UC Berkeley Library Data Initiatives Plan

January 2019

Service statement: UC Berkeley Library's data initiatives advance our mission as a leader and partner in data-intensive research and learning in order to increase the impact of innovative scholarship at UC Berkeley.

This document outlines a multi-year roadmap for aligning the Library's data services' activities, resources, and opportunities with the University Library's Strategic Plan[1]. The plan includes desired outcomes, each with at least one proposed tactic. Annually we will identify specific goals to work on with partners in and beyond our organization.

1. **Provide access to data collections and the resources to engage with them.**

To *optimize the discoverability, usability, and impact* of data curated, acquired, hosted, discovered, or licensed through the library, we recommend the library implement the following tactics to strengthen our framework around data collections:

1.1 Standardize data collection rationale and workflow

- Tactic: Write a transparent data collection and curation policy articulating the library's values around collecting, acquiring, and curating data
- Partners: Collection Services Council, Collection Development Leadership Group, Acquisitions, Selector/Liaisons, Scholarly Communications, D-Lab, California Digital Library

1.2 Streamline the acquisitions process.

- Tactic: Implement a project management system designed for data to efficiently connect the library units responsible for different stages of workflow
- Partners: Acquisitions, Cataloging & Metadata Services, Collection Services Council, Collection Development Leadership Group, Selector/Liaisons

1.3 Optimize infrastructure for discovery, access, and usability of data collections

- Tactic: Implement a library data repository[2] solution designed for the secure storage, description, sharing, and discoverability of data
- Partners: Library IT, Cataloging & Metadata Services, Instruction Services, Assessment, D-Lab

1.4 Articulate to users what can be shared and what cannot

- Tactic: Write a data access policy that nurtures the open, information-sharing nature of the academic culture while preserving the sensitive nature of restricted-use data and share with campus partners
- Partners: Scholarly Communications, Acquisitions, Research Data Management/Research IT

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[1] http://stories.lib.berkeley.edu/strategicplan/

[2] https://drive.google.com/file/d/0B0Rf70ZyIByHdm9zLTJseFpzaGc/view

1.5 Provide the technology and tools necessary to work with data

- Tactic: Write a public computing policy and support impactful computing tools such as Jupyterhub, Savio, loaner laptops, etc. and share with campus partners
- Partners: Library IT, Public Services Council, Educational Technology Services, Research IT, D-Lab

2. **Build and articulate data expertise within the Library to better respond to the increasing educational and research needs of students, faculty, and scholars.**

The Federal Big Data and Research and Development Strategic Plan,[3] released by the Obama Administration's Big Data and Research Initiative, explicitly identifies curators, librarians, and archivists as core specialists to help meet a growing demand for analytical talent and capacity across all sectors, including higher education. The way libraries engage with users is expanding, and in order to *grow as an adaptive learning organization*, we recommend:

2.1 The prioritization and incentivization of a culture of data advocacy across the Library. Foster opportunities for subject librarians and all other interested library staff to be conversant around the library's data initiatives.

- Tactic: Build internal capacity through communication and opportunities to participate in events, workshops, webinars, etc.
- Partners: Roundtable, Research Data Management, Data Initiatives Expertise Group, Teaching & Learning Expertise Group, Instruction Services

2.2 The prioritization and incentivization of a culture of "data savviness" [4] for library staff in a variety of positions such as liaisons, functional experts, and cataloging/metadata staff. Data savviness includes many roles such as gaining familiarity with datasets, becoming proficient in data preparation and analysis, recommending data management strategies, and contributing to data policy and advocacy. Highlight and share the diverse types of data expertise that exist and continue to grow skills across units.

- Tactic: Build internal capacity through Data Initiatives Expertise Group and advocating for teaching organizations like the Carpentries. Encourage time for training, reinventing workflows and skillsets
- Tactic: Involve liaisons and functional experts in RDM consultations and data curation activities in their subject areas
- Partners: Selector/Liaisons, Subject Councils/Divisions, Assessment, Research Data Management, Data Initiatives Expertise Group, Instruction Services, Teaching and Learning Expertise Group, Carpentries, Berkeley Institute for Data Science

3. **Facilitate and develop data literacy at all stages of the research lifecycle - from data consumer to data producer.**

[3] The Federal Big Data Research and Development Strategic Plan. (2016) https://catalog.data.gov/dataset/the-federal-big-data-research-and-development-strategic-plan

[4] Shifting to Data Savvy: The Future of Data Science In Libraries. (2018) http://d-scholarship.pitt.edu/33891/

To *create and support a robust menu of services* and to *empower all students and researchers* to develop multiple fluencies and literacies around data (information, digital, computational), we recommend the library:

3.1 Target specific courses and groups that could benefit from data literacy

- Tactic: Work with liaisons and mine course offerings and identify specific courses, labs, and research groups
- Partners: Instruction Services, Research Data Management, Selector/Liaisons, Subject Councils/Divisions

3.2 Be embedded in the curriculum

- Tactic: Design assignments, activities, and teaching modules that frame critical thinking in the data sciences and data-enabled courses
- Partners: Instruction Sevices, Selector/Liaisons, Data Science Education Program, Center for Teaching and Learning

3.3 Offer expert Research Data Management solutions via consulting

- Tactic: Understand scholars' research and address their needs related to managing their data
- Tactic: Document solutions from consulting to share broadly
- Partners: Research Data Management, Research IT, Selector/Liaisons

3.4 Provide nimble and expert research assistance where our users are

- Tactic: Strategize using service design thinking principles[5] and create an array of online and in-person service points for triaging data questions
- Partners: Instruction Services, Research Data Management, Research IT, D-Lab, Berkeley Institute for Data Science

4. **Engage with university partners and beyond to build communities of practice in data sciences and data management.**

To communicate Library data services to campus and beyond, we must help users *know what we are doing, and inspire them to engage and invest* by:

4.1 Communicate Library data services to our users

- Tactic: Design a user-focused website modeled after the Scholarly Communications[6] and Level Up[7] pages advertising the suite of collections, spaces, tools, and expertise available to the UC Berkeley community
- Tactic: Coordinate with existing communication channels
- Partners: Library IT, Communications, Research Data Management, Research Teaching & Learning

[5] https://www.interaction-design.org/literature/article/the-principles-of-service-design-thinking-building-better-services
[6] http://www.lib.berkeley.edu/scholarly-communication
[7] http://www.lib.berkeley.edu/level-up

4.2 Strategically utilize physical space

- Tactic: Design space enabled for connected learning and collaboration around data sciences communities
- Partners: Center for Connected Learning, Division of Data Sciences, Berkeley Institute for Data Science

4.3 Collaboratively work together to create strategic initiatives, funding opportunities, and collections

- Tactic: Co-develop and deliver programming and services, collaborative grant proposals
- Tactic: Participate in the campus-wide Secure Research Data and Computation initiative
- Tactic: Participate in Common Knowledge Groups and other communities of practice around data
- Partners: Division of Data Sciences, I-School, Research Teaching & Learning, Berkeley Institute for Data Science, D-Lab, Social Science Matrix, Berkeley Initiative for Transparency in Social Sciences, Lawrence Berkeley National Laboratory, Carpentries, California Digital Library, etc.

Authorship and Evolution:

In spring 2018 Associate University Librarian Elizabeth Dupuis charged Joshua Quan, Data Services Librarian, to develop a vision document for the Library's data services and programs. Joshua connected with Amy Neeser, Research Data Management Program Manager, and together they gathered input from various groups including members of the Library's Leadership Team, the Data Initiatives Expertise Group, Research Data Management Operations Team, and Research Data Management Partners. In mid-September the Library held an open meeting to discuss the draft with all interested staff which included library staff, campus partners, and California Digital Library colleagues. The document was shared with the Library's Lead Team which suggested further revisions. This document is the final approved version, though it is a living document and will continue to be updated and adapted to match the evolving library and campus context.