Introduction

For the sake of this exercise, Operations covers multiple offices that provide services across the Library, including Business and Human Resources Service Center, Office of Library Facilities, Library Information Technology, User Experience and Web Strategy, Communications, and Advancement. These offices provide support to and partners with all employees of the Library, all physical locations occupied by the Library, and all units of the Library.

Strengths

1. Broad perspective. All these units have a view across the entire Library, providing for a broader perspective and the ability to offer more wholistic solutions, rather than compartmentalized approaches.
2. Well positioned using campus services/resources. The Library is a good citizen in that it is using campus or system provided resources where they exist versus duplicating or building their own. This is particularly apparent in the IT, HR, and Business areas.
3. Dedicated, experienced communications staff. Many libraries do not have communications personnel, but rather charge various staff or librarians with communications tasks and responsibilities.
4. Experienced staff in general. All units within operations expressed experience as a strength. Staff in HR, Business, and Facilities possess expertise and knowledge around the campus processes in their respective areas and how best to interface with campus to get the most benefit for the Library. IT staff expressed expertise and experience in security and compliance, resource monitoring, configuration management, AWS technologies, and general IT service management as strengths to be leveraged.
5. Library specific domain knowledge. Even though these units may be thought of as generally administrative and not part of the Library’s core competencies, many staff in these units actually have backgrounds as librarians or have completed library and information science advanced degrees. As a result, there is a solid understanding of the overall business of the Library within these units.
6. Innovative and agile approaches. The SCaRS and IMS teams within IT noted innovation and agility as strengths. Having relatively greenfield opportunities and few legacy constraints, SCaRS has been able to deliver several iterations of successful product deployments and currently has positive momentum in this area. IMS also noted that with the availability of virtual infrastructure and other campus resources, we are positioned to respond quickly and flexibly to requests.

7. Diversity. Several groups noted diversity as a strength. Diversity in age, experience, gender, ethnicity, skills, talent, and educational backgrounds makes for many perspectives and generates out-of-the-box thinking. This medley allows these groups to solve unique problems.

8. Teamwork / Collaboration / Coordination. Teamwork and collaboration were themes across the entirety of operations. Generally, staff work well together, coordinate across groups, and collaborate to reach the best solutions given all parameters. They promote partnerships across the Library.

9. Customer Service. Customer service is a pillar of the operational units. They strive to provide excellent customer service in all interactions.

10. Unified Platforms. By using unified platforms in a number of areas, the Library leverages shared processes and resources, decreases overhead, and provides a more unified patron experience. For example, Voyager, Wordpress, and the Digital Repository (and associated services such as the Digital Library) are all used across the Library, promoting standardization in the respective functional areas that can support a more streamlined and user-friendly patron experience.

Opportunities (and Challenges)

1-3 Years

1. The ILS migration to Alma and the Primo implementation will provide an opportunity for the Library to evaluate workflows for improvements and take advantage of more modern technologies for interfaces, integrations, and data analysis.

2. The Library capital building projects slated for the next several years will provide an opportunity for the Library to design new spaces to meet current and future needs. Operations would like to future-proof these spaces as much as possible, for example, include ample data and power in the designs.

3. Recruitment and retention of talented staff is a high priority. There are a number of openings and anticipated retirements that will create near-term opportunities, and these hires will help shape the 3-7 year and beyond 7 year opportunities, aspirations, and results.

4. Operations would like to improve organizational and operational effectiveness. The Library could increase productivity of all staff by fortifying middle management with appropriate training and skills. The Library could better evaluate use of resources, collections, expenditures, and impact with more appropriate tools and support for data analysis.

5. By optimizing the use of cloud services the Library can create a more transparent, pay-as-you-go environment to support research, and the Library can pioneer microservices and cloud-based repository services for harvesting, object storage, dynamic image delivery, and other innovations.

3-7 Years

1. A rapidly changing technology environment and rapidly changing library context (e.g., scholarly publishing) are both opportunities and challenges. How do the services provided by the Library to students, faculty, staff, and the community stay relevant?
2. The Library can expand impact through consortial collaborations. The Library may expand its services beyond internal use. Yet to be identified collaboration opportunities may become available through the BTAA, with peer institutions, etc.

3. A large-scale comparison of print vs. digital collections is needed in order to determine what items are available in what systems, determine if we have missing items that should be sent for digitization, identify where there are disparate digitization efforts requesting the same materials, and ensure our print collections remain robust.

4. As a library patron, I need user-friendly, federated searching across all library collections (including medusa collection registries, Illinois Data Bank, and easy search) in order to find cross discipline research opportunities and to analyze gaps in research.

5. Future scaling will be challenging from the point of view of storage and software maintenance. The cost of digital storage will continue to increase without intervention and maintaining large amounts of complex custom software will be burdensome. An opportunity would be centralizing the role of digital object management within the Library.

7 Years and Beyond

The groups had more difficulty imagining or defining opportunities beyond 7 years due to the rates of technological and environmental changes.

1. The primary challenge and opportunity for staff will be to stay engaged and continually learning new technologies that present themselves and identifying ways in which those new technologies can be incorporated into our environment to provide new services to our faculty, students, staff, and community.

2. Effective artificial intelligent agents providing advanced customized search and access functions for information could be a specific opportunity.

3. The amount of digital data worldwide has increased tremendously and will continue to do so. New discoveries will come from the analysis of this data. What are the things the Library can do to help researchers navigate to the right data?

Aspirations

Operations had a lengthy list of aspirations. Many were very specific to the group participating in the exercise at the moment. Overall, aspirations can be summarized in this manner.

1. Operational units would like to be proactive, trusted partners and would like to promote the Library as one organization. These units welcome being involved from the beginning of a project to provide input to achieve the best possible solutions.

2. We would like to be the best ARL to work for! Since salary is typically not the lone driver of employee satisfaction, and the University Library cannot compete on salary alone anyway, meaningful and challenging work for employees is paramount. Furthermore, adequately staffing a function or appropriately setting expectations and service offerings based on resourcing is important to the quality of work life for employees. Employees who are not appreciated or feel they can never meet expectations are unhappy employees. Finally, transparency in decision making builds trust within the ranks. When employees understand why decisions are made, they can more fully support the leadership and direction they provide.

3. Personalize the Library! Bake accessibility and usability into the patron experience from beginning. Be leaders in web and application development, and the evolution of our virtual patron experience. Empower
the library with more web analytics to continually improve customer experience and demonstrate societal impact. Promote "What's in the Library for Me?" A learning opportunity from the scholarly commons, an equipment or space reservation from Media Commons/UGL, an emerging technology from the IDEA Lab, a digital resource from the website, a favorite study space in Funk Library, reference or research support from my favorite subject specialist, discipline specific data sets or subscription resources...

Results

Scholarship, discovery, and innovation

1. Provide infrastructure upon which scholarship, discovery, and innovation are done. For example, deliver expected SCaRS development results: IDEALS Replacement, Archon Replacement, Improvement and new features for our existing services.
2. Promote broadly the Library’s digital resources and tools to the community. Build some strategic communication plans around this goal.
3. Build the Library’s commitment to the humanities and social sciences into our upcoming building project communications and increase Library potential for collaborative spaces and innovation (e.g., VR in IDEA Lab).
4. Improve library catalog, search, and discovery systems. Searches are placed across all print and digital collections through one call. Make virtual stacks browsing and shelf reading available.
5. Treat Plan S Open Access mandated criteria as a specification, even if Plan S as a whole does not prove practical, we could use their criteria as a guide to technical features that support open access. We would be trailblazers if we offered an institutional repository that fulfilled those elements of their mandatory criteria that seem good and practical to us.

Transformative learning experiences

1. Provide and promote loanable and emerging technologies to students, staff, and faculty to allow them to teach, learn, and innovate in areas that may not otherwise be available to them.
2. Communicate ways in which the Library supports students’ mental health and well being (e.g., lib-guides, relaxation rooms, etc.), promote the enriching programming and services the Library offers (e.g., Diversity Committee events), and promote the Library’s commitment to accessibility (e.g., readers, signage, entrances, etc.)
3. Reinforce the Library’s impact on student success (e.g., Undergraduate Student Survey). Help people become lifelong learners and support the growing number of distance learners.
4. Design building features to allow for multi-purpose room use such as teaching, training, studying, and socializing. Possibly create a VR classroom that could be expanded to online learning.
5. Showcase Student Research. Develop and support improved forums for publishing student-generated scholarly work. Specific growth may be possible and valuable in the realm of undergraduate research.

Societal impact

1. Use technology to provide more fully accessible knowledge to broader groups of people, for example, supporting Green Open Access. Open access initiatives have the potential to progressively benefit global access to research work.
2. Widen the Library’s impact through consortial collaborations (e.g. CARLI, BTAA) or other expansions of our services, possibly to local high schools. Pursue interest in our repository services and related applications through expansion to CARLI members. Promote the Library through modern means such as videos, VR, humorous trainings, etc.

3. Contribute open source development to the library community for shared problem sets, i.e. IIIF viewer.

4. Support Networks of library experts (e.g., Data Curation Network). Provide technical infrastructure to network library experts more cost effectively than third-party vendors (e.g. tying Illinois Data Bank into Data Curation Network)

5. Continue the Library’s activism around protecting people’s privacy.

Resources and strategic investment

1. Provide and coordinate planning, design, and construction of new and existing library facilities, taking advantage of campus interdisciplinary opportunities.

2. Efficiently and strategically leverage cloud offerings:
   a. Optimize AWS usage, utilize features like auto-scaling, scheduling, Lambda, etc. to reduce costs.
   b. Implement use of MS Azure in the Library:
      i. Migrate all windows servers that do not need to be on prem.
      ii. Migrate all SQL server services that do not need to be on prem.
   c. Create decision tree for determining where services belong in the technology stack.

3. Improve specific areas of audit and analysis for greater impact or more automation.
   a. Direct logs and service data to Splunk for analysis. (Splunk is a service provided by campus that can be used to aggregate and analyze machine data.)
   b. Automate CIS-CAT analysis. (Center for Internet Security – Configuration Assessment Tool)

4. Continue to mature our service life cycle processes to enable us to redirect resources from services that are no longer useful to activities that have more potential value.
   a. Retire all library-managed storage hardware.
   b. Retire applications tagged by staff as no longer needed.
   c. Coordinate emerging technology on campus – not every unit needs VR/AR/3D printing.

5. Reduce campus bureaucracy and provide colleges and departments with business and HR systems that are useful. For example, everyone on campus is required to complete performance evaluations, but campus does not provide a system for this activity.
Appendix: Division Work Overview

Special Notes:

Advancement input is not included due to heavy travel schedule during data collection window.

Seven separate SOAR analysis activities were conducted with the multiple teams across Operations. Each of the seven outputs was then distilled into this one report. All of the output is captured in the data folder in Box.