

Renovation Dos and Don'ts:

How to Create Functional, Flexible, and Forgiving Library Spaces

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Introduction

Whether a library renovation is a bane or a blessing depends on its responsiveness to patron needs, its recasting of the library image, and its improvement of the built environment. This chapter will address the essential components of the users' role in commissioning an inviting set of library spaces that accommodate the cosmic effects of virtual collections on library design.

What Motivates Libraries to Renovate?

Libraries introduce renovation for several reasons. Some acknowledge the changing uses of library space and identify the need reinvent the library as a destination and physical environment. This increasingly frequent repurposing of traditional spaces is the result of diminishing numbers of print items acquired and housed, the increasing number of electronic resources purchased and subscribed to, and the resulting in the need for more computer hardware and a more ubiquitous technological infrastructure. Others see an antiquated physical plant and have the opportunity to correct the decay caused by extended period of deferred maintenance. Yet others introduce the concept of the electronic library, one that some playfully call a technology sandbox. In other cases, the current building design presents barriers to patrons with disabilities, and the library administration has committed to correcting that deficiency. And finally, the decision to renovate may stem simply from a desire to improve the appearance of the facility, to make it more attractive, more inviting, maybe even to make it beautiful; thus the renovation is in part a marketing tool in service of an effort to retain a constituency of readers and information seekers.

Given the cosmic changes in both the publishing industries and their related outlets, such as libraries—both public and academic—many libraries see themselves as subject to an uncertain

future. That future—and how it shapes the library, both as an organization and as a place—will evolve as readers' relation to the printed word and its mediation changes. The Pew Research Center reports that, while a great majority of readers favor electronic books for their speed of access, the same number (82%) favor the printed format for reading with a child. Thus, the tactility of the physical book dominates in shared reading experience.¹

Changing use, insufficient space, and deteriorating building condition are the three most fundamental reasons to renovate. In both public and academic libraries, changing use results from the need for meeting spaces, social spaces for collaboration and group work, and the trend to house aging print collections either in compact shelving or off-site. Insufficient space results from either greater demand for meeting and social spaces or for more housing for collections (the latter more frequently the case in research libraries). And problematic building condition stems from deferred maintenance, an antiquated physical infrastructure, insufficient physical accessibility for users with disabilities, the need to provide support for technology, and perhaps the most abstract reason of all, simply the appearance of the environment. (Public relations and marketing professionals understand that responsive design, attentive physical plant maintenance, and the aesthetic experience communicate the value of the institution to its public.)

Thus it is likely that a comprehensive view of the renovation will result in a radical reconfiguration, of which there are two types: collection-centric and people-centric. Despite the people-centric trend toward converting space for collections into social spaces, some projects focus on creating long-term, environmentally advanced conditions for the preservation of materials and are thus collection-centric. At the University of Chicago's Joe and Rika Mansueto Library, for example, provides a glass-domed reading room above its fifty-foot-deep

subterranean, robotic storage facility based on commercial inventory systems, which can hold 3.5 million volumes.²

Planning for Change

Typically, the need for change in libraries centers on growth, technology, and flexible space. Collections and staff may increase in number, but often not at the same time.

Technological advances bring challenging questions, such as whether to rely wholly on a wireless network. And the desire for collaborative spaces suggests a discussion of the nature of multi-purpose space. These are the types of conversations that precede and energize the planning phase.

Making the Case

The impetus for renovation may come from an upper administrative level, but if library staff members see the need, it is critical to present persuasively the benefits of renovation. Six questions can form the outline for making the case:

1. Who benefits? Who are the constituents who will gain the most from improved facilities?
2. How do we preserve the library as a destination? How will a renovation bring the library closer to that goal?
3. Do we want to improve the library as a place, and if so, how?
4. Will a renovation achieve economies of scale by, for example, consolidating service points?
5. Will services improve as the result of a renovation?
6. Will the library mission be served better?

If the facility is an academic library, you might observe that academic libraries are marketing tools for prospective students. The Association of Higher Education Facilities Officers supported studies indicating that 53.6% of prospective students during campus tours

consider the library extremely or very important in the selection decision process, 48.4% want to see the library, and 19.3% reject the institution because of a poorly maintained library.³ And the condition of the library is likely to influence parental impressions even more deeply.

Types of Spaces

A taxonomy of library spaces has emerged with people-centered facilities. They comprise space for quiet study and reading; small group study rooms; lounge areas with new books, popular titles, and periodicals; and social spaces, such as cafés, conference rooms, and auditoriums. The challenge of providing space for working in isolation as well as in collaboration will add complexity, depth, and energy to the problem.

Developing a Proposal

Key to making the case for renovation to upper level administrators, elected officials, or municipal appointees is a well-composed proposal that includes a rationale for the project. Be sure to outline the benefits, identify which users will be positively affected, identify the client (who within the organization, agency, or municipality has the final say in decisions), and suggest a planning group. A strong but concise proposal improves the odds for approval and allows fundraisers to articulate the need successfully to prospective donors.

Design Development Process

How can library staff be involved in the process? A management plan follows a successful renovation proposal. In developing a management plan, be sure to answer these questions:

1. Who will be consulted when the designers, contractors, and vendors have questions?
2. Who will communications be handled? How will library staff participate in them?
3. Who will review architectural drawings, specifications, and other documents?

4. Who will make final decisions on behalf of the institution?
5. How will the work schedule be defined? Will the library close during renovations?
6. How have other libraries gone about their renovations

In the course of answering these questions, be sure to identify a management team that will meet frequently to review project needs and challenges, which include the impact of technology, security of patrons and collections (which designers, vendors, and consultants are unlikely to appreciate), maintenance of the physical plant, the specific needs for furniture and equipment, and other special needs, such as exhibition cases and highly regulated climate for special collections. Be sure to identify to whom design plans are submitted, who reviews them, and who ultimately authorizes them.

Space Inventory

If you are not sure where on campus the facility should be located, conduct an inventory of all possible sites. This exercise helps identify all of the options for adjacencies and possibilities for renewal. List features of each option, such as square footage, basic geometry, structural and spatial intrusions (e. g., columns and ducts), lighting, ceiling heights, type and level of climate control, and the condition of surfaces.

Do You Need a Professional Designer?

If the organization has limited experience with architects and other design practitioners, the assumption might be that a modest renovation proceed without professional design services. For modest a refurbishing with a small budget, that approach may suffice. However, there are benefits to engaging a professional architect or interior designer. The design professional

1. Can ask questions that the clients and users may not. For example, if the design professional has had experience with a certain type of wire management, that knowledge may be valuable to even the small project.
2. Coordinates the implementation schedule. This is helpful if there are multiple work groups, vendors, or contractors.
3. Will supervise implementation. A design professional has experience identifying potential installation problems.
4. Estimates costs with accuracy. Cost estimation is time consuming for the design layperson, and this benefit might for that reason be cost-effective.
5. Is familiar with sources for furnishings, equipment, and materials. Especially if there are state contracts, the design professional can assist with generating requests for proposals so as to find the best price for furnishings. Rather than rely on library supply catalogs, the design professional interacts with sources for materials and furnishings on a daily basis and can offer a much broader range of styles and prices.
6. Develops specifications for furnishings, equipment, and materials. This is very helpful if you are requesting bids from multiple vendors.

Do You Need a Project Manager?

A project manager is an architect or specialist who serves as a client representative to the designers, architects, vendors, and contractors. Serving as a client and user advocate, the project manager coordinates communication between the various participants in the process.

A small project may not need a project manager, and in fact many large projects do not employ them. Despite the added expense, there are nevertheless several benefits adding this level of coordination to the process since an effective project manager ensures communication,

coordinates schedules, and therefore can minimize the number of change orders. Schedule coordination is especially critical if the project includes architects, contractors, and separate furnishing and millwork orders. For example, early delivery of furnishings can result in unnecessary storage charges, and late delivery can delay installation of technological equipment and opening of the facility.

Do You Need a Technical Consultant?

If the project introduces new levels of technological tools, it may be advisable to hire a technical consultant, who can talk to vendors, in-house information technology staff, and other consultants so as to ensure full integration of not only personal computers, but also of scanners, copiers, video editing software, print stations, vending machines for smart cards, and classroom control software. With an eye for advances in technology, the consultant might offer economies unknown within the organization and introduce superseding equipment. For example, the consultant may suggest inclusion of coaxial cable so as to allow for television at every station. Similarly, the limitations of the interactive white board might be addressed productively by a consultant who has tested Apple TV.

The Role of Library Staff

Omission or exclusion of library staff from the design process results in the failure to solve fully the complex design problem of creating spaces for the people and collections—to address the diverse needs of library constituents and staff members. The library director must ensure, whether through personal appeal or a formal proposal, that the perspectives of library personnel are integral to the process. Users know better than anyone else what they need, but upper-level administrators, elected officials, and municipal appointees may overlook you if the library leader is not assertive. Be sure to infuse yourself into the process as fully as possible.

What Are the Phases of Planning a Renovation?

The three phases of renovation planning are programming, schematic design, and design development. For a renovation to be successful and responsive to user needs, the library staff must participate in each phase.

The program is a tool that defines project objectives and goals. It serves as a device for decision-making and a guide for the design team throughout the design process. It also provides a checklist—one that the users can refer to once a design is proposed to assess whether it addresses all user needs. Providing scope and parameters, the program lists functional requirements. A good program does not offer a solution; rather, it states the core design problem. It quantifies rather than qualifies.

A program is also important to the client and users because it provides an opportunity to evaluate goals, the spaces selected, service and operational concepts, staff size and collection growth, as well as adjacencies and internal organization. In providing an opportunity to examine organizational structure through spatial relationships, the client can offer a more comprehensive and articulate statement of need to the designers.

In addition to a summary of goals and objectives, a program identifies key issues and assumptions. It outlines fundamental planning criteria, such as the amount of space needed for each personnel function, for collections, for patrons, and for storage. It recommends functional adjacencies and may even list technical criteria, room by room.

Remember that although a program is an essential tool for getting started, it is neither a contract nor a rigid set of rules. And although ideally the architects or designers will create the program in close consultation with the client and users, some architects, for the sake of saving time and lowering fees, will skip this essential phase of the process. As the user you are in a

good position to fill that void. If there is a project manager in the early stages of the project, feel free to suggest collaboration. Alternatively, an independent library consultant might be retained to assist in the programming phase.

Examples of Architectural Programs

In 2005 the Joan and Donald E. Axinn Library pursued a renovation of the public spaces on the main floor of its nine-story building, containing access services, reference services, the reference collection, and a computer commons. The Head of Access Services and the Assistant Dean for Reference and Collection Development wrote a comprehensive program, of which this is an excerpt, to guide the architects:



Hofstra University Library

JOAN AND DONALD E. AXINN LIBRARY RENOVATION PROGRAM

Electronic information commons (public computer terminals)

- Include space for four dedicated online public catalog terminals and one printer, three to be positioned at standing height and one to have ADA-compliant accessibility.
- Provide seating and connectivity for 36 electronic resource terminals, 22 of which can have wireless access to the network. One of the hard-wired terminals should have ADA-compliant accessibility.
- Include space for two public printers.
- Allow adequate space at both sides of each work station for note-taking and mouse movement.
- Equip work tables with median dividers to preserve privacy.
- Preserve 210 linear feet of shelving, with consideration given to half-height shelving units.

Reference room

- Provide 3,351 linear feet of shelving.
- Include a double-width atlas stand and retain flat-file shelving for atlases.
- Retain as many carrels as possible for quiet study, giving priority to perimeter carrels.
- Provide visual access to the south windows.
- Ensure quiet study throughout the area.
- Avoid a seating configuration that positions readers back-to-back.

In 2013 Felician College applied to the State of New Jersey under its Building Our Future Bond Act for \$4.3 million to support renovation of the abandoned Messler Library on the original Fairleigh Dickinson University campus in Rutherford, which it purchased in 1998.

Although additions over time made the building non-compliant with guidelines of the Americans with Disabilities Act, two grand spaces offered the promise of an Education Commons, to be operated by Library Services, and a Nursing Skills Laboratory, to be operated by the School of Nursing. For the Education Commons component, the Director of Library Services and Public Services Librarian for the Rutherford campus created this program:

Felician College Libraries Education Commons

Program Areas Summary

Program component	Collection # of items	Shelving (l.f.)	Seating #	Technology
Public spaces				
Vestibule				Digital sign; drinking fountains, 2; 6 l. f. of fabric-covered bulletin boards
Exhibit space		50 in cases		
Lounge: booths with			50	Power (data?) outlets in floor; 3 rolling

tables & chairs; café tables & chairs; open/lounge seating				two-sided whiteboard easels; 6 l. f. of fabric-covered bulletin boards
Service desk, desk height			2	Sliding slings for 2 computers; monitors with articulated arms; printer
Cell phone booth				
Conference room			16	Wall-mounted 80" LED/ LCD panel; monitor on articulated arm; computer; cabinet for computer; wireless keyboard; laptop connection; whiteboard; speaker system; telephone & jack; installed video camera & microphone at ceiling level
Cultural events space (can be co-located with lounge—3 above)			75	Data projection with large screen & computer cabinet; laptop connection
Charging stations			5	
Information services				
Help desk, desk height			3	3 computers in sliding slings; monitors with articulated arms; printer
Computer lab with extra power & data outlets			50	50
Printing stations/copy center/scanners				3 printers & scanner; copier
Group study (2 @ 8 occupants)			16	Wall-mounted 46" LED/ LCD panel; monitor on articulated arm; computer; cabinet for computer; wireless keyboard; laptop connection; whiteboard; speaker system; telephone & jack
Group study (6 @4 occupants)			24	Wall-mounted 36" LED/ LCD panel; computer; monitor on articulated arm; computer; cabinet for computer; wireless keyboard; laptop connection; whiteboard; speaker system; telephone & jack
Consultation room (2)			6	Computer in sliding sling; monitor on articulated arm; cabinet for computer; laptop connection; whiteboard; telephone & jack
Offices, library faculty (3)			9	Computer in sliding sling; monitor on articulated arm; telephone & jack
Office, library director/manager (2)			8	Computer in sliding sling; monitor on articulated arm; telephone & jack
Staff rest room, solo				
Instruction				

Smart classrooms/labs (1 or 2)			50	85" SMARTboard; teaching station with podium/cabinet for computer & monitor; wireless keyboard; laptop connection; whiteboard; speaker system; telephone & jack
Materials (shelving)				
Print resources	6,100	800		
Media collection	1,000	60		
Digital Media Lab			8	Plotter; scanner; color printer; cabinet for computer; iMac station; laptop plugin; 46" HD screen; cabinets for equipment (12 l. f.); wireless keyboard; installed video camera; tripod; wireless microphone; DVD recording capability; control panel; speaker system; whiteboard; headphones with microphones
All-hours study with after-hours entry			~50	Wall-mounted 80" LED/ LCD panel; teaching station with podium/cabinet for computer & monitor; wireless keyboard; laptop connection; whiteboard; speaker system; telephone & jack; ~50 student work stations
Lockers	20			
Café/coffee kiosk/cart			~15	Plumbing; digital sign
Rest rooms				Ensure good exhaust system; manual paper towel rollers or XLRATOR hand dryer

Schematic Design

In the schematic design phase, an initial floor plan or an initial set of floor plans invite discussion about alternatives. Often the most dynamic phase of the process, schematic design allows for the exchange of ideas about overall concept, spatial configuration, and adjacencies. Even if there is only one plan presented, this is the point in the process for intensive review of and feedback on what the designers envision—or what they forgot. Examples of what designers forget:

- Space for book trucks

- Sorting shelves
- Staff lockers
- Sensible placement of light switches
- Bulletin boards and signs
- Closets and storage units
- Waste baskets

Design Development

In the design development phase, the decisions are finalized, resulting in a complete set of construction documents that include not only architectural components, but also mechanical, electrical, and plumbing design (MEP). Specifications indicate types of hardware, fixtures, and millwork. And detail drawings show the design at a much smaller scale. This package is known as the bid set and is sent with a request for proposals (RFP) to all general contractors who wish to be considered for job of constructing the design.

Furnishings

Often separate from the architectural contract, furnishings can be acquired through an interior designer or design agency if not requisitioned by the institution's purchasing agent. Keep in mind the ergonomics of your selections and incorporate anthropomorphic data, which are useful for plotting human dimensions and adding ergonomics to your criteria.⁴

Optimally you will be able to choose from several options for seating. If possible, ask the designers or vendors whether an example of each can be lent for a few weeks to allow a focus

group to provide feedback on user preferences. The stimulation of interest in the project and generation of good will is likely to surpass the information collected.

Utilities and Practicalities

Examine the lighting design carefully and, if one is not offered, request a reflected ceiling plan. Note the two fundamental types of lighting: ambient (general, atmospheric) and task (focused, intense). Look at wall elevations to assess the locations of light switches. Are they near entrances and duplicated in large rooms? Does the ambient lighting have rheostatic controls to allow for lowered light levels but sufficient illumination for note-taking during image projection? Are there separate controls for the ambient and task lighting?

Ask about electrical power. See whether there are outlets near each work station and work space. Until mobile devices come with better and longer-lasting batteries, users will look for power wherever they find themselves in the space. Customized furnishings often integrate power. And remember to ask whether there are sufficient outlets to accommodate printers and other peripheral equipment.

If it is not being replaced, the current HVAC (heating, ventilating, and air conditioning) system must be able to manage increased heat loads from computer equipment. Since most spaces were designed for lower heat loads, the design may need to introduce larger capacity air handling units and chillers. Thermostatic controls in each space ensure comfortable temperatures if the zones vary in use and amount of equipment. Multiple zones, however, result in more complex climate control systems.

Lastly, keep in mind the needs of technologists who install computer equipment and of the housekeeping staff. Dust-collecting surfaces twenty-five feet off the floor are not reachable, and moveable furnishings make equipment installation much easier.

Final Recommendations

Assume nothing! Review each drawing carefully, and even consider making paper mockups of desks and other service points. Learn to use an architect's scale to assess the dimensions of spaces, furnishings, and equipment. Notify the architects and designers in writing of problems, concerns, and suggestions. This is the time to use electronic mail rather than the telephone. And refer to the architectural program as a functional checklist.

Try not to let the architects prevail if you strongly disagree with aspects of their design. The quest for the rational design may oversimplify the problem. Don't be easily convinced that you storage is unnecessary or that pearl gray silk is a durable upholstery textile.

And finally, exploit the project as a promotional opportunity. Post "before and after" images at entrances. Photograph the work in progress frequently, and acquire a three-dimensional rendering from the designers. Develop a web site or blog with design and construction updates.

Conclusion

Shaping library space is an energizing experience for those privileged to participate. Therefore, engage as many of the library's staff members as you can in the planning and design development stages. Gather and review information thoroughly. Double the time that you will spend and that the project will take. And be prepared in the end to settle for less, bearing in mind that any improvement to the library environment adds value.

Endnotes

¹ Lee Rainie et al. "The Rise of E-Reading," *Pew Internet & American Life Project*, April 5, 2012, accessed January 25, 2014, <http://libraries.pewinternet.org/2012/04/04/the-rise-of-e-reading>.

² Adam Gordon, "Books Are the Widgets of University of Chicago's Mansueto Library," *Forbes*, June 24, 2011, accessed January 25, 2014,

<http://www.forbes.com/sites/adamgordon/2011/06/24/books-widgets>.

³ Gary L. Reynolds, "The Impact of Facilities on Recruitment and Retention of Students," *New Directions for Institutional Research*, no. 135 (2007): 67-70, doi:10.1002/ir.223.

⁴ Henry Dreyfuss, *The Measure of Man: Human Factors in Design*. (New York: Whitney Library of Design, 1967).

Further Reading

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