Report of the
Task Force on University Libraries

Harvard University
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**REPORT OF THE TASK FORCE ON
UNIVERSITY LIBRARIES**

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Just as its largest building, Widener Library, stands at the center of the campus, so are Harvard's libraries central to the teaching and research performed throughout the University. Harvard owes its very name to the library that was left in 1638 by John Harvard to the newly created College. For 370 years, the College and the University that grew around it have had libraries at their heart. While the University sprouted new buildings, departments, and schools, the library grew into a collection of collections, adding new services and locations until its tendrils stretched as far from Cambridge as Washington, DC and Florence, Italy. Harvard's library system now includes 73 separate libraries with 1,200 full-time employees, 16.3 million volumes, 12.8 million digital files, over 100,000 serial titles, and millions of manuscripts, photographs, musical recordings, films, and artifacts of all kinds, making it by far the largest university library in the world. The library system supports the more than 20,000 students, 2,100 faculty members, and 12,900 staff across Harvard's schools, as well as 10,500 hospital-based faculty members. Harvard's libraries are not only a local strength, but also a global treasure that supports the scholarly work of an untold number of researchers around the world. Even these impressive numbers fail to do justice to the importance of the library system for Harvard. For many students, faculty members and departments, Harvard's library collections are the core of their intellectual experience.

The members of the Task Force on University Libraries (Task Force) believe strongly in the fundamental place that the libraries hold at Harvard. Though the Task Force met in the face of unprecedented financial pressure and a rapidly changing technological and intellectual landscape, their charge was not to wring resources out of the libraries, but rather to recommend reforms that would allow the libraries to invest their resources more heavily in academic priorities. In the course of the group's deliberations, it found that a major obstacle for the libraries to overcome would be to move away from their fragmented and outmoded administrative and financial model. Though it was clear from discussions that intellectual matters and collections expertise should be closely tied to the activity of the faculties, it also became clear that the resources of the libraries and the University could be better spent in ways other than preserving a dispersed and overly complex infrastructure.

The Harvard library structure is unique among great universities for its degree of decentralization and its often internally incompatible modes of operation. While the University has an overarching library body, the Harvard University Library (HUL), most of the 73 constituent libraries are funded by and report to the different faculties of the University or to departments within them. Perpetuation of the current administrative structure promises to hold the University captive to frozen accidents of history, rather than facilitating the development of new strengths and fostering an agile organization for the twenty-first century.

Having evolved organically over the centuries, the library network developed many autonomous units attached to departments, research centers, and schools. While highly distributed decision making undoubtedly contributed to the rich and varied development of Harvard's collections, it has also contributed to dissimilar library policies and practices, to incompatible and different modes of operation, to the inhibition of flexible and forward-looking responses to intellectual and technological opportunities, to impeding the University's ability to aggregate its buying power even in the face of monopolistic journal publishers, and to incurring increasingly unsupportable

costs. Its unwieldy governance no longer aligns well with the current needs of scholarship, where disciplinary boundaries have broken down and digital technology has created a virtual space that extends across the entire University and indeed, the entire world.

These highly variegated internal policies make it more difficult for the Harvard libraries to adjust to external shifts in the information landscape. Even during the recent years of endowment growth, the libraries struggled to collect the books, journals, and other research materials desired by current faculty and students and to develop holdings so that future generations of Harvard scholars would have the same excellence in resources that our predecessors have bequeathed to us. The reasons for these difficulties are multiple, but include the steadily rising prices of monographs and journal subscriptions (serials), the costs of providing both electronic and paper versions of many of these resources, the expansion of the University's intellectual horizons to new areas of study, the chronic weakness of the US dollar as the demand for international materials continues to increase, and the explosive proliferation of both printed materials and electronic media required for scholarship now and in the future. At the same time, many academic units developed new priorities that limited their ability to invest in libraries even before the global financial crisis of 2008. Given these potent trends, the Harvard libraries can no longer harbor delusions of being a completely comprehensive collection, but instead must develop their holdings more strategically. To do so, Harvard will need to embrace a model that ensures *access to*—not necessarily ownership of—scholarly materials needed by faculty, students, and other library users, now and in the future.

Superimposed upon the serious disparity between the University's ever-growing intellectual aspirations and its available resources lies another major trend with significant impact on the organization and goals of our libraries: the changing boundaries of academic disciplines and the rapid emergence of interdisciplinary scholarship and teaching. Interdisciplinarity is producing new kinds of research and research collaborations; it is yielding new courses much desired by our students. In the short term, however, the rise of interdisciplinarity has resulted in adding more research areas that the already overextended library staff must support, and the creation of new journals that the library must purchase, even though they could not afford to fully support the existing areas of scholarship. In the longer term, the transgression of traditional intellectual boundaries by Harvard's scholars raises important questions about the cartography of our library system, which contains a large number of relatively narrow disciplinary units.

Perhaps most destabilizing to our operating model is the digital revolution. Though it is still in its early stages, it has already penetrated nearly all aspects of research and teaching. In the natural sciences and quantitative social sciences, faculty and students relate to libraries in ways that would have been unimaginable a generation ago. Indeed, all domains of academia are changing their relationship to libraries, to librarians, and to information, often involving technologies and ways of working that cannot readily be predicted from moment to moment.

Although this shifting landscape presents exciting opportunities for growth, the unforgiving reality of the University's significantly diminished financial resources cannot be overlooked. The Task Force believes that it is critical and urgent for Harvard to boldly address the effectiveness—and the cost-effectiveness—of its existing library structure. A failure to do so will risk a decline in the library system that could have extremely negative effects on Harvard's academic mandate.

Several examples illustrate the problems of the current structure. Based on principles and habits of local autonomy, individual Harvard libraries have developed IT systems with varying characteristics. Most are not interoperable with the libraries of peer universities and important library consortia, but more problematically, some are not readily interoperable even within

Harvard itself. HOLLIS (Harvard OnLine Library Information System), Harvard's shared catalog, historically one of the hard-won and successful points of collaboration within the library system, poses some impediments to collaboration with peer libraries because when it was developed, individual Harvard libraries were not required to follow the same data standards for inputting their collections.

In many areas of licensing, Harvard often relates to content providers as if it were several separate institutions rather than one university. As a result, the University loses the leverage that would come with the aggregation of its purchasing power; the result is that individual libraries often overspend and have less to spend on services. The local costs limit the number of serials that libraries can afford and force them to limit access to a circumscribed number of faculty and students, thus excluding many members of the Harvard community. Even when Harvard libraries do try to act in concert, the number of independent library units and the complexity of decision-making authority consume extraordinary amounts of staff time and energy that would be better invested in client services. In 2009, coming to internal agreement on a contract with one major scientific journal publisher took four months and involved staff from twenty-two separate Harvard libraries. Though these libraries make solid efforts to work together, they each have a primary duty to further the interests of their own departments, rather than seek what might best serve the needs of the overall Harvard community.

The funding model of the Harvard Depository (HD) represents a materially significant negative consequence of Harvard's complex library structure and decision-making processes. The HD now holds almost 45% of the University's total collections and is asked to cover its costs in full. When HD was designed and built in the 1980s, the University was forced to employ a client-based business model in which each of the Harvard libraries was treated as a potential client no different from clients outside of Harvard, such as MIT. While HD is extraordinarily efficient in its storage and delivery operations, and rather lean in overall costs, the client business model that was set up mandates that all costs for storage and circulation of each book be paid by the library that originally purchased it. This means that when a student at one of the professional schools requests a book from HD, the $2.15 circulation cost is most often not borne by that student's school but by the library that deposited the book at HD initially. Given the disproportionate size of the constituent faculties and libraries, this model results in free-riding by some parts of the University at the expense of others (most often the Harvard College Library), and provides perverse incentives that favor narrow collecting practices.   Moreover, given the decentralized client structure, there is little incentive for optimizing the use of cheaper off-site storage.

Harvard must do a better job at knitting together its complex and fragmented library infrastructure in order to improve services and maximize the resources available to its users.   The University cannot afford to replicate administrative systems and processes many times over, nor can it support its users effectively if its information systems cannot efficiently communicate, nor can it fund its priorities for the libraries if it encourages publishers to divide and conquer, nor can it provide optimal access to scholarly materials if it tolerates historical practices that serve as barriers to collaboration. The Task Force proposes reforms that will allow the library to build from strength. Despite the inefficiencies and governing challenges flowing from its inherited organizational structure, the library is characterized by its great collections and its excellent staff. It is critical that Harvard now lay the foundation for a twenty-first century library that can focus its financial and human resources on strategic change and on effective responses to evolving academic priorities.

At a time of rapid change and severe financial stress, the Task Force on University Libraries was charged to *make clear recommendations to the President and Deans to adapt the Harvard Library system to the 21st century and to make a stronger and more efficient library system.* Given the long history and labyrinthine complexity of the library system, the pressing need to move forward effectively in the face of technological change and financial challenge, and the universal desire to avoid unintended harm to the existing strengths of the library, the Task Force recommends that the University and its libraries undertake a significant and focused initial effort in five principal areas. A lack of focus would risk diffusion of effort and even failure in structuring a more cohesive library system; a lack of thoughtful implementation could damage the aspects of the library we aim to preserve and strengthen.

The Task Force believes that these five core recommendations, outlined below, represent a strong place for reform to begin and that they will create the platform for additional efforts. Ideas and directions for future efforts are outlined in the following sections of this report. The ultimate goal of reform within the libraries will be to create access both now and in perpetuity to the world's scholarly materials for Harvard's community. This should be done in a way that retains Harvard's successful tradition of decentralized intellectual expertise, but also aggregates administration and infrastructure for maximum efficiency.

1. Establish and implement a shared administrative infrastructure.

The fragmented organization of the Harvard libraries represents the fossilization of contingent historical decisions, based on past circumstances and actors. This structure now impedes nimble, effective, and fiscally responsible responses to twenty-first century challenges. We recommend reforms focused on *administrative* services that, when unified, will provide better and more cost-effective service to faculty and students. Functions that depend on local *intellectual* leadership and expertise should continue to be centered within departments, schools, and other units of the University. Administrative services that will be markedly strengthened by centralization include many information technology functions; most preservation functions; and certain significant technical services such as acquisitions and cataloging. The development of a simplified and unified administrative infrastructure does not necessarily entail parallel changes in governance, or to physical library spaces. Those should be evaluated separately in processes that involve the schools and University leadership. In making these reforms, attention should be paid to maintaining the local intellectual expertise and diversity that are the core strength of Harvard's current system.

2. Rationalize and enhance our information technology systems.

Harvard's libraries have developed significant shared information technology infrastructure successfully, notably HOLLIS, the shared catalog system, and the Digital Repository Service (DRS). We need to build upon and improve these models of shared technology. This focus on systems improvement will not succeed, however, unless paired

with changes in the model for decision making and funding. A widely distributed "veto" and excesses of local customization have impeded the effective development of technology infrastructure both within and outside Harvard's libraries. The Task Force believes that Harvard must develop a robust, shared information architecture to guide future development and to orient investments in innovative projects. Core systems must be standardized across Harvard libraries to enable the University to collaborate internally and externally more effectively than we do today. At the same time, information technology platforms and systems should be designed to enable innovation within shared platform parameters by individual libraries and librarians and to be responsive to the demands of an ever-changing academic community. The libraries also need to chart a path to bring successful innovations in information technologies from the edges into the rest of the system where appropriate. Overall, a more nimble and responsive organization with adequate funding will be needed and it must align with other IT organizations at Harvard.

3. Revamp the financial model for the Harvard libraries.

The current system of financing library materials and services impedes efforts to collaborate across the different parts of Harvard University, and often establishes incentives for actions that aid one part of the library at the expense of the whole. This phenomenon is most clearly reflected when content costs are shifted from one unit to another. The University should evaluate the system of funding for library materials, spaces and services, including cost sharing among the many libraries that make up the whole. This review should begin with an immediate evaluation of the manner in which Harvard Depository is financed. The current model combines disincentives to storing materials at HD with procedures that punish the most generous providers of materials. An initial focus on the depository should yield models that might be extended to other collaborative aspects of a reorganized library system.

4. Rationalize our system for acquiring, accessing, and developing materials for a "single university" collection.

The Harvard University Library system needs to rationalize the manner in which all parts of the University collect and provide access to materials, and orient its focus more clearly toward *ensuring access*, as opposed to the current default model of building collections by acquisition. This shift is already in prominent view in many disciplines of the natural and social sciences, where ownership of materials has given way to providing access to materials that may be housed on a publisher's server, at other institutions, or in other countries. Many fields, including the humanities, will continue to depend on physical materials, but the emphasis on ensuring access in perpetuity to materials should nonetheless increasingly supplant acquisition in the case of widely available resources. The University's efforts to build a single, shared collection must also be coordinated more effectively. A centralized purchasing and licensing office that negotiates with vendors should be empowered to speak to vendors with a single voice whenever possible. Longer-term efforts to reform the scholarly communications and publishing system, such as the University's leadership in the open access movement, should continue to be emphasized and supported from within the library system.

5. Collaborate more ambitiously with peer libraries and other institutions.

Harvard should enhance its efforts to work with other libraries and cultural institutions to build a sustainable information ecosystem for the 21st century. In some cases, this collaboration will mean building upon existing efforts to work directly with partner institutions, such as MIT. In other instances, this collaboration should include entering into new or expanded consortial arrangements, such as BorrowDirect. As described above, Harvard's information technology systems must be improved to become more interoperable, internally and externally, in order to facilitate external collaborations with the goal of maximizing access to scholarly materials for our faculty and students. Throughout the library system, Harvard must be more ambitious in its efforts to work with external partners to share costs and resources to improve library collections and services to current and future users.

In enacting these reforms, the Task Force recommends that the following principles be understood and adhered to:

- The University as a whole, the schools, and the libraries must work together to build the foundation from which to develop a 21st century library system.

- The work undertaken must be user-centered and aligned with the research and teaching missions of the University.

- Strategic investments must be made in human capital to achieve these objectives and reforms.

The Task Force advises that the President and Provost, working with the Deans, move expeditiously to appoint an implementation work group to put this report into effect, beginning with the five areas of focus. This work group should work closely with University leadership, with the schools, and with existing and/or new library committees to complete the analyses required—for example, to develop and implement new funding and operating models for HD, for technology infrastructure unification, and for centralization of the administrative functions recommended above. The implementation work group must be relatively small to be effective. Rather than having representation from each library, the work group should be populated by key faculty, librarians, and administrators with the diverse types of expertise required for success. It may need to engage financial analysts and computer scientists as consultants, ideally from within the University, but from without if necessary. Members should be selected who can leave their individual school or library affiliations at the door of the meeting room, and work for the overall good.

Much of the work of the Task Force was conducted within four working groups divided into the following areas: Collections, Technological Futures, Research & Teaching, and Library as Place. These groups were charged with identifying needs and opportunities for change in both the short and longer term. The following section outlines the work conducted within the working groups, with the recommendations organized by the five focus areas outlined in the prior section of this report.

The information coming out of these summaries is meant to inform those who will be implementing change within the libraries based on this report. The ideas found in this section were generated in the course of the working group research and discussions; they are meant to provide greater detail and nuance on how to move Harvard toward an effective library for the 21st century and how to put it on a more rational and sustainable financial footing.

COLLECTIONS WORKING GROUP

The rich and diverse collections of the University should be considered as a heterogeneous whole, with the particular libraries offering constituency-specific access onto the entire collection, as well as need-tailored resources for its patrons to make the fullest use of these resources. To that end, the Collections Working Group believes that further collaboration among the libraries at Harvard, as well as with partners outside the University, will be crucial to the future of research and teaching within higher education.

CHARGE

The Collections Working Group was asked to identify what Harvard's priorities for collecting are; how the libraries balance collecting in various formats and if this reflects the institution's needs; and how the University defines and treats its rare and special collections. The group was also asked to consider if further coordination in collecting could avoid duplication in acquiring materials and facilitate better breadth and depth, in addition to how collection services— including conservation and preservation policies as well as procedures and actual bench work— could become more cooperative, and, if appropriate, more standardized. Finally, the group was asked if and how Harvard might coordinate its acquisitions with external research libraries.

GUIDING OBSERVATIONS AND PRINCIPLES

- Scholarship and research materials are growing at an increasing pace in an expanding number of disciplines and formats. A single institution cannot capture, document, and make accessible the world's record of scholarship, and Harvard is no exception.

- Research is a primary mission of the University, and therefore Harvard's library collections must be supported and funded accordingly. Harvard's libraries have an obligation to scholarship that transcends any particular time or contingent circumstances. The collection is paramount to the research university's library in a way that it is not in the library of a liberal arts college where teaching and curriculum are the overriding concerns. The University's collection is integral to the strength of its scholarship and the cognitive life of the institution.

- Different areas of scholarship have different understandings of what types of materials are necessary and should be collected, and whether the university needs to acquire or provide access to them. Establishing these criteria among all disciplines and methodologies will be both difficult and necessary.

- Librarians will continue to consult with faculty experts in particular topics or types of materials in deciding how to set priorities, but the skills and professional expertise of our bibliographers, curators, and specialist librarians should guide the integrity of our collections for all time.

- Decisions about rare and special collections must be made carefully and separately from the general decision-making about collections and access. These exceptionally valuable materials constitute a category unto itself, requiring bibliographers, curators, preservation

expertise and access restrictions that demand special handling and attention. These are the materials that distinguish individual libraries and in which Harvard University Library excels.

- The libraries should continue to emphasize providing access to materials in a way that makes them maximally accessible to both Harvard and the global research community.

- Students and researchers are changing how they seek out intellectual resources. As scholarship and research materials grow at an increasing pace in an expanding number of disciplines and formats, boundaries are also blurring between the professional schools and academic disciplines.

RECOMMENDATIONS

SHARED ADMINISTRATIVE SERVICES STRUCTURE

1. Develop a core mission statement for the Harvard libraries.

If the libraries are to be considered as one University-wide collection, they need a single statement that will symbolize the library's common commitment to supporting the current and future research and teaching of the University. The Working Group recommends that the library develop a mission statement, which will orient priorities and facilitate the implementation of general recommendations. For such a statement to be effective, it must emerge from a process of consultation.

2. Create a five to ten year strategic plan for the libraries.

This plan should be explicit in its articulation of the areas in which we plan to continue to lead and in which we hope to expand our leadership. This plan should be clear in how technologies, human resources, and the collaborations both within and outside of Harvard can help support us in realizing this vision.

3. Keep lines of communication open between faculty members and the libraries.

It is easy for faculty members to take the excellence of the Harvard libraries for granted; a better understanding of the complicated issues and budgetary pressures that the libraries currently face—and will continue to face—can only benefit both libraries and faculties. Though the benefits from the library's collections and services are understood to be felt University-wide, each discipline and faculty member is tempted to place higher priority on more immediate goals for their research, teaching, or department. As the administration of the library becomes less distributed within the schools, it will be imperative to keep the lines of communication open between the faculty and libraries.

4.   Schools within Harvard that wish to expand their research areas and curricular offerings must compensate such expansion with a correlating investment in the budget for library collections.

While the libraries at Harvard are committed to sustaining the areas of the collections' strengths, resources are limited. Faculties should calculate and be prepared to help defray the cost of building collections in new areas of scholarship when those fields are added to their purview. As faculty lines and new departments are created, additional demands are placed on the extent of the libraries' ability to collect. The schools must recognize that as the scope of the research and teaching grows, so too must the ability for the libraries to meet the demands of these new users. As a general practice, incoming faculty should be surveyed about their information resource needs and expectations.

RATIONALIZE COLLECTION DEVELOPMENT SYSTEMS

5.   HUL and Harvard's libraries need to continue to develop collaborative and explicit collection strategies.

Considering the pace of expansion in scholarship and research materials, Harvard's dispersed acquisitions strategy is no longer viable. Understanding that a single institution cannot afford the space and funding to collect and maintain the entirety of the world's scholarship, careful, strategic decisions must be made about how the University should maintain Harvard's premiere library collection status. No single institution can bear the burden of acquiring the entire world's informational output. Indeed, the few libraries that have collections larger than Harvard's are deposit libraries, meaning that the library does not bear the costs of the majority of its acquisitions. Harvard must be explicit to its internal and external constituencies in how it determines the scope of and the processes around its collections. Having limitations on the scope of Harvard's collection is inevitable—a fact which makes interlibrary collaboration discussed below all the more essential.

Unambiguous strategies must be established to aid decision making around what the libraries collect, how access should be provided to materials held elsewhere, which faculty should be responsible for purchasing and caring for an item, and whether the item should be purchased outright or if leased access is sufficient. There should be a framework or set of guidelines that can serve as a touchstone for making difficult decisions within the independent libraries, as well as an opportunity for faculties to share the cost of purchasing and storing materials that are of value to more than one faculty. Several libraries have such guidelines readily and widely available (Appendix H), and informal efforts made to date by bibliographers to increase coordination have been helpful. Such efforts, however, need to be systematized and supported formally by the members of the library system, as they already have been with access to digital materials such as journals and databases. This coordination should include planning with respect to what materials will be collected in what formats and by which Harvard library. Aligning budgets accordingly will enable libraries to develop their contributions to the overall collections of the University library system.

6. Identify Harvard's collection areas that represent particular strengths and that thus ought to be targeted for expansion.

Harvard's collecting policies should aim to acquire a broad representation of the record of scholarship as well as to pursue the areas in which we already have strength. Because outstanding collections are built over the long term, we have a particular responsibility to develop our extant areas of expertise, sustaining the excellence of the collections for which the Harvard libraries are best known, while not neglecting developing areas of scholarship.

These are major decisions requiring input from many stakeholders, including the faculties, and must be developed as part of a larger review and analysis of existing collections and future trends. Collections decisions need, in short, to be part of a strategy for the evolution of the current library.

7. Acquire digital rather than physical materials where appropriate and possible.

When content is available in a reliable and archived digital format, digital formats should be preferred. There will, of course, be exceptions to this rule such as in cases where the physical document is itself an object of study, or in rare and special collections.

Most serials and databases, and many primary sources now originate in a digital format. Virtually all books are born digital today, and have been for more than a decade. Before long, the majority of books published in print will be archived in a reliable digital format, rather than in conventional warehouses. Datasets provide an entirely new information type that the library will need to access and preserve. We must prepare for a predominantly digital structure as early on as possible in this transition, while remaining cognizant that print will never entirely disappear and that some materials currently in print form will not be digitized.

When the library has to make choices between various materials to acquire, this approach will help us make those decisions rationally and to minimize costs associated with the preservation and circulation of printed materials. With this shift in policy, the library is able to offer its users new modes of collecting and a new range of services, such as print on demand. However, it is important to note that—though the acquisition of digital materials can translate into reduced costs in storage, transport, preservation, and numbers of copies purchased—those reductions in current costs may be offset, in whole or in part, with new costs associated with technological development. It is an important, urgent, and delicate calculus that the libraries must thoroughly interrogate.

8. Expand our collection in digital materials such as data sets and academic blogs, websites, and email correspondence, and especially those materials produced by our own scholars.

Harvard has historically collected, organized, and made accessible collections of varying media, such as the collection of 14,000 films held by the Harvard Film Archive or the personal papers, ephemera, and manuscripts of Houghton Library's Theodore Roosevelt Collection. As soon and as much as it is financially and technologically feasible, the Harvard libraries should increase their collections in these new areas. What has historically been considered the record of scholarship is changing, and as such the libraries must collect and preserve new media types. Access to and organization of these unique materials will be critical to current and future

scholars, and the library provides the appropriate home for storage and access as the world's research trends in a digital direction.

The Schlesinger Library is one of three libraries at Harvard that has begun to develop a system for collecting material that was "born digital." Through the capture of women's blogs, this pilot project offered Schlesinger Library an opportunity to test its ability to document women's use of a new technology in the beginning of the 21st century while simultaneously increasing the diversity of its collections. Both aspects of the project will support research that promises to attract numerous scholars in the coming decades. In addition to expanding its collections and its technical capabilities, this project helped Schlesinger Library both better understand the issues and challenges involved in collecting and archiving this volatile medium, and build a system that could capture, manage, store, and display web sites for long-term archiving.

In the sciences and social sciences, the capture, interpretation, and curating of large data sets are still in early stages of development. Further work will be necessary to determine how best to interpret this information and develop appropriate modes of inquiry. As knowledge in this area expands, it will be imperative for the library to work with members of the faculty, as well as other units within and beyond the University.

9.   As appropriate, the Harvard Libraries must emphasize providing access to, and not only acquisition of, materials.

The library should always take full advantage of open access and licensed materials as well as collaborating on plans for shared access. Acquiring materials makes us their stewards; storage and preservation are expensive and may not be necessary if external vendors and other stewards can reliably take on this role and charge us fairly. Additional services such as "scan and deliver" and "print on demand" could eliminate the need to purchase multiple copies of books and materials.

10. Make a strong commitment to the preservation and conservation of the libraries' collections.

Throughout nearly four centuries of collecting, Harvard's libraries have been committed to ensuring its collection will endure for future generations of scholars. In order to continue to provide access to the University's ever expanding collections, the University must make a corresponding investment in the conservation and preservation of its holdings. A commitment to acquire materials, whether for general or special collections, also implies a necessary future cost that the University will incur for ongoing storage and preservation of the collections, both in analog and digital formats. Items acquired by the libraries are ultimately intended to support research, teaching, and learning. With increased use of materials, attention and additional investment is all the more likely. The University must anticipate these expenses and plan accordingly for them.

The Harvard libraries own a range of objects in a variety of formats that include not only print but also audio, video, film, photographic, biological, and digital. As the holdings of the libraries continue to grow, the University must understand the investment choices that will be required to meet their preservation needs. Additional expertise, technology investments and/or collaborations, expanded space for existing conservation facilities, network storage and support for curating born digital objects, must be calculated into the costs of acquiring items for the collections. The libraries will need to evaluate how best they can meet preservation and conservation needs as the scale and complexity of the collections continue to grow.

11. Strengthen Harvard's negotiating position with publishers and vendors.

Harvard has the largest university library in the world and its faculty and alumni are widely published and cited authors. The University is a major site of information production, yet the distribution model has been skewed in favor of the publishers and vendors that have traditionally controlled the dispersal of this information. The University must assert its significant power in this production chain in how it purchases its subscriptions from serials publishers and data and database providers.

A revised program of negotiation with major package providers must be devised in the near term, not unlike the types of intense preparation and major administrative clout applied to the indirect cost negotiations. The economic downturn has made this issue even more critical than in years prior. Because library budgets have been cut, journals will need to be cancelled, with attendant cancellation fees feeding a downward spiral. The possibility exists that faculty and students will not be able to access what they need—not only exotica, but major journals as well. Negotiations with publishers should cover not only cost and access, but also the rights that Harvard authors retain to re-use their own publications. In addition, a centralized negotiation entity could potentially address how to add digitization rights with specific digital distribution permissions to the purchase of print books.

Harvard must become a more forceful participant in this negotiation, leverage its combined rather than distributed weight, and not be beholden to the prices and packages determined by the major publishing houses. This might be done by empowering a University-wide negotiator who could reposition the University, not as a passive purchaser of material, but as an active and engaged supplier in the production process.

COLLABORATE MORE AMBITIOUSLY WITH PEERS

12. Exercise a leadership role in developing alliances with other libraries in areas such as preservation, collection development, collection management, outreach, and teaching.

Technology provides new platforms that make it possible to provide instant access to materials that would have required several days to procure even five years ago. Harvard should proactively develop relationships with peer libraries that might explore new ways of developing collections, such as sharing digital collections or joint ownership of printed materials. By identifying areas of focus for our collections and coordinating these with other institutions, we could increase the information resources available to our patrons, at a decreased cost. Of course, it will be critical to protect Harvard users and the collections in these arrangements, as well as the intellectual property rights of the authors and publishers. We will need to ensure that all participating libraries are genuinely collaborative and that all are committed to preservation and protection of the collections over the long term.

In the past, large coalitions of research libraries have often been unworkable. In this case, Harvard is not recommending the recreation of past failed experiments, but rather a careful alliance that can be built upon over time. One bilateral alliance that might be established at the pilot level could be with our neighbor, MIT. Despite our very different characters and clienteles, the two libraries have much in common and have collaborated in many ways over the years. In addition to the University's cross enrollments and joint research projects, we have adopted identical open-access resolutions and have built compatible repositories using MIT's DSpace.

This digital cooperation could be expanded in several directions, such as the capture of institutionally-generated scholarly content and joint participation in the Profiles program, which has proven its effectiveness at Harvard Medical School. HMS has worked closely with MIT, and the medical sciences are a promising area in which to collaborate.

Another area the Harvard libraries may want to explore is joining Borrow Direct (BD). This program is a rapid book request and delivery system that enables users to search the combined library catalogs of its member organizations—currently Brown, Columbia, Cornell, Dartmouth, University of Pennsylvania, Princeton and Yale. Harvard is the only member of the Ivy League that is not a partner in this organization. Currently, participation in BD is not feasible due to the anticipated overhead costs that would be incurred under the current financial model. However, if Harvard were to reconsider how the costs for the library were structured, it may become more feasible to consider membership.

The Working Group recognizes that a proposal to be a leader in external alliances has many collateral costs. The cost of interlibrary loan for a monograph may exceed the cost of purchasing the item itself, once one factors in the amount of time that a researcher must wait for the item to be obtained as well as the costs of distributing the material. A thorough interrogation of the financial information must be conducted in order to determine whether Harvard is to enter into such an arrangement.

THE TECHNOLOGICAL FUTURES WORKING GROUP

Technology has revolutionized how the library collects, catalogs, and presents ways to access its holdings and deliver its services. Increased utilization of networked web services, digital scholarship and web-based publishing suggest that libraries must reconsider how—and to whom—they provide access to information. Technology provides a platform for allowing once diverse operations to work together. Within the libraries it can enable more collaborative work in collection management, patron services, infrastructure and decision-making. As our world shifts, technology provides an opportunity for our libraries to work both independently and with greater coordination. Technology offers Harvard's libraries the opportunity to operate on a common platform without compromising their operational efficiency or patrons' ease of use.

Technology raises many questions that remain to be solved by the libraries, such as how best to archive and store digital information, make connections between different information sets, allow information to be findable across disparate information types, and deliver information. Harvard's Task Force suggests that these unanswered questions present an opportunity for significant leadership that will impact scholarship for generations to come.

CHARGE

The Technological Futures Working Group was asked to consider the changing nature of information behaviors, including scholarly publications and communication. They were also asked to identify what additional technological functions can be centralized at Harvard based on the success of HOLLIS and if the University should develop a centralized infrastructure for digital projects. Further committee time was spent in considering how the University can be sure to have the technical expertise to support new fields of scholarship that will require increased use of metadata and other technological tools, as well as how the libraries can strengthen their relationships with IT organizations given the substantial number of systems and increasing amount of digital content being managed by the libraries. The group was also asked to look outward, and determine ways in which Harvard can use new technologies to contribute further to world scholarship.

GUIDING OBSERVATIONS AND PRINCIPLES

- The world is in the midst of a major transition from analog to predominantly digital formats. The rate of change is as high as it has ever been in history, and predictions about specific technologies over the medium to long term will be of limited value. Statements about how specifically technology can help over the next five to ten years need to be calibrated by an understanding of how rapidly changes are taking place in the information technology environment every year.

- The libraries are already dependent upon technology. Major systems like HOLLIS and VIA are essential to the libraries functions in carrying out their internal operations and achieving productivity. However, the process by which these existing systems are upgraded or new systems are developed is slow, which impacts overall operations of the library. Greater development must be made in this area to maximize our existing systems.

- Harvard should determine and describe in clear terms, how technologies can provide support for the libraries in meeting their goals of supporting the teaching and scholarly missions of the University. Technologies will allow researchers more flexibility as scholarship becomes increasingly interdisciplinary. At the same time, the University must bear in mind the different skill sets and varying comfort levels in terms of using new technologies.

- A one-size-fits-all approach to how technology can support and enable the functions of the library would be insufficient. Multiple products and service approaches are required in the Harvard libraries. But some core technologies are best provided in a common framework by the center of the University. This should enable the delivery of customized services and products.

Additionally, in pursuing the recommendations below and in making the suggested decisions, the library must consider its audience, which may be worldwide but which is not everyone. The arena of technology demands scope, and it is important to identify the constituencies (the scholarly community, professional communities, etc) we are committed to serving.

RECOMMENDATIONS

SHARED ADMINISTRATIVE SERVICES STRUCTURE
1. Evaluate the structure of library technical services.

Many of the technical services and facilities that are currently distributed throughout the libraries should be evaluated to determine how they might best be coordinated among the faculties. Financial efficiencies that might be gained at a central level will need to be considered in conjunction with any losses in function and service at the local level. Similar activities such as cataloging, processing, and acquisitions might be considered for greater coordination among faculties.   To achieve such change, attention will need to be given to providing well-designed work spaces, robust and effective systems, proper equipment, etc.

RATIONALIZE AND ENHANCE IT SYSTEMS
2. Create an internal centralized infrastructure for digital projects.

Building upon its already successful efforts like DRS and HOLLIS, the Harvard libraries must collaborate to develop a common platform that can work at an individual level for the autonomous libraries. As stated previously, a one-size-fits-all approach would be insufficient given the broad scope of activity among the Harvard libraries. Technology can support and enable the individual functions of the libraries using multiple products and service approaches, but many core technologies can operate on a common framework.

Digital and network technologies should be designed to provide a platform that will provide new opportunities for Harvard's diverse libraries to carry out their individual functions and to find opportunities to collaborate. Harvard should build upon its recent leadership in developing a digital infrastructure, but should realize that we will proceed cautiously and that we are still in the earliest stages.

3. Design flexible online architecture to make the library websites coherent, navigable, pedagogically viable, and accessible.

The contemporary library is increasingly dual, existing both as a brick-and-mortar collection and as a collection of online resources and services. While the complementary and tenuous relationship between these two faces varies across Harvard's libraries, it is clear that a wealth of resources, both in content and services, is currently available to the research community through the libraries' online portals. Less clear is how that information might be navigated by the student or researcher. Indeed, through extensive consultation with the community, the Task Force has heard from students, librarians, faculty, and other interested parties how singularly difficult it is to find the resources which, when discovered, prove invaluable.

The Task Force recommends that the libraries formulate a vision for mapping the online resources and coordinating technologies available across Harvard, including integrating the libraries' resources with other online entities such as course platforms, iCommons, and research collaborations. All members of the Harvard community should be able to locate and avail themselves of available resources, understanding, of course, that some resources might nonetheless be available only to certain constituencies. In creating a user-centric cyberspace for the libraries, it is critical to understand that librarians and IT staff are at the front edge of working with users, and should be a part of creating a more agile and innovative approach to using, designing, modifying, and embracing technology.

Just as the carefully planned and often glorious architecture of the library buildings can carry tremendous symbolic weight and increase the functionality of its mission, so too does this reflect upon its online architecture. Creating a thoughtfully-constructed and agile online environment will be crucial for the libraries in continuing to serve the changing and increasingly digital research needs of the Harvard and wider scholarly community.

4. Review and update library systems regularly.

Harvard library systems support a range of both user- and staff-focused activities and needs. As library collections have become more complex and user behaviors and expectations have evolved, the number and types of systems have increased. These systems facilitate the acquisition, cataloging, and processing of items, as well as their subsequent discovery and circulation. A number of systems facilitate the online use of digital objects for which other systems ensure the long term preservation. In order to serve this broad set of needs and users, the range and complexity of systems require extensive expertise to develop, implement and manage it, training of staff and users, investment in IT infrastructure, and integration with administrative and academic systems.

A review of current system investments is needed in order to identify clearly the priorities that align the Libraries' efforts to support the breadth and complexity of research, teaching, and learning, to enable innovation and early adoption of technologies, to facilitate curating born-digital objects resulting from faculty research, and to continue the libraries' investment in digital preservation by considering how to collaborate with peer institutions.

5. Realign technology decision-making with University-wide priorities for the libraries.

Currently, the University Library Council (ULC) prioritizes projects deliberated by and presented to its membership by the three coordinating committees. There is no strategic framework provided in which to choose one project over another. Decisions are based on the autonomous

libraries' priorities, available resources, and backlogs of projects from previous years. This is a suboptimal decision-making model for the development of new technology. Decisions are not tethered to long-term priorities and the Office for Information Systems (OIS) is often pulled in multiple directions. The long-term plan for OIS development at the core ought to be driven by the vision for the library system as a whole. The emphasis in terms of time and development dollars should be allocated to work that supports strategic priorities that emerge from the library's leadership vision. For instance, Harvard might determine that it wishes to be a leader in hosting and producing Harvard-created scholarly materials, and therefore ought to ensure that shared development dollars and time support this key function.

6.   Encourage innovation by providing greater financial incentives for innovation within the libraries.

Harvard should not always be at the cutting edge in terms of trying out the latest product in information systems; the mission of the University is quite different from that of corporate-sector technology developers. It should, however, be doing more than it does at present to help shape the predominantly digital future that lies before us. The library should find new ways to integrate industry and peer institution successes into our own technology program in a manner that will best serve the University's mission.

The current technology investment from the University and its component faculties is too modest for significant innovation to occur. For change to be made, additional resources must be dedicated to imagining and building information technology systems that will best serve the users, both current and future, of the University's libraries.

7.   Listen carefully to the changing user-base of the libraries.

The needs and levels of familiarity with technology are rapidly shifting among the libraries' patrons. Focus groups and interviews need to be conducted regularly, and usage metrics should be studied consistently for trends. The libraries at Harvard must describe in clear terms how technologies can help meet their goals of supporting the teaching and scholarly missions of the University. The needs and expectations of library patrons will not only change, but vary. Each library should ensure a framework is in place for monitoring what its users require to meet their research and teaching needs. The decisions that these libraries reach should influence OIS priorities.

8.   Design intuitive technologies for all users with the presumption of substantial self-service.

Though services provided by librarians and other staff members in the library are critical to making the library accessible to its users, many of our users prefer to explore our resources independently—something which, for many students and faculty, increasingly means exploring those resources online. While it provides new methods of research, the digitization of materials should also enable, and not preclude, more traditional methods of research that are valued—for example, the serendipitous browsing of shelves and the "beauty of the call number." It would not be hard to imagine conceiving of a browsable digital representation of books on a shelf, which would preserve older methods while working with digital materials. This is an area in which partnership with other universities, research institutions, and libraries will be of paramount importance.

The library's home page and electronic resources are one of the key points of interface for many of our users both on campus and around the world. The interfaces should be dynamic, accessible, and encourage interaction and exploration among its users. The library must also emphasize improvements in search and discovery capacities.

REVAMP THE FINANCIAL MODEL

9. Produce a funding model which will sustain technological innovation and change.

New technologies will have a major and growing role in contributing to the improvement of research and teaching functions of the University. Within the library system, we recognize that consistent and sufficient funding needs to be allocated to the development and maintenance of technological systems.

The current governance and funding model for library IT is cumbersome and increasingly at odds with an environment of rapid change. Furthermore, it tends to emphasize tweaking and slow evolution of existing systems at the expense of new developments suited to an evolving environment. A new model should be proposed whereby the libraries set goals and HUL is responsible for defining and implementing systems, whether built internally or acquired. This will require a new model for technology governance and funding.

COLLABORATE MORE AMBITIOUSLY WITH PEERS

10. Continue to develop the activities and scope for the Office for Scholarly Communication (OSC).

New modes of communication with the advancement of digital technology mean that the scope of OSC must continue to grow. For the University to retain equal footing with external publishers in negotiations as well as to pursue the University's mission to disseminate information, it will be critical for the University to explore new areas in this domain. In addition to the growing digital repository for Harvard produced scholarship, the OSC could potentially offer, for example, copyright advisory services for Harvard researchers and a central platform for electronic journals, monographs, and other materials produced at the University. In terms of the growth and sustainability of the repository itself, it is crucial that some existing library roles evolve to include regular, ongoing support for faculty use of the repository.

Harvard should take a more active role in supporting its scholars in publishing and preserving scholarly works. This capability would build upon the work of OSC and would require additional resources and potentially a reallocation of some existing collection resources, as the OSC promotes new models for institutional funding of journal publication and access. Though some of these functions could be handled outside the libraries, at the Harvard University Press for example, the libraries are a rational place to host these services.

RESEARCH AND TEACHING WORKING GROUP

Without libraries, the research university would be unable to advance its mission of research and teaching. Harvard's libraries contain the information which our scholars use to produce new knowledge. The libraries are critical to assisting faculty in course development and in providing its scholars with the appropriate resources. Though the digital era has brought significant changes to the library, its function as a center of information for the academy has not shifted. Technological advancements mean that new means of access need to be navigated, both in how faculty members develop courses and how they conduct their research.

There will be great variation in how information is studied and accessed among and within the faculties at Harvard. Within FAS alone, there exist the arts, the humanities, the social sciences, and the sciences, each of which employs different research materials and pedagogical approaches. Even within these divisions, there is a great difference that needs to be bridged between the needs of undergraduate and graduate students. The demands of the different fields represented within the professional schools often require their libraries to respond with quite different approaches.

CHARGE

The Research and Teaching Working Group was asked to identify how the faculty and students use librarians and library services to aid in their research and teaching, how research and teaching will change in the current and future technological landscapes, how the relationship has changed between research services and their intended constituencies, and how it will change in the future.

GUIDING OBSERVATIONS AND PRINCIPLES

- As information technology becomes a more dominant feature of the twenty-first century library, its patrons must be able to access and use newly developed and often unfamiliar resources. Harvard's librarians and staff are critical in maximizing the efficiency and efficacy with which patrons use the library and in ensuring that the information for which users are looking can be found. Accordingly, they will need to acquire new skill sets and areas of expertise as technologies shift. In the current budgetary landscape, libraries are cutting back on comprehensive professional development for library employees, but now, more than ever, it will be critical to ensure that users are able to receive the best possible support.

- With the changes in the nature of information itself, librarians must have the necessary skills to organize information and enable its accessibility, not only in libraries, but through all venues and media by which faculty and students seek out information, such as with mobile devices.

- Libraries can be valuable resources in contributing assistance to course development. As faculty members experiment with new pedagogical approaches and technologies, librarians can be helpful in navigating the dense resources of the University's library and in highlighting relevant resources. Already, there are many examples at Harvard of faculty working with the library to develop courses and enrich their programs of instruction with information literacy. These activities will become more valuable as digital technologies become more prevalent across the University.

- Librarians need to be excellent relationship-builders of networks around the world. They need to build and maintain these networks so that Harvard can continue to collect and access the information it needs to create world-class scholarship.

RECOMMENDATIONS

SHARED ADMINISTRATIVE SERVICES STRUCTURE

1. Convene a cross-school committee on educational technology and information literacy.

In providing assistance and resources for research and teaching at Harvard, the libraries are joined by many other of the University's information, research, and teaching support organs (e.g., the Bok Center, iCommons). These units all provide unique, valuable, and constituency-sensitive support, but they are often limited by individual mandate, and attempts at collaboration or joint service offerings can be hampered by administrative obstacles. A cross-school committee would coordinate the highly complementary perspectives and skills of these many units across the campus, allowing the libraries and these partners to strengthen and expand their support for innovative research and teaching. There are certainly differences in pedagogy, curriculum, and faculty-library relations across the professional schools and between the graduate schools and the College. However, a stronger and more robust network of relationships and partnerships among these organizations would prevent duplication of services and would allow these offices to share their expertise with a wider community.

2. Create a single portal for faculty access to library and other teaching and information support resources.

The plethora of offices and resources available to faculty seeking research or teaching assistance can be daunting and difficult for faculty and their teaching fellows to navigate. Many faculty members observe the dispersed loci for instructional support, technical support, and library support and assume that it would be easier to approach the task on their own, rather than begin to involve so many separate locations and functions in their teaching. Each faculty should consider instituting a single point of entry for information support resources, whether an office, website, or department liaison. This would provide a simplified point of entry for faculty to explore and incorporate the services made available by librarians and other information partners. Such teams would also benefit from integrated, cross-functional expertise from within the libraries (including bibliographers, taxonomists, information specialists, reference librarians, data specialists, etc.).

3. Engage students in the libraries early and throughout their academic careers for research and research instruction.

The Task Force has heard from numerous undergraduate students who came to the libraries relatively late in their program of study, as a result of either being unaware of the resources available or being intimidated by the sheer volume of resources. This problem might be alleviated by more consistently training students in the value and accessibility of the libraries as early as possible in their academic experience, perhaps even structuring a significant library presence during freshmen orientation. Another approach might be through the development of an undergraduate information research component. Though it is not needed or desirable for every course, students would be at a great advantage if requirements for at least some of their courses included developing research skills and information literacy. Additionally, by incorporating new

technologies in research instruction and other offerings, faculty could make the course experience more interactive and engaging for their students.

4. Invest in professional development relevant to the new roles and responsibilities of librarians and IT professionals.

Librarians serve an increasingly important function in the digital age as the curators of the new information landscape, helping researchers and students sort credible information from less credible information, and use that information in ways that support their research and teaching. This requires a constantly-updated skill set, as these professionals must stay on the cutting edge of the knowledge base and skills associated with the changing nature of scholarship and education, including new forms of information, knowledge dissemination, and instructional technologies. Encouraging professional development will ensure that Harvard maintains a world-class teaching and research support environment. Professional development is critical to maintaining and expanding the many areas of librarians' expertise in this regard.

As new formats of scholarship are produced in the digital era, librarians will need to develop and expand their skills in data curating, data and text mining, information discovery, as well as understanding of the issues related to digital content stewardship, new forms of publishing, and intellectual property rights management. In cross-institutional, collaborative research initiatives, libraries need to decide who will take responsibility for the stewardship of data and new forms of scholarly output.

5. Develop a program for internal knowledge sharing within the libraries.

Given the wealth of professional expertise within the Harvard libraries, the libraries should establish a system in which knowledge can be shared. This would not only allow best practices within libraries to be shared more fluidly across faculty boundaries, but might also alleviate expenses in seeking professional development training off-campus. HUL should coordinate this process, and might do so by creating a structured barter system that allows libraries to request training in certain areas and to reciprocate by offering training in their own areas of expertise.

In addition to internal education, Harvard's librarians should continue to be thought leaders in the field of library and information science. HUL should provide a forum where peers can share, capture, and disseminate new thinking in a way that brings the University librarians together. Ideally, there should be an associated reward and recognition system for thought leadership, as well as for work in support of strategic administrative change.

LIBRARY AS PLACE WORKING GROUP

Rather than spaces to house particular collections, libraries should be understood as portals onto the collections of the University taken as a whole, in both physical and virtual forms. At present, it is impossible for Harvard's libraries to house and offer immediate physical access to their full collections. There are also growing demands for different kinds of library spaces for study, work, research, and the provision of library services. Developments in digital media suggest the need to re-envision the interface between the physical and the digital with regard to collections access, and to the articulation of space and resources within physical libraries.

CHARGE

The Library as Place Working Group was asked to identify how the physical spaces of the library are presently being used, how they might be used in the future, and how the library has evolved beyond the existing physical models on campus. They were also given the task of determining what constitutes a working library at Harvard and what the physical facility needs of departmental libraries, specialized libraries, and house libraries actually are. Finally, they were asked to consider if the libraries at Harvard should look at other models for storage of physical and digital holdings.

GUIDING OBSERVATIONS AND PRINCIPLES

- Library spaces should be considered functionally, with regard to their value as intellectual spaces, the services they provide, their proximity to significant constituencies, and other critical functions. Physical libraries should also be seen as locations for the provision of library services to patrons and distinctive constituencies. As the digital future evolves, the pedagogical aspects of this function will continue to grow in importance.

- Libraries are used in different ways by constituencies across the University. The variety among facilities serves different groups of patrons well, considering the functional importance of varied ambiances and intellectual cultures within particular libraries and among the different campus facilities. This variety is of immense importance to the University: in addition to being of great symbolic importance in the lives and work of the faculties, libraries are invaluable common intellectual spaces for the University, hosting individual and collaborative study and learning, research, and intellectual discovery.

RECOMMENDATIONS

SHARED ADMINISTRATIVE SERVICES STRUCTURE

1. Document and benchmark current space dedicated to any form of library.

Particularly in this time of budget constraint, space should not be decommissioned from library functions without consultation among the relevant Dean of Faculty, HUL/ULC and the Central Administration. FAS Departments and other entities with smaller libraries within their administration should not have complete autonomy to reduce library spaces or dissolve libraries; likewise, faculty-level decisions about library spaces should be made in view of their impact on

the University as a whole. Currently, there is no centralized understanding of how much space the library occupies or what the costs are to the University to maintain the space.

2. Account for the economic value of library space across and within faculty and Central Administration budgets.

Currently, library space is disparately accounted across the University and within the FAS. Library space should be accounted as either a quantified in-kind contribution to the library budget by the faculty or tub, or a charge paid by the library unit. Libraries within FAS and other faculties that are currently considered departmental or tublet expenditures should nonetheless be seen as library spaces and expenses for the faculty itself, as well as parts of the University's overall library system. The value of any space removed from library deployment to other uses should be accounted as a reallocated asset in relation to the library budget, or a cut.

3. Consider library spaces functionally, with regard to their value as intellectual spaces, the services they provide, their proximity to significant constituencies, and other critical functions.

Spaces should not be evaluated exclusively according to the need to house particular parts of the collection, even when dedicated funds connected to that library lead to collecting that material. Digital means of browsing the complete collections of the University should be enhanced. On-site collections should be curated in relation to teaching, research, and the discovery needs of—and aspirations for—constituencies for a given library space, rather than simply aggregated as increasingly arbitrary representations of the more fulsome physical collection. Sizing of the on-site collecting in a particular library should be evaluated in terms of the highest and best use of space given (a) its potential configurations, and (b) on-site needs for collection in view of efficiency versus off-site storage and access. When overall cost efficiency is gained, access to parts of the University's collections stored off-site should be made possible for libraries that were not the source of the material's acquisition.

4. Facilities should continue to vary in terms of their spatial attributes.

Harvard's libraries vary widely in form, and the variety is highly valued by the members of the Harvard community. Some libraries are oriented toward a particular constituency, and fulfill distinctive symbolic needs and purposes. Each faculty should, if it chooses, maintain a flagship library for the purposes of:
- shaping the culture of its intellectual environment, and building a sense of identity within that, as a distinctive part of the University, with distinctive mission, and
- conveying that culture and image within and across faculties, and beyond the limits of Harvard.

Other library spaces with a less symbolic role are oriented instead toward distinctive functions and/or distinctive constituencies; they often have varied and unique ambiances, and are also central to the life of the University. For example, Lamont is a primary place to engage with undergraduates and a correspondingly social and casual ambiance; additional space to this end, sharing the flow between the social reading rooms and the new café, may be warranted due to demand and number of constituents served. Widener proves crucial in a parallel way to students in certain fields at the research phase of their work. The Fine Arts Library has special resources for dealing with visual materials that are appropriately housed primarily in a single, separate facility, and thus warrant being sustained on this functional and spatial analysis.

5. Evaluate how the departmental, special, office, and other research libraries are utilized and if the current space allocation is optimal.

There are significant costs and benefits to sustaining a particular facility as a differentiated space relative to the resources of the faculty and the University libraries as a whole. Decisions about continuing to collect in an area should be seen as completely independent of the decision to sustain a particular library as a physical space. Much of this issue pertains primarily to the libraries under the FAS.

These spaces should be carefully assessed to see if they are being used optimally. There are many factors worth considering in this review, including: the duplication of collections, size of constituencies served, space limitations that suggest higher or better use of limited space long-term, and the pedagogical effects of division into traditional disciplines given the interdisciplinary aspects of many fields of contemporary scholarship. Many of these libraries do not have staff and do not actively acquire volumes.   Current library spaces often do not reflect contemporary departments and interdisciplinary work.

The overwhelming majority of smaller and specialized libraries belong to the FAS. The FAS should consider integrating several existing libraries. However, care should be taken to sustain a significant number of specific libraries intended to serve physically disparate constituencies and intellectually differentiated fields with specialized library needs. Criteria to determine what types of space are needed to serve specific needs should be established within the faculties and libraries.

Departmental Libraries. There are 16 departmental libraries within FAS. Given the duplication of collections, size of constituencies served, space limitations that suggest higher or better use of limited space long-term, and the pedagogical effects of isolation into traditional disciplines that now stands in stark contrast with the interdisciplinary aspects of many fields of contemporary scholarship, the value and efficiency of these libraries should be examined.

For example, ten of these departmental libraries are located within Widener. Though each of these libraries is small—often only one or two rooms—together they take up a significant footprint within the Widener building. These departmental libraries are under the administration of their parent departments, located elsewhere on campus, and not under the administration of the HCL. Though these libraries are located within a central and heavily utilized library location, they are not open to most library patrons and remain locked for the majority of the time. The departments do not contribute to building operations or utilities. These libraries were granted space in Widener at earlier times but have not been re-evaluated with an eye toward how they might best be managed or the space best utilized.

The Working Group believes that the FAS should carefully consider whether the value that these libraries deliver to the departments can be better served through a different arrangement, allowing the Widener space to benefit a broader range of users. One possibility would be to put the collections and space under Widener's control, consolidating some of the departmentally allotted space into reading rooms open to a wider public; another possibility would be to integrate them fully into the libraries. Regardless of how the space is used, the financing of the space must be rationalized.

Special, Office, and Other Libraries. There are 19 different spaces that hold special, office, and other research libraries at Harvard, such as the Biblioteca Berenson of the Villa I Tatti or the Wolbach Library at the Harvard-Smithsonian Center for Astrophysics (see Appendix D for the complete list). Central Administration, HUL, HCL, and the faculty dean, where relevant, should consider whether these libraries warrant being sustained as separate facilities in the long term. Aggregation of resources and expertise across some of these, or into more generally oriented libraries, may render some of these collections and resources more accessible and facilitate research, as well as proving more efficient in the long term.

House Libraries. The 13 House Libraries are highly valued by undergraduates as intellectual spaces for study, collaboration, and research. They must be maintained but re-envisioned. Nine of these libraries maintain research collections, with varying degrees of depth and breadth. The remaining four function as reading rooms. Given the changes that have taken place in the methods students use to undertake their work, these spaces should be assessed as to how they might best serve their constituencies and care for their collections. Ambiance and access to technology are more important than the presence or development of the collections; the fact that the majority of House libraries do not currently develop their collections or circulate their texts supports this conclusion. Some educational outreach focused on particular library skills relevant to undergraduates should be considered for these venues, offering training in the skills discussed under the Research and Teaching section.

6.   Over the long term, a University-wide rare and special collections facility will be necessary to house appropriately items needing special environmental conditions.

Harvard is the steward of an abundance of the world's rare and valuable material. Though there are many spaces on campus that are environmentally appropriate and secure in which we house such materials, including Houghton, Schlesinger, Baker, and Pusey, there are many collections scattered throughout the University that warrant improved facilities to ensure their preservation for future generations and to provide appropriate levels of security. By housing many of the divergent collections in one central location, the University can provide optimal conditions to ensure their longevity and provide potential cost savings to the various faculties by sharing expense. This new facility would open up space that had previously been allocated to the rare and special collections in the various libraries.

7.   Evaluate the location for technical and other realigned services.

Some process-intensive services currently distributed throughout the libraries should be considered for consolidation, based on a cost/benefit analysis of efficiencies gained versus any functional losses not being pursued locally. Preservation facilities should be consolidated to the extent that long-term efficiencies can be gained. Cataloging, processing, and acquisitions should be considered for at least partial consolidation; an offsite location for these services should be entertained. Attention needs to be given to the creation of productive, collegial workspace, and to the quality of interactions with relevant collections and library staff in on-campus libraries.

8. Study and re-envision the off-site storage model of the Harvard Depository.

Though its model was designed to be dormant storage, HD currently houses 45% of the University's collection. It is used much more frequently as a circulating library than its original design intended, and yet is not organized or managed as a collection itself. The result, since design and use have bifurcated, is likely a more costly solution overall for the individual libraries that house parts of their collections in HD. Given the centrality of HD to the University's libraries, HD requires a thorough review that must include the following considerations:

- The ideal circulation model of offsite material needs to be clarified. A preferred model for interfacing digital with physical access and/or circulation needs to be developed in view of existing copyright limitations, balancing speed of delivery with cost efficiency. The best means of patron access to off-site stored materials needs to be re-evaluated, attending to the cost of on-site patron access versus the full cost of remote delivery in the current or any projected model, assuming an increase in demand. An on-site reading room for the next phase of off-site storage may be more efficient than remote delivery, given the projections in size of the collection ultimately housed.

- Management of the circulation of off-site materials needs to be centralized and upgraded. Policies should provide strong incentives to library staff to minimize unnecessary physical circulation to and from off-site. Digital HOLLIS access to front and back matter of all future items sent to HD should be included as soon as possible to minimize patrons' exploratory calls for material. All materials that circulate from HD should have this information scanned and added to their records. Best practices concerning what is sent to or decommissioned from HD when it circulates should be re-evaluated, then adopted across the library system. Currently, the selection process of what is sent offsite varies widely. Financial incentives to minimize circulation should be instituted.

- Planning for a new, additional storage facility should begin with these specific functions in view:
  o Strong consideration should be given to a site either proximate to campus (e.g., Allston or Watertown) or to public transportation directly available on the Cambridge campus.
  o A half-day research trip should be feasible, inclusive of time to collect and consult materials.
  o Reading/consultation facilities should be available on-site to reduce off-site delivery and circulation. The automated model (ASRS), scaled, should be evaluated as a promising option for materials storage and delivery in view of increased size and demand for circulation, and the environmental workplace challenges of HD (temperatures, etc).
  o A new facility or facilities should be scalable for storage of 50 years of collection increase at current projections, realizing that digital developments may reduce the collection of physical materials.
  o Optimizing for slower growth of this new facility should be included in the economic projections.
  o When the new facility is functional, HD should be evaluated as to whether it might more efficiently function as dark storage as originally conceived, with any HD materials called returned to the new facility, rather than HD.

- The long-term financial model of off-site storage needs to be reconceived according to the role of housing and making accessible the majority of Harvard's physical collections. Digital access should be optimized when legally possible and efficient compared to physical access. Physical access to materials should nonetheless remain available. Once a new facility is functional, patron-driven circulation of materials to other Harvard libraries should be evaluated in terms of cost-efficiency compared to on-site access to materials at the new facility.

- The short-term financial model for HD should be readjusted. Best practices to minimize volume circulation need to be adopted across the library system. Patron calls to HD for books on the shelf in another on-campus library should be disallowed. Longwood versus Cambridge campus may prove an exception; Countway/Cambridge delivery should be evaluated and optimized relative to HD in terms of time and cost-efficiency.

- The structure of HD fees should be optimized to provide efficiency incentives for circulation and storage decisions. HD policies regarding the management of book space should be evaluated to facilitate optimization. In the case of costs, one solution might be to share the HD circulation and transportation fee between home faculty of the calling patron and the faculty that sent the book to HD. This would encourage the calling patron's library or faculty to manage HD calls in aggregate, as well as encourage the library that purchased the item to manage more actively what they continue to store in HD.

9. **Reconceive the financial model for the University's library system as a whole.**

Harvard should move toward a University-wide approach to issues of funding, space, staffing, library technology, collection management and development, service provision, and resource management.

Many of the proposals outlined in this report will not explicitly save the University money, but they will ensure that the libraries' resources are more fully dedicated to strategic academic priorities. Centralization and consolidation of many functions will make the libraries more efficient and may permit the redeployment of existing funds, compensating for the further budget cuts that are expected. Given the current impact felt at the University from the recent economic downturn, new projects cannot be undertaken without rigorously examining the unsustainable financial model currently in place and devising a plan that ranks academic priorities and secures new funding, perhaps through targeted fund raising or external partnerships.

Conclusions

Much of the strength of Harvard's libraries has arisen from their direct relationships with the parent faculties, who have encouraged deep and specialized collecting, but who now face extraordinary challenges to maintain their libraries. Because the University's collection contains such vast resources, and because academic fields have been relatively insulated from one another, the need for libraries to look to each other for support was often unnecessary; the libraries were able to function successfully as autonomous units, both from an academic and financial standpoint. The demands on the library in the twenty-first century do not permit this to remain so. There is an increasing amount of information produced, with fewer resources available to procure it and fuzzier lines drawn among the fields of interest of Harvard's faculties.

The academic mission of the Harvard libraries must not be compromised. But if this mission is to be met, the University and the libraries must identify their common activities and adopt optimal strategies to pursue closer internal and external alignment. If the Harvard libraries are to flourish in this rapidly changing intellectual, technological, and economic environment, the libraries must find opportunities to focus their resources in a more strategic way, so that the health of the system overall can be strengthened.

With the great privilege of holding the largest University library in the world, Harvard holds the corresponding responsibility of its careful stewardship. Its users are able to access one of the most comprehensive research collections available anywhere, often without leaving their own school's campus. Knowledgeable library professionals are able to make direct connections from the collection's holdings to the research, teaching, and learning happening at the University. Harvard, however, also carries the burden of the significant costs associated with acquiring, storing, preserving, and making accessible this great collection. As the collection grows, the costs for the University grow accordingly. Also, as the scope and quantity of information produced expands worldwide, the proportion of existing scholarly resources that Harvard can own and preserve diminishes.

The Task Force believes that for the libraries at Harvard to serve their mission effectively in the twenty-first century, the University must initiate reforms based on the five identified areas of focus: developing a system of shared administrative services, enhancing IT systems, reorganizing its financial model, rationalizing the collecting systems that serve a single University collection, and strengthening our external collaborations. Each of these is a significant task. Taken together, they represent a paradigm shift in Harvard's decentralized structure and culture.

Next Steps

It will be critical for the administrations of the University and of the individual faculties to agree that they all share a common task of the highest priority: the re-evaluation of the Harvard libraries' funding model and infrastructure. A task of this significance will require oversight from an administrative body (the implementation work group), adequately staffed and supported, and charged with effecting major transitions within the libraries.

The Task Force recommends that the President and Provost immediately appoint an implementation group to oversee the transitions within the articulated five areas of focus. The group will have a functional mix of librarians, administrators, financial analysts, and faculty who have the University's interest most prominently in view, while also carrying out their service on this work group with a commitment to work independently of any single faculty or department.

One of the near-term tasks to be executed by the implementation group will be considering the reorganization of HD. Though large in terms of scale, HD provides a clear opportunity in which collaboration can produce greater rationalization in structure. Moreover, since collaboration on HD will involve a significant expense for some faculties who are not large users at this point, it may well serve as an incentive for those faculties to move more quickly toward a different funding structure for the libraries as a whole, one in which they would reap more benefits from their contributions. The financial reorganization of HD will demand exploration of a range of possible funding approaches for the University; should one prove successful, it might then be extrapolated to the larger library system.

APPENDIX A: Task Force Charge

Harvard's libraries are among its greatest resources and contribute to the University's global leadership. At this time in its history, the library system faces significant challenges as it seeks to maintain its collecting and to fund other aspects of its core mission. This system, comprised of more than 70 separate libraries, has evolved organically over 371 years, often with too little consideration given to its overall structure.

Many of the components of this system are great treasures, yet the duplication of acquisitions, licenses, and long-term storage space may detract from our ability to fund critical priorities. Several libraries have their own preservation laboratories, digital facilities, archives, and methods of handling special collections. They undertake common activities in incompatible ways, often without reference to the resources and expertise available at the center of the system in places like the Weissman Preservation Center, the Harvard University Archives, and the Office for Information Systems. The creation of HOLLIS showed how all of the libraries could benefit from a centralized service.

This task force is charged with making clear recommendations to the President and the Council of Deans to adapt the Harvard Library system to the 21st century to make a stronger and more efficient library system. This effort is not meant to slow efforts going on within schools, but to facilitate University-wide efforts to rationalize our system. In particular the committee should (1) set clear priorities to tailor the system to the information landscape being created by technological innovation, and (2) propose reforms that will help maintain collections and support other core activities at the highest attainable level.

APPENDIX B: Task Force Membership

Chair, Steven Hyman, Provost, Harvard University; Professor of Neurobiology, HMS

Jeremy Bloxham, Mallinckrodt Professor of Geophysics and Professor of Computational Science; Dean of Science, FAS

Nancy Cline, Roy E. Larsen Librarian of Harvard College, FAS

Robert Darnton, Carl H. Pforzheimer University Professor; Director of the Harvard University Library, HUL

Mary Maples Dunn, President *Emerita*, Smith College; Former Director, Schlesinger Library

Andrew Gordon, Lee and Juliet Folger Fund Professor of History, FAS

Jennifer Hochschild, Henry LaBarre Jayne Professor of Government and Professor of African and African American Studies, FAS

Mary Lee Kennedy, Executive Director, Knowledge and Library Services, HBS

Isaac Kohane, Lawrence J. Henderson Professor of Pediatrics; Director, Countway Library of Medicine, HMS

David Lamberth, Professor of Philosophy and Theology, HDS

James McCarthy, Professor of Biological Oceanography; Alexander Agassiz Professor of Biological Oceanography in the Museum of Comparative Zoology, FAS

Kathleen McCartney, Gerald S. Lesser Professorship in Early Childhood Development; Dean, GSE

Louis Menand, Anne T. and Robert M. Bass Professor of English, FAS

Donald Oppenheimer, Associate Dean and Chief Information Officer, HKS

John Palfrey, Vice Dean of Library and Information Resources and Henry N. Ess III Professor of Law, HLS

Antoine Picon, Professor of the History of Architecture and Technology, GSD

Stuart Shieber, Gordon McKay Professor of Computer Science, SEAS; Faculty Director of the Office for Scholarly Communication, HUL

Laurel Ulrich, 300th Anniversary University Professor, FAS

Clayton Spencer, Vice President for Policy, Harvard University (*ex officio*)

Task Force Staff
    Lori Gross, Associate Provost for Arts and Culture, Harvard University
    Chris Barrett
    Stephanie Gumble
    Julia Topalian

TASK FORCE STRUCTURE

The Task Force divided into four working groups: (1) Collections, (2) Library as Place, (3) Research and Teaching, and (4) Technological Futures. The Working Groups supplemented their memberships with additional experts from the Harvard Library Community. The members of the working groups are listed below.

All of the working groups were asked to consider the effect of the digital revolution on the future of the libraries, what functions of the library might benefit from centralization or decentralization, and how Harvard might balance its aspirations for the libraries to be open and accessible against the specific needs of its community. In addition, the groups were given specific charges to frame their discussions, which were detailed in the text of the report.

TASK FORCE RESEARCH AND CONSULTATION PROCESS

The Task Force and its working groups have based their recommendations on multiple forms of research: Task Force meetings and deliberations; consultation with faculty, students, and library staff; and an analysis of data and policies from individual libraries.

Task Force meetings and deliberations. The Task Force met four times between March 10th and June 8th, 2009 to review goals, data, research and preliminary recommendation proposals. The four working groups met independently for a combined total of 26 times. The working groups reviewed information specific to their respective charges and refined the recommendations that they later presented to the entire Task Force. The working group chairs and Task Force staff met four times to review the recommendations of the Working Groups and to coordinate efforts across the Task Force.

All of the Working Groups expanded their membership to include additional perspectives from the Harvard community. The membership of the working groups can be found at the end of this section. The Working Groups invited guest speakers to present at meetings in order to better inform their understanding of current campus practices.

Consultation with Harvard students and faculty. The Task Force sought out information from students and faculty through a variety of communication mechanisms. An email announcement of the Task Force was sent to all members of the Harvard community, with an email address to which suggestions, comments, and concerns could be sent. Questions about the libraries were developed for the senior survey. Two focus groups were held for students, one with students from Harvard College, the other with students from the graduate and professional schools. The Working Groups interviewed students and faculty representatives both at meetings and on an individual basis.

Consultation with Harvard library staff. The Task Force hosted two town hall meetings for all members of the Harvard library community. These were held on May 26, 2009 and October 9, 2009. Three email solicitations were circulated for input from members of the Task Force to the University-wide community. A focus group on technology was conducted with library staff.

Library data collection and analysis. The Task Force requested annual report data from the Harvard University Library to understand levels of spending within the libraries, budget

allocation, and changes in spending over the last five years (see Appendix G). An information request was sent to all libraries within the University asking for background data on areas that include their strategic directions, organization, operations, cataloging and technical services, preservation and conservation, user services, and library facilities (see Appendix H). The objective of the information request was both qualitative and quantitative; it asked for concrete data about the libraries' operations and also data regarding program and policy. The information request allowed the Task Force to learn more about the constituent libraries at Harvard and to offer the libraries an opportunity to communicate ideas and offer input.

WORKING GROUP MEMBERSHIP

Collections Working Group
Jennifer Hochschild, chair
Amy Brand, Program Manager, Office for Scholarly Communication, HUL
Robert Darnton
Marilyn Dunn, Executive Director of the Schlesinger Library, RIAS
Andrew Gordon
Bert Halperin, Hollis Professor of Mathematics and Natural Philosophy, FAS
Dan Hazen, Hollis Professor of Mathematics and Natural Philosophy, FAS
David Osterbur, Public and Access Services Librarian, HMS
Richard Thomas, Professor of Greek and Latin, FAS
Laurel Ulrich

Library as Place Working Group
David Lamberth, chair
Nancy Cline
John Collins, Librarian of the Graduate School of Education
Mary Maples Dunn
Tanya Iatridis, Director of the University Planning Office
Antoine Picon

Research and Teaching Working Group
Jim McCarthy, chair
Susan Fliss, Associate Librarian of Harvard College for Research, Teaching and Learning, FAS
Mary Lee Kennedy
Kathy McCartney
Luke Menand

Technological Futures Working Group
John Palfrey, chair
Jeremy Bloxham
Dale Flecker, Associate Director of the Harvard University Library for Planning and Systems
Isaac Kohane
Christie McDonald, Smith Professor of French Language and Literature and of Comparative
        Literature, FAS
Alison Scott, Charles Warren Bibliographer for American History and Senior Collection
        Development Librarian, FAS
Stuart Shieber
Donald Oppenheimer

LIBRARIES WITHIN THE GRADUATE AND PROFESSIONAL FACULTIES (10)

Harvard Business School
Knowledge and Library Services

Harvard Divinity School
Andover-Harvard Theological Library

Harvard Graduate School of Design
Frances Loeb Library

Harvard Graduate School of Education
Monroe C. Gutman Library

Harvard Kennedy School
Library and Knowledge Services
Belfer Center for International Affairs Library

Harvard Law School
Harvard Law School Library

Harvard Medical School
Francis A. Countway Library of Medicine
Henry Coe Meadow Library (New England Primate Research Center)

Radcliffe Institute of Advanced Studies
Schlesinger Library on the History of Women in America

LIBRARIES WITHIN THE FACULTY OF ARTS AND SCIENCES (57)

Harvard College Library
Fine Arts Library
Harvard-Yenching Library
Houghton Library
Lamont Library
Loeb Music Library
Science Libraries:
    Birkhoff Mathematical Library
    Cabot Science Library
    Chemistry and Chemical Biology Library
    Physics Research Library
    Tozzer Library
Widener Memorial Library

Departmental Libraries
African and African American Studies: Raines Library
Celtic Languages and Literatures: Robinson Seminar Library

Classics: Smyth Classical Library
Engineering and Applied Sciences: McKay Library
Engineering and Applied Sciences: Blue Hill Meteorological Observatory Library
English: Child Memorial Library
History: Departmental Library
History of Science: Departmental Library
Linguistics: Departmental Library
Medieval Studies: Paleography Library
Near Eastern Languages and Civilizations: Assyriology Library
Near Eastern Languages and Civilizations: Judaica Library
Philosophy: Robinson Library
Sanskrit: Departmental Library
Statistics: Departmental Library

House Libraries
Adams House Library
Cabot House Library/McCarthy Reading Room
Currier Tuchman Reading Room
Dudley House Library
Dunster House Library
Eliot House Library
Kirkland House Library
Leverett House Library
Lowell House Library
Mather House: Gross Memorial Library
Pforzheimer House: Jimenez Reading Room
Quincy House: Qube Library
Winthrop House Library

Special, Office and Other Research Libraries
Botany Libraries:
Arnold Arboretum Main Library
Gray Herbarium Library
Farlow Reference Library of Cryptogamic Botany
Economic Botany Library of Oakes Ames
Oakes Ames Orchid Library
Career Reference Library (Office of Career Services)
Center for European Studies Library
Center for Hellenic Studies Library
Dumbarton Oaks Research Library (Dumbarton Oaks)
Fung Library (Center for Governmental and International Studies)
Gibb Islamic Seminar Library
Grossman Library for University Extension (Extension School)
Harvard Forest Library (Harvard Forest)
Mayr Library (Museum of Comparative Zoology)
Milman Parry Collection of Oral Literature
Rowland Institute Library
Ukranian Research Institute Reference Library
Wolbach Library (Harvard-Smithsonian Center for Astrophysics)

LIBRARIES WITHIN THE CENTRAL ADMINISTRATION (6)

Harvard University Library
>   Harvard University Archives

Special, Office, and Other Research Libraries
>   Biblioteca Berenson (Villa I Tatti)
>   *Botany Libraries:*
>   Arnold Arboretum Horticultural Library
>   Development Office Library (University Development Office)
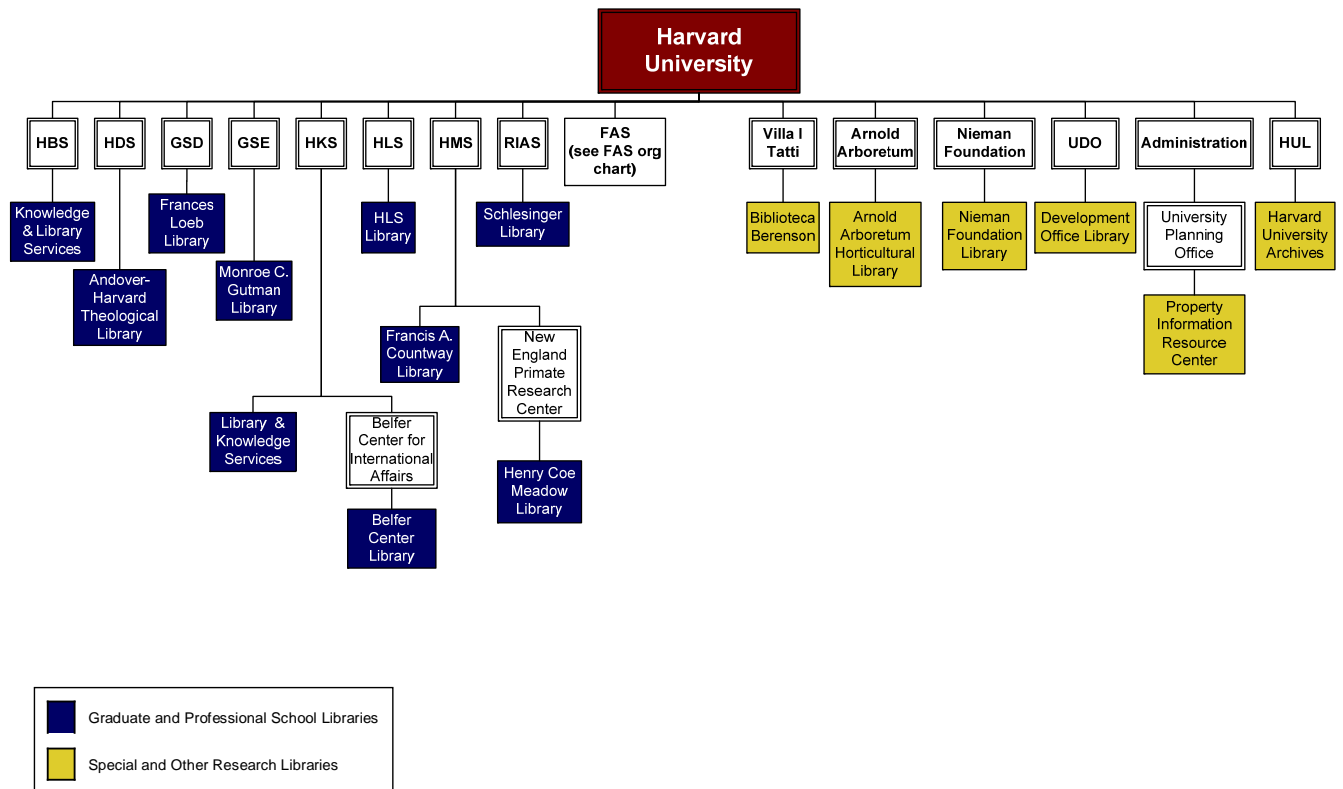>   Nieman Foundation Library
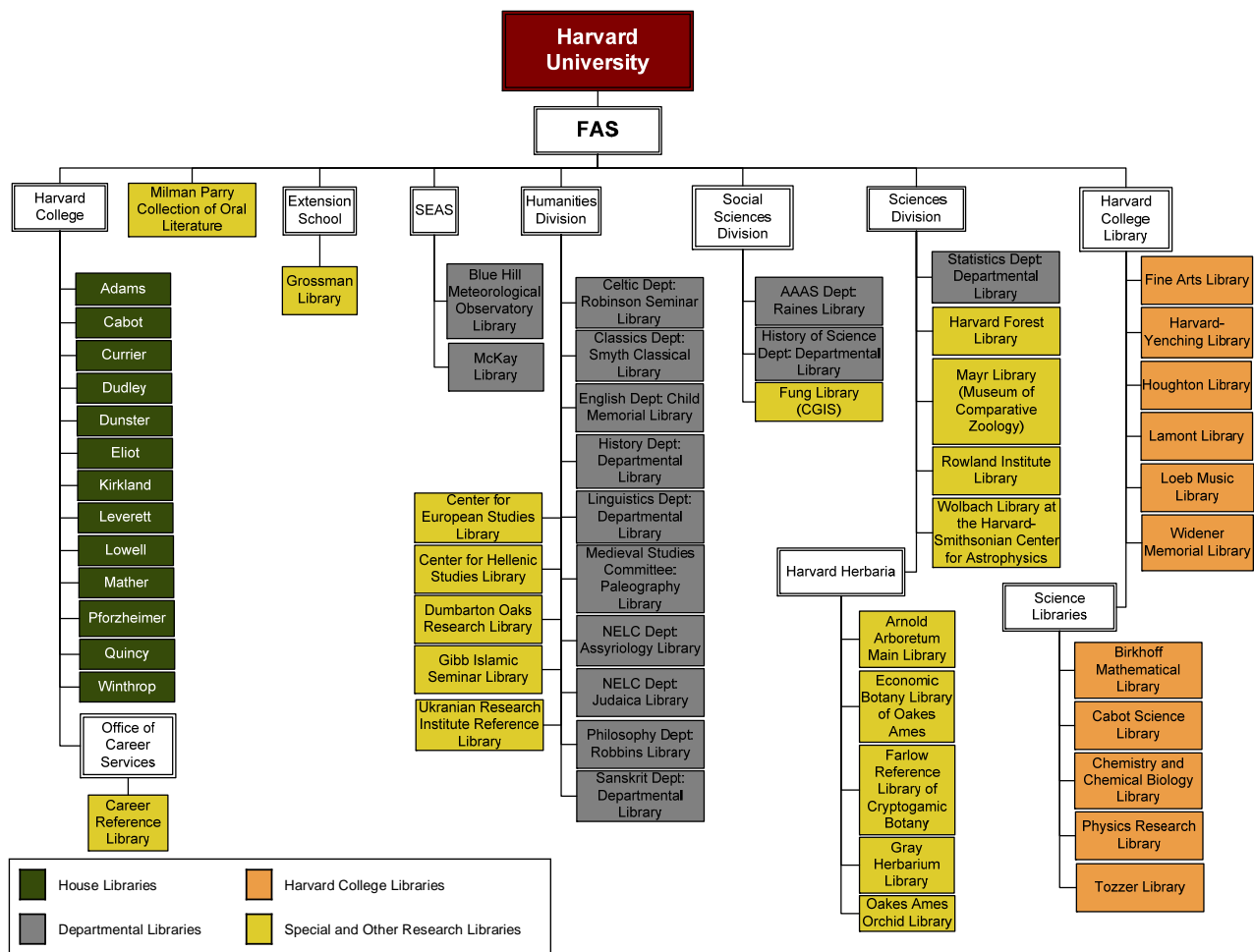>   Property Planning Information Research Center Library (University Planning Office)

TOTAL NUMBER OF HARVARD LIBRARIES: 7 3

UNIVERSITY-WIDE ORGANIZATION OF HARVARD'S LIBRARIES

ORGANIZATION OF HARVARD'S LIBRARIES WITHIN FAS

Harvard University

FAS

Harvard College
- Adams
- Cabot
- Currier
- Dudley
- Dunster
- Eliot
- Kirkland
- Leverett
- Lowell
- Mather
- Pforzheimer
- Quincy
- Winthrop

Office of Career Services
- Career Reference Library

Milman Parry Collection of Oral Literature

Extension School
- Grossman Library

SEAS
- Blue Hill Meteorological Observatory Library
- McKay Library

Humanities Division
- Celtic Dept: Robinson Seminar Library
- Classics Dept: Smyth Classical Library
- English Dept: Child Memorial Library
- History Dept: Departmental Library
- Linguistics Dept: Departmental Library
- Medieval Studies Committee: Paleography Library
- NELC Dept: Assyriology Library
- NELC Dept: Judaica Library
- Philosophy Dept: Robbins Library
- Sanskrit Dept: Departmental Library

- Center for European Studies Library
- Center for Hellenic Studies Library
- Dumbarton Oaks Research Library
- Gibb Islamic Seminar Library
- Ukranian Research Institute Reference Library

Social Sciences Division
- AAAS Dept: Raines Library
- History of Science Dept: Departmental Library
- Fung Library (CGIS)

Sciences Division
- Statistics Dept: Departmental Library
- Harvard Forest Library
- Mayr Library (Museum of Comparative Zoology)
- Rowland Institute Library
- Wolbach Library at the Harvard-Smithsonian Center for Astrophysics

Harvard Herbaria
- Arnold Arboretum Main Library
- Economic Botany Library of Oakes Ames
- Farlow Reference Library of Cryptogamic Botany
- Gray Herbarium Library
- Oakes Ames Orchid Library

Harvard College Library
- Fine Arts Library
- Harvard-Yenching Library
- Houghton Library
- Lamont Library
- Loeb Music Library
- Widener Memorial Library

Science Libraries
- Birkhoff Mathematical Library
- Cabot Science Library
- Chemistry and Chemical Biology Library
- Physics Research Library
- Tozzer Library

Legend:
- House Libraries
- Departmental Libraries
- Harvard College Libraries
- Special and Other Research Libraries

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UNIVERSITY LIBRARY STRUCTURE AND ADMINISTRATION

Harvard's 73 libraries hold over 16 million volumes and are found in 54 different locations. They employ a staff of 1,200 and have a combined operating budget of almost $160 million. They serve the nearly 50,000 students, faculty, and staff on Harvard's campuses, as well as thousands of additional researchers from around the world.

Harvard's libraries are operated within the academic unit that they most directly support. Thus, the Countway Library, the library focused on the support of medical research, is under the direction of the Harvard Medical School (HMS), and the Monroe C. Gutman Library, which focuses on the field of education, is similarly managed by the Graduate School of Education (GSE). Each library at Harvard has its own organization and reporting structure. As a result, there is a great deal of variation in funding and administrative support among the libraries. See Appendix E for an organizational chart of the University libraries.

For most of the faculties at Harvard, there is just one library unit supported by its parent school. The School of Public Health (SPH) does not have its own library, but instead has arranged to compensate HMS in order for SPH students to access Countway Library.   The Harvard Medical School and the Harvard Kennedy School each operate one major library, and have smaller libraries that support different units within the faculty. See Appendix D for further detail. The Faculty of Arts and Sciences (FAS) hosts the great majority of the University's libraries, administering 57 of the 73 in support of 42 academic departments and 13 residential houses. The FAS's Harvard College Library (HCL) coordinates 11 of these libraries and provides the majority of patron and technical services for the FAS.   Beyond HCL, FAS hosts 33 additional specialized libraries that directly support specific academic departments or research centers. These libraries are restricted in whom they serve and to whom they provide access. The FAS has yet another 13 libraries that are operated by the residential houses; they function as critical study space on campus and provide limited access to the University's physical collection.

The 73 library units are coordinated through the Harvard University Library (HUL), a department within the central administration that reports to the President and Provost. HUL serves the libraries as a central service provider for critical functions that benefit from sharing resources across the faculties. In this capacity, HUL has a primary role in coordinating activities such as information technology, high-density physical storage, University archives and records management, preservation, and campus-wide scholarly communication and open access policies.

The University Library Council (ULC) is the advisory body for the HUL Director, the person who convenes and chairs the ULC meetings. Its membership consists of the head librarian of each of the professional school faculties, as well as the HCL's Roy E. Larsen Librarian, HCL's four associate librarians, and HUL senior staff. Currently, the ULC works through four tiers of committees divided into three major areas: Collections and Content, Discovery and Metadata, and Public Services. These groupings include coordinating committees, standing committees, working groups, and affinity groups. Coordinating committees are charged by the ULC or the director of HUL. In turn, the standing committees function at the request of the coordinating committees and provide information to the ULC and HUL in order to identify issues as well as to inform decisions and subsequent activity.

THE LIBRARY COLLECTION

Harvard's library collection is the largest held by an academic institution and the result of significant financial commitments from the University over the last four centuries. In its holdings are over 16 million volumes and items that include manuscripts and archival records, as well as audio, visual, and digital records. Harvard has historically viewed teaching and research support for the present and future generations of scholars as critical to its mission; its success in this area contributes directly to its reputation as a premier research university.

The collection that has been assembled is the result of concentrated efforts of the independent libraries. Some libraries have a highly specialized focus, such as the rare and special collections in Houghton Library, and the resources on the history of American women's lives and activities of the Schlesinger Library. Other libraries are vast and diverse in scope, like Widener Library, which holds comprehensive collections in the history, literature, public affairs, and cultures of five continents and in over 100 languages. Libraries purchase items that contribute to the record of scholarship for their respective missions. In many instances there is overlap between the separate faculties, and duplication of volumes does exist within the physical collection. In recent years, the University has become much better coordinated in reducing duplication, and developing a more centralized process for purchasing electronic resources. However, this more coordinated collecting strategy for physical items presents additional questions as to which faculty should purchase the volume, where it should be housed, and who is responsible for its maintenance. For example, if the FAS were to purchase a religious text, they would also pay to store and conserve it for its lifetime, even though its heaviest users might be students and faculty from the Divinity School. The elimination of duplicates has also led to the potential for lacunae to develop in the University's collection—faculty libraries might often wait to see if another unit will purchase a volume that is cross-disciplinary. In doing so, the faculty can purchase other volumes in its stead, but the result of this waiting game is that sometimes the volume is never purchased.

The acquisition and management of shared e-resources are coordinated throughout the University through the Digital Acquisitions and Collections Standing Committee (DAC) which reports to a subcommittee of the ULC. These shared e-resources include purchased and/or licensed digital collections and databases that are available to all users of the Harvard libraries. The DAC places special emphasis on coordinating access to interdisciplinary resources of mutual concern and interest through equitable cost distributions among the faculties.

Harvard actively ensures that its collection can be accessed by future generations of scholars and maintains a strong dedication to preservation and conservation. There are 21 sites on campus engaged in collections care, management, and reproduction for the libraries. Eight faculties operate their own smaller-scale preservation facilities to maintain the condition of their general collection; other libraries choose instead to purchase these services from the largest of the facilities on campus, the HCL Collections Conservation Laboratory and HCL Imaging Services. The HCL Conservation Lab is a large-scale operation inside Widener that cares for the bulk of the University's circulating collections from the 18th century and later. HCL Imaging Services provides high-quality digitization of and metadata for a range of materials and formats, including rare books, manuscripts, maps, and photographs. Reformatting items from print to digital not only protects endangered library items but also extends access to Harvard's collections to a much wider audience. Conservation efforts for all the faculty libraries' rare, unique and most valuable items are cared for by the Special Collections Conservation Laboratory, housed within HUL's Weissman Preservation Center. The Weissman Center also provides additional services to the University's libraries that include training and outreach for library professionals, emergency preparedness and on-site response, collection condition surveys, environmental monitoring, and preparation for digital reformatting.

USER SERVICES

Across the University, librarians and library staff perform a range of patron services that include, but are not limited to, collection development and bibliographical research, cataloging, preservation, IT infrastructure building, departmental and faculty liaisons, reference and research support, and course content development. It is not unusual for a librarian or staff member to split his or her time among several different highly demanding and highly specialized tasks in any given day, especially in this era of budget constrictions.

Yet the areas of expertise demanded of librarians only continue to increase and change. Indeed, with the changes being wrought across publishing and libraries as a whole by the possibilities of a digital age, librarians are becoming less the accumulators of physical materials and more the stewards and curators of information, varyingly accessed, with significant subject matter expertise in the realms of information, research and learning, and the disciplines they support. Course materials and scholarly resources have migrated online, and librarians have responded by generating unique guides to help students and faculty navigate these new digital spaces, and by adopting new media to the research and teaching taking place on campus. Proliferation of digital data and materials has made the reference librarian an instructor in information literacy and research skills, helping library patrons learn how to navigate the daily-increasing wealth of knowledge available in print, in artifact, and online. The expertise and experience of reference librarians and support staff are indispensible to research and teaching at Harvard.

Though research services have long been an established role within the library, curricular support for students and faculty is becoming increasingly prominent on campus. Librarians within several of the faculties have partnered with faculty members in developing the content for new courses. These librarians contribute their expertise on how to identify, obtain, evaluate, and use information in the creation of knowledge, often in partnership with other curricular support units which develop computer, visual, and media literacy. In a rapidly-changing scholarly environment, this collaboration between faculty and librarians has been found to be profoundly valuable, and several initiatives are in place across the University to increase the number of such partnerships. One example of this is the Library Resources page which now loads automatically with every course iSite in FAS. This is a portal for students who want to know how to get started making the most of the libraries in their classes. The page can also be customized for each course by a librarian partner.

LIBRARY SPACES

There are 56 physical buildings for the libraries at Harvard, 54 on the Cambridge and Boston campuses, one in Washington, DC, and one in Florence, Italy (See Appendix I for a map of Cambridge and Boston locations). The library buildings are some of the University's most iconic, designed as temples of learning. Baker, Langdell, and Widener, among others, loom large in their physical and spiritual presence on campus.

Harvard's libraries provide beautiful, quiet spaces for scholarly study and research, as well as invaluable common intellectual and social spaces for collaborative study. The library, however, is no longer a building that provides access to information in print format; the library is now a portal to information that can be accessed in either virtual or physical forms. In fact, many patrons of the library, when accessing electronic resources such as Lexis-Nexis or JSTOR, do not realize that they are using the library in its electronic iteration. The reach of the library now extends well beyond the confines of its buildings, though the structures themselves still remain an important space for the contemplation and research which lie at the heart of Harvard's mission.

The dispersed layout of Harvard's current library spaces is largely attributed to the historical development of the faculties' particular collections. Until the late twentieth century, the site of a library was determined by where its users were located; collections were entirely physical in their composition, and proximity was critical to accessing information. By the mid-1980s, however, the volume of materials collected exceeded the capacity of the library buildings on campus. Given the limitations of space on the Cambridge campus, the University developed off-site storage for rarely used materials. The Harvard Depository (HD) now houses nearly 45% of the University's collection 27 miles away from campus. Though this storage space was designed initially for non-circulating materials, the off-site facility has a high volume of circulation traffic to the Cambridge and Longwood campuses; over 3.2% of its collection, or 218,067 items, were retrieved in FY2007. Materials are requested from HD either through a request in HOLLIS, or directly through the HD website. A courier from the facility makes daily deliveries to 30 drop locations, as specified by the requestor. This process is incredibly efficient: 100% of deliveries occur within 24 hours of the initial request.

Currently, 20 of the 73 libraries in the HUL system store materials in HD. However, at least four smaller libraries anticipate that they will need to make use of HD in the next five years given the growth of their physical collections and their heavy use of electronic resources. Not only will this place an increased demand upon the operations of the off-site facility, it will also be an additional significant expenditure for these smaller libraries. The current financial model of HD places the financial burden for the delivery and storage on the school that initially purchased the volume or item. For example, if a request comes from a student of the College for a volume purchased by the Graduate School of Education (GSE), the GSE will pay the circulation and transportation costs of the volume, currently $2.15 per item.

Individual libraries at Harvard were once able to house and offer complete and immediate access to their distinctive collections. However, given space and budget restrictions, many of these libraries can no longer do so. At the same time, there are growing demands for different kinds of library spaces for study, work, research, and the provision of expanded patron services. Developments in digital media suggest the need to re-envision the interface between the physical and the digital with regard to collections access, and to the articulation of space and resources within the physical libraries.

Library buildings are the location for the provision of library services to patrons and distinctive constituencies; as the digital future evolves, the library's spaces will continue to maintain their pedagogical role in the cognitive life of the University. They are heavily used spaces on campus and students and faculty indicate that they find value in the varied types and locations of library spaces available. There is symbolic importance of many of the libraries in the lives and work of the faculties, as well as functional importance of varied ambiances and intellectual cultures within particular libraries and among different faculties. The variety among facilities serves different groups of patrons well and is of immense importance to the University.

LIBRARY FINANCES

Over the last 25 years, many libraries within the Harvard system have experienced restrictions in their ability to maintain their historic levels of collecting. In a survey developed by the Task Force, budget restrictions and collection acquisitions were cited as the two greatest challenges that they face in the years ahead (see Appendix H). Several factors contribute to the libraries' inability to collect as deeply and broadly as they would prefer: the libraries themselves have reallocated funds within their budgets to new activities such as increased services for users, faculty priorities have shifted away from the library, and systematic budget cuts are being taken within many of the schools. As the libraries see their purchasing capacities diminish, they have also begun to take on collecting in new categories of materials and academic areas. Within Harvard's faculties, research areas are expanding and new departments are being created. Library budgets are not accommodated for the expanding scope of our professors and students,

but are expected to find room for new areas of research within the existing budgets while also maintaining collecting levels in existing areas.

At present budget levels, even if collection budgets enjoyed increasing incremental levels, the budgets would not suffice to cover the costs of collecting. The number and costs of both books and (especially) serials are rising at dramatic rates, compounded by the fact that our purchasing power has diminished as the value of the dollar has decreased. There are also new needs for collecting new formats of information, such as datasets and other born-digital materials. These problems can be found throughout the research library community, but the current financial crisis exacerbates the problems our library system faces. Many of Harvard's libraries will see more than twenty percent cut in their budgets over the next two years, and the collections will feel these cuts keenly. This severe constraint means that the libraries must think even more strategically about how to provide access to an increasingly expanding set of materials.

THE LIBRARY IN THE DIGITAL AGE

The last twenty years have brought a paradigm shift to libraries around the world. Libraries continue to collect and provide access to information apace, but the format in which this information is acquired is no longer dominated by print, but instead a hybrid of print and digital resources.

Though it is likely that students and faculty will shift to accessing the majority of collections through digital means within the foreseeable future (though different disciplines will move at different rates), Harvard's libraries are not yet entirely electronic and never will be. The immediate future presents a need to be able to collect both print and digital materials given that many monographs and current serials are still only available in print. Many materials will remain in print copy; such materials include archives, special collections and the book as an object of study. The originals of unique and rare materials will continue to require labor-intensive physical care, and the University will want to continue collecting such materials. In fact, as electronic access to scholarship becomes more easily and widely available, emphasis on and the development of special collections, both print and digital, will likely grow in importance.

Technology has also created new unknowns for the library. It can be expected that a great majority of scholarship produced now and in the future will be born in a digital format. This means that there will be new, yet-to-be-imagined publication channels for scholarly communications, and thus new types of materials for the libraries to acquire and store. Though much of scholarly communication is still dispersed widely in print format, and many born-digital materials are archived in print form, there is great opportunity for this to shift to primarily digital storage in the future. There are new formats of information for libraries to acquire and catalog. For example, data sets, which are unorganized or minimally structured raw data, are an area that is increasingly relevant to researchers in the physical, biological, and social sciences and should be made widely available to scholars. These data are shared within the research community, but not often acquired by an institutional library. Digital primary sources—blogs, newspapers, government documents, visual images, sound recordings, websites—are also increasingly coming under the purview of library collections.

The new technologies have meant that publishers and libraries can experiment with new structures of ownership and payment. Libraries currently lease some information in digital form, rather than purchasing it outright. Libraries have access to a greater level of information than ever before, but because they do not own the material, and current technology has yet to endure the test of time, it is uncertain how this information will be stored, preserved, and accessed by future generations of scholars. Issues around the preservation and conservation of digital materials have yet to be resolved within the global library community. Not only are there questions surrounding the long-term access of leased digital materials, there are unresolved concerns around the appropriate format and storage of electronic materials that have been purchased outright.
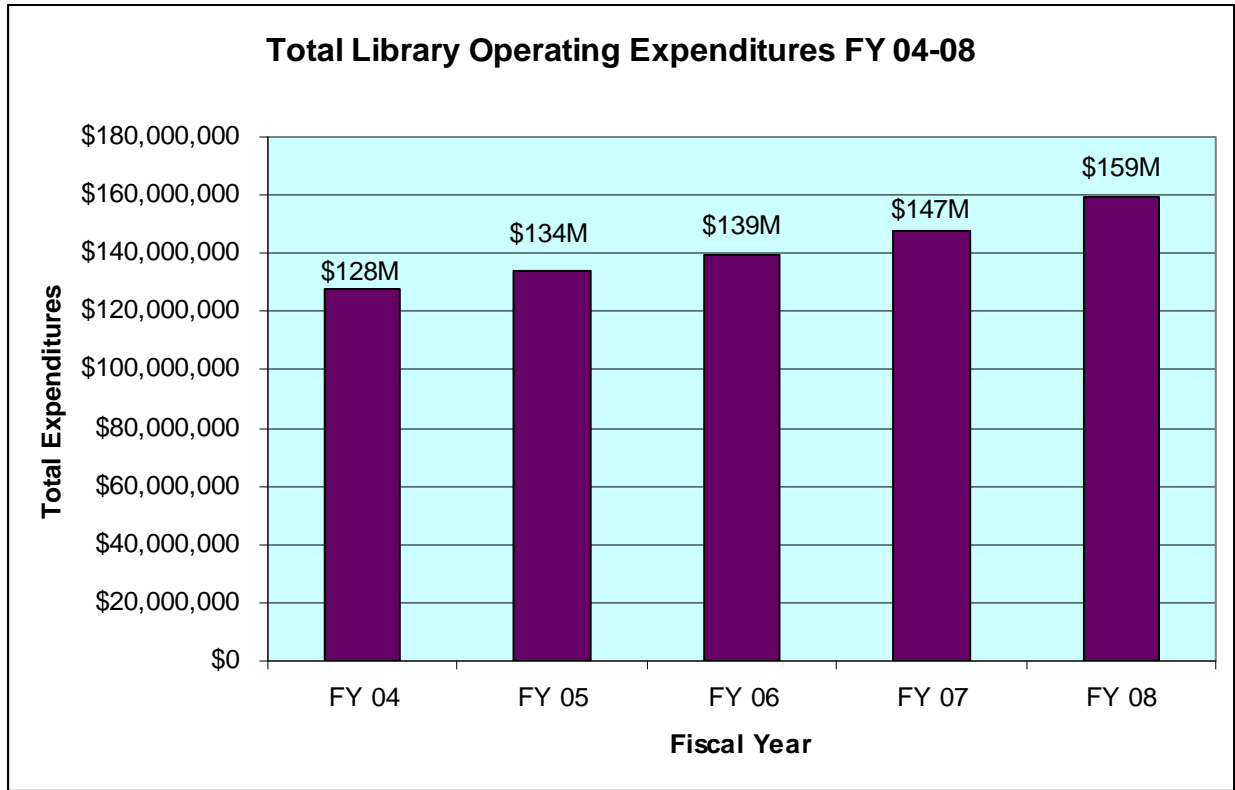
The skills required for teaching, researching, and publishing in this new information ecosystem are also changing. Comfort levels with technology vary greatly within the University community. Students expect to access information on public search engines on mobile devices as part of their daily life; they feel very comfortable in digital information environments. This familiarity with technology, however, can lead to a misunderstanding about how well they can perform research. Despite their comfort levels with searching for information in the digital realm, students require more, not less, research instruction in doing so. For faculty, there is a wide discrepancy in behavior and preferences for accessing information. In some disciplines, scholars are quite content with online databases as information sources and are adept in accessing them; in others, some faculty members strongly prefer printed materials and find digital technologies to be less critical to their work. Scholars are publishing their work in various formats that include online open access formats as well as the more traditional monographs and peer-reviewed journals that can be found in digital formats.

Because digital technologies provide a common platform that encourages innovation and collaboration at the center without sacrificing individual needs at the edges, the autonomous Harvard libraries have found opportunity to come together using this medium. The ULC is responsible for identifying and prioritizing the coordinated projects, and the Office for Information Services (OIS), which is a part of HUL, is responsible for coordinating these initiatives.
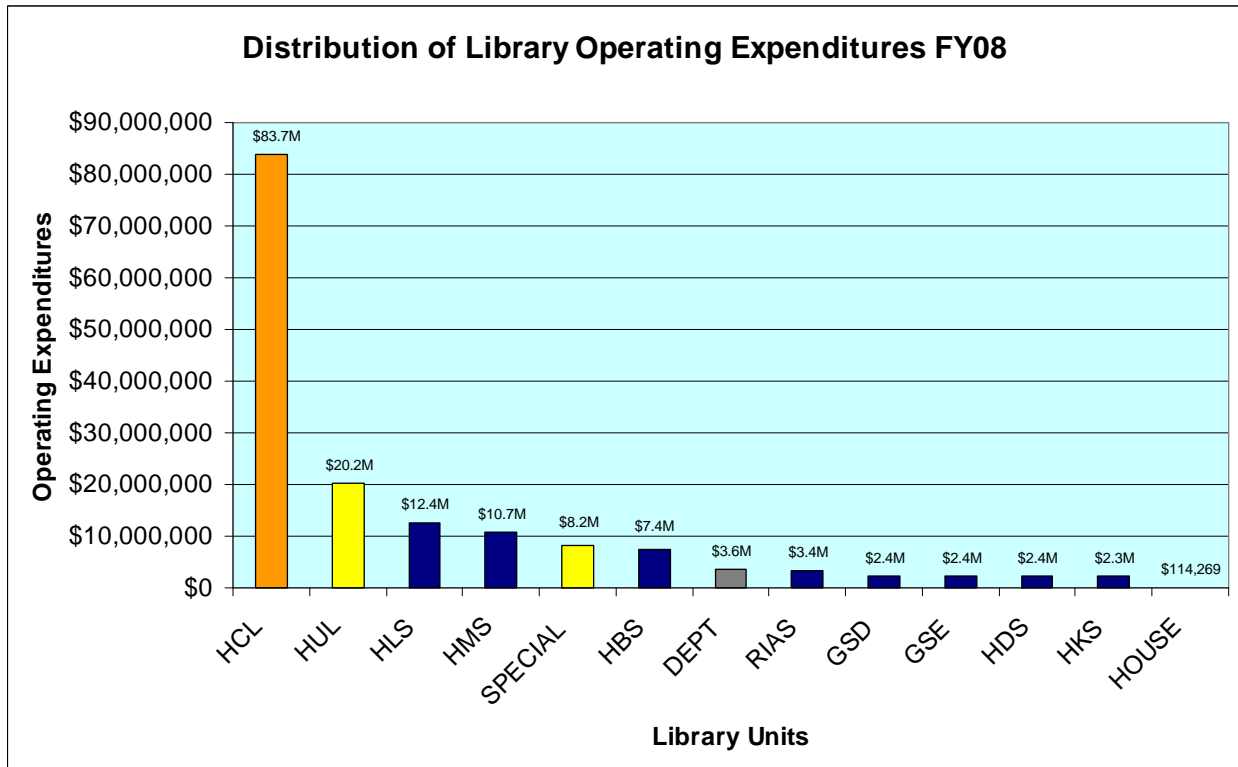
Several digital projects coordinated by OIS have achieved impressive results working with the autonomous Harvard libraries. Perhaps the most visible instance of this collaboration and coordination is in HOLLIS. which enables access to a database with over 11 million records of the University's holdings. By working together on the creation of this system, the individual libraries are able to share the expenses of developing and maintaining such a database; the libraries also ease the user's experience by providing one entry point to the University's catalog, rather than 73 separate catalogs, as was the case prior to the development of HOLLIS. The Digital Repository Service (DRS) is another example of collaboration through technology. The DRS provides the libraries and other Harvard departments with a set of services that guarantee the usability of securely stored digital objects over time, ensuring that the objects can be accessed through one database and that they will remain accessible for future generations. This service as provided by OIS is more efficient to maintain for its users than it would be if the libraries were to manage their own database, and it also provides a more comprehensive experience for the library patrons in understanding the breadth of Harvard's collections.

Systems currently maintained by the Harvard University Library include components (ALEPH/HOLLIS Classic/SFX/MetaLib/VERDE) of the integrated library system (ILS) as well as digital library infrastructure and services (Digital Repository Service, Name Resolution Service, Access Management Service, OASIS, VIA, OLIVIA, Image Delivery Service, Page Delivery Service, Streaming Delivery Service, and others). Harvard licenses the ILS systems at this time but even licensed systems often require considerable customization given the complexity and scale of underlying data. The newer digital library systems are primarily locally developed and locally maintained systems. As the number and complexity of these locally developed systems has grown, it has required a corresponding increase in the commitment of staff resources in OIS to maintain and support system functional development. Multiple linkages and interfacing connections are often required among these individual components. The libraries, working within a rapidly changing technology environment, require large, complex systems that are reliable and robust yet capable of allowing growth and innovation. The work of staff across all locations depends on these systems, and the users whom the libraries serve are always presenting new needs relating to their research, teaching, and learning.
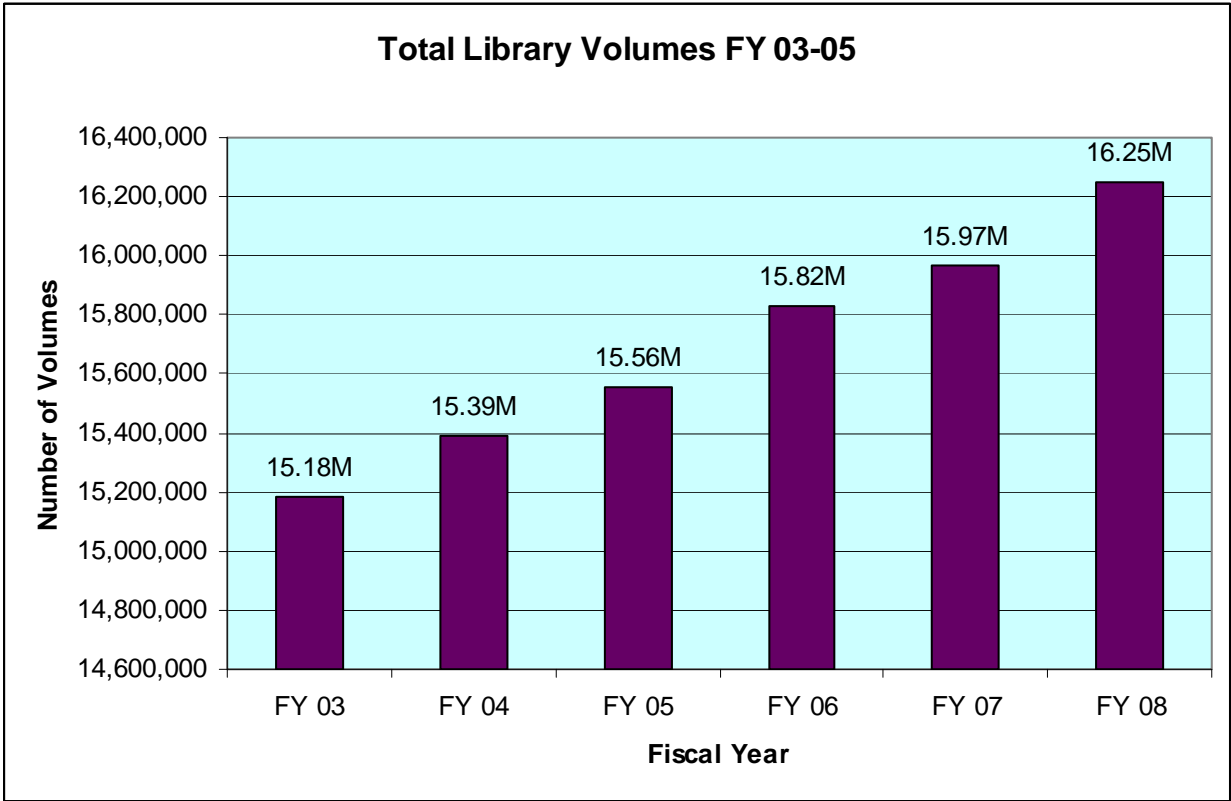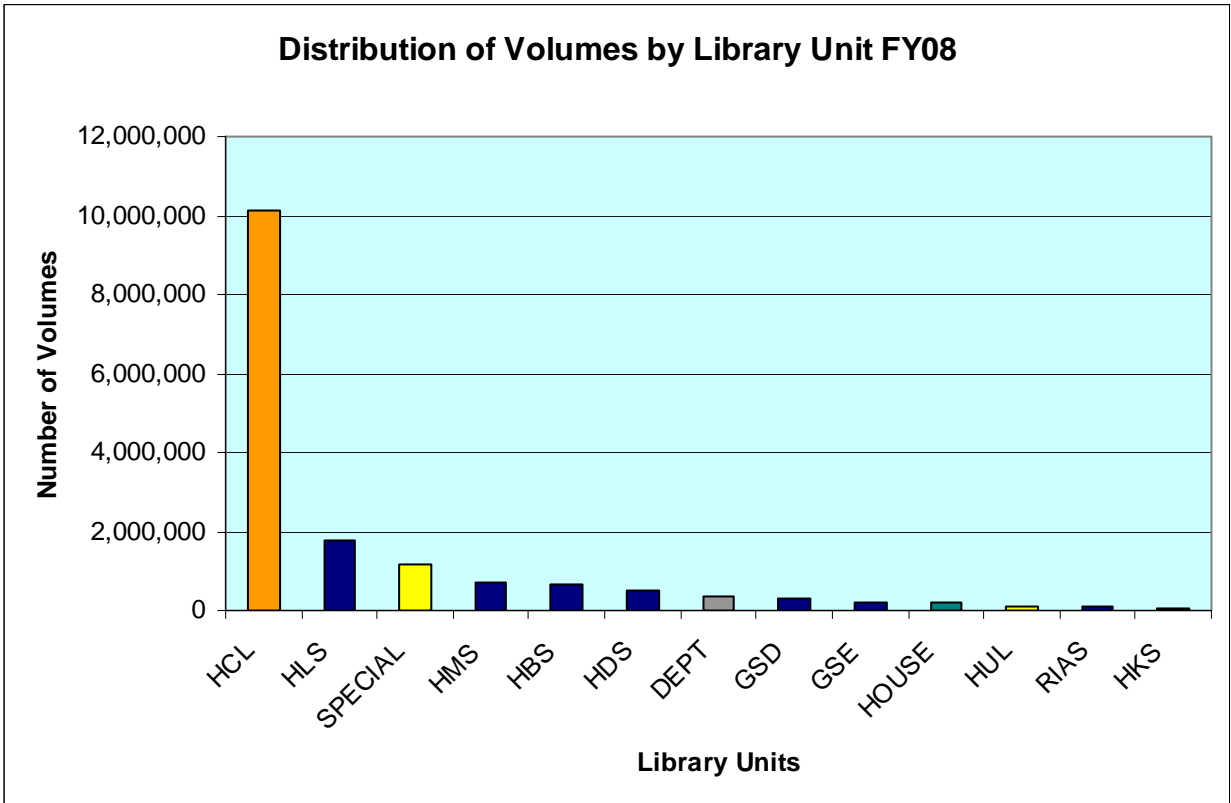
Total Library Operating Expenditures FY 04-08

A bar chart showing Total Expenditures by Fiscal Year:
- FY 04: $128M
- FY 05: $134M
- FY 06: $139M
- FY 07: $147M
- FY 08: $159M

Y-axis: Total Expenditures ($0 to $180,000,000)
X-axis: Fiscal Year

Source: HUL Statistics

Distribution of Library Operating Expenditures FY08

A bar chart showing Operating Expenditures by Library Unit:
- HCL: $83.7M
- HUL: $20.2M
- HLS: $12.4M
- HMS: $10.7M
- SPECIAL: $8.2M
- HBS: $7.4M
- DEPT: $3.6M
- RIAS: $3.4M
- GSD: $2.4M
- GSE: $2.4M
- HDS: $2.4M
- HKS: $2.3M
- HOUSE: $114,269

Y-axis: Operating Expenditures ($0 to $90,000,000)
X-axis: Library Units

Source: HUL Statistics

48

Total Library Volumes FY 03-05

Number of Volumes (vertical axis): 14,600,000 to 16,400,000

Fiscal Year	Volumes
FY 03	15.18M
FY 04	15.39M
FY 05	15.56M
FY 06	15.82M
FY 07	15.97M
FY 08	16.25M

Fiscal Year

Distribution of Volumes by Library Unit FY08

Number of Volumes (vertical axis): 0 to 12,000,000

Library Units: HCL, HLS, SPECIAL, HMS, HBS, HDS, DEPT, GSD, GSE, HOUSE, HUL, RIAS, HKS

Library Units

Total Library Acquisition Expenditures FY 04- 08

Dollars

$27.9M	$27.6M	$28.1M	$29.7M	$34.3M
FY 04	FY 05	FY 06	FY 07	FY 08

Fiscal Year

Acquisition Expenditures by Library Unit FY 08

Dollars

HCL HLS HMS DEPT SPECIAL HBS HDS RIAS GSD GSE HKS HOUSE HUL

Library Unit

50

Total Volumes Added per Year FY 03-08

Circulation Volume by Library Unit FY 08

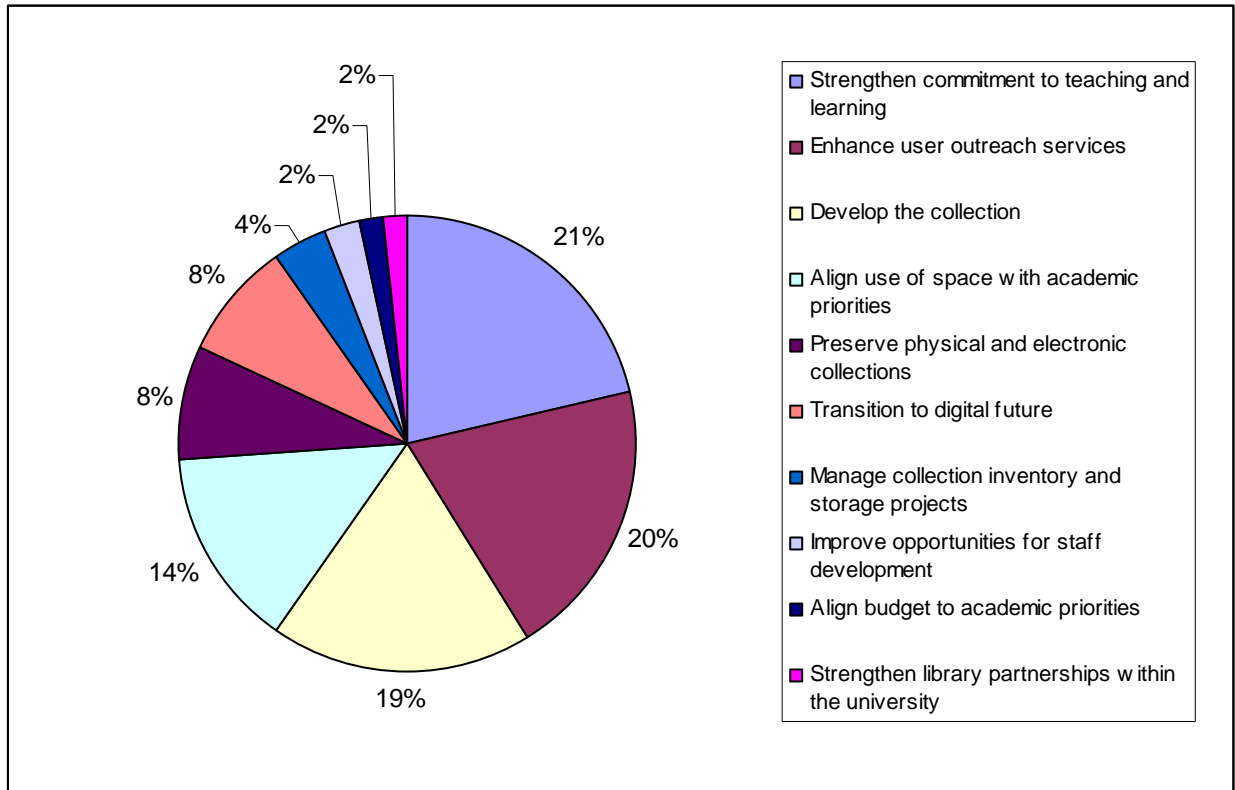**APPENDIX H: Task Force Information Request**

In May 2009, the Task Force sent a request for information to the 73 library units at Harvard. The information request was intended to solicit input and ideas directly from the constituent libraries, as well as to provide a more comprehensive picture of library organizational structure, strategic goals and directions, operations, cataloging and technical services, preservation and conservation, user services, and library facilities. Questions were both quantitative and qualitative in nature.

The results of the survey have been compiled and will be used for future analysis and planning in the libraries. Data collected about the libraries' intended strategic directions is included in this appendix.

Responses: 45 libraries responded to the survey. Responses were received from the eight graduate faculties that host libraries and the eleven libraries within HCL.

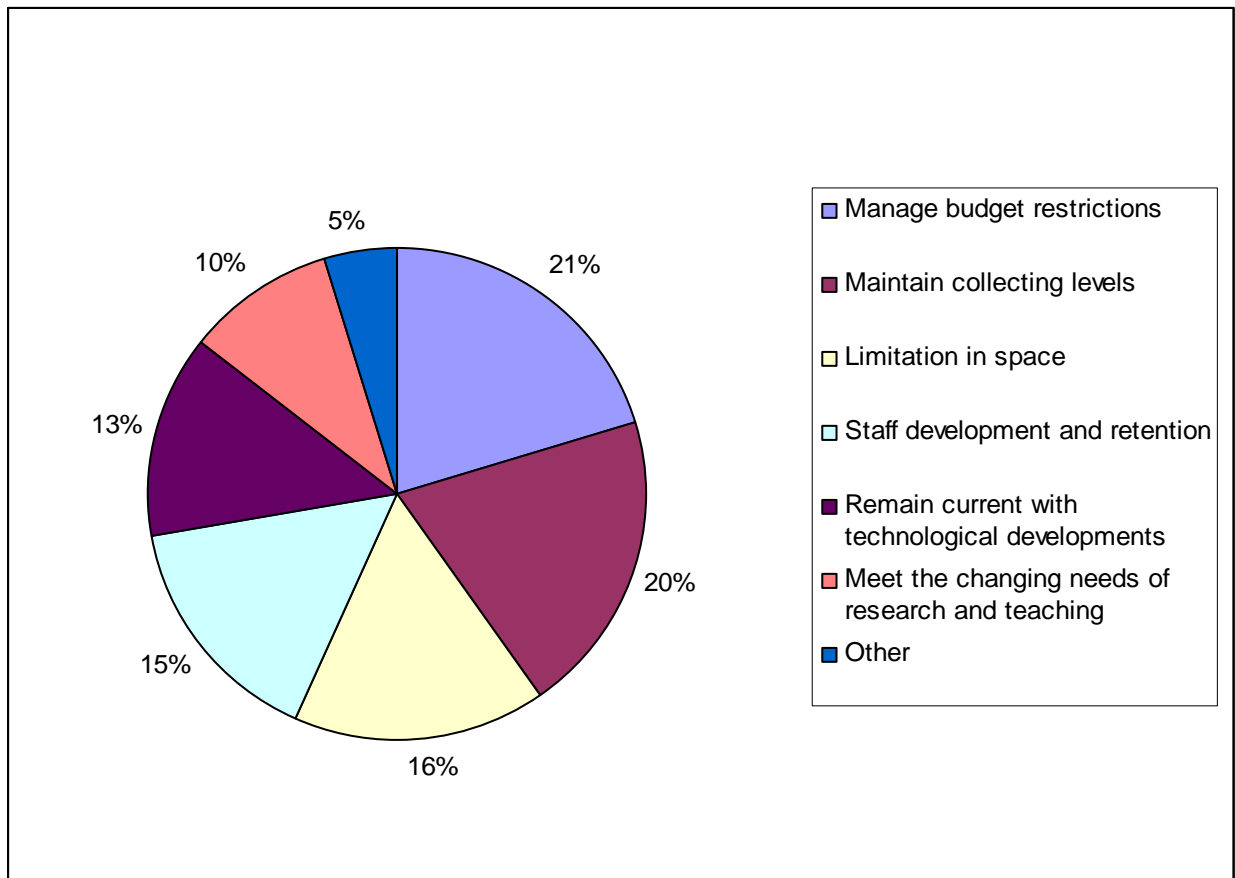*Response Rate:*   62% overall response rate.

What are the top three goals for your library over the next 5-10 years?

Strengthen commitment to teaching and learning — 21%
Enhance user outreach services — 20%
Develop the collection — 19%
Align use of space with academic priorities — 14%
Preserve physical and electronic collections — 8%
Transition to digital future — 8%
Manage collection inventory and storage projects — 4%
Improve opportunities for staff development — 2%
Align budget to academic priorities — 2%
Strengthen library partnerships within the university — 2%

Note: The percentages above represent the percent of respondents citing a given goal out of the 33 libraries that reported statistics for this metric.
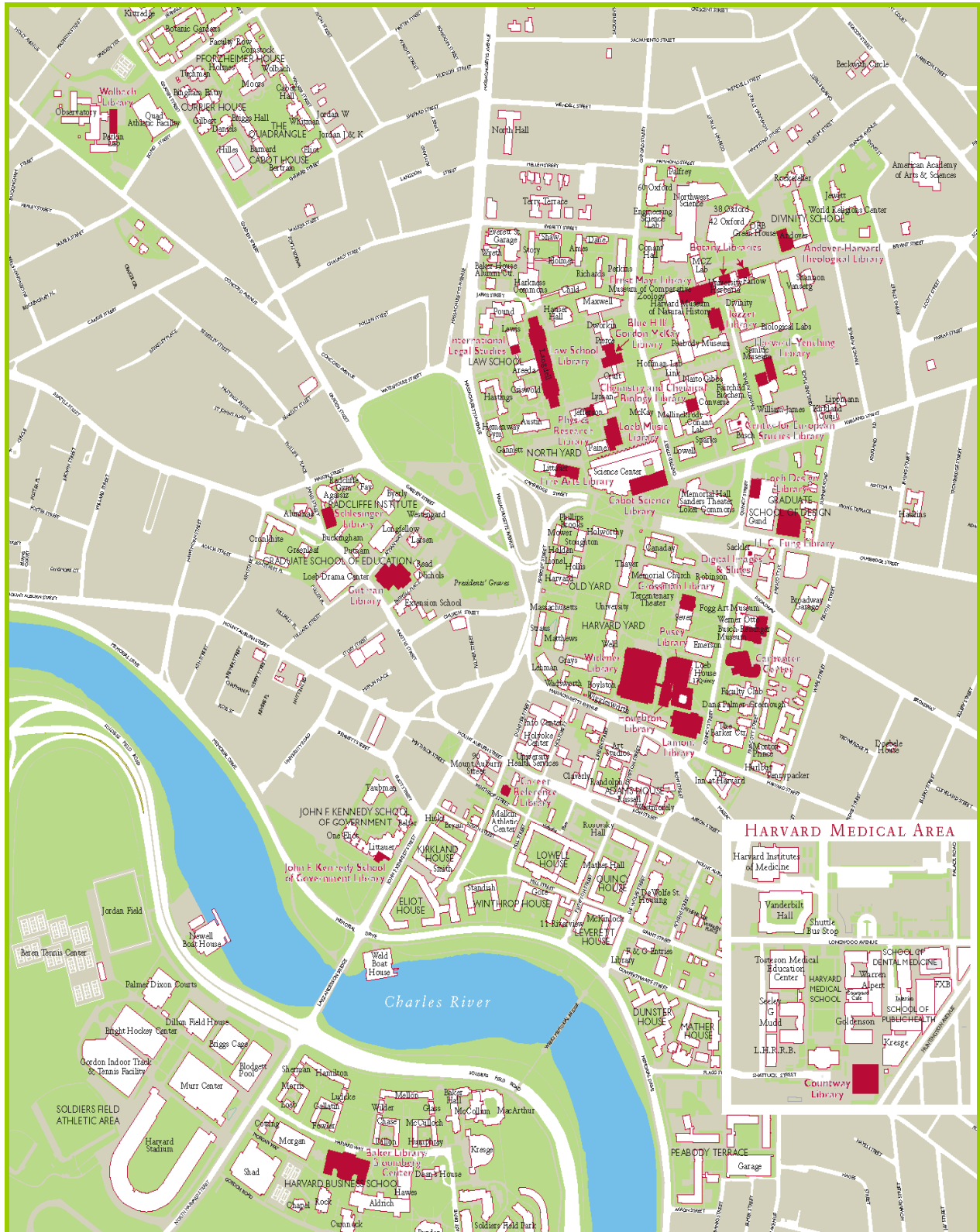
**What are the three greatest challenges your library must address
over the next 5-10 years?**

Legend:
- Manage budget restrictions
- Maintain collecting levels
- Limitation in space
- Staff development and retention
- Remain current with technological developments
- Meet the changing needs of research and teaching
- Other

Pie chart values: 21%, 20%, 16%, 15%, 13%, 10%, 5%

Note: The percentages above represent the percent of respondents citing a given challenge out of the 33 libraries that reported statistics for this metric.

Source: HUL Map Guide