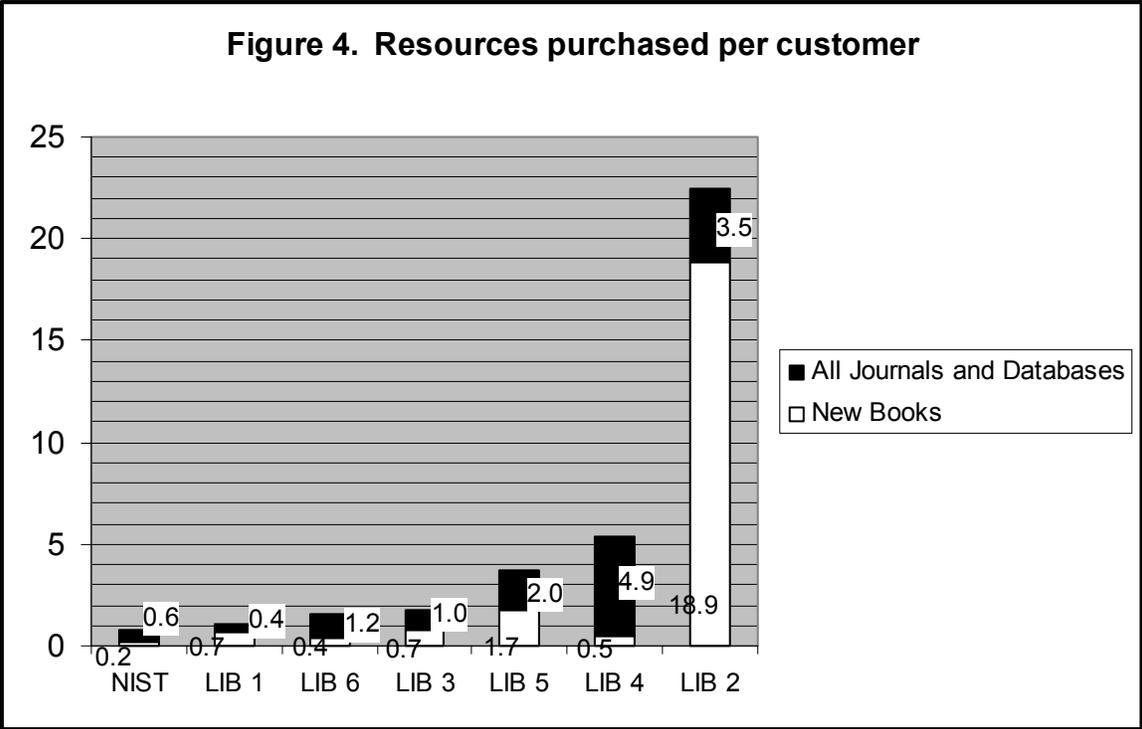
Figure 3. Percent of total materials budget spent on books and journals

Books plotted per library: LIB 5 (90%, 2%), LIB 6 (81%, 11%), LIB 7 (88%, 6%), LIB 3 (90%, 9%), LIB 1 (82%, 18%), NIST (102%, 2%)

Legend:
- ■ Books
- □ Journals and Databases

Libraries 2 and 4 did not provide any financial information.

Figure 4. Resources purchased per customer

Data per library: NIST (0.6 / 0.2), LIB 1 (0.4 / 0.7), LIB 6 (1.2 / 0.4), LIB 3 (1.0 / 0.7), LIB 5 (2.0 / 1.7), LIB 4 (4.9 / 0.5), LIB 2 (3.5 / 18.9)

Legend:
- ■ All Journals and Databases
- □ New Books

Library 7 is excluded because it counted its employees nationwide. This is because it operates nationwide. However, Library 7 is also supported by branch libraries whose budget information was not included in the survey. Library 2 has access to its parent organizations electronic resources at no or a minimal cost.

The low resource purchase per customer is partly due to the Research Library's higher per journal costs. Its average cost per journal title in FY2001 was $1,137 while the average among benchmark partners reporting these costs was $772 (see figure 5).

Figure 5. Average cost per journal						
	LIBRARY 3	LIBRARY 6	LIBRARY 1	LIBRARY 7	NIST	LIBRARY 5
Average Cost per Journal	$130.03	$502.37	$581.25	$800.00	$1,137.44	$1,481.19

Libraries 2 and 4 did not provide any financial information.

3.3 Document Delivery

An overall view of the Research Library's document delivery service reveals a highly productive staff working diligently to find free information resources. However, the Research Library appears to have higher costs than other libraries when it is unable to obtain free resources. While the data obtained for this study does not supply an explanation for this, some potential influential factors are considered below.

The Research Library placed a greater than average number of requests for borrowing. If Library 1 is excluded, which uses a contracted service for processing requests, the Research Library placed a much greater than average number of requests to obtain materials from outside sources, with only one library placing more. Measured in terms of number of items lent and borrowed per staff member, the Research Library had the second highest productivity of the benchmark partners for which these data were available.

Although the Research Library placed a much greater than average number of requests, it paid fees for the fewest number of requests. The Research Library received 72 percent of its items at no cost, which is 20 percentage points higher than the next closest library. Because of this, of the five libraries reporting these data, the Research Library had below average per-item costs for borrowed items.

When libraries did accrue costs for borrowing items, the Research Library's average costs for the service were the highest of the five libraries that provided information (see figure 6). This, in part, is because libraries that charge back all document delivery costs to their customers paint a distorted picture of document delivery costs. Libraries showing the lowest costs or subsidies are charging all or most of these costs back to the customer and so they do not show up as library expenditures.

Figure 6. Average per-item library subsidies for document delivery services						
	LIB 5	LIB 1	LIB 3	LIB 7	LIB 6	NIST
Average library subsidy when fee is paid	$0.00	$0.33	$2.54	$20.00	$20.87	$21.73
Charge back to customer	Yes	Yes	Yes	No	Yes	No

Libraries 2 and 4 did not provide any financial information.

There are at least two other variables that might affect the cost per item. These include (1) the types of journals from which articles are requested; and (2) the sources being tapped for obtaining these articles. These variables are likely to prove to be interrelated. For example, articles from less specialized journals can be obtained from less expensive sources.

The Research Library made significantly less than the average number of photocopies for document delivery inside the organization. Further study would be required to determine why the Research Library is receiving a relatively low number of requests for this service in comparison to its benchmark partners.

The Research Library filled more outside requests than any of the six benchmark partners who were able to provide these data; five times the next highest number of outside document delivery requests filled.

The limited data collected in this study appear to support the argument that a relationship does exist between the number of items loaned to other libraries and a willingness generated in other libraries to supply items at no cost to the borrowing library. This is evident in data provided by the benchmark partners in that, out of the five libraries giving complete data on this, there is a clear correlation between the number of items supplied to other libraries and the number of items obtained at no charge (see figure 7).

Figure 7. Relationship of items loaned and items borrowed at no charge
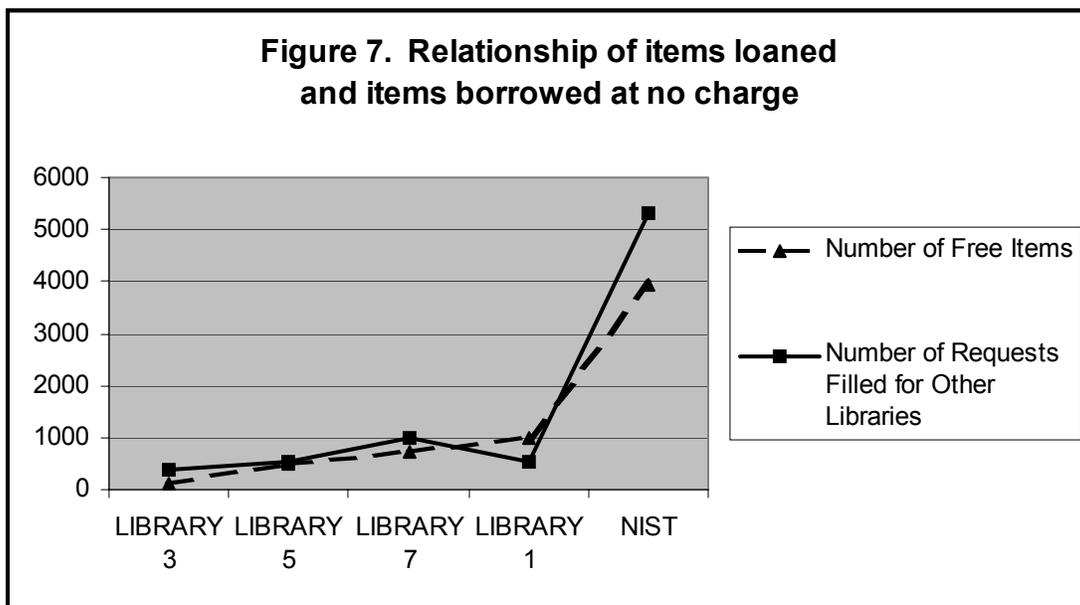
Libraries 2, 4 and 6 did not provide this data.

Moreover, the OCLC[4] interlibrary loan system itself, which is the Research Library's primary means for retrieving documents, charges a $.40 fee per item borrowed and grants a $.40 credit

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[4] OCLC is an international, nonprofit, library cooperative that currently serves 41,000 libraries.

per item loaned. In addition, outside lending supports NIST's role in working with U.S. industry.

4. Conclusion

An analysis of the benchmark data reveals best practices among the benchmark partners, areas that offer opportunities and challenges for improvement, and areas where the Research Library excels.

4.1 Best Practices
Within the data collected, two areas of best practices stood out. These relate to the recording and processing of customer feedback and the speed of document delivery services.

Of the tracking mechanisms reported, one software product in particular stood out. This product is used for the following activities: capturing, routing, and tracking all incoming email questions; recording all "off-desk" interactions with customers including customer comments; and recording and tracking all questions received at the reference desk. This is a practice that the Research Library is currently considering emulating.

The data revealed that one of the benchmark partners provides document delivery services with a very short turn-around time, i.e., in 1½ days while the Research Library averages 5 days. The Research Library may benefit from a discussion with this library on how they are able to provide this efficient and cost effective service. (For a comparison of turn-around times for all benchmark partners, see figure 8.)

Figure 8. Average turn-around time for document delivery services							
	NIST	**LIB 1**	**LIB 2**	**LIB 3**	**LIB 5**	**LIB 6**	**LIB7**
Average turn-around time for books	1 1/2 - 2 weeks	1 week	2-3 weeks	< 1 week	9.4 days	38 days	3-10 days
Average turn-around time for photocopies	3 - 7 days	1 week	5 days	< 36 hrs	2.8 days	12 days	1-10 days
Average turn-around time for requests filled electronically	2 -3 days	<1 day	2-3 days	N/A	2.8 days	N/A	1-2 days

Data shown here appear exactly as reported by benchmark partners. "Turn-around time" is defined as the amount of time from date of request until the customer receives item.

4.2 Opportunities for Improvement
The Benchmark Team identified two areas where the Research Library could try to reduce its operational costs: journal costs and document delivery costs.

The Research Library has among the highest costs per journal title (see figure 5), even though the subject focus of all the libraries studied is fairly homogeneous. Based on these data, the Research Library has explored opportunities for decreasing its costs per journal.

There are two ways to approach this issue. One is to look at the cost of individual titles. Recently, the Research Library asked its customers for input on titles published by one of the most expensive scientific publishers. Several title cuts resulted from that study. The Research Library has always considered the cost of a journal, among other things, when determining whether to start or stop a subscription[5]. In support of this approach, the Research Library recently asked all NIST laboratories to compile a list of core journals in their fields. In this way, the Research Library continues to make studied decisions on keeping costs within budget while meeting the needs of its customers.

A second place to look is purchasing titles as part of a consortium. The Research Library recently joined a consortium purchase agreement for titles published by Wiley InterScience. In FY2002, the Research Library gained access to 345 e-journals at an average cost of $442 per title. As a member of the National Research Library Alliance (NRLA), in FY2003 the Library reached similar agreements with the Institute of Physics and the American Chemical Society.

The Research Library can benefit by finding ways to reduce its document delivery costs. While the Library paid for many fewer documents, when it did incur costs for document delivery, data indicate that its costs were higher than the other benchmark partners (see figure 6).

The Research Library is currently collecting data which will allow it to conduct analysis in two areas: a cost benefit analysis of subscribing to a journal versus repeatedly requesting individual articles and; analysis of costs and service patterns of document suppliers currently being used. The Research Library is finding it considerably easier to do this with its recent purchase of document delivery management software, which greatly facilitates the tracking of these kinds of statistics.

In addition, the Library has begun using a fee management service through OCLC. This service allows lenders to debit the Research Library's account when they supply materials. Because suppliers prefer this method of payment, they often provide discounts for this arrangement.

4.3 Where the Research Library Excels

The Research Library performs well in areas of customer focus. This shows up in its communications with its customers and in the services it provides. The Library uses a variety of methods to solicit feedback from its customers, including customer surveys/questionnaires and focus groups.

The Research Library is the only library of the eight benchmark partners that is using a Book Approval Plan. With this plan, the Research Library receives a bi-weekly shipment of recently published books and electronic lists of new titles that fall within its subject profile. These are made available to subject specialists within each NIST laboratory to review and make recommendations for purchase. The subject specialists appreciate this opportunity to be consistently involved in the Research Library's development of its collection.

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[5] In the Research Library, journal cancellation decisions are made based on usage statistics, the frequency with which a journal's articles are cited, and formalized customer and library staff review.

The Research Library is adept at providing mechanisms for communicating information on library products and services. The Research Library communicates with its customers in the following ways: library news included in its Web site, training for specific resources, library tours, new employee orientation, announcements in agency publications, brochures, information sheets, and special events. The Research Library is one of three benchmark partners that publish a newsletter. This vehicle is used to educate customers about the Research Library's products and services.

The Research Library continues to fine-tune its interactions with its customers. The recently formed Research Library Advisory Board works with the Research Library staff to recommend directions for its collections and services consistent with current state and future trends in NIST research. Recent changes have also been made in the way the reference staff conducts business. Greater emphasis has been placed upon going out to individual laboratories instead of waiting at a reference desk for laboratory staff to come to the Research Library.

The Research Library provides a broad range of services. Those services include: reference services (a staffed reference desk and an e-mail based reference service), online searching, a web site with research tools, interlibrary loan and document delivery services, customer training, historical archive maintenance for the NIST organization, and publishing support through its Research Consultant service. With a staff size of 16, the Research Library is able to achieve these services with the highest ratio of customers per staff member (see figure 9).

Figure 9. Ratio of customers per staff member
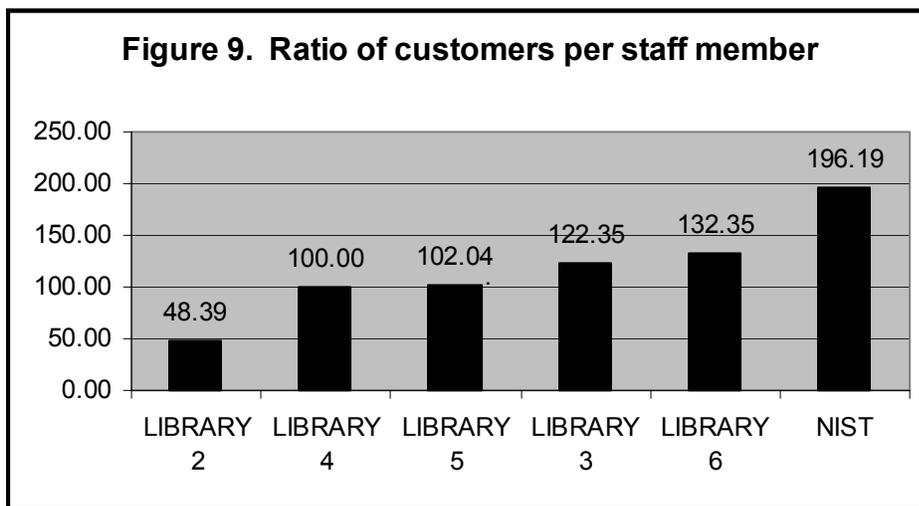
Library 1 does not appear here because its document delivery service is contracted out and is not included in the staff count. Library 7 is excluded because its staff count does not include branch libraries, but its customer base is counted nationwide.

One of NIST's stated organization goals is to "transform NIST into a learning organization that enables all people to do their best and aligns human resource management policies with mission and strategic intent." The Research Library is already playing a critical role in facilitating the transformation of NIST into a learning organization. After benchmarking with comparable organizations, the Research Library now knows that, relative to its benchmarking partners, it excels in providing a broad range of learning resources.

4.4 Lessons Learned

The team was advised not to use such a lengthy survey instrument because nobody would be willing to complete it. In fact, one library indicated it would not participate in part because of the length of the survey, and one library dropped out after receiving a copy of the survey. However, enough libraries were still willing to complete the survey. One library stated that it was being asked by its own management to benchmark and NIST was affording them that opportunity.

The real issues with the length of the survey became apparent when the team began analyzing the data. It was difficult to determine just where the team should focus its attention because there was so much data. In hindsight, the benchmark team might have benefited from a more focused approach. The team might have gained a greater understanding of some of its data by asking more detailed questions about a narrower range of functions or processes.

The team also made some errors in its use of more subjective questions. Data obtained from questions related to the adequacy of an institution's budget were discarded because the team realized that these questions were not asked in a way that would produce quantifiable results.

4.5 Next Steps

The Benchmark Team collected data on a wide variety of library activities. Members of the Research Library have already begun to take a more in-depth look at the processes where the benchmark partners outperform the NIST Research Library. Some benchmark partners who seem to be setting the standard for providing superior information services to their customers have already been contacted in order to learn more about their processes. The goal is to emulate one or more of the best practices measured and make strides in offering improved research and information services to its customers.

The Research Library strives to support the NIST organization in providing efficient and effective use of scientific and technological information, and in creating, managing and disseminating NIST's knowledge. Moreover, the Research Library expects to align its goals with NIST's 2010 Strategic objectives and begin to track customer data in order to define and understand customer needs, requirements, and expectations. The Information Services Division is a NIST asset which can contribute in valuable ways to NIST's efforts to implement the elements of its 2010 Strategic Plan.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY RESEARCH LIBRARY

Benchmark Questionnaire 2002

Answer the questions based on the most recent fiscal year that you have completed.
For what year will you be completing this questionnaire?

		to		
mm	yy		mm	yy

COLLECTIONS
Size and Scope

1. Number of volumes[1] currently held   _____

2. Number of current journal subscriptions   _____

3. Number of other types of serial[2] subscriptions   _____
4. Number of the above serials subscriptions that are received but not
    purchased (through gift or exchange programs)   _____

5. Gross number of books (monographs)[3] added last year   _____
6. Gross number of the above monographs that were received but not
    purchased (e.g. through gift or exchange programs)   _____

7. Number of full-text electronic journal[4] subscriptions   _____

8. Number of electronic reference sources[5]   _____

9. Number of electronic books[6]   _____

    In what specific areas of the science/technology field does your organization specialize?
10. (Check all that apply)

    - [ ] Biosciences
    - [ ] Biotechnology
    - [ ] Chemistry
    - [ ] Electronics
    - [ ] Engineering
    - [ ] Information Technology
    - [ ] Manufacturing
    - [ ] Materials Science
    - [ ] Mathematics
    - [ ] Medicine
    - [ ] Metrology
    - [ ] Physics
    - [ ] Other (Please Specify

Collection Development

11. Do you solicit input about your collection from your customers through the following ways?

(Check all that apply)
- [ ] Regular review of books from a book approval plan
- [ ] Submission of requests for purchases
- [ ] A committee or board that regularly evaluates the collection
- [ ] Other (Please Specify)

_____

12. On what do you base decisions to cut serial titles? (Check all that apply)
- [ ] Usage statistics
- [ ] Formalized review process by library staff
- [ ] Formalized review process by customers
- [ ] Citation patterns or "impact factor"[7]
- [ ] Other (Please Specify)

_____

13. Does your library participate in any consortia or other types of partnerships? If so, please identify the reason(s) for these relationships. (Check all that apply)
- [ ] To share resources
- [ ] To procure resources at decreased costs
- [ ] To benefit from the experience of others
- [ ] Other (Please Specify)

_____

14. How would you characterize your partners? (Check all that apply)
- [ ] Academic institutions
- [ ] Research institutions
- [ ] Industry associations
- [ ] Private companies
- [ ] Government organizations)

BUDGETS/EXPENDITURES
Budget

15. What was your total base budget[8] for library materials for your most recent fiscal year?   _____

16. What is the amount of any one-time funds[9] in your most recent fiscal year?   _____

17. What is the amount of endowed or special funds[10] you received?

18. Do you have a single source of funding for library materials, labor, and operations? If no, is the library director able to move funds from one source to another?   [ ] Yes [ ] No / [ ] Yes [ ] No

19. Do you provide any services for which you charge the customer? If so,   [ ] Yes [ ] No
   - What is the dollar amount for expenses you recovered in your most recent fiscal year?   _____

16

- Please complete the following table:

Service	Charges apply to internal customers[11]	Charges apply to external customers[11]	Fee structure or rate
Interlibrary Loan			
Document delivery			
On-line searching			
Research consulting			
Other reference services			
Training			
Other (please specify)			

Adequacy Of Budget To Meet Customer Needs

20.	How much did your base budget[8] increase/decrease from the previous year?

☐ unchanged

_____		_____
	increase			decrease

21.	Did you make cuts in your resources or services in any of the last three years?	☐ Yes ☐ No
	If so, please specify the general areas in which you made cuts (e.g. journal subscriptions, staff, etc.)

	Journals, Books
	_____

22.	Are you continuing to offer new products and services?	☐ Yes ☐ No
	If yes, please specify which products or services and indicate how you paid for these new services (e.g. special, or one-time funding; budget increase; cuts in other areas, etc.)

	_____

	_____

23.	Do you have sufficient funding to enable exploiting new technologies?	☐ Yes ☐ No

24.	Do you feel you are able to acquire the most significant resources in your fields of focus?	☐ Yes ☐ No

Expenditures

Please indicate the approximate amount spent for each category below for the most recent fiscal year:

25. Monographs (one-time purchases)
- Print

- Electronic[12]   _____

26. Serials (continuing expenses)
- Electronic journals[13]

    - Accessed through direct licenses   _____

    - Accessed through consortia agreements   _____

- Print journals   _____
- Other serial[2] subscriptions

    - Print   _____

    - Electronic   _____

27. Electronic reference resources[14]   _____

28. Binding   _____

29. Bibliographic utilities (e.g. OCLC, RLIN, etc.)   _____
30. Fees paid to interlibrary loan/document delivery suppliers (include copyright fees)   _____

31. Employee salaries (do not include contractors)   _____
32. Does any of your computer support come from within your library or information center?
     If so, have you included their salaries in your answer to question 30?
33. What are your annual costs (or percentage of total budget) associated with the purchase, lease, and maintenance of your library's hardware including, computers, copiers, fax machines, microfilm/fiche reader/printers, VCRs, CD-Rom, DVD players, TVs? (Estimates are acceptable.)   _____

34. All other expenses   _____

INTERLIBRARY LOAN/DOCUMENT DELIVERY

35. Do you use any software products (other than a bibliographic utility, such as OCLC) for tracking ILL requests   ☐ Yes ☐ No
     If so, please specify which product or products

36. Do you use any software products for maintaining statistics   ☐ Yes ☐ No
     If so, please specify which product or products

37. Do you use any other software products for interlibrary loan/document delivery processes? ☐ Yes ☐ No

   If so, please specify which product or products

38. Do you provide a photocopy service in which your library staff copies materials held within your collection for members of your organization? ☐ Yes ☐ No

   If so, how many requests were filled during the past fiscal year? _____

39. What is the size of your interlibrary loan/document delivery staff?[15] _____

Receiving From Outside Sources[16]

40. Number of requests your center made for loans or photocopies during your most recent fiscal year. _____

41. What percentage of your requests were for photocopies (as opposed to loans)? Estimates are acceptable. _____

42. Number of requests for which a fee was paid to the supplier during your most recent fiscal year. _____

43. Please list the top five of your most often used document delivery vendors.

   _____

44. Number of requests filled electronically (e.g., Ariel Fax Service, e-mail). _____

45. What is the average turnaround time (from date of request until customer receives item) for borrowed items? _____

46. What is the average turnaround time (from date of request until customer receives item) for photocopied items? _____

47. What is the average turnaround time (from date of request until customer receives item) for requests filled electronically? _____

Lending To Other Libraries

48. Number of requests for interlibrary loans received from other libraries during your most recent fiscal year (include loans and photocopies). _____

49. Number of requests for interlibrary loans that were actually filled during your most recent fiscal year (include loans and photocopies). _____

50. What percentage of these requests were for photocopies? Estimates are acceptable. _____

51. What percentage of requests were filled electronically (e.g., Ariel Fax Service, e-mail)? Estimates are acceptable. _____

STAFFING[15]

52. Number of professional librarians[17] _____

53. Number of other professional staff[18] _____

54. Number of support staff (e.g. library technicians, secretaries, library aides) _____

55. What is the number of contractors included in the above staff count? _____
56. How many FTE's[15] are committed to the administration and/or maintenance
     of computerized resources[19]? _____

CUSTOMERS

57. How many employees work at your institution or organization? _____

58. What is the size of your target audience or customer base? _____
59. Who do you consider your primary customers/target audience? (Check all that apply to your
     primary customers):
     ☐ Researchers
     ☐ Educators
     ☐ Administrators
     ☐ Support Staff
     ☐ External Customers[11]
60. Do you provide services to people outside of your institution? ☐ Yes ☐ No
     If so, are your external customers from (please check all that apply):
     ☐ Educational institutions
     ☐ Private companies
     ☐ Industry associations
     ☐ Research institutions
     ☐ Government organizations
     ☐ General public
61. Is your library open to the walk-in public? ☐ Yes ☐ No

SERVICES

62. How many hours per week is your library accessible? _____

63. How many hours per week is your library staffed? _____

64. Please check all services that your library offers:

Service	Offered internally	Offered externally
Reference service		
Staffed reference desk	☐	☐
Email-based reference service	☐	☐
On-line Searching	☐	☐
Alerting service	☐	☐
Research Consulting[20]	☐	☐
On-line catalog	☐	☐
Library maintained Web site with research tools	☐	☐
Interlibrary Loan/Document Delivery	☐	☐
Photocopying Service	☐	☐
Training	☐	☐
Maintaining an historical archive for your organization or institution	☐	☐
Other (please specify)		
_____	☐	☐
_____	☐	☐
_____	☐	☐
_____	☐	☐

65. How many staff hours per week are dedicated to reference services[21]? _____

66. Which of the following mechanisms do you use for communicating services to your customers (Check all that apply):

☐ Training for specific resources
☐ Library Tours
☐ New employee orientation programs
☐ Newsletter
☐ Announcements in company or agency publications
☐ Brochures
☐ Information sheets
☐ Special events (Open House, speakers, etc.)
   Others (please specify)

_____

_____

_____

67. Do you use any of the following tools to evaluate your services:

☐ Written customer surveys/questionnaires
☐ Focus groups
☐ Advisory boards
   Other (please specify)

_____

_____

_____

68. Do you have a formal system for tracking of customer comments   ☐ Yes ☐ No
If so, please describe briefly.

_____

_____

_____

69. What methods do you use to evaluate customer satisfaction?

_____

_____

_____

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[1] A single physical unit of any printed, typewritten, handwritten, mimeographed, or processed work, distinguished from other units by a separate binding, encasement, portfolio, or other clear distinction, which has been cataloged, classified, and made ready for use, and which is typically the unit used to charge circulation transactions. (**source:** ANSI/NISO Z39.7-1995)

[2] A publication in any medium issued in successive parts bearing numerical or chronological designations and intended to be continued indefinitely (**source:** ANSI/NISO Z39.7-1995)

[3] A nonserial printed publication of any length bound in hard or soft covers or in looseleaf format (**source:** ANSI/NISO Z39.7-1995)

[4] This includes electronic full-text journals offered by established scholarly journal publishing houses (e.g., Elsevier's ScienceDirect and Academic Press's IDEAL), scholarly societies (e.g., American Chemical Society journals and American Institute of Physics Online), and services which aggregate content from smaller publishers or from those publishers that prefer to use an external delivery platform (Highwire, OCLC ECO, and EbscoOnline).

Special considerations: Include journal titles that come with print subscriptions or print plus online subscriptions since the focus of the statistic has to do with how many scholarly electronic journal titles users can access. Do not include free government publications and free electronic journals to which the library provides links. Also exclude general-purpose periodicals such as magazines and newspapers.

(**source:** adapted from *Measures And Statistics For Research Library Networked Services: Procedures And Issues. Arl E-Metrics Phase Ii Report*, issued October 2001. <http://www.arl.org/stats/newmeas/emetrics/phasetwo.pdf>)

[5] This includes citation indexes and abstracts; full-text reference sources (e.g. encyclopedias, almanacs, biographical and statistical sources, and other quick fact-finding sources); full-text journal and periodical article collection services (e.g., EBSCOhost, ProQuest, Academic Universe, and INFOTRAC OneFile); dissertation and conference proceedings databases; and general-purpose magazines and newspapers. Licensed electronic resources also include those databases that institutions mount locally.

Special considerations: The unit of measurement here is the database not the whole service provided by a vendor. For example, if the library subscribes to OVID and the company provides five databases (ABI/Inform, Books in Print, CINAHL, INSPEC, and PsycINFO), then the count is 5, not 1. By the same token, if the library subscribes to three database packages (Academic Universe, Congressional Universe, and Statistical Universe) from Lexis-Nexis, the count is 3. This count should not include freely available databases to which the library provides links or library-created finding aids.

(**source:** *Measures And Statistics For Research Library Networked Services: Procedures And Issues. Arl E-Metrics Phase Ii Report*, issued October 2001. <http://www.arl.org/stats/newmeas/emetrics/phasetwo.pdf>)

[6] Number of electronic full-text monographs that the library offers to its users either through an individual licensing contract with the content providers or through other arrangements (e.g., regional or state consortium) where the library pays a reduced or no fee for access. This includes electronic books purchased through vendors, such as netLibrary and Books24x7, and electronic books that come as part of aggregate services. It excludes internally digitized electronic books, electronic theses and dissertations, digitally created archival collections (e.g., Early English Books Online), and other special collections. This also excludes publicly available electronic books to which the library provides web links. It does not include machine-readable books distributed on CD-ROM, or accompanied by print books.

Special considerations: Do not include book collections that are a part of aggregate services and function more as a reference collection (e.g., MD Consult reference books, ProQuest's Early English Books Online, and books@OVID). They should be reported in the electronic reference databases. Do not include freely available electronic books such as titles available from the National Academy Press.

(**source:** *Measures And Statistics For Research Library Networked Services: Procedures And Issues. Arl E-Metrics Phase Ii Report*, issued October 2001. <http://www.arl.org/stats/newmeas/emetrics/phasetwo.pdf>)

[7] *Impact Factor* is a formula developed by the Institute for Scientific Information to measure the frequency with which the "average article" in a journal has been cited in a particular year or period. The *impact factor* discounts the advantage of large journals over small ones or frequently issued journals over less frequently issued ones, and of older journals over newer ones.

[8] This is also referred to as permanent budget. It is usually the annual (sometimes biannual) but ongoing allocation for library materials. In government institutions, this is normally the primary fund allocation, often a line-item in the budget. In private institutions, the base budget may come from permanent endowments that are designated to the library materials budget or other stable revenue resources. The base budget represents an agreed upon figure between an administration and the library that is the basis for long-range budget planning. (**source:** adapted from CCDO Library Materials Budget Survey**, "**Definitions**,"** Prepared by Robert G. Sewell < http://www.arl.org/scomm/lmbs/lmbsdef.html>)

[9] This refers to money that supplements the base budget and is available normally only for one year. These temporary funds are usually designated for a specific purpose such as to build up an area of the

collection or for the purchase of an expensive item. (**source:** CCDO Library Materials Budget Survey**, "**Definitions**,"** Prepared by Robert G. Sewell < http://www.arl.org/scomm/lmbs/lmbsdef.html>)

[10] Include funds provided for a specific purpose which are considered supplementary to your base budget and are not included in your one-time funds.

[11] Consider internal customers any patrons doing work for your institution, including staff, contractors, guest researchers, etc. External customers are patrons using your resources that do not work for your institution.

[12] Expenditures for electronic full-text monographs that the library offers to its users. Include both initial purchase costs and membership fees as well as annual access and service fees paid directly or through consortia arrangements.

Special considerations: Traditionally books are purchased on a one-time payment in exchange for permanent ownership by the library. However, with regard to electronic books, it appears that some arrangements allow libraries to subscribe to an e-book collection at a predetermined fee and for a predetermined interval of time. We are concerned with the format of the material, not the subscription or payment arrangement. These materials should be counted as books, not serial publications.

(**source:** *Measures And Statistics For Research Library Networked Services: Procedures And Issues. Arl E-Metrics Phase Ii Report*, issued October 2001. <http://www.arl.org/stats/newmeas/emetrics/phasetwo.pdf>)

[13] Expenditures for electronic full-text journal subscriptions that the library provides to its users. Include both initial purchase cost, membership fees (such as JSTOR) as well as annual access and service fees paid directly or through consortia arrangements.

Special considerations: Some electronic full-text journals come either as a free service with a print subscription or as part of a print-plus-online-access subscription (the library pays extra for electronic access). Only include costs which are above and beyond costs paid for print copy. In cases where the cost breakdown is not clear, provide the best approximation.

(**source:** adapted from *Measures And Statistics For Research Library Networked Services: Procedures And Issues. Arl E-Metrics Phase Ii Report*, issued October 2001. <http://www.arl.org/stats/newmeas/emetrics/phasetwo.pdf>)

[14] Expenditures for electronic reference sources and aggregate services that the library provides to users either through individual licensing contracts with content providers or through consortia or other arrangements where the library pays some fees. These fees include both annual access fees and other service costs paid to the vendor directly or through consortial arrangements.

(**source:** *Measures And Statistics For Research Library Networked Services: Procedures And Issues. Arl E-Metrics Phase Ii Report*, issued October 2001. <http://www.arl.org/stats/newmeas/emetrics/phasetwo.pdf>)

[15] Report the number of staff in filled positions (including contract employees), or positions that are only temporarily vacant. Please count FTE's (or Full Time Equivalents). To compute full-time equivalents of part-time employees, take the total number of hours per week (or year) worked by part-time employees and divide it by the number of hours considered by the reporting library to be a full-time work week (or year). Round figures to the nearest whole numbers.

[16] In this section, include only the number of requests you were actually able to fill, if this number is available. If you only have numbers for the amount of requests placed, please indicate that with a note.

[17] Professional librarian is defined as a person having a Master's in Library and Information Science from a graduate program accredited by the American Library Association.

[18] The criteria for determining professional status may vary among libraries. Each library should report those staff members it considers professional, including, when appropriate, staff who are not librarians in the strict sense of the term, for example computer experts, systems analysts, or budget officers.

[19] Include system administrators, Web masters, etc. Do not include staff responsible for content only.

[20] Research consultation is in-depth reference and research assistance that goes beyond ready-reference service and on-line literature searching. It suggests some further processing of the information collected.

[21] If some of the reference services staff divide their time with other duties, please approximate the number of FTE's committed solely to reference duties.

APPENDIX B: TALKING POINTS FOR CONTACTING LIBRARIES

Introduction
We are calling from the National Institute of Standards and Technology (NIST) library. NIST is an agency in the U.S. Department of Commerce that works with industry to develop and apply technology, measurement, and standards.

The NIST library has collections in the physical sciences and engineering. In order to justify a request for a budget increase, the NIST library has developed a benchmarking survey to compare its services with those of other comparable libraries in government and the private sector. Because of your facility's size and the types of collections that you hold, your library is on a list that we have compiled of about 15 potential benchmarking partners. **Make it clear that this has nothing to do with A76 studies.**

Results will be made available to study participants

Any reporting of results will be anonymous
We will identify which libraries participated in the study, but we won't attribute any answers/data to a library. We will share the report with those libraries that participate in the study. We plan to share the report with NIST management. Only ISD staff members working on the benchmark study will see an individual library's data.

We may report on the study at conferences, etc., but we won't attribute any response to any of the participating libraries. If a library is willing to participate but doesn't want to be listed as a participant, that's ok, too.

Why their library was selected
We looked for partners that were similar to us: similar research areas, size (of collection or staff).

We will assist them any way we can
- If they would like, we'll step them through the questionnaire over the phone.
- If they are unclear anytime along the way, encourage them to call us.
- We will give them a reminder call or email one week before it's due.
- They are welcome to talk with anybody on the team, the head of the Research Library, or the director of ISD.