Introduction

Via a 12-week intensive strategic planning and library renovation visioning process in Spring 2017, the Arthur Lakes Library developed an overarching roadmap to craft a modern academic library for Mines in the coming years. This Arthur Lakes Library Pathways to Distinction document outlines five select strategies and initiatives from this broader planning process that will contribute most to the forging of not just a better library, but a truly innovative, distinctive, world-class STEM research library. These proposals are all cornerstone initiatives of the library’s updated mission to “Foster a rich and responsive information environment that empowers learning, discovery, critical thinking, and knowledge creation for Mines and a sustainable global society.”

Each of these five signature initiatives share a common emphasis on collaboration, within and beyond the library. The library, as a discipline-neutral space on campus, is a uniquely positioned environment for promoting the cross-disciplinary connections between industry, scholars, and students that are a common theme identified in of many of the pathways to distinction identified by other academic departments at Mines.

Resources: While full implementation of most the below initiatives is contingent upon a full library renovation and expansion, many can be initiated and at least partially brought to fruition in advance of a significant capital project.

Distinction Proposal 1: STEM Business Incubator

Libraries of all types now commonly feature makerspaces, but relatively few of them focus on the promotion of entrepreneurial endeavors. The library proposes the creation of a business makerspace that fosters innovation and entrepreneurship between Mines faculty and students and the larger business community. Proposed incubator features include competitive intelligence consultation and business research services, conference and teleconference facilities, multimedia and marketing production studio, geospatial marketing analysis services, presentation practice space, and office incubator suites. This proposal will benefit from collaborative opportunities with Traxion, the Mines Director of Innovation & Entrepreneurship, and industry partners.

The incubator will also uniquely offer students an opportunity to develop real-world business management skills via structured, curriculum-based internships at the library’s Book & Brew café. Students will learn to develop business plans, marketing strategies, and accounting skills in an on-site business environment.

Resources include:
- New staffing line for a dedicated business librarian with expertise in corporate librarianship, competitive intelligence, and geospatial marketing analysis.
- Physical space, furnishings, and technology to support the above identified business incubator features.

Learn more: https://www.gensler.com/research-insight/in-focus/the-rise-of-academic-incubators

Distinction Proposal 2: STEM-Focused Scholarly Communications Center

Developing a robust Center for Scholarly Communications is a top-level goal in the library’s 3-year strategic plan. This center will pursue collaborative partnerships and increase participation in university and community-based
efforts to advance digital scholarship and born-digital collections. With the goal of enhancing Mines research impact, the center will provide recognizable leadership and innovation in managing and disseminating Mines research output through collaborations with the research community and stakeholders. Specific features and services of the center include:

- Development of a Research Information Management System with a Research Networking and Profiling Interface to enable interdisciplinary and cross-institution collaboration and data-informed decision-making in research development.
- Leadership, resources, and services to foster open access publishing, research data management and sharing, reproducible research, open education resources, and best practices in digital workflow across the research lifecycle.
- Consultation and instruction on copyright, patent searching, and other intellectual property topics.
- Expansion of the Mines institutional repository and connection of the repository to the broader research information ecosystem with the goal of enabling new forms of academic inquiry and discovery through the creative and dynamic use and reuse of the digital assets of the university.
- Support the marketing and sharing of “Mines stories” at both institution and individual researcher level via the above digital platforms.

**Competition:** Other institutions, recognizing it as an essential support system for research and innovation, are already making significant commitments to scholarly communications. Dr. Ye Li recently completed a competitive analysis of scholarly communications initiatives underway at “Cohort A” institutions, which can serve as a guide for Mines to achieve true leadership and STEM-specific distinction in this emerging field.

**Resources:** Creating a Center for Scholarly Communications will require financial support to acquire a number of proprietary digital platforms and to provide additional staffing for new services.

**Learn more:** [http://acrl.libguides.com/scholcomm/toolkit/](http://acrl.libguides.com/scholcomm/toolkit/)

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**Distinction Proposal 3: Scaffolding Research Competencies throughout the Curriculum**

Mines students now have greater access to information than students of previous generations; however that information is not always accurate, helpful or reliable. While many of the “Cohort A” schools offer some level of information literacy instruction, a commitment by Mines to a fully embedded program for undergraduate, graduate and distance students would be unique. It would distinguish Mines graduates as capable, ethical researchers and participants in the scholarly community. Opportunities include:

- Establishing a strong foundation in the first year by partnering closely with EPICS, Nature and Human Values and CSM 101
- Partnership with the Center for Scholarly Communications to provide events, workshops and support for all Mines researchers
- Creating a collection of tutorials, activities and lessons on topics related to information literacy, data literacy and good research practices that faculty can incorporate into their courses to assist students at their point of need
- Developing a robust program to work with graduate students throughout their course of study at Mines
- Partner with teaching faculty to identify opportunities in the upper class curriculum to continue improving student research skills and the quality of student research
- Developing information literacy lessons for online courses to ensure distance students receive the same level of research support as on campus students
- Provide support for students interested in pursuing publication and/or presentation of their research
Resources: An extensive information literacy program will eventually require additional instruction librarian staffing lines, including a dedicated First Year Experience Librarian and a Graduate Instruction Librarian.

Distinction Proposal 4: Celebrating Distinctive Museum and Library Collections

As noted in a recent Chronicle of Higher Education article (What the 21st-Century Library Looks Like, 07/02/17), libraries can no longer realistically collect a full breadth of information for most disciplines, and are instead reemphasizing the distinctive, in-depth aspects of their collections. This has led to a renewed focus on once dusty and neglected special collections and archives. Over the years, the Arthur Lakes Library has developed a number of unique and valuable special collections, including the Center for Ropeway Studies, the Tell Ertl Oil Shale Repository, and the Russell L. & Lyn Wood Mining History Archive, but their full potential has not yet been leveraged. To do so, library has already created a new digital initiatives specialist position to bring these collections to a global audience through our Institutional Repository platform. This, along with intentional efforts to integrate the collections within the Mines curriculum, make them relevant to today, and better connect the Mines community to external constituents, will further contribute to awareness, recognition, and use of Mines’ unique holdings. Distinctive collections, when showcased appealingly, also increasingly serve as important vehicles for library and campus fundraising.

The museum and the library are also in the early stages of identifying collaborative initiatives, a distinctive development that will contribute to the reputation of both. Early identified projects include digitization of the museum’s mineral specimens, including 3D scans and high quality photographs; collaborative displays; and an opportunity to jointly host a traveling exhibit funded by an NEH grant in collaboration with the Boston Public Library.

Resources: Digitization initiatives are labor intensive and may require additional staffing over time. The digital platform (Institutional Repository) to feature the collections also need constant renewal of technology and aesthetic appeal. The library has already acquired a professional, oversized scanner; additional equipment such as a 3D scanner may be required as projects develop.

Distinction Proposal 5: Fostering a Learning and Research Community through Intentional Spaces

The library renovation vision includes many ideas that are no longer distinctive if just considered independently. A large number of academic libraries already host a unified commons for student success services. Many faculty teaching and learning centers (e.g., Trefny) are also now centered in libraries. Some libraries, such as the University of Denver’s Anderson Academic Commons, also include faculty lounges that provide a casual but elegant atmosphere conducive to casual, cross-disciplinary conversation. One Mines faculty member has cited a strong desire for a casual but elegant space to converse with graduate students as well as colleagues in other departments.

These spaces, though, are not typically considered in a holistic manner. In designing a new library, Mines has the opportunity to bring these separate features together in a unique, intentional way that encourages greater interaction and “innovation sparking” between faculty and students across multiple disciplines. This space would serve as a distinctive salon and “academic incubator” for the campus, where a broader scholarly community that breaks disciplinary siloes is forged and new ideas can emerge. Beyond breaking disciplinary and status boundaries, this research community space for the campus can also help span cultural boundaries, especially for international students and scholars who seek a safe, connected, inclusive, and responsive environment. This campus space, properly designed can contribute significantly to the fostering of a vibrant graduate community, an identified campus priority.