Director, MIT Libraries

In fiscal year 2019, the MIT Libraries continued to be leaders in the transformation of research libraries while supporting the creation, sharing, and stewarding of knowledge at the Institute and beyond. Guided by the vision of the Task Force on the Future of Libraries, the Libraries are pursuing transformational work in library spaces and technology, leading efforts to push scholarly communications toward openness and equity, and continuing to support and enable teaching, learning, and research across the Institute as it undergoes tremendous change. We are reinventing research libraries for a computational age, focusing on our unique contributions to MIT's mission: making scholarly information open, interactive, and computational.

Open

Open Access Task Force

In March 2019 the Ad Hoc Task Force on Open Access to MIT's Research—convened by Provost Martin Schmidt in July 2017 and co-chaired by Chris Bourg and Hal Abelson, Class of 1922 Professor in the Department of Electrical Engineering and Computer Science—released a set of draft recommendations. These recommendations aim to support and increase the open sharing of MIT publications, data, software, and educational materials and include ratifying an Institute-wide set of principles for open science. The release of the draft recommendations came after 18 months of gathering input from experts across the campus and beyond to better understand local, national, and global practices and policies related to open access. The community was invited to comment on the draft, and the final recommendations, incorporating this feedback, are expected in fall 2019.

Transforming Scholarly Communication toward Open Access

The MIT Libraries entered into pilot projects with the American Chemical Society and the American Institute of Physics that will allow MIT-authored articles to be made open access for no additional fees, under terms that include a commitment by the publishers to migrate further on the path to open access. We also restructured the library collections budget to allow the Libraries to more readily invest in—and assess the impact of—efforts to transform the scholarly communications system toward openness. Changes included creating new funds for open access partnerships, open access monographs, digital preservation, and special collections.

Sponsored Research in the MIT Libraries

The Center for Research on Equitable and Open Scholarship (CREOS) launched in FY2019 with the mission of advancing knowledge in the service of equitable and open scholarship. CREOS staff have begun the process of seeking grant funding for the center's activities, including the development of a postdoctoral program and a visiting scholars program. CREOS research will address incentives for, barriers to, impacts of, and economic models for equitable and open scholarship.

In April 2019, CREOS hosted a workshop titled Diversity, Accessibility, and Inclusion in Library Systems. The aim of the event, which was funded by the Institute of Museum and Library Services, was to assess the role of library information systems and information architecture in supporting the efforts of diverse communities to discover, access, create, and learn from library services.

Meanwhile, the Libraries' Program on Information Science was subsumed within CREOS in June 2019, and active research projects were transferred administratively. Active projects are as follows: the Information Privacy project (Alfred P. Sloan Foundation, Microsoft Research, and Harvard University), Enhancing Teaching and Learning (Technical Education Research Center and Landmark College), and Accessibility and Inclusion in the Design of Library Information Systems (Institute of Museum and Library Services).

Transforming Metadata through Collaboration

Metadata and Digital Collections Services kicked off the Metadata Knowledge Series in FY2019. This series enables staff to explore topics such as how to decolonize systems by focusing on reducing bias in our metadata and how to use Wikidata to make metadata more openly available.

Interactive

Space

FY2019 saw a number of small-scale space changes, including expansion of the GIS and Data Lab in Rotch. However, the Libraries' top priority was preparation for Hayden Library's renovation, with construction scheduled to begin in January 2020. This renovation will reflect the library of the future, one that is more open and participatory and invites the community to make connections between ideas, collections, and each other. Several teams have been charged with preparing both staff and the MIT community for Hayden's closure during construction and ensuring that essential services will be adjusted across the Libraries without interruption.

Key to the success of the renovation is communication with and input from the MIT community. In the first half of 2019, plans for the Hayden renovation were shared with the community through stories in MIT News, *The Tech*, the *MIT Faculty Newsletter*, and *Slice of MIT*; community events; email; social media; and large-scale, interactive graphics in the library. A particular effort has been made to reach out and include many diverse voices to inform future service design.

Community Building and Engagement

This program brings together a variety of long-standing and piloted community-oriented efforts across the Libraries including the Orientation Committee, MIT Reads, Calm under the Dome, Furry First Fridays, and the Calm-to-Go experiment. Collaborative experimentation in FY2019 around new types of library events—for example, the interactive installation *The Laughing Room*, a National Poetry Month open mic, and a reading by MIT alumna SL Huang, author of *Zero Sum Game*—is setting

the stage for a further build-out of the program in FY2020 with the completion of the Hayden renovation and related service design efforts.

Research Data Support

The GIS and Data Lab opened in fall 2018 on the first floor of Rotch Library with expanded computing capabilities, additional software packages, improved instruction support infrastructure, and experimental programming related to virtual reality and data visualization. Adding research data support has led to new types of interactions between students, staff, and faculty and has greatly increased the vibrancy and usage of the first floor space.

Learning and Study Support

Session management software was installed in FY2019 to improve how the community uses the visitor computers in the Libraries. This resulted in a dramatic decrease in staff/user incident reports.

The reserves team worked successfully and seamlessly with departments and schools that have changed learning management systems to Canvas. In addition, the Libraries are working with Information Systems and Technology (IS&T) and the MIT Coop to create a new memorandum of understanding concerning the Textbook Information Provisioning Program; this will lead to simplified processes for faculty and staff and better service for students in FY2020.

Responding to Changing Research and Teaching Practices

Library liaisons are participating in an initiative, the Summer of Data program, designed to enhance their understanding of and improve their skills in emerging research and teaching practices at MIT. As part of the program, initiated in June 2019, arts and humanities liaisons explore digital humanities and text mining as well as tools and resources of the HathiTrust Research Center. Science and engineering liaisons offer monthly educational presentations focused on major campus trends and initiatives and broad academic topics.

Also, liaisons developed a roadmap for the Program on Information Citizenship, elements of which address library/faculty collaborations in Concourse and in the School of Engineering's New Engineering Education Transformation (NEET) program.

Transforming Special Collections

With new leadership in place, the Institute Archives and Special Collections made significant changes this year—including a name change to Distinctive Collections, signaling a broader aspiration for the variety of collections and services that this growing department will offer. Components of this transformation include bringing in the Aga Kahn Documentation Center, providing administrative oversight of and curatorial partnerships for the Rotch Limited Access Collection, and recentering the work of the Conservation Lab.

Computational

FY2019 work in Digital Library Services (DLS) was guided by four priorities aimed at addressing immediate challenges and laying a foundation for future work:

1. Adopt an application programming interface (API) approach to system design and begin establishing and documenting APIs as public-facing services to enable computational access to the collections stewarded by the MIT Libraries

2. Repair and refine data flows, data management, and data storage throughout all Libraries tools and systems, with a particular focus on privacy and security of identifying data

3. Establish foundational cloud infrastructure, strategy, governance, and staffing to support existing storage and computing needs and anticipate future needs

4. Develop and begin to implement architecture principles and engineering best practices across all new work

Highlights of DLS accomplishments in FY2019 include:

- Launching the MIT Libraries' first public API, TIMDEX, a centralized index of metadata for the Libraries' research collections

- Completing the first major enterprise upgrade of MIT's publication repository, DSpace@MIT, in over a decade

- Implementing a new intellectual property and content rights data model, along with tooling and metadata, across the Libraries' archives and Distinctive Collections

- Refining and developing architecture principles and providing high-level reviews of systems, architecture, and integrations

- Upgrading and stabilizing infrastructure: working in collaboration with IS&T to procure 450 TB of archival-quality digital storage, a major milestone in developing comprehensive digital storage for preserving MIT's historic collections; migrating approximately 90% of the Libraries' underlying infrastructure to AWS Cloud and automating the majority of our infrastructure deployment with Terraform; and planning for the first major upgrade of the Libraries' enterprise library platform in 18 years, with implementation of the upgraded system expected in 2020

- Participating in the College of Computing's Computing Infrastructure Working Group, representing the Libraries and MIT's research community in the areas of data management, privacy of user data, archiving of MIT's research output, and ethical and inclusive organizational design

- Engaging with campus-wide research teams to better understand the needs associated with computation as a means of informing FY2020 planning

Supporting Activities

Visiting Committee Meeting

The MIT Libraries Visiting Committee, chaired by Leslie Dewan, met in March 2019. In addition to updating progress on the Hayden Library renovation, the agenda was organized around three themes:

1. Transforming scholarly communications

2. Transforming library technology

3. Transforming the library workforce

The Visiting Committee members were impressed with the vision and leadership of the MIT Libraries, and they were especially pleased by the progress on the Hayden renovation and on addressing our technical debt and pivoting our library technology work to an API-first design and a cloud-based infrastructure. The Visiting Committee urged the Institute to include libraries and library expertise in relevant planning for the College of Computing. In addition, the committee voiced strong and unanimous support for open access and open science and encouraged the Libraries and the Institute to take a strong stand in upcoming negotiations with publishers so as to advance our vision for open science.

People

Libraries staff departures increased from 19 (10%) in FY2018 to 27 (16%) in FY2019. New roles are being established to enable the Libraries to bring in capacities to support new directions, particularly in Digital Library Services.

The overall percentage of underrepresented minority staff members rose again in FY2019, from 17% to 19%. The organization remains dedicated to equity, diversity, inclusion, and social justice, and thus managers were provided with training that aligned with those values. In addition, all staff members were given the opportunity to complete an online training module called The Equity Toolkit: Essentials of Cultural Competence and Reducing the Negative Impact of Bias in the Workplace.

The Libraries conducted a search in FY2019 that we hoped would conclude with the hire of a new associate director for academic and community engagement, but that search is not yet complete. In addition, Greg Eow, associate director for collections, announced that he has accepted a new position as president of the Center for Research Libraries. The Libraries are now conducting simultaneous searches for two associate directors with the help of a search firm.

Fundraising

The MIT Libraries raised more than $11.7 million in gifts and grants from the launch of the MIT Campaign for a Better World in May 2016 to the end of fiscal year 2019. On the heels of a banner FY2018, Libraries fundraising in FY2019 continued to be robust, closing at $1,246,943. A new $500,000 commitment to support the Hayden renovation just missed the FY2019 deadline and will be included in the FY2020 total.

Future fundraising success for the Libraries remains dependent on access to major gift, principal gift, and foundation donors. Working in our favor are a strong economy, a $1 billion increase in the campaign goal (after the initial $5 billion goal had been exceeded), and continued interest in having the director of Libraries speak about the future of libraries internally and externally.

Chris Bourg
Director of Libraries