



[EXECUTIVE SUMMARY]

Renewal of the Georgia Tech Library is underway, and along with that renewal, we are reimagining and redefining the Library. Our physical spaces and library services are evolving to meet the changing research, teaching, and learning needs of Georgia Tech.

A majority of the Library’s physical collection — the very core of all preconceived notions of what a research library is and how librarians serve — is leaving the Georgia Tech Library space. Even without these books, we are still a *research* library.

The Library is *still* a place that facilitates access to information to produce useful knowledge, just as it always has been. The Library is a space and a network of services that accomplishes this mission, even without the print copy books directly located on site. There have been many gains in the digital access to information in recent years, and the Georgia Tech Library will have space and services to match these digital gains after the renewal is complete. It will still be a library.

In this paper, we discuss the major elements of that renewal as pertaining to our Library. First, we are a research library. A 21st century research institution still requires the multifaceted services of a research library. We also discuss the space of the Library itself. A library has never been merely a container for books. The physical space of the renewed Library will be the interdisciplinary platform for innovative scholarship and learning, as services expand. Finally, we discuss the role of the Library as an integrated network of resources, focusing on the important and unique collaborative services provided by Library faculty and staff.

The renewed Georgia Tech Library will be the research library that Georgia Tech needs to both support and define what a 21st century research institution should be.

REIMAGINING THE GEORGIA TECH LIBRARY

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[INTRODUCTION]

For many people, the thought of reimagining or redefining a library may be slightly discomfiting, because of the fond and romantic notions a place called a “library” conjures up in their minds. Preconceived notions of libraries are often bound up in what a library was like during one’s own college experience, or during one’s childhood, or even in how libraries are portrayed in our popular culture.

And it’s true, things like print books and journals are often an integral part of those notions. The presence of many shelves of scholarly books is a signifier that one is in a research library: a place where information was accessed to produce useful knowledge, with the helpful services of the librarian on hand to guide one to just the right item.

To use a book metaphor, the renewal process is not the “The End” for the Library. This is the start of a new chapter. The renewal project is taking the opportunity to show what a library really can be, and what research librarians and archivists really can do, like no other research library in America has yet done.

As a research institute, Georgia Tech needs a research library, and it needs capable Library faculty and staff to operate that research library. When the paper books are housed off-site, the work that a library needs to do remains. A research library is a resource and a service for students, faculty, and researchers unlike any other on campus, and is aligned with the campus’s goals and mission in the service to its scholarly community.

Georgia Tech’s own strategic plan includes enriching the student experience, developing an innovative environment, sustaining excellence in research and scholarship, and providing a cutting-edge infrastructure to support the faculty’s vision. The new, reimagined Georgia Tech Library building will be a space to provide many new physical, informational, and technological resources to do just that. When the paper books are housed off-site, the work that a library needs to do remains. And the Library is already well equipped with the most important resource to transition into this reimagined environment: professional Library faculty and staff who have the expertise to find and organize information and to consult, teach, and guide Georgia Tech’s community of scholars and researchers.

Like our research library peers, the Georgia Tech Library has reimagined and renewed itself before. When the Library outgrew its original home on the 3rd floor of Tech Tower and needed its own building, it was still a library. When Georgia Tech again outgrew that space and freshmen hand-carried the collection to a new building called Price Gilbert, it was still a library. When the Library added computers for students to do their research, it was still a library. When the Library first bought electronic journal subscriptions, it was still a library. When common group study areas were added, when a coffee shop was installed, when the card catalog was taken away, the Library was still a library. Likewise, the identity of our newly reimagined space will be as a library, in both the skilled professionals who are housed in the space, and in the research library services provided here.

The reimagined and renewed Georgia Tech Library will continue to be the important hub for campus knowledge creation, collaboration, and scholarship that it has always been. Every great academic institution relies on the spaces, services, staff, and symbolic value of the “library” to serve that purpose, regardless of the form its library may take. American college tours always include a stop at the university library. New student orientations across the country either take place in the library or include a mandatory visit. Every member institution of the Association for American Universities has a building on its campus called a “library.” The Georgia Tech Library will be a model for our peers, an example of the increasing value of libraries in a more technologically advanced and information rich environment. Thus the Library will continue to be a crucial part of the Georgia Institute of Technology as it continues to define the technological research university of the 21st century.

[THE TECHNOLOGICAL RESEARCH LIBRARY FOR THE 21ST CENTURY]

As an academic library, the Georgia Tech Library has a mission that is easy to state and hard to define: *provide an essential component of the teaching, research, and learning activities of the Institute*. The Library fulfills its mission through a variety of services and resources that are developed and refined by Library faculty and support staff in collaboration with the Library's constituency: the students, faculty, and staff of Georgia Tech. And since the Library serves Georgia Tech, one of the top 40 schools in the nation and a globally respected research institute, it is a research library.

As a research library, our mission deepens and broadens. We provide open and equitable access to essential information for research and scholarship; we provide tools and expertise to facilitate the creation and publication (in many formats) of knowledge; we anticipate the information needs of our future patrons; and we strive to be the leading model of the 21st century research library.

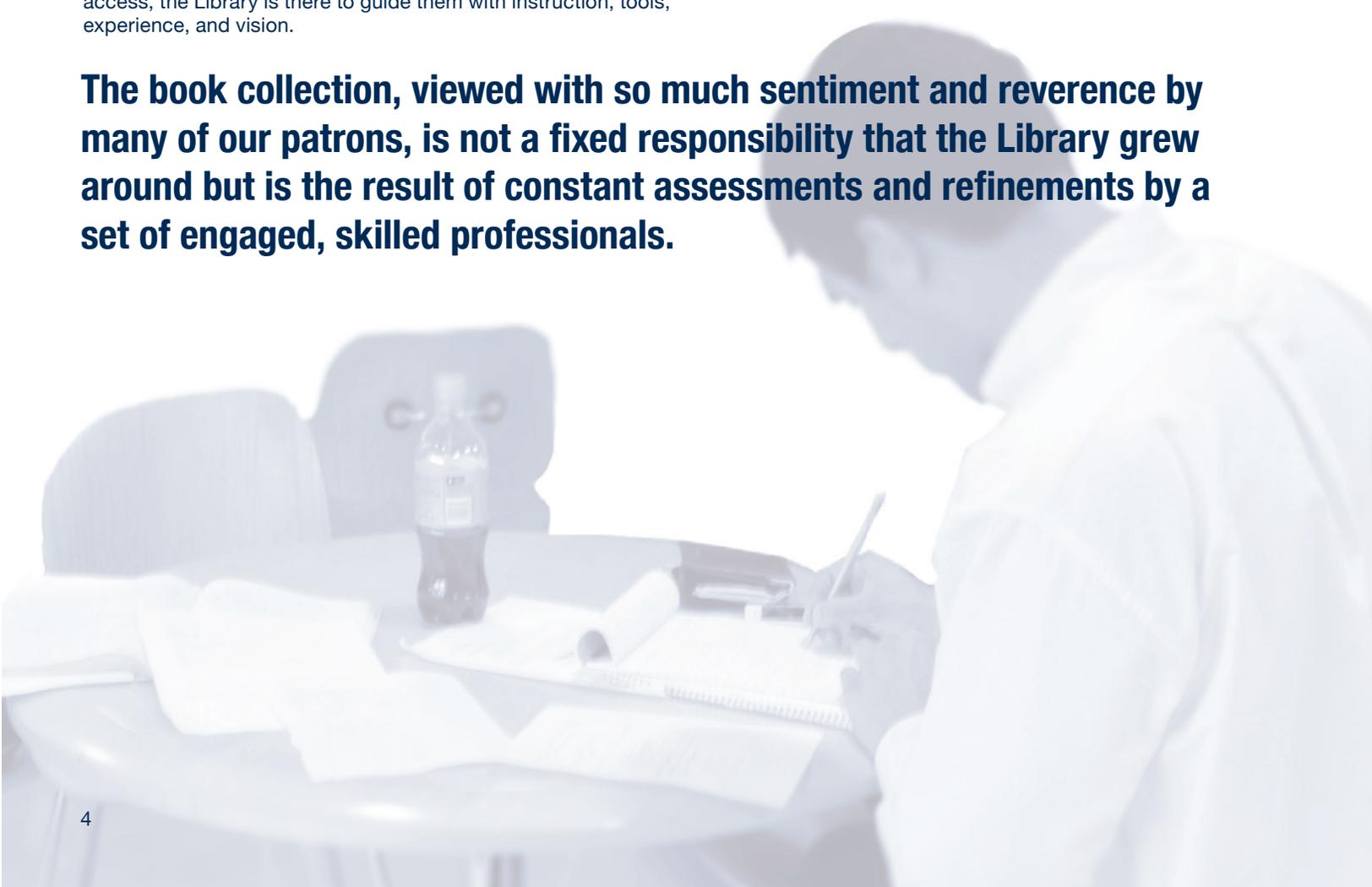
Each of these components of our mission requires near-constant change, as technological requirements, financial obstacles, and legal puzzles complicate accessing, publishing, and archiving knowledge. As our patrons grapple with new media, digital repositories, massive data sets, and open access, the Library is there to guide them with instruction, tools, experience, and vision.

The Library's collection reflects our anticipation of changes in research and scholarship. Over the past decade, we've seen a precipitous decline in Library print book checkouts, while visits to the physical facility and use of the electronic collection have risen substantially. By merging our collection with Emory's and relocating a substantial portion of our print collection to the Library Service Center, the Library is able to utilize our spaces for the services and collections required by the teaching, learning, and research of the future.

The book collection, viewed with so much sentiment and reverence by many of our patrons, is not a fixed responsibility that the Library grew around but is the result of constant assessments and refinements by a set of engaged, skilled professionals. We assess the use and value of all the resources the Library might make available, making decisions based on cost, use, constituency, and an idea of what the future information needs might be. We will always curate our collection, in whatever form it takes — e-book, book, student project, research data, recorded simulations, and forms we haven't seen yet — and our purpose will always be to make sure our patrons get access to information and the collection in the most efficient and useful way.

The Library's transformations are all to better deliver and develop its essential services. So much of what the Library is, year to year, is made out of the needs of our constituents, whether we are providing access to up-to-date research data and scholarship, supporting new teaching methods through collaboration with faculty, or preparing scholars of all levels of experience to engage with new publishing models. We discover these needs as an organization aware of our interconnected responsibilities and our mission.

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[LIBRARY AS PLACE]

The Library is not an assortment of services and people appropriated from various departments and fields. We are an academic unit that experiments, researches, and contributes to the field of library and information science. As a research library at one of the best schools and research facilities in the world, we deal with extraordinary patrons, who require extraordinary resources and services. The Library is an organization designed to deliver those resources and services as a cohesive whole for the betterment of the Institute.

As a research library, the Georgia Tech Library belongs to an international community network that is based on a shared understanding of the term “library.” “Library” is a noun — specifically, according to the *Oxford English Dictionary*, it is “a

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place.”¹ The library is one of the first places you learned about as a child and one of the most constant and well-understood common grounds we have in society. When we say “library,” “biblioteca,” “図書館,” “도서관,” “ةبتكم” we know *where* — both physically and metaphorically — we are. Just as the term “theater” once signified a space where Greek drama was performed and now connotes a space where digital images are projected, the activity within a library space may change, but the label and the place retain their informative, symbolic power. With the rise of the MOOC and the flipped classroom, a few years from now, the terms “lecture hall” or “classroom” may not mean places where lectures happen or formal classes take place, but rather places where project-based, hands-on discovery unfolds. But we will continue to use the terms “lecture hall” and “classroom” because they will remain meaningful touchstones, crucial elements of our lingua franca. And the terms will continue to refer to physical spaces because the rise of the virtual world does not negate the need for the physical world; the physical world — the classroom, the library — is where the virtual world is made. Like the dorm, the dining hall, or the laboratory, the library — called “library” — exists on campuses everywhere not because it has always existed but because it works. MOOCs have arrived, but universities still need space — face-to-face education space, living space, meeting space,

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production space, space that in itself is an argument that what the university community is doing, the work it is engaged in, is important.

The Library is a space that embodies the Library mission. The Georgia Tech Library’s mission to serve as “a creative partner and essential force” in “the Institute’s instructional, learning and research programs” is embodied in the space we provide for scholarship, inquiry, discovery, risk-taking, collaboration, concentration, and connection, all at the very important physical center of campus.² Libraries continue to occupy central spaces on university campuses all over the world because they are the

physical nerve center of the research enterprise. The Library “implements programs,” provides “expert staff,” “satisf[ies] information needs, promote[s] lifelong learning and create[s] productive connections for the scholarly community.” To accomplish all of this and make it available, the Library needs reimagined walls and windows. Like the quad ruled pages of a laboratory notebook or the tight-knit components of an integrated development environment, the Library is a template, a didactic structure, a platform for innovation. The physical space of the Library brings users together, inviting them to model innovative methods of research and scholarship for each other. The space directs users to the services that are there to support them and even suggests tactics that can help them succeed. Quiet study carrels and rooms say, “sometimes you will need solitude and silence to focus on your scholarship.” Reconfigurable couches and rolling tables inside a multimedia room say, “other times, you will need to rearrange your

environment to support both in-person and virtual collaboration and to examine your research question from a new perspective.” Likewise, the ways in which Library patrons use these diverse and dynamic spaces instructs the Library and its employees in how research practices are changing and in the particular needs of the Georgia Tech community.

The Library’s services demand both lively, collaborative spaces *and* quiet, contemplative spaces, designed with Georgia Tech’s thinkers in mind — spaces fashioned specifically for faculty, spaces geared to graduate students, spaces customized for undergraduate scholarship. The Library needs flexible and open room for over 500 annual library-related learning and instruction sessions on topics such as data management, MATLAB, patents, LaTeX, video editing, archival research, or engineering the next invention that will change the world. And the intricate and frequently invisible work that goes on behind the scenes within the Library to enable complex and vital services such as the Library website, multiple catalogs, digital repositories, and seamless (and increasingly expensive) e-journal and database connections requires substantial physical space: office space, space to house servers that are busier than ever, meeting space for interdisciplinary IT project teams, space in which Library staff can engineer code, architect websites, and further Georgia Tech’s top tier technical reputation.

Over the next few years, the vast majority of the Georgia Tech Library’s circulating print collection will be moved to the Library Services Center and the demand for electronic books and resources will accelerate, but the Library will still be a space that provides access to tangible information resources. Books

1. “library, n.1.” *OED Online*. Oxford University Press, March 2014. Web. 16 March 2014.

2. About. Georgia Tech Library. 26 March 2014. <http://www.library.gatech.edu/about/mission.php>

and journals moving to and from the Library Service Center will be processed in the Library building, and students and faculty will retrieve requested materials from the Library. Crucial non-circulating reference books, journals, and course reserves will still be made accessible in the Library building. And access to other physical tools and forms of information — DVDs, laptops, digital cameras, tablets, perhaps someday soon, Google Glass, or the video games and virtual reality equipment invented right here at Georgia Tech — will be provided in the Library.

The Library is a space for preserving the past and present for the years to come. By showcasing curated content in inspirational surroundings, the Library will invite the Georgia Tech community to explore the past and design the future. It will continue to house several thousand linear feet of rare, fragile, and awe-inspiring archival collections that cannot be transported to the Library Service Center and must be made available by trained archivists — Academy Award statuettes, a vase painted by Picasso, well-loved RAT caps worn by Tech's first graduates, a soft leather football helmet from 1936, handcrafted wooden airplanes flown during mid-20th-century halftimes, John Heisman's signed contract to coach football and baseball, the first three editions of Newton's *Principia*. No matter how convenient the digital surrogates of these items might be — accessible online to anyone from anywhere — there is nothing like the magic of the firsthand experience of the physical museum piece, no digital equivalent of the aura of the object. The Library is a space for exhibiting these treasures and for displaying and celebrating the academic work and innovations produced by the Georgia Tech community every day.

The Library is an inspirational space for scholarly activity that attracts the best minds to Georgia Tech. It is an open-minded, equal-opportunity meeting place for intellectuals from every discipline that invites serendipitous encounters and promotes community building. Like the Hewlett-Packard garage or the Google dorm room, it is an incubator for the research required of us if we are to define the leading edge. If a graduate student lacks a designated office space of his own, if a tenure-track faculty member wants personalized advice about open access, if a postdoc needs a place to meet with a student, if an undergraduate seeks an hour of focused quiet before an exam, if a research faculty member needs a meeting room for her multi-institution grant, the Library space is their space. The

The Library is interdisciplinary, neutral, and open to all. No other space or unit on campus is committed to enhancing and promoting the scholarship and learning of all academic disciplines in the same way. At Georgia Tech, the Library is unique in its fundamental commitment to supporting the information needs of all members of campus, regardless of status, discipline, or college affiliation; accordingly, Library collections, spaces, and services are available to everyone.

building itself is a reminder of what they came to Georgia Tech to accomplish and the future they will create.

The Library is also the home base for active, engaged Library faculty and staff who architect the physical Library spaces to foster and promote Georgia Tech's scholarship. No matter how our collections or services may change, Library employees and the Library spaces remain inextricably bound to one another.

Just as the employees shape the space they inhabit, so too does the space shape the Library's employees and the work they perform. Therefore, it should come as no surprise that co-location of Library employees within the Library building is vital — to maintain the Library's service levels, to cultivate interdisciplinary and neutral spaces that are open to all, to support the Library's own research and scholarship, and to sustain the Library's collective identity.

[AN INTEGRATED NETWORK OF RESOURCES]

Co-location of Library resources and expertise is fundamental to Library operations, and subsequently the level of service provided to our Library patrons. The Library will continue to house unique resources that are unavailable elsewhere on campus, and patrons will still require expert Library faculty and staff to locate, navigate, and provide access to the Library's information resources — whether they need the unique Library collections, the physical collections that will remain in the building, or the specialized technologies used to access, manipulate, and disseminate digital information.

The Library provides one-stop shop support to the Institute, and we're able to do so because Library employees are housed in the same building. That level of universal service depends upon the collaborative efforts of Library faculty and staff who possess varied skills and proficiencies; it depends upon Library employees' ability to physically sit in a room together to meet and work on projects and solve problems; it depends upon the accumulated time and energy saved when employees have what they need, when they need it. The co-location of Library employees also reduces the administrative burden on our students, faculty, and staff. Requiring a faculty member to visit multiple offices around campus and coordinate with a handful of different units to include an information literacy component in their course would impair their ability to effectively teach, advise, conduct research, and publish. Scattering Library services throughout the campus and beyond would overburden faculty,

staff, researchers, and students alike. Only by physically housing the Library's employees in one building is the Library able to provide one-stop shop support, turning internal efficiency into more effective deployment of services and greater productivity and improved practices of the Georgia Tech community as a whole.

The Library is interdisciplinary, neutral, and open to all. No other space or unit on campus is committed to enhancing and promoting the scholarship and learning of all academic disciplines in the same way. At Georgia Tech, the Library is unique in its fundamental commitment to supporting the information needs of all members of campus, regardless of status, discipline, or college affiliation; accordingly, Library collections, spaces, and services are available to everyone. As a unit, the Library is neutral and open to all because internally our employees are so diverse; we come from a variety of backgrounds, service models, experiences, and ways of approaching the Library's mission. Some employees have subject domain expertise, some have deep technical knowledge, some have come to Georgia Tech from the corporate sector, while some are from research labs. We offer a richer and overall more multidisciplinary and cohesive experience to our users because Library departments supplement and augment the programming of one another, provide opportunities for cross-training and skills sharing, and collaborate on projects and services requiring a wide array of expertise. Further, the physical co-location of this diversity drives more rapid innovation, greater opportunity for professional development and growth, and subsequently vastly improved and more efficient service to the Institute.

It's important to note that Library services and programs are a collaborative effort on the part of Library employees. Although some Library services have traditionally been more apparent to our patrons (for example, the physical print collection or the Library Services Desk), all Library functions depend upon the efficient and coordinated efforts of many, whether or not a Library patron ever sees or personally interacts with those employees. Subject liaisons require reliable desktop computers and printers, as well as specialized tools or software, which are managed by our own internal Information Technology & Development (IT&D) department. SMARTech, Georgia Tech's institutional repository, depends on the collaboration between the Scholarly Communication & Digital Curation, Archives and Records Management, and IT&D Departments. Seamless access to e-journals involves IT&D, as well as our Collection Development Librarians and our Electronic Resource Coordinator Librarian. Service levels would suffer if Library employees were separated and housed in different buildings.

The Library is a research unit, actively engaged in scholarship and research of our own and contributing the results of this research to Georgia Tech, the broader Information Science profession, and society as a whole. The Library's research process itself is more productive, inspired, collaborative, and effective because Library faculty and staff work physically closely to one another. Not only does the close proximity facilitate scholarly collaboration, it is necessary for many Library research projects, whether it's writing the code to support a new type of digital collection or studying the ways in which changes to a physical space enhances student collaboration. By conducting research ourselves, we are better able to understand the practices and needs of the community we serve, which empowers the Library to improve our service to the Institute. Our research and scholarship also contribute to Georgia Tech's tradition of excellence in scholarship and research. The Library, just like the rest of the Institute, strives to be a world leader in library and information science. We too expect, that within the field of information science, our peers will ask, "What does Georgia Tech think?" Our research and scholarly endeavors are possible because we are physically located in the same building.

The Library is also an inspirational space for Georgia Tech Library employees. Regardless of specialization or department, we are all united by our commitment to the ideals of Librarianship and to the mission of the Georgia Tech Library. The Library building embodies this collective identity in the physical spaces of the Library where we work, and in our patrons and co-workers with whom we interact. The building itself is a reminder that we are essential partners in the Institute's mission and in



Georgia Tech Library (Gilbert Building), VA 318, circa 1950, Georgia Tech Photograph Collection (VAC375), Georgia Institute of Technology Archives.

the international community to which our Library belongs. We cannot emphasize enough that the collective identity of the Library and its employees is an incredibly powerful force. The Library's collective identity fosters the collegiality that makes the Georgia Tech Library an inspiring and exciting place to work. It is what attracts new generations of Library employees and ensures retention of seasoned professionals. It unifies a diverse group of faculty and staff into one of the most time-honored academic institutions. It is what drives our services and support, it is what compels us to innovate and improve, and it enables collective action for important advocacy issues on campus and in academia as a whole. The concept of the "library" and the "librarian" is pervasive in every society, and this identity carries weight with the students, faculty, and staff who teach, learn, research, and serve on the Georgia Tech campus. New students and staff may need to learn about unique Georgia Tech Library services, but they do not need to be taught about what the Library is and what it stands for. Ensuring that all Library faculty and staff remain in the physical Library building is crucial, not only for sustaining internal Library morale and identity, but also for ensuring that the expectations of the Institute match the reality of the space and services.

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[CONCLUSION]

As campus continues to discuss the Library renewal project, it's only natural that part of those discussions deal with the future of Library spaces and services. Efforts to define the 21st century technological research library will require not only an understanding of what a research library is, who research library faculty are, what should be in a research library, and what functions a research library fulfills, but also how these components will or will not change in the coming years.

The Georgia Tech Library collects, preserves, and provides access to information, in whatever form or medium that information may come. No one function, service, space, or person in the Library does this on his/her own. The Library provides all of these resources as a cohesive unit, and because we are cohered in the Library space, we provide the level of support that a top research institute requires. No matter the patron — whether a researcher, an instructor, a graduate student, or a provost — the Library is and will continue to be committed to capturing our patrons' scholarly output, curating the collections of scholarship necessary for their work, and ensuring access to the highest quality, most relevant information resources. Library collections may move, but the Library's core mission, functions, and services will remain.

The Library is so much more than a mere collection of books ever could be. The Library's print collections are not what define Georgia Tech or the Georgia Tech Library. Georgia Tech and the Library are defined by world class research and education, and 21st century research, teaching, and learning practices require new spaces, services, and resources. The Library renewal is not a break from tradition, but a bold rethinking of past conventions, an acknowledgement that research and teaching are changing, and a necessary reshaping, to ensure that the Library continues to be a creative partner and essential force in the fulfillment of the Georgia Tech mission.





[Unpacking Library Services]

Just as properly functioning infrastructure should be invisible to the user, the better the Georgia Tech Library anticipates and meets the needs of our patrons, the less obvious our value becomes. Often, it's only when the book isn't on the shelf, or the full text PDF of an article won't load that the importance of Library services becomes apparent. However, just as the electricity grid that powers our city is non-obvious but still fundamental to modern life, requiring constant attention, resources, and expert care, so too does Library infrastructure require careful consideration. In order to unearth the systems, services, and employees that keep the Library running day in and day out, we present five case studies on current and evolving Library functions (e-journal access, Library instruction, and research data archiving).

E-Journal Access

The widespread use of electronic journals and online databases has made e-journal access easier than ever, but not without considerable time, effort, and resources on the part of the Library. All too often, patrons report not "using the Library," failing to understand that even if they never set foot in the Library building, when they download an article from a database or Google Scholar, they are using the Library. When a patron searches for an academic journal article, they're able to locate the article online because a Librarian has created professional metadata for each item according to national standards – national standards that ensure the metadata from one source can be shared and used in other systems; national standards that make it possible for patrons to find articles through Google Scholar, the Library catalog, or a vendor database. In some cases, the records may have been created by a 3rd party vendor, but a Georgia Tech Library employee updates those records to include information specific to our Library.

Once a patron has found the article they need, they're able to gain access to the article because trained Library faculty have already identified the journals that Georgia Tech patrons need, they have negotiated with the publishers, and they have ensured that the Library has the funding necessary to pay the license for that journal. Library employees confirm that the vendor bills are paid, they pay for and manage the knowledge base that keeps track of what content we have paid access to, and they ensure that the publisher data and systems work with our data and systems. Library employees coordinate with the vendors and campus IT to authenticate Georgia Tech users, a requirement for providing access to paid subscriptions over the Internet. Even when a user searches for an article through Google Scholar, an act seemingly devoid of Library involvement, the Library is there, behind the scenes, coordinating with Google. Beyond paying the bills for access for the articles to which Google points, our e-resource Librarian works with Google, customizing Georgia Tech search results to highlight those resources to which we subscribe, and to integrate our knowledge base and link resolvers directly into the Google Scholar Search Interface.

The Georgia Tech Library's e-resource collection is the direct result of time, effort, resources, and intellectual consideration, a curated selection of resources that the Library's collections development professionals and subject liaisons have identified as necessary to the Georgia Tech community. Library employees constantly monitor use of e-journals, watch trends for new tools or publications, conduct usability testing, troubleshoot article access problems – necessary work to ensure that all a patron needs to do to get an article is click the link that takes them to the full text PDF.

Library Instruction

When a patron has a question or needs assistance with their research, the Library is able to address their needs, because we are a center for instruction at all levels. Employees at the Library Service Desk answer quick questions and demonstrate how to search the Library catalog and databases or how to locate an online article or a book on the shelves. They also instruct patrons on how to use the computers, printers, and scanners in the Library's Computing Commons. They demonstrate how to use the gadgets available for check out and answer questions about the Library spaces, campus, and Georgia Tech as a whole. Library employees at the Clough Core desk also offer academic advising and troubleshoot basic IT issues. Subject Librarians are available to offer in-depth reference consultations, whether for one-on-one advice on writing a report, publishing an article, more advanced literature reviews, or copyright consultations. All of this support is seamless to the end user because prior to the interaction, Library employees have coordinated access to computers, databases, the catalog, specialized software, as well as public spaces where they can meet with the patron.

The Library also provides two types of formal instruction: drop-in courses on software tools (such as EndNote, MATLAB, Final Cut Pro, and Wordpress), Library tools and services (such as Productivity Tools for Graduate Students or Student Library Orientation), or specialized skills (such as Data Management Planning or Writing a Literature Review); and instruction designed to complement Georgia Tech catalog courses, such as workshops introducing local resources particularly well suited for a class project or embedded instruction on how to craft a Wikipedia article. In 2013 alone, the Library held over 425 classes. Providing this level of instruction requires expert staff, designated classroom spaces, and specialized technologies and software. It requires planning, outreach, and meetings. It requires training and professional development for Library employees, hours of background research and course development, and the time, energy, and technical resources to create web resources (such as Research Guides) or handouts to supplement the course.

Research Data Management and Archiving

As patrons' needs evolve, the Library also changes. In response to the growing need for research data archiving, the Library is working to build out the infrastructure and support to make the process of data management planning and archiving as seamless as possible. This will require servers, storage, and specialized repository software designed to manage research data, which requires IT staff. In particular, because the repository and preservation tools used by the Library community are open source, the Library needs technical staff who understand user needs, who program and write code, and who contribute to the ever-expanding community of Library developers. It will also require employees with metadata and digital preservation expertise, to ensure that deposited items can be retrieved over time, even as software and technology changes. Library employees must be experts in preservation techniques such as format migration, media refreshment, and bit integrity checks. Employees must understand markup languages, ontologies, how to develop crosswalks between different metadata schemas, controlled vocabularies, and harvesting standards such as Open Archives Initiative-Protocol for Metadata Harvesting. Library employees must be able to assess incoming collections to ensure that sensitive information will not be divulged, and to ensure that the appropriate files are retained, and this requires knowledge of copyright, human subjects research protocols, export control, and non-disclosure agreements. The ability to appraise incoming collections also often requires subject domain expertise, which subject liaisons can provide.

Because research data archiving is still a nascent and burgeoning area for research libraries, it also requires staff and library faculty who can enthusiastically advocate for data management and data archiving,

and who can train faculty, staff and students on how to best manage and archive research data. It requires up-to-date knowledge on rapidly changing federal, state, and institutional regulations regarding the planning, management, sharing, and archiving of research data. It requires collaboration with the Office of Information Technology, who are intimately involved with data management during the course of a project and have a vested interest in ensuring the safe passage of the data to the repository. It requires collaboration with the Office of Sponsored Programs and the Office of Research Integrity Assurance, who track the requirements for grant proposals and ensure compliance with the terms of the awarded grant.

In-depth Research Assistance

Library faculty work to support Georgia Tech faculty and students throughout their research journey. They provide personalized assistance and expertise in locating, evaluating and using subject-specific information resources, and provide specialized help with a variety of scholarly communication issues. Each school or unit on campus has a designated liaison librarian who serves as the first point of contact for library-related questions or services. These liaisons or subject specialists are highly skilled professionals with education and/or experience in the fields they serve, and have considerable knowledge of the information resources in these areas.

Graduate students often struggle as they begin their research. All too often they are overwhelmed because they feel that they should know how to find all the information they need even though they likely received little, if any, training to use information resources as an undergraduate student. In an age when “everything is on the Internet,” effectively navigating channels of information to find the best resources may be challenging and anything but simple. In order to assist students in successfully completing their research activities, the Library provides a cluster of supportive services mostly offered through subject specialists. Library subject specialists actively work with graduate students to help them at every stage of their educational experience. They work through departments to reach the students during new student orientations. They create resource guides that lead students to the best resources for their particular disciplines, and they offer both discipline specific and general interest workshops designed explicitly to meet their needs. However, the most beneficial service to the graduate student may be personalized research help through individual consultations.

For a faculty researcher, the path to a Library expert may begin as the researcher searches for an obscure 17th century article or when she cannot decipher an incomplete citation for a much-needed conference proceeding. Perhaps the journey starts when the researcher looks for help setting up alerts or using research tools. Or, she may need help with the development of multidimensional research strategies, or help identifying relevant search venues for a new research topic. As the research continues she may seek guidance on compiling and managing a personal citation database, or with locating technical reports or standards for research or grant proposals. Then, as these proposals evolve into multi-year, multi-faceted research projects, help from librarian experts may also progress into long-term collaborations – with information assistance and advice available at critical junctures. When results are ready to be shared with the scholarly community, the researcher may have questions around copyright and fair use of materials in her publications, as well as in evaluating or negotiating author agreements. Throughout the research journey, Library faculty are available to provide the just-in-time professional support needed to successfully navigate the increasingly complex information universe.

Research Guides & Tutorials

Georgia Tech faculty and students are characterized by their tendency and expectation of being able to seek information and assistance just-in-time. Today’s academic is already juggling a full load; having a reliable pathfinder that can always be consulted for their information needs can be crucial. The highly trained Library faculty have anticipated this need by providing an ever-growing smorgasbord of research guides and tutorials specifically tailored for Georgia Tech’s faculty and students.

Librarians create targeted research guides for a variety of purposes including class-specific support tools for instructional faculty, comprehensive subject-based guides/pathfinders for each major discipline, library workshop guides, and special interest guides (such as Earth Day and Patents & Trademarks). Development and upgrades for a customized Georgia Tech template are provided by Information Technology & Development, and Library faculty from various departments create and maintain the content and formatting for the Guides. The in-depth subject expertise of librarians coupled with their well-developed organizational and web design skills result in guides that are uniquely geared toward the technology-focused disciplines that are taught at Georgia Tech. Liaison librarians also work closely with instructional faculty to provide customized class-specific tools that students can return to time and again to find the resources best suited to their course assignments. Significant time and energy is expended in identifying and evaluating high quality resources from both the Library’s collection and the web to create guides that provide targeted help to the Georgia Tech community, just-in-time.

In addition to the guidance offered through research guides, librarians also provide tutorials to guide students and faculty through the use of Library resources. In collaboration with our database vendors, Library faculty identified and assembled a collection of over 100 tutorials designed to instruct patrons on the most effective ways to use the unique features of many of the Library’s article databases. The faculty librarians also create and collect high quality tutorials that teach elements of the research process, software a scholar might use, and citation management tools. The creation process utilizes the faculty librarian’s complex technical and subject matter expertise, pedagogical design knowledge, and finely tuned organizational skills. The resulting online tutorials portal is thus able to provide essential guidance to users just when they need it, right at their fingertips.

These are only a handful of examples of Library services and the level of expertise and amount of work that is required for them to run properly. The same degree of complexity underlies almost every service the Library provides – expert, dedicated Library employees are working behind the scenes to ensure that the service points our patrons interact with are seamless, easy, and convenient.

