

From Data to Outcomes:

Assessment Activities at the NIST Research Library

By Barbara P Silcox and Paula Deutsh

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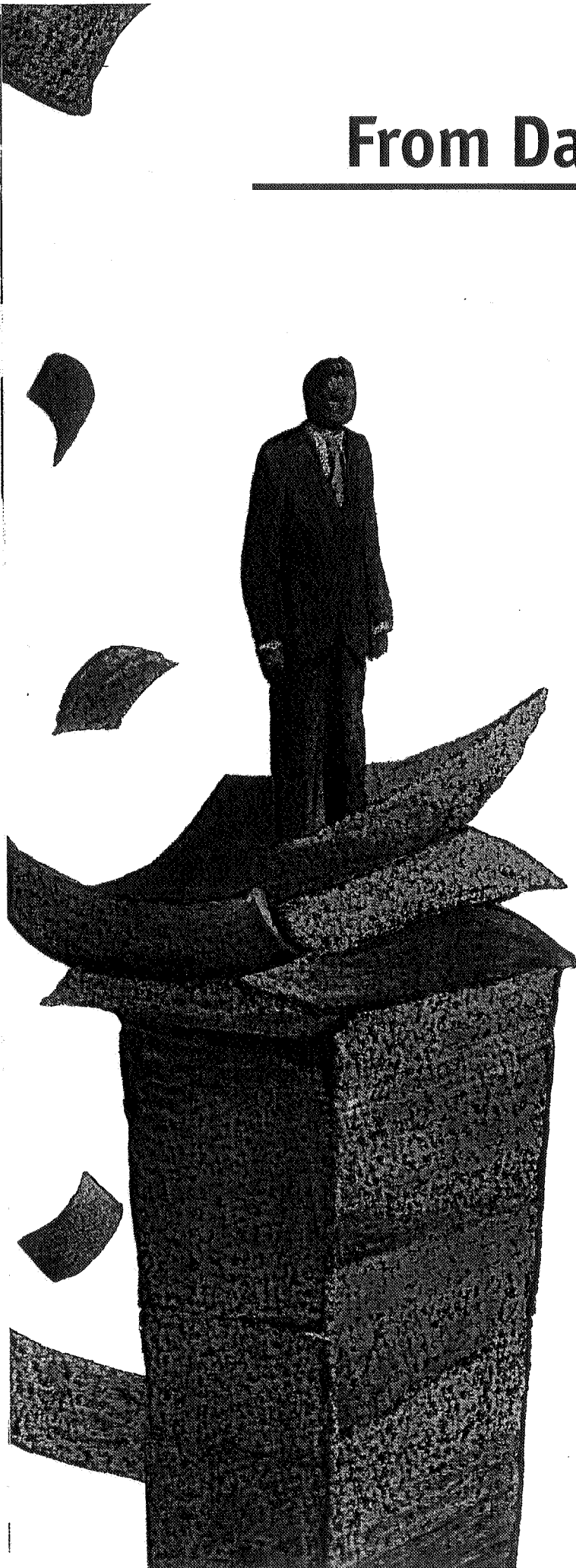
••• Analyzing the Results

This is the third and final article in a series describing assessment activities at the National Institute of Standards and Technology (NIST) Research Library. The first article described the development, administration, and interpretation of a customer survey. The second described those same elements of the library's benchmarking activities. This article addresses how the results of these two activities fit together to provide direction for the library's operational and strategic planning.

Background

NIST is a nonregulatory federal agency within the U.S. Department of Commerce. Its mission is "to develop and promote measurement, standards, and technology to enhance productivity, facilitate trade, and improve the quality of life." The NIST Research Library is one of three work units within the Information Services Division (ISD). The library has a staff of 17 and maintains a collection of about 300,000 volumes and 1,150 journal subscriptions. Its primary customers are the researchers in the NIST laboratory programs at the Gaithersburg, Maryland, location.

Beginning in fall 2001, the NIST Research Library undertook two fairly extensive assessment activities: a customer satisfaction survey and a benchmark study. (For more information on the customer survey, see *Information Outlook*, May 2003, and for more information on the benchmark study, see *Information Outlook*, July 2003.) While both these activities involved a large commitment of time and effort, they provided a wealth of learning opportunities. We gathered valuable data that were used for guiding our strategic planning efforts and for making operational improvements. The activities also provided a



tremendous growth experience for the staff and had an impact on library customer and stakeholder perceptions regarding library operations and the professional capabilities of the library staff.

The results of the customer survey and benchmark study revealed unmet needs, service and communications issues, and organizational strengths. Typically, libraries and other organizations take actions based on data collected through one assessment mechanism. The opportunity to view ourselves from multiple perspectives at one time enabled us to gain a better understanding of the effectiveness of our approaches in collection development, marketing and communications, and service delivery.

Comparing the Data

As a first step in analyzing and interpreting the results from both assessment activities, we identified major themes (see boxes 1 and 2) and looked to see how the data fit together. We were expecting to see an alignment of data; however, this was not always the case.

NIST researchers' concerns with the depth of our collections aligned with what we learned from the benchmark study. Researchers reported that they place a high value on the journal collection, use it a great deal, and are generally satisfied with it. However, they felt there were holes in the collection and that some subject areas needed better coverage. From the benchmark study, we learned that we were providing one of the lowest ratios of journal subscriptions per customer among our benchmark partners. The benchmark study also showed that our total expenditure per customer was lower than any of the benchmark partners. Although a library may have little control over how much money is available for spending on each customer, the benchmark study did point out an area in which we could exert some control. It showed that we were paying more per journal than almost all of the benchmark partners. The data provided a mandate to look at our collection development and purchasing methods.

NIST researchers expressed some dissatisfaction with our book collection. In particular, they wanted to see more technical books and textbooks. When we compared our collection budget with those of our benchmark partners, we found that we were allocating the smallest percentage of our collections budget to books. Since all libraries in the benchmark study supported scientific/technical organizations, it would seem we would all have the same need to focus on the latest research, which is



what a journal collection provides. Still, the other libraries in the study were choosing a different balance between their book collection and other parts of their collections. The customer survey showed that we might have underestimated the value our researchers place on the book collection. This information directed us to consider shifting resources toward this part of the library's collection.

A service that we have clearly gotten right is interlibrary loan and document delivery. According to the customer survey, this is a highly valued service. The benchmark study showed that, in the time period studied, we had filled more interlibrary loan requests than almost all of our benchmark partners and had filled an above-average number of requests per customer. However, we had also spent more money on this service, both overall and per customer, than our benchmark partners. Therefore, we knew that any efforts and funds spent on making this service as efficient and cost-effective as possible would be a worthwhile investment.

From the benchmark study we learned that we employ a relatively wide variety of methods for communicating with our customers. In addition, we make a large effort to involve researchers in collection decisions. However, the customer survey still indicated that researchers lacked an awareness of many of our information resources. There also appeared to be misperceptions about our materials selection processes and how journal cancellation decisions are made. This disconnect told us that we needed to look more closely at how, what, and to whom we were communicating.

Turning Results into Actions

The fun started after we got over the initial shock from our customers' comments and the feeling that we had before us an insurmountable task of making improvements. Grouping the findings from both assessment activities into major themes provided a broader view than either activity gave by itself. Looking at the data together offered a systematic way to delineate specific actions we needed to take, which made the task of determining appropriate improvement activities seem less daunting.

Based on what we learned, six areas of focus were identified: (1) evaluating and improving the collection, (2) marketing

and communications, (3) building and enhancing relationships with customers and stakeholders, (4) improving interlibrary loan and document delivery, (5) tracking and making better use of customer data, and (6) reducing and controlling costs. Lead responsibilities for planning and implementing improvements have been assigned to selected individuals on the library staff, but related activities from each of the areas are incorporated into the annual performance plans of all staff members. Leads are responsible for developing implementation plans and coordinating implementation activities.

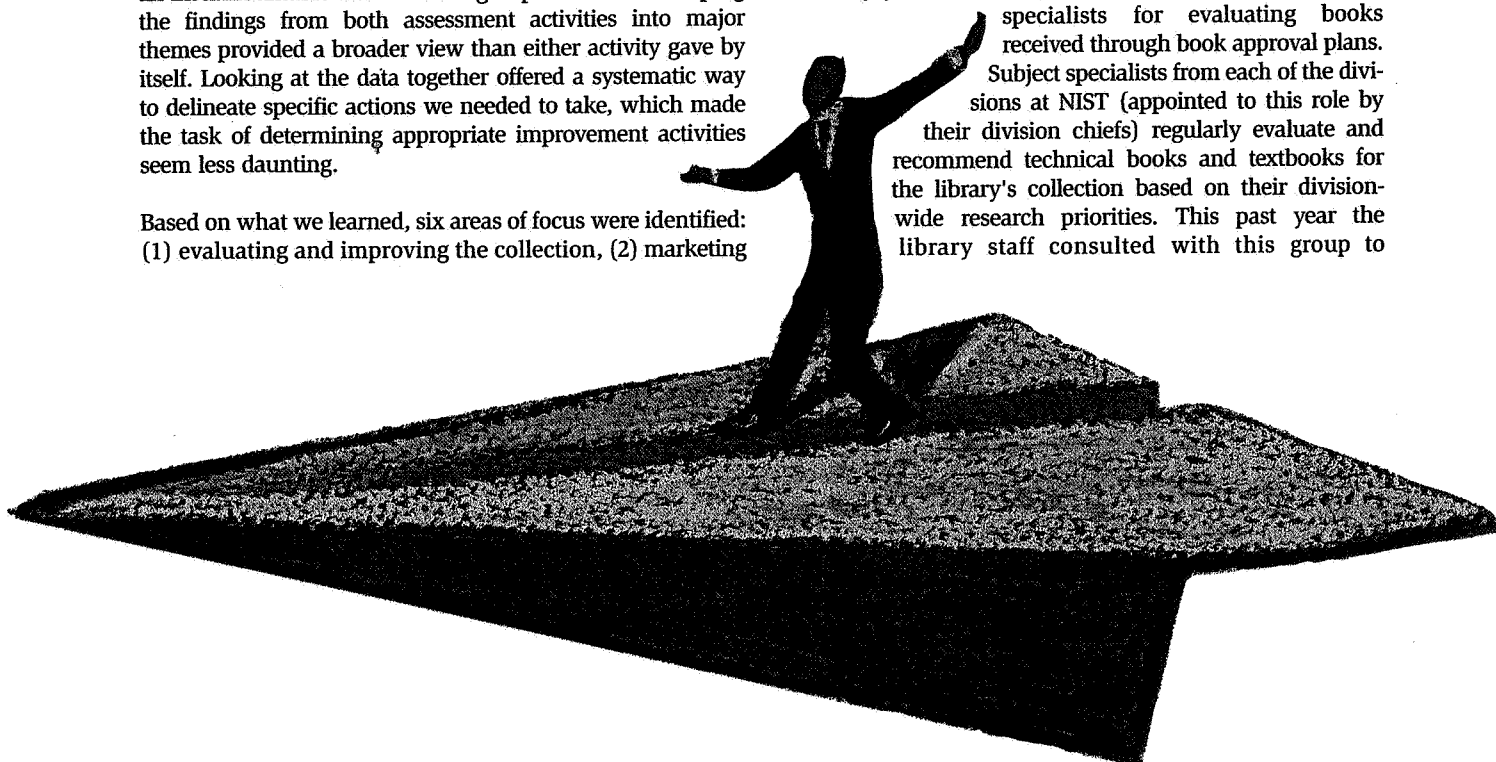
The six areas of focus were incorporated into the ISD strategic objectives during the fiscal year 2002 strategic planning process. Three of ISD's five strategic objectives specifically reflect the findings from the customer survey and the benchmark study. (See box 3.)

Evaluating and Improving the Collection

Survey comments indicated that NIST researchers have a strong desire to be more involved in selecting information resources for the collection. To meet this desire, the library undertook a core journal project and put new life into its book selection activities.

In order to create a list of core journals, NIST researchers were asked to identify which journals they viewed as essential in their fields. Out of 32 divisions invited to submit core journal lists, 28 elected to participate. This resulted in a list of 650 titles, reflecting the research needs of almost 90 percent of the NIST scientific/technical divisions that make up the library's primary customer base. An article describing the core journal project authored by the lead on this activity will appear in the November 2003 issue of *Information Outlook*.

For many years the library has solicited the help of subject specialists for evaluating books received through book approval plans. Subject specialists from each of the divisions at NIST (appointed to this role by their division chiefs) regularly evaluate and recommend technical books and textbooks for the library's collection based on their division-wide research priorities. This past year the library staff consulted with this group to



review and update the profile used to acquire technical books from the book approval plan vendor. In addition, the library met with the subject specialists to discuss ways of reengineering the book evaluation and selection process to allow subject specialists to participate in the book review process through the library's website. They can now view book information and submit their recommendations using the NIST Virtual Library (NVL).

We heard through the customer survey that the collection of technical books and conference proceedings was out of date or insufficient to nonexistent in key NIST research areas. Throughout fiscal years 2002 and 2003, collection development activities focused on enhancing critical areas of the collection. Using input from NIST researchers, we purchased 70 percent more technical books and conference proceedings in each of fiscal years 2002 and 2003 than we purchased in 2001.

Mechanisms were put into place to facilitate the tracking and analysis of collection development activities. We now track the number of titles purchased for each division, the amount of money spent per division, the number of titles recommended and purchased per each subject specialist, and the number of titles and amount of money spent by subject area (including NIST's strate-

gic focus areas). These data will be compared with circulation statistics to determine how well the book purchases match with actual collection use in order to continuously evaluate the effectiveness of our collection development activities.

Although the library did receive a small increase in its annual budget for collections in fiscal year 2002, deficiencies in the collection have been addressed primarily through the redirecting of other division funds and through consortial purchases. Sufficient funding to support the collection remains a critical problem.

Marketing and Communications

It was clear from the results of the assessment activities that one big issue the library had to address was marketing and communications. At the completion of each assessment activity, the library began a campaign to communicate to its customers and stakeholders what had been learned through the customer and benchmark surveys and what actions the library planned to take.

To provide a cohesive and systematic approach to our marketing activities, a member of the library staff created

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Box 1. Customer Survey—Summary of Findings

Major Themes:

- High use and satisfaction with journals, but a need for more electronic journals.
- A preference for electronic resources over print.
- Low satisfaction with technical books, textbooks, and conference proceedings.
- Specific subject areas within the collection in need of improvement to support new and ongoing areas of NIST research.
- Lack of awareness of many of the library's information resources.
- Misperceptions about how the library selects information resources and how past journal cancellations had been handled.
- Importance of interlibrary loan and document delivery for accessing information resources not owned by the NIST Research Library.
- Concern about the future of the library's collections.
- Strong service orientation of the library staff recognized by customers.

Box 2. Benchmark Study—Summary of Findings

Significant Findings:

- Of the libraries disclosing complete financial information, NIST spends the least per customer.
- NIST is spending far above the average percentage of its total allocation on materials, pulling from other areas of its budget to cover its collections costs.
- NIST purchased the fewest titles per customer.
- NIST paid more per journal title than all but one of the libraries.
- NIST placed a greater-than-average number of requests for borrowing.
- NIST paid fees for the fewest number of borrowed documents.
- NIST's average cost per document delivered was the highest of the five libraries that provided this information.
- NIST had the highest number of customers per library staff member.
- NIST employs a very wide variety of methods to communicate with and solicit feedback from its customers.

Box 3. ISD's 2002 Strategic Overview

Run the Business Objectives:

- Build ISD organizational capabilities that will allow staff to do their best work and increase knowledge sharing and teamwork.
- Provide better information about the products and services ISD provides.
- Provide better Document Delivery Service.

a marketing plan. The plan addresses listening to customers, general marketing guidelines, and specific marketing strategies and their financial implications. The plan is broad enough and includes a wealth of marketing and outreach suggestions to be used across multiple years.

All members of the library staff were given an opportunity to review and provide input to the plan. The plan was also discussed at a library staff meeting in spring 2003, at which library staff were asked to identify three marketing/communications activities that the library should devote its energies to for the remainder of the fiscal year. Specific marketing and communications activities are included in the annual performance plans of all library staff members.

An important part of our marketing program is our role in NIST's new employee orientation activities. A 15-minute presentation on library resources and services made by ISD staff is a regular part of the biweekly orientation sessions for new employees and guest researchers. Starting in June 2003, the library began a new employee tracking program that involves sending new employees a welcome package 1 month after their start date and follow-ups 6 and 12

months later. Follow-ups take several forms, depending upon the new employee's role in the organization and his or her research needs. The 6-month follow-up also includes a short questionnaire that asks if employees have used the library, what services were found useful, and which services they would have liked to have known about at the beginning of their employment at NIST. The feedback from these surveys will be used to guide our overall marketing activities and to refine presentations made to new employees.

Building and Enhancing Relationships

In fall 2002, in an effort to enhance two-way communication with NIST researchers, we established a Research Library Advisory Board (RLAB). The NIST director approved the charter for the RLAB, and the board is recognized and operates just like other NIST standing committees. The 20 members of the board (including primary and alternate members) represent each of the NIST laboratories and programs. The board also includes the head of the library, in a nonvoting capacity.

The RLAB meets once a month and functions as a mechanism for NIST labs and programs to communicate their needs to the library. RLAB members are expected to recommend

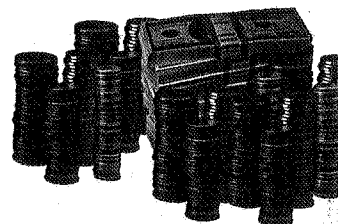
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directions for the library's collections and services consistent with current and future trends in NIST research. The RLAB also serves as a means for the library to keep the NIST community informed about ISD products and services. The board will produce its first annual report to the NIST director later this year. Information about the work of the RLAB, including the board's charter and the names of the current members, is maintained on the NVL.

In addition to establishing the RLAB, the library launched a Laboratory Liaison Program in fiscal year 2003. The Laboratory Liaison Program is an outgrowth of the core journal project. The overall goal of the program is to meet the needs of NIST researchers more effectively through a better understanding of their information requirements and service expectations. Each of the NIST labs has been assigned to a reference librarian, who serves as a single point of contact for questions, in-depth research, suggestions for the library's collection, and publication support. To learn more about each lab, the library's lab

liaisons are developing profiles for each division in their assigned labs. Profiles consist of division data from the 2001 customer survey, their core journal requirements, statistical data on their use of document delivery services and the collection, the division's research priorities, and information about their published papers. The knowledge gained about the division through the profile development exercise will enable the lab liaisons to anticipate more effectively the information needs and research support required by the labs.

Improving Interlibrary Loan and Document Delivery

The results of the customer survey and the benchmark study provided the library with useful information to guide improvements in interlibrary loan (ILL) and document delivery services to NIST researchers. The library has undertaken a number of approaches to address some of the issues related to cost control, responsiveness to customers, and management of staff workload.

To quickly meet the information needs of

NIST researchers doing work in the biomedical and health care fields, the library implemented access to Loansome Doc and PubMed through the NVL in spring 2002. Through an agreement established with the National Institutes of Health (NIH), the NIH library serves as the primary supplier of journal articles requested by NIST researchers through Loansome Doc.

In fall 2002, the library implemented an ILL management system to allow customers to submit their ILL and document delivery requests directly through the NVL and obtain information about their current and past requests at any time. The new system also allows the library staff to better track expenses and ILL/document delivery activity.

The library looked at the number and types of document delivery suppliers being used as well as its payment mechanisms. In fiscal year 2003, the library began using OCLC's ILL Fee Management (IFM) service. The library also set up deposit accounts with several key document delivery suppliers. Use of OCLC's IFM and deposit accounts has reduced the administrative burden on ILL staff for tracking and reconciling charges.

The library's ILL/document delivery costs have been rising significantly over the past three years. The introduction of these two ILL management systems has enhanced our ability to track and report on ILL activities. This is a first step toward identifying ways to stabilize or reduce these costs. To evaluate how these new service elements are affecting NIST researchers, the library plans to conduct a customer satisfaction survey focusing on these services in late fall 2003.

Tracking and Making Better Use of Customer Data

As a result of undertaking the customer survey and benchmark study, the gathering and analyzing of customer data have become an integral part of the library's operations. The collection and analysis of customer data are part of all library staff annual performance plans. Furthermore, we are implementing a variety of new mechanisms for listening to and learning from our customers and stakeholders. Through the Laboratory Liaison Program we are working toward a better understanding of each lab's research interests and information needs. We are using ILL/document delivery borrowing data in our budgeting and collection development decisions. We are also tracking and reporting on Information Desk customer inquiries, including complaints and their resolution.

Reducing and Controlling Costs

Sufficient funding to allow the library to effectively meet the information needs of the NIST community continues

to be a problem. The library did receive a small increase in its library collections budget in fiscal year 2002, but there have been no additional increases in funding to help deal with rising costs and customer expectations.

Without additional funds, the library continuously looks for areas in operational and collection expenses to save money that can be used to meet rising collection costs. As a member of several library consortia, the library has been able to take advantage of some discounted purchases. The library has also been able to access additional electronic resources at reduced rates through consortial purchase arrangements. Like many other libraries, the NIST Research Library is considering print plus electronic versus electronic-only options to incur savings that can be re-deployed elsewhere. Because respondents to the customer survey indicated a preference for electronic journals, a movement to electronic-only subscriptions may be received reasonably well.

Benefits of Assessment

When we embarked on these two projects, we expected to benefit from what we learned about our customers, services, and processes. However, there were also some unexpected benefits.

Both the customer survey and benchmark study resulted in tremendous professional growth for the library staff. We not only gained insights into our customers and operations, but new talents also emerged, and we learned more about our own professional abilities. A divisionwide Professional Development Plan was created to encourage library staff to continue their professional growth and share the knowledge gained through these experiences. The plan provides a framework and suggests opportunities for training, writing/publishing, and presenting at professional conferences.

As a result of these assessment activities, customer and stakeholder perceptions about the library have changed. The library has received considerable recognition from NIST management for conducting and reporting on the two activities, and NIST management now has a better understanding of how the library operates. In addition, because NIST is a research institution, demonstrating that we can conduct research in our own field has caused our customers to see us more as equals.

Looking Ahead

How will we know that we took the right actions? The library staff has always enjoyed a reputation for being customer-oriented. However, more sophisticated methods of listening and learning are now embedded in our operations and our way of thinking. Our evidence-based practices enable us to be more responsive to our customers and demonstrate concretely the value the library brings to the NIST community.