

Consultants Report on the Stony Brook Health Sciences Library

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The Stony Brook Health Sciences Library: Hub of a Vibrant and Engaged Academic Community

Introduction

A major transition will take place at Stony Brook Health Sciences Library as the current library director, Spencer Marsh, retires in July. To systematically address the factors to be considered in effecting this transition, a team of consultants was asked to review the state of the library and make recommendations regarding future library administration and services. The consultant team made an onsite visit on January 29 and 30, 2008, meeting with the library advisory committee, key administrators, and library staff as reflected in the agenda included as Appendix 1.

This review finds Stony Brook Health Sciences Library (HSL) is in the midst of a transition from a 20th to a 21st Century library. The mission of health sciences libraries in the 21st Century has not changed; they are still devoted to providing access to information resources in support of teaching, research and clinical care. However, whereas the 20th Century library was largely defined by the space it occupied, in the 21st Century space is only one component of a multi-faceted system designed to insure that faculty, staff, students and clinicians have quick, easy access to the literature of the health sciences. This change is certainly being driven by the migration of scholarly publishing from printed materials available on the shelf to electronic content delivered over the Internet, but the changing nature of health sciences training programs, the increasingly pressured environment for providing clinical care, and the intense competition for funding to support biomedical research are also causing health sciences libraries to reformulate their programs and services in order to stay abreast of user needs.

In the past few years, the HSL has made several important changes to meet the new 21st Century information environment. Most journals are now purchased in electronic form, space formerly occupied by library materials has been repurposed to support student learning, and the library has invested heavily in technology to improve use of information resources. Further changes have been stymied, however, by a lack of resources as well as the absence of a clearly defined and shared vision of the future to guide the necessary transformation.

State appropriations, on which the Library depends for much of its funding, have been flat for the past 10 years. At the same time, the cost of medical journals has skyrocketed. The average price of an academic medical journal in 2003 was \$763; by 2007, this cost had risen to \$1,075 (EBSCO Five Year Journal Increase History (2003-2007)), an increase of 40%. During this same period, the HSL materials budget rose a mere 1%. By cancelling subscriptions to titles also held at the Melville Library as well as those published in foreign languages, pruning the collection of lesser used journals, drastically reducing book purchases, and participating in consortial buying agreements with other SUNY libraries and the Northeastern Research Libraries (NERL), the Library has stretched its funds. In addition, positions have been held open in order to acquire funds to support the collections budget. However, none of these strategies could be sufficient to compensate for a price increase of 40%; as a result faculty are now funding some library subscriptions from departmental funds, needed books are not being purchased for students in more book-dependent programs, such as Social Work, and the quality of the library offerings to support research and clinical care has declined – a trend noticed by the library's users. The lack of available funds to maintain the collection has been compounded by the introduction of new resources to support clinical care, such as *UpToDate*. These expensive resources are much in demand by clinicians but were never covered in the base collections budgets of health sciences libraries. Many libraries have received additional funding from their hospitals and practice plans to cover these new resources, but that has not been the case at Stony Brook.

The absence of a predictable funding stream has also made it extremely difficult for the library to plan its transformation. Now that many of their users no longer actually come to the physical library, health sciences libraries have redirected their efforts and developed new strategies to meet user information needs. Some libraries have chosen to devote significant staff resources to developing technologies that make it easier for users to find and use information resources. Others have emphasized moving professional staff out of the library and “embedding” them where the users are, so that information needs can be more easily identified and met and users more easily trained in the latest information management technologies. Still other health sciences libraries have decided to strengthen their instructional and communication programs by developing new partnerships with media centers, information technology departments and other entities that cut across boundaries within the health sciences enterprise. A library with sufficient staff can do all of these simultaneously. One the size of Stony Brook must make some choices, at least at the outset. These choices will then guide decisions as to where to place scarce staff resources, how to transition staff to new roles, and how to reallocate space. At present, the Library lacks a mission statement with accompanying clearly defined values into which staff and stakeholders have contributed their perspectives, and around which the staff can coalesce. Without such a statement, plan or vision to provide guidance for the transition, staff will make their own choices on an individual or departmental basis, sometimes working at cross-purposes and often diluting the effectiveness of their efforts and preventing the library from moving ahead.

The new Director of the Health Sciences Library will require a predictable budgetary framework in which to make decisions. Equally important, he or she must be someone who can further define the vision and articulate the strategies presented here, setting priorities that match the needs and resources of the Stony Brook Health Sciences Center.

The following bullet points outline our vision of the Stony Brook Health Sciences Library in 2020 and the actions that will be required to achieve this vision.

In 2020, the Stony Brook Health Sciences Library will:

- Align and integrate with the missions of the schools and the hospitals
- Provide an all-digital collection for its users
- Deliver services where the user works and lives
- Keep faculty, students and staff apprised of new content and programs
- Integrate information and knowledge management skills into the curricula in support of lifelong learning
- Offer intelligent interfaces between the users and the content
- Be virtually and physically integrated with patient care
- Launch strategic initiatives in support of new University initiatives
- Offer diverse study and learning space to the growing student body
- House complementary services in space previously occupied by the print collection

To achieve this vision, the Library must:

- Engage in strategic and action planning
- Employ staff with a mix of library/information and biomedical/technical skills and knowledge
- Carry out systematic staff realignments in support of the university's mission and strategic goals
- Engage in ongoing training and professional development of all library staff
- Continually assess user needs and satisfaction
- Have excellent communication within and outside the library
- Enhance collaboration with the Melville Library and the SUNY libraries
- Enhance collaboration with HSC IT units
- Focus technology development efforts on user-oriented services and in areas where no commercially viable product is available
- Insure a sufficient and transparent budget
- Institute a 3-5 year collection budget process
- Project future space needs for staff, collections and services
- Have a clear reporting line for the library
- Recruit a leader to guide the library through this period of change

In the report that follows, we envision the future of the Health Sciences Library in 2020 and discuss associated requirements in detail.

Visioning the Future

The Stony Brook Health Sciences Library of 2020 will:

1. Align and integrate with the missions of the schools and the hospitals.

At the very foundation of a successful library is an in-depth understanding of the needs of its users. This is particularly true when the user community is complex, as with the grouping of schools and programs served by HSL. The clinical, research, and educational information needs of the users served are diverse and require different kinds of library service. These diverse needs flow from the basic missions of the different organizational units served. Thus, the library of 2020 will have a good understanding of the missions and activities of each unit, and will consciously align and integrate its services with each organizational unit. None of the other elements of the future vision presented here can be successfully achieved without such an alignment.

Alignment requires ongoing adjustments as the schools and the hospital take on new initiatives and emphases. For example, in his 2008 State of the State address, Governor Spitzer spoke of extensive plans for higher education, including the following:

We will help bring together the University at Stony Brook, and the world renowned Brookhaven and Cold Spring Harbor laboratories. The result will be a peerless cross-disciplinary research engine in the areas of cancer, neurobiology, plant genetics and bioinformatics. The economic benefit for Long Island will be tremendous. The chance for New York to lead the world will be unparalleled. (State of the State Address, January 9, 2008, available at http://www.ny.gov/governor/keydocs/2008sos_speech.html)

This new direction will need to be supported by HSL in through such activities as addressing cross-disciplinary research needs and developing partnerships with the information support units of Brookhaven and Cold Spring Harbor.

The HSL will also play an important role in conveying the significance of the University in the broader academic world. It will do so through collaboration with other libraries and through its support of the broad dissemination of the research results and academic output of Stony Brook faculty.

2. Provide an all digital collection for its users.

Currently users of the Stony Brook Health Sciences Library can find the full-text of many current journals and some major textbooks online. However, journal articles more than five or ten years old are still only available in print, and the monographic (book) collection is largely in paper format. Studies have shown that the convenience of web access is such that faculty and students tend to rely on what they can read online and ignore or bypass materials only available in print. To insure that faculty, students and clinicians continue to use the most relevant publications for their information needs, the Library must add electronic access to the older literature. Fortunately, older journal

volumes in electronic format are now available from most major journal publishers and these can be acquired as one-time purchases or with an annual access fee

Comment [RS1]: His change may be misleading. Most that I'm familiar with require a large upfront payment. If there is an annual access fee, it's pretty small. Nancy/Jerry – what's your experience?

By 2020, we anticipate that Stony Brook's electronic database, journal and textbook collection will be further expanded to also include many topical monographs and important image databases. We can predict that clinicians will come to rely on new digital publications licensed by the Library that make it far easier to find information to support patient care. Currently disciplines such as Social Work are still dependent on printed material, but by 2020 they will be able to find the information they need in digital formats; the Library may need to invest in new tools, such as electronic book readers, to make digital information as easy to use as its paper predecessors. The most frequently needed of all of these materials will be owned or licensed by the Health Sciences Library. Those used less frequently will be delivered to the desktop on request by automated library systems.

3. Deliver services where the user works and lives.

Moving information to digital formats has eliminated the need, in many cases, to visit the physical library. However, the move to digital has not obviated the need for someone to select, locate and organize material in order to make it easy to find. Anyone can do a keyword search of Google or PubMed. Actually finding the best article to address a clinical information need or answer a research question will continue, even in 2020, to be challenging. Unfortunately, few faculty, students or clinicians have time to find a librarian to assist them. To address this issue, librarians are taking their skills in selection, discovery and organization out of the physical library and delivering services wherever their users are. This trend is expected to accelerate in the next decade so that by 2020 librarians are "embedded" with the clientele that they serve, functioning as Information Specialists in Context, providing information and knowledge management services within the context of the clinical or research enterprise. In this environment, a clinician at the Stony Brook University Medical Center who needs help in locating literature can ask his clinical information specialist for assistance. She/he will have an office on the floor and regularly attend rounds and morning report. A member of the nursing faculty who is trying to find images to use in her distance learning class will be able to stop by the desk of the nursing liaison librarian as she goes to teach a class and ask for advice. The diabetes researcher finishing his latest NIH grant proposal will know he can ask his liaison for help at the department meeting that afternoon.

This close contact between librarians and those who use the literature will not only makes the skills of librarians more readily available to users; it will also give librarians a far deeper understanding of their users' information needs. Currently, Stony Brook health sciences librarians rely on sporadic contact with faculty to determine what journals they need and to understand the information access problems they face. By 2020, using the knowledge gained through closer contact with key user groups, the Library will be able to select precisely the right materials for Stony Brook's online library collection; the collection thus will be designed to maximize user access to the most frequently needed materials, a key to managing budgets in light of continuing inflation in the cost of library materials. Closer contact will also support the creation of an online interface that makes

it easy for Stony Brooks' faculty, staff and students to find the digital materials that they require using the Library's virtual interface.

4. Keep faculty, staff and students apprised of new content and programs.

Closer contact will also insure that faculty, staff and students stay abreast of the latest information management tools; they will know when new journals are published, new current awareness tools become available, and new means to store and locate articles appear on the market. In fact, by 2020, the library's staff and champions will be fully and proactively engaged with users and stakeholders. Deploying state-of-the-art communications technologies, users will be able to readily learn about services, resources and opportunities anytime, anywhere. Rather than waiting to be asked, the Library's staff will be constantly networking and reaching out to users in a robust, technology-enhanced dialog that creates a strong sense of community and ownership by the users of their library.

Libraries are already deploying media to bring precisely the right information needed for decision-making to the attention of users. By 2020, the dialog will be ubiquitous and seamless. The library staff will anticipate what their users need and will communicate about and deliver that knowledge based on that awareness.

Because the library's staff understand Stony Brook's mission, visions and values, and are integrated into the work-lives of their users, they will be expertly positioned to develop new and meaningful services and deliver enhanced collections and resources.

5. Integrate information and knowledge management skills into the curricula in support of lifelong learning.

The health professional of 2020 will practice in a highly complex and information rich environment where evidence-based decision-making will be the norm. S/he will need to bring knowledge to bear in all matters of decision-making and in all realms of professional practice, and will need to be fully competent in the acquisition, assessment and application of that knowledge. Recognizing this critical need for facility and literacy with information assets, the library's staff members will have established in active partnership with faculty the comprehensive integration of informatics and knowledge management skills into the curricula of Stony Brook's health sciences educational programs. Library staff, as experts in instructional design and information transfer technologies, will be fully embedded both virtually and in real-time into instructional programs, and will work closely with faculty to identify teachable moments. Students will know they can turn to and rely on Stony Brook's librarians to locate, verify, analyze and apply data, as they learn the information-management skills they know they will need as they advance into their highly productive careers.

6. Offer intelligent interfaces between the users and the content.

The library of the future will be a virtual knowledge connection that enables students, clinicians and researchers to rapidly find, capture, understand and apply information relevant to the task at hand. This vision assumes that libraries, either individually or

collectively, will create intelligent interfaces that provide access, integration and dissemination of information when, where and in the most appropriate format. These interfaces break down silos between content sources and apply filters and tools that put information directly into the user's workflow.

Most libraries are implementing the core functions of intelligent interfaces now. These include: 1) a simple, fast search of all content regardless of format similar to popular web search engines; 2) link out to institutionally-licensed content available online from within external search engines, for example, from PubMed or Google Scholar to the journal article; 3) integrated document request and delivery for items not yet available online; 4) learning content linked directly into the curriculum/course support system rather than a separate library-based reserve system; and 5) role-based portals with tailored searches, for example a portal with high demand clinical tools and custom PubMed searches for the practicing clinician. Open source and commercial software is currently available to achieve this level of integration. A close collaboration of information specialists, technologists and the users is required to design and implement seamless interfaces that meet institutional needs.

By 2020 intelligent interfaces will extract specific information from multiple content "containers" (e.g., data, articles, documents, topics, videos, images) using sophisticated search algorithms which will be integrated directly into a user's workflow. This level of integration will be achieved through a tight partnership between workflow owners, technologists, and the library. The library will be staffed with clinical, bioresearch and learning-information knowledge integration specialists who work side-by-side with HSC partners. Developers will work across the HSC to create intelligent interfaces that address the local perspective across all training, research and patient care locations.

7. Be virtually and physically integrated with patient care.

Today libraries are working with medical center IT units to integrate clinical patient-specific reference information within the electronic medical record (EMR). They are collaborating with pharmacists, nurses, attendings, lab and patient education departments to integrate local and licensed reference content into order sets, create reference links for drugs, lab tests and conditions, and provide patient education materials. By 2020 librarian-information specialists at Stony Brook will be active in the medical center, walking the floor to observe information needs and evaluate interventions after implementation. They will be partnering with their clinical colleagues to license the most appropriate content and design requirements for integration within the EMR.

Information specialists and information architects together can provide the right feed into the application at the right instance. For example, 1) one-click reference information within a patient record for conditions, drugs, labs, etc.; 2) support for order sets and decision tools including alerts that update authors from the literature and directly to patients as EMRs becomes EHRs; 3) evidence-based searching and training tools for residents, students and nurses; and 4) evaluation and licensure of clinical reference content. By 2020, the library's clinical information specialists will be a part of the clinical environment and be included in the clinical information systems development team. Further into the future as personalized medicine that uses a patient's genotype to select medications, provide therapies, or initiate preventive measures becomes standard practice

in medical centers, the clinical information specialist and bioresearch information specialist may become a team that liaisons with translational medicine and research development teams.

8. Launch strategic services in support of new University initiatives.

As the Library aligns itself more closely with the mission of the Health Sciences Center and the University, its ability to support new University initiatives will expand. By 2020 Stony Brook should be able to proudly publicize the important role the Library plays in support of its many teaching, learning and patient care initiatives. This presupposes that the Library is informed at the outset of plans to expand research, launch new academic programs, or develop new partnerships with community organizations. With this information in hand, the Library can be expected to recommend ways in which it might be able to assist the University in meeting its goals. Not all initiatives can benefit from library and information services, but the Library can be active in many areas, including developing tutorials and delivery services for students enrolled in distance-learning programs, providing special classes and online training to affiliates at community hospitals, and contributing expertise to the development of databases to support research. Sometimes the Library's contributions will be gratis, other times they will require additional grant support or be underwritten by fees for those attending classes or otherwise benefiting from Library programs. In any case, these programs can serve an important role in building support for Stony Brook's University Medical Center in the community and strengthening its mission of teaching and patient care.

9. Offer diverse study and learning space to the growing student body.

The HSL presently provides a variety of options for studying and learning to the students of the schools it serves. Dedicated learning spaces in the library are well-utilized and appreciated, particularly the new information commons. Library staff is aware that as current educational programs change and new ones emerge, the library must continue to assess the needs of the students and provide appropriate space. HSL staff recognizes the need for flexibility in deployment and use of its space. Factors they will need to consider on an ongoing basis include when and how students study and learn, particularly with regard to the mix of quiet and collaborative spaces, and the technological requirements of the students and the curricula. HSL staff will need to continuously assess trends in libraries with regard to collaborative learning. One of the many advantages of the library's provision of study and learning space for all Stony Brook health sciences students is the opportunity that this provides for interaction among the different groups of students. This is a considerable asset always to be kept in mind in planning for study and learning spaces.

10. House complementary services in space previously occupied by the print collection.

In 2020, because the HSL has moved to a largely digital collection, including back files of its journal holdings, the paper versions of those materials have been removed

from the library, leaving additional space to be devoted to library and library-related activities. HSL staff used freed space in part to extend study and learning space for students, as those student bodies grew and as their needs changed. Library staff and campus leadership recognized that freed space could be used to expand the relatively modest space previously available for small group discussions and activities. They appreciated that the library's footprint was useful not only to students but also to Stony Brook faculty and staff.

Other space options considered were uses for information activities complementary to the activities of the library. For example, the library's strong partnership with informatics is recognized as a substantial asset, and space can be used to provide collaborative services, such as an informatics laboratory. Similarly, the activities then planned for Stony Brook under CTSA were directed towards better communication of research results into clinical practice and had strong parallels to the library's mission of dissemination of research information.

Staff and leadership additionally saw a third area of potential use for library space, leveraging the many roles that the Library played in building community within Stony Brook and in representing the university within the local geographic community. They saw how other libraries have found it useful to provide such facilities as meeting and public space for events that provided academic enrichment and stimulus to the intellectual life of the campus and provided real and meaningful connections with the broader community.

Pathways to the Future

In order to achieve this 2020 vision the Library must:

1. Engage in strategic and action planning.

Much of the focus of the HSL over the last decade has been on extending the electronic collection and reconfiguring space within the library. Excellent progress has been made on these fronts, and the time is now ripe to conduct a more in-depth assessment of where the library is, where it wants to go, and how to get there. This document suggests broad directions for the HSL of 2020, extending and focusing the services provided to its users, but the details need to be developed by library staff working together with those user groups. Leadership of this process is an appropriate task for the new library director, allowing him or her to take on the essential role of communicating with staff and the library's constituents in a meaningful and productive way.

Planning begins with the identification of a planning team, which should be focused in the library but include both representatives from the library advisory committee and a significant level of input from faculty, staff and students. There are many planning methodologies to select from, and it may be useful to make use of methods used by other units at Stony Brook and/or to call upon the services of internal or external consultants. Consultants in library strategic and action planning are also available.

2. Employ staff with a mix of library/information, biomedical/technical skills and knowledge.

Library staffing generally has undergone a gradual evolution in the background and their skill sets have evolved. The baseline of knowledge and skills for librarians remains an understanding of information needs on the one hand and the cycle of information production and use on the other. However, additional skills are required today and into the future.

The major shift of the past 20 years in medical librarianship has been an increasing need for staff to work with emerging technologies, so that the library can take maximum advantage of technology to support the information needs of users. While all library staff members today must be familiar with technology and use it in their work, different library roles related to technology have emerged over time. HSL has kept abreast of these trends with its patterns of organization and staffing, including the recent creation of the Online Resources Group. It will be important for HSL to continue to adapt its organization and staffing on the basis of technology trends, but at the same time it must also address a second major trend – that of the increasing need for medical librarians to become information specialists with subject and technology expertise. With the widespread adoption of technology by the HSL and its users, the needs of those users are gradually shifting from “where do I find information?” to “how do I find the best information, and what do I do with it when I find it?” The latter question requires a more in-depth understanding of the subject matter that is being explored, and hence medical librarians involved in both interacting with users and with building better interfaces for uses need to have some subject background. The specifics of this requirement will vary with the role of the librarian, but there is a clear trend in this direction. Achieving a significant population of librarian/information specialists, as described in earlier sections, will be a substantial challenge to the HSL.

3. Carry out systematic staff realignments in support of the university's mission and strategic goals.

The Library of 2020 envisioned here will require a different mix of staff and skills than the existing Library. In 2020 skill in selecting, organizing and delivering information is still a hallmark of those who work in libraries, along with sensitivity to users' information needs and the ability to instruct users in the latest knowledge management tools. However, in order to successfully deliver services where the user is, either virtually or physically, other skills must be added to this traditional repertoire. The librarians who work as information specialists will need more subject expertise than in the past to successfully play their new roles, and they will need more outgoing personalities than were required to work in the enclosed physical library. The technology specialists will continue to need an understanding of database structure and web 2.0 (or its equivalent in 2020). However they will also need to be able to work closely with users in the many partnerships in which they Library now participates. Paraprofessionals will be key to maintaining the physical library in 2020. They will need to have the knowledge, communication skills, and interest in helping others that will allow them to successfully staff service desks and introduce students to information tools. In order to

achieve the vision for 2020, staff with these new skills must be selected to replace existing staff as they retire or move to other positions. While each opening will require independent analysis, an overall plan should be in place to insure that the right mix of staff is on board by 2020.

4. Engage in ongoing training and professional development of all library staff.

Keeping pace with the rapid pace of technology is a challenge for any department in a health sciences center, and the library is no exception. Constant training in new tools and services for locating, delivering and managing information is required to maintain and develop successful library services. Technology staff must regularly attend classes and workshops to keep their technology skills and knowledge up-to-date. In libraries, such staff faces the added challenge of staying abreast of the latest advances in technologies developed specifically for the library market, such as online catalogs and systems to process library materials; this information is usually best acquired at conferences targeted at librarians. Information specialists also face challenges when it comes to training. They must stay abreast of both the subject matter of their designated user group and the databases, journals, and other information systems designed to serve them. They can acquire some of this knowledge from reading but attending workshops and conferences is critical if they are expected to create and implement new services. Paraprofessionals also have distinct training needs. They must acquire knowledge of ever-changing general information sources and new automation tools to better deliver material to users. In house training can help with much of this, but local workshops also encourage paraprofessionals to take a broader view of their role in the library. The Library should budget a certain sum for training and professional development activities and should have clearly defined expectations for all staff to take advantage of training opportunities.

5. Continually assess user needs and satisfaction.

Since the Library is a service organization, it must stay abreast of user needs in order to plan new programs and modify old ones. At present there is little data available to judge user satisfaction with space, collections or services. Understanding how users view current services and what they would like to see in the future is key to making a successful transition to the envisioned library of 2020. Assessment in libraries takes many forms. Surveys, including online surveys, are certainly sometimes appropriate. However, because busy faculty and students may not respond well to a constant barrage of questions from the library, lengthy surveys need to be supplemented by other techniques. Current users of library services can be polled when they enter the library or given questionnaires to answer and turn in when they leave. Brief (one question) surveys can be mounted on the library's website to judge the effectiveness of a particular service, subscription or program. It is more difficult to reach those who do not use the physical library or the library's website. For these users, focus groups, encounters in the cafeteria, attendance at departmental meetings, or interviews with departmental members or chairs, can help the library to understand how it needs to revise and adapt its services.

In addition to introducing some of the above techniques for assessing user needs and satisfaction, the Library should review and repackage data it already collects on budget,

traffic in the library, use of library resources and attendance at library classes. These data can be very useful for administrators and have the added benefit of permitting library staff to compare themselves to other libraries. Making them available in graphs and charts, and constructing comparisons to a small group of peer institutions enhances their value to those who view them.

Overall, the Library should strive to introduce a culture of assessment, one which assumes that any and all services will be consistently evaluated. The evaluation can be formal or informal, but it should address the needs of all library user groups.

6. Have excellent communication within and outside of the library.

To achieve excellence in any organization, its stakeholders must be articulate in communicating their needs, achievements, values and contributions to the mission and vision of the enterprise.

The new library Director will have the opportunity to set the tone and model exemplary communications and outreach skills by establishing a diverse array of forums for the solicitation, sharing and assessment of information about the library, about the schools it serves, and about the community it which it engages. S/he will need to meet and communicate with campus leadership in the appropriate decision-making settings, as well as simply "being present" to learn about the trends, influences and shifting priorities of Stony Brook. Within the library, s/he should consider launching periodic but not-infrequent all-staff meetings, distributing periodic and meaningful messages and updates to all-staff, and scheduling the frequent convocation of library leaders. Staff members need to have opportunities to interact and network with their peers throughout the organization but as well with stakeholder groups served by and interested in the library.

HSL staff need to think critically about who its stakeholders are and identify the best ways to communicate with those groups. Formal and informal networks need to be established and nurtured, including newsletters, blogs and whatever in the future replaces those forums. News should be considered in light of the intent for its distribution and its audience; consumers of information about the library will want to receive information that is specifically meaningful to them and their needs. News that champions the library staff's accomplishments is critical to motivating success and needs to be communicated primarily to other library staff, peers at local libraries including the Melville Library and others in the SUNY system, and to campus leaders. News that announces new services, programs and resources for users needs to be communicated to users and stakeholders with an interest in those developments, with the information presented in a manner that demonstrably shows benefit to their needs.

7. Enhance collaboration with the Melville Library and the SUNY libraries.

Recognizing their very specific and differentiating missions, the Health Sciences and Melville libraries are nonetheless both *academic* libraries and as such share some important similarities. Both are engaged in managing scholarly information resources and assets; both strive to interact with their constituencies in meaningful ways delivering critical services intended to advance the academic mission of the university; and both

deploy similar technologies, staffing mechanisms and service frameworks in order to achieve their goals and objectives. There is much to be learned from each other.

The HSL at Stony Brook has even more in common with its sister health sciences libraries in the SUNY network, at Downstate/Brooklyn, Upstate/Syracuse and in Buffalo. It does not appear that many inroads have been made to date in strategic partnerships between the individual libraries.

Advancing into the future by finding innovative opportunities for deeper collaboration that leverage the values shared between HSL Stony Brook and its sister libraries, be they across campus or scattered across the state, is a strategy worthy of consideration and one which is likely to yield positive outcomes.

Libraries have long recognized the utility – and financial benefits – of forming consortia for purchasing and licensing access to resources, and networking to achieve mutually desired outcomes. For example, all of these libraries have collected rich print collections which will continue to have value to the individual universities and SUNY system, though they may no longer need to be housed at the individual libraries. Collectively obtaining access to digital back files of journals of mutual interest; sharing the expense but also the benefits of remote storage; considering cost-savings in materials procurement, processing and licensing – all are options that should be on the table for future consideration.

Between the sister SUNY health sciences libraries, there are more mission-specific opportunities for collaboration ready to be exploited, including sharing staff expertise in how to effectively integrate instruction of knowledge management skills into their schools' curricula; identifying best practices in supporting the clinical enterprise; methods for informatics engagement; supporting their university's research initiatives; developing and delivering smart interfaces for accessing just the right piece of information at just the right moment of time – all of these and many more are options to be considered.

8. Enhance collaboration with other IT units, especially the Department of Medical Informatics

To achieve the vision of 2020, the Library needs to capitalize on the collaboration with the School of Medicine Department of Medical Informatics particularly with respect to sharing web-design resources, as well as many other IT-centric activities. The Library should coordinate as well with the large Hospital IT Division, which is primarily responsible for clinical and patient centric IT activities. These three entities, the Library, the Department of Medical Informatics, and Hospital IT should be perceived as integral components of the Health Sciences Center's information technology enterprise.

Wireless availability in the HSC is an excellent example of the benefits to be derived from interdisciplinary collaboration. As the library becomes a learning space rather than a collection space, there will be new synergies related to nomadic computing technology to serve the HSC population. Equipment and staff efficiencies through a centralized data center, backups, networking and other infrastructure support will be a priority.

Other areas of potential collaboration could involve sharing of staff resources needed across units. For example, a media developer with web design, graphic and usability experience is needed for the library's web presence but not on a full-time basis. Interface developers in the future will be further specialized in technologies and likely to be shared among units. Collaboration with medical center IT is critical to integrate clinical reference into the EMR, and delivery of patient education/public health information to the community under a Stony Brook brand.

9. Focus technology development efforts on user-oriented services and in areas where no commercially viable product is available.

The Library has already aligned staff to provide a robust systems group that includes two web developers. This staff is critical to create backend integration of content for users. HSL technology staff should work side-by-side with information specialists who work collaboratively with their respective user populations. In general, the Library should concentrate on "off-the-shelf" software when available (e.g., integrated library system, link resolver, document request, proxy, software sharing, network printing), and use developers to integrate these systems into the local environment. Metadata management should be simplified to a single system (e.g., a single catalog or integrated library system). Developers can then customize interfaces that extract or harvest this data to create an institutional use interface that provides the same experience as popular internet engines.

Maximizing the use of content is a priority and impacts budget decisions. Tracking usage is only part of the equation. Justification for a new or better product requires an awareness of its existence and utility by the user community. The library can influence usage of content through digital highlighting, and in the future through workflow integration. This will ultimately reduce duplication of similar content sources for practicing clinicians and students.

Use of next generation technologies should be filtered through the vision and mission of the library and its constituent schools. Due to staffing restraints, testing these technologies should be grounded on the strategic goals and matched to user need/demand when prioritizing implementation and development projects.

10. Insure a sufficient and transparent budget.

The current HSL budget is primarily derived from state funds which have been flat for over 5 years. State funds are supplemented by a royalty fee donation that could disappear without warning; \$70,000 in the form of two personnel lines from the hospital; and \$350,000 from student technology fees allocated by the University. Personnel increases are mandated by the state at a low inflationary level.

New vision and strategic goals will require a longitudinal budget process to move forward toward 2020. Multi-year budget planning will enable both transformation and sustainability in funding for the collections, equipment, personnel and facility renovations. Priorities and costs should be shared with the user groups after discussion and approval with the core administrative and advisory committees to insure open and

clear communication. Mapping goals and budget over a cycle of years will insure that growing and sustaining programs are understood and achievable within budgetary restraints. Specific plans should be developed for:

- **3-5 year collection budget process.** (see #11)
- **3-year computing replacement cycle plan** for administrative computing and licenses for off-the-shelf software for library systems. Funding to update equipment and services for student computing is funded through an allocation by the University from the student technology fee. At about \$400,000 annually, the fees cover replacement costs on a 3-year cycle.
- **5 year facility plan** to address changes in technology and use of the main floor of the library space at 5 and 10 years into the future. In the near term the journal stacks will be removed and the cost to renovate is dependent on the new use selected for this space. Immediate needs are: 1) adding electrified tables and more outlets in the library commons; 2) updating the lab to address more students working in groups; and 3) planning the repurposing of stack space into people-centered space.
- **5-year personnel reallocation plan** that anticipates the transformation to the information specialist-librarian model. The information specialist with discipline, technology and subject expertise requires a higher salary than general reference librarians of the past. Reallocation of personnel funds for systems/programming and the new bioinformatics position have already taken place. Further reallocation of vacancies can lead to additional new librarian-information specialist model. Based on the size and complexity of the user population, we would suggest a target of 4-7 information specialists.

11. Institute a 3-5 year collection budget process.

The current state of the collection is an admirable achievement on the part of library staff faced with a flat budget, which translates into less each year as inflation on content rises at approximately 6-9% annually. The collection survived over the past 5 years by aggressively moving online only for journals, eliminating foreign language journals and binding, consortial pricing, and careful purchasing. Over the last 2 years, the collection has been underfunded by \$200,000 and subsidized to license high cost clinical reference packages. With no inflation factor, the Library has now reached the end of its capacity to sustain or grow its digital collection.

Over the next 5 years a budget to transform to 90% digital should be a high priority for the HSC. Going fully digital means that all journal titles and their backfiles will be online, and new online "book" packages or media that replaces current text will be available to support the curricula. The majority of print journals may then be discarded as HSL is not an archival collection. Print books older than 5 or 10 years depending on the discipline can be discarded or stored in compact shelving. No more than 10-15% of floor space on the main level should be devoted to housing the physical collection. The cost of one-time journal backfile purchases and new subscriptions to digital content transformation is a tradeoff with the cost of space utilization.

It is imperative that the collection budget be managed strategically in 3-5 year cycles that addresses the economics of licensure agreements in a digital environment and allows sufficient time to manage changes (cuts and additions) in collaboration with user groups. A new director will be looking for a long-term budget commitment to make the full transition to a digital collection and develop a sustainable program.

New funding is required to support the essential but expensive online clinical practice collection (e.g., *UpToDate*). This content must be available anywhere, anytime, and should be tightly integrated into the electronic medical record and clinical training programs to maximize the investment. The primary users are medical students, residents, attendings, nurses, pharmacists, and other hospital staff. Additional costs will be incurred by increasing numbers from new affiliated hospitals in training sites. A funding proposal should be developed and presented to the hospital, practice plan and clinical training administrative units. A separate clinical advisory committee and collaboration with EMR integrators is critical to tying funding to user needs. A new clinical information specialist who is active in the medical center would be the ideal liaison to evaluate packages as they develop and as costs change over the next 10 years.

12. Project future space needs for staff, collections and services.

The Library will need a strategic planning framework to advance its overarching objectives as they align with the mission of the university, and a critical part of that will be specific plans for how space as an asset will be leveraged into the future. Advancing the vision presented in this report will rest on thoughtful and assiduous planning, performed by Library leadership in concert with key university stakeholders and decision-makers. And, because of the critical value placed on access to space with all of the accompanying symbolism, it will be critical to clearly communicate those plans and the meaningful benefits to be derived. The need for careful space planning with buy-in from key stakeholders is particularly acute, given potentially significant and irreversible downstream consequences.

It will be critical for Library staff to prioritize goals and objectives, and determine appropriate space and facility requirements. In turn, those needs should be communicated to stakeholders so that all constituencies understand both the rationale and benefits.

As print books and journals are removed to create new learning spaces, as staff assignments evolve with some personnel strategically placed "in context" outside of the Library and embedded with constituencies, and as systems and services evolve resulting in changes in the ways in which services are rendered virtually and in person, the way the library uses space will dramatically change. Those changes need to be mapped out longitudinally.

As space assets are considered, opportunities should be sought to enhance the value of that space through synergies with other units on campus and in light of strategic university initiatives, particularly in kinship areas such as informatics, academic computing, and highly information dependent enterprises such as translational clinical research.

13. Have a clear reporting line for the Library.

Like any entity within a health sciences center, the Library needs a clearly established reporting line. Ideally the Director should report to someone in a position to present the Library's resource and support needs to those with budgetary authority within the HSC. This person should be someone who understands the mission of the library and its role in the health sciences center; the individual may possess that understanding at the outset or the Director may help them to gain that understanding. Either way, they need to be able to speak on behalf of library users in an administrative setting. A clear reporting line does not imply that the Director works solely with one senior administrator. It is common for health sciences library directors to have working relationships with a variety of associate deans, since the programs of the library affect education, research and clinical care. However, there should be a single individual with clear authority to which the library reports.

The reporting line for the Library is complicated by the fact that while the largest share by far of its budget comes from the School of Medicine, it is charged with serving all of Stony Brooks Health Sciences programs as well as the University's hospital. In some institutions, this situation is resolved with a reporting line to an individual above the level of the Deans of the individual schools. In others a more matrixed arrangement specifies a direct reporting line within the School of Medicine but requires the Director to work with the Dean, or the Dean's designate, in each of the schools and an administrator in the hospital. In such relationships there is usually a dotted reporting line to those administrators outside the School of Medicine. The dotted line implies regular reports from the Director to these other administrators and, often, budgetary contributions to the Library from these other parties.

14. Recruit a leader to guide the library through this period of change who will lead strategic and action planning, stimulate innovation and creativity in service initiatives, be an advocate for the library's role in the University, have a strong background in health sciences librarianship and information services, and pursue opportunities to enhance library services.

As Spencer Marsh has ably guided the Health Sciences Library through the last decade, a strong leader is required to continue setting the course for the library and maintaining and even improving strong collaborations with its multiple user communities. With many choices available to the library of today and tomorrow, making the best choices for Stony Brook will require considerably knowledge and ability. The director must work closely with University administration, other library and information units at Stony Brook, and with the larger academic health sciences library community. He or she must have a plan and follow it, but also have the vision and flexibility to respond appropriately as new opportunities emerge.

This general statement of requirements suggests a person from the health sciences library community with considerable management and leadership ability. While such people are available, there is a relatively small pool, and it is critical that the search start soon, be aggressive in seeking out candidates, and provides strong incentives to potential directors.

In general, the pool is medical librarians with management experience. One group of such people are the fellows of the NLM/AAHSL Leadership Fellows Program for Librarians (http://www.aahsl.org/Applications_Awards_Scholarships/NLM_AAHS�_Leadership_Fellows_2008.pdf), a program which has been in place since 200 and has trained and mentored a number of mid-career medical librarians. More information on this program and its graduates can be obtained from its coordinator, Carolyn Lipscomb (CarolynLipscomb@cs.com).

A draft job description for the director is provided as Appendix 2.

Appendix 1. Agenda for Consultants Visit

Appendix 2 Draft Job Description

Director, Stony Brook Health Sciences Library

The Stony Brook Health Sciences Center seeks a creative, energetic individual to provide transformative leadership for the Stony Brook Health Sciences Library. The director reports to the Associate Dean for Medical Education and is responsible for: organizational planning and policy decisions, budget and resource allocations, organization and communication, and personnel decisions; creating opportunities to expand integration of library programs with curricular and clinical programs by building relationships with faculty and administrators in the Schools of Dental Medicine, Health Technology & Management, Medicine, Nursing, and Social Welfare; recruiting, leading and motivating a highly service-oriented staff of [fill in] FTE as they develop expanded or new services to meet the changing information needs of Stony Brook's biomedical research, teaching, and clinical care enterprises; and serving as a strong advocate for the information needs of the health sciences library within the Stony Brook Health Sciences Center. The Director represents the Health Sciences Library system-wide and nationally.

Alternative description:

The Stony Brook Health Sciences Center is seeking a visionary leader to direct programs of the Health Sciences Library. The director reports to the Associate Dean of Medical Education and is responsible for: creating and communicating a strong vision for the health sciences library in a digital age; administering the budget, strategic planning, and formulating policy for the library's resources, programs and services; advancing new and innovative technologies in the provision of information in the education, research and clinical enterprise in the health sciences; providing leadership and strategic direction at the health sciences center, University, SUNY system and national levels on health sciences library issues.

The Health Sciences Library serves the Schools of Dental Medicine, Health Technology & Management, Medicine, Nursing and Social Welfare, and the Medical Center. [add any other description of the medical center and biomedical research offsite programs as needed.] Library personnel includes [fill in description of FTE]. The Library's collections include [fill in description of online and print]. The HSL library is a [fill in facility description.] The annual budget includes state appropriations, funding from the hospital, donations and earned income. More information about the Library is available at: <http://www.hsclib.sunysb.edu/>

Qualifications

- A Masters Degree in Library Science from an accredited program or an advanced degree in information sciences or other appropriate field and ten years of increasingly higher levels of responsibility and leadership, preferably in an academic health sciences library.

- Knowledge and understanding of the changing roles and technologies of biomedical libraries, and the ability to guide their continuing evolution.
- Strong service orientation with a broad understanding of contemporary approaches to the use of knowledge resources and services to support patient care, biomedical research and education.
- Ability to stimulate innovation and creativity in new service initiatives and utilize resources for the advancement of the programs in the health sciences.
- Ability to plan and manage a library budget, which is currently approximately [*\$fill in*] million dollars. Experience securing external funding through grants and/or private fund-raising desirable.
- Ability to promote diversity of views as a manager and colleague, and to effectively collaborate with faculty, staff and administration of the academic and clinical community.
- Excellent leadership and management skills and a strong commitment to fostering growth and development of the staff.
- Demonstrated policy development and strategic planning experience.
- Excellent strategic and collaborative skills to meet organizational goals.
- Strong written and verbal communication and presentation skills, including the ability to effectively communicate in both technical and non-technical environments.
- Proven experience in areas of proposal writing and project management.
- Ability to keep apprised of, and to evaluate, issues and trends in information services, medical informatics, and