Research Data Service Annual Report

2018-2019

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"The Research Data Service (RDS) is a campus-wide program that provides the Illinois research community with the expertise, tools, and infrastructure necessary to manage and steward research data."

I. Narrative

Major activities and accomplishments

5 year anniversary

FY19 marks the fifth anniversary of the founding of the Research Data Service (RDS) at the University of Illinois at Urbana-Champaign. In the past 5 years, RDS staff are pleased to have served Illinois researchers in the following ways:

- Curated, published, and preserved **one-hundred-seventy-five (175)** datasets
- Offered presentations, trainings, and other outreach to over **four thousand (4,000)** researchers, faculty, students, and staff
- Reviewed over **one-hundred-seventeen (117)** Data Management Plans from departments and research institutes across campus
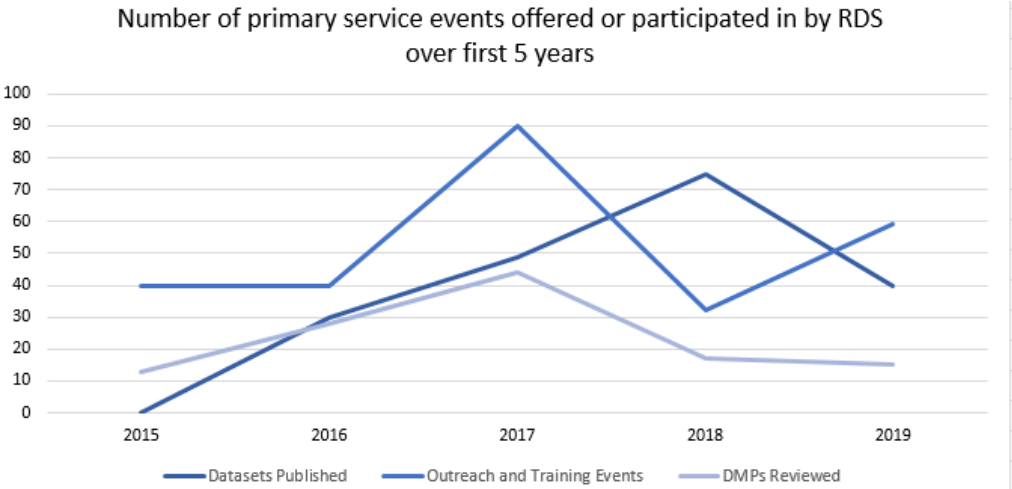

Figure 1: Number of primary service events (publishing datasets, performing outreach and training, and reviewing DMPs) that RDS staff have engaged in over the first five years of the RDS' existence.
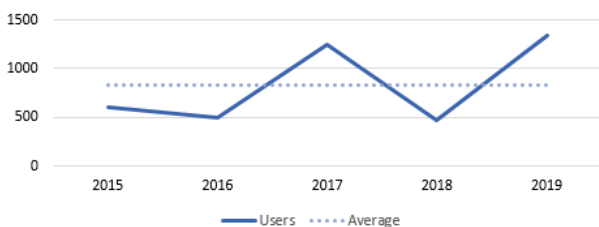
Figure 2: Users reached through outreach over 5 years

Figure 3: Dataset downloads by subject over 5 years
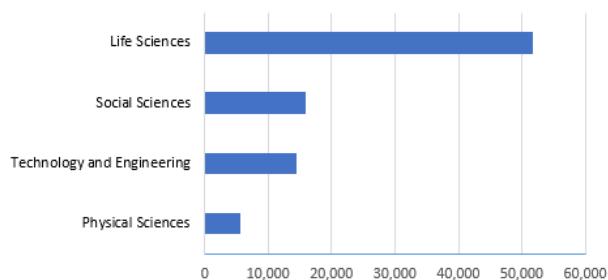
History

The RDS was formally adopted as a campus strategic priority through inclusion in the 2013-2016 Campus Strategic Plan. In 2016, the RDS launched the Illinois Data Bank, an institutional data repository accessible to the public, in partial fulfillment of the RDS' mission to provide Illinois researchers with the expertise, tools, and infrastructure crucial to stewarding research data. The RDS also provides a variety of outreach events on data management, including workshops, presentations, and individual consultations. Due to its place in the University Library, the RDS also works closely with the School of Information Sciences (iSchool) to provide iSchool students with valuable experience working in the field of research data management at an academic library within a premiere research institution.

Feedback through the years

RDS staff regularly elicit feedback on services from users, and use this feedback to improve both content and delivery. In celebration of the fifth anniversary of the RDS' founding, we have provided feedback from each year the RDS has been in operation. Feedback may be in response to data curation services, training and consultation services, DMP review services or all three, or it may address the RDS as a whole.

2014-2015

From the **College of ACES**:
"Dr. Imker and her colleagues at the Research Data Service have provided several useful resources over the past year for our use in carrying out two collaborative, interdisciplinary research projects. Services included several in-person consultations in which **concrete suggestions were offered** to trouble shooting data management and documentation challenges. In-person meetings were followed up with detailed summaries of topics discussed. Services and recommendations were **individualized to specific needs** of our projects and included referrals regarding computing resources and computer programming on campus, links to data documentation examples and protocols, specific suggestions regarding workflow management and versioning conventions, and recommendations for file format conversion for long-term usability (e.g., converting wmv video files to mp4 format)."

2015-2016

From the **College of Engineering**:

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"The Research Data Service looked over my NSF Data Management Plan and provided a prompt, point-by-point review, including suggesting draft text and best practices for data archiving. As data management and archiving become increasingly important part of research and grant applications, the Research Data Service is a **unique and valuable campus resource**."

2016-2017

From the **Prairie Research Institute**:
"This is the first time I have gone through this process and it was really informative. I really liked the website. Everything was **intuitive and easy to follow along**."

2017-2018

From the department of **Educational Psychology:**
"The presentation on data management to the counseling psychology program faculty and students was **OUTSTANDING**. Personally, I was able to make immediate changes in how I store and organize my various files. I know a number of the students have implemented changes based on the information presented as well. The workshop was **practical, informative, and extremely timely**. Plus, we appreciated the handouts and goodies."

Year in review

The RDS is pleased to report that FY19 was a very active and successful year. The RDS has met last year's goals, which centered on refining our service by strengthening established relationships and building new ones among collaborators and users, on both national and local levels.

From its inception, the RDS has taken a two-pronged approach to identifying and working with collaborators: external and internal. The RDS continues to represent the University Library in the Data Curation Network (DCN), a cross-institutional data curation service currently comprised of ten (10) partner institutions across the nation. At home, the RDS remains an active member in data science initiatives on campus, with the Director of the RDS creating data science education opportunities at the Illinois Data Science Initiative's (iDSI) 2018 Data Science Day, and arranging Software and Data carpentry workshops for interested members of the campus community. Data management, the RDS believes, requires communal effort. As such, external and internal relationships must be developed in tandem, as both are necessary to extend and enrich data management practices and products.

In FY19, the RDS focused even more on developing at the internal level. Local and internal environments remain crucial to the RDS, as the unit was created first and foremost to serve the needs of Illinois researchers for data management infrastructure, tools, and best practices. In order to continue providing excellent service at the local level, the RDS engaged in two primary categories of activity this year: restructuring with other units within the University Library and contributing efforts to other organizations' service offerings.

RDS staff joined with employees in the Scholarly Commons and Scholarly Communications and Publishing units to form the newly reestablished Office of Research (OOR). The OOR is under the direction of Heidi J. Imker, Ph.D., who serves as the Director of the RDS and, since November of 2018, as

Associate Dean for Research and University Librarian (AUL). As a consolidated office initially created under Beth Sandore Namachchivaya in 2015, the OOR has strengthened ties among the RDS, Scholarly Commons, and Scholarly Communication and Publishing, providing a more streamlined service model and opportunities for more efficient communication among the various service providers within the OOR. In this same span of time, RDS staff actively identified other organizations outside of the University Library who have established structures for training and outreach activities and who invite contributions from other organizations. Specifically, RDS staff have developed professional relationships with the Center for Innovation in Teaching and Learning's (CITL) Graduate Academy for College Teaching and the International Student and Scholar Services (ISSS) group to offer presentations on RDS services and training in data management to their audiences.

In FY19, the RDS' major activities and accomplishments included:

- **Joined**, along with Scholarly Commons and Scholarly Communications and Publishing, the newly reestablished Office of Research (OOR)
- **Refined** staff titles to better reflect increased job responsibilities and areas of expertise (from Research Data Specialists to Assistant Directors)
- **Elevated** the Assistant Director for Data Curation to serve as a co-PI on the nation-wide Data Curation Network (DCN)
- **Continued** contributions to data science initiatives on campus by participating in the 2018 Data Science Day and offering several runs of the Hesitant Data Science Software and Data Carpentry workshops
- **Shared** the research management training plan with collaborators for consideration
- **Developed** a professional relationship with CITL by creating and delivering a data management workshop for the Grad Academy, a campus-wide orientation for graduate teaching assistants
- **Collaborated** with ISSS to conduct targeted outreach to international graduate students
- **Evaluated** the Illinois Data Bank, including policies on deposit, preservation, and versioning
- **Hosted** a practicum student from the iSchool

Major challenges

This past year was a time of advancement for the RDS' core staff. In particular, the Director of the RDS was promoted to Associate Dean for Research and University Librarian (AUL). Heidi's new appointment is for three years, during which she will continue to serve as Director of the RDS, though at reduced time. Several of the RDS' major challenges this year have been related to ensuring that Heidi has the support necessary to continue providing excellent service to the campus in both of her roles. By distributing more of the duties associated with running the RDS to other RDS staff members, Heidi has been able to function as Director of the RDS and as AUL. Other major challenges relate to the reestablishment of the OOR.

Changes to unit

In FY19, the RDS experienced the following significant changes to unit operations, personnel, service profile, or service programs:

- Heidi, Director of the RDS and Associate Professor, became Associate Dean for Research and University Librarian; she continues to serve as Director of the RDS
- Hoa Luong, Research Data Specialist, became Assistant Director for Research Data Curation

- Ashley Hetrick, Research Data Specialist, became Assistant Director for Research Data Engagement and Education
- Daria Orlowska, RDS GA, graduated with an MSLIS and accepted a position as Data Librarian at Western Michigan University
- Lisa Morrison, RDS Practicum student, graduated with an MSLIS and accepted a position as Social Sciences Liaison Librarian at Denison University
- Livia Garza, incoming MSLIS student, was hired to serve as the new RDS GA, beginning Fall 2019

Contributions to University Library-wide programs

In FY19, the RDS helped strengthen several University Library-wide programs and created others. Contributions included:

- Held **77** research consultations, including **29** data sharing consultations, **18** dataset consultations, **15** data management consultations, and **15** data management plan consultations
- Participated in **59** outreach and training events
- Provided **49** dataset pre-publication reviews
- Answered **26** general data questions
- Designed **3** researcher and staff training and development plans
- Created **1** new group (the Data Interest Group, a monthly meeting that features researchers and support staff from within the University Library and across campus who share their projects and create space for collaboration

Progress on unit annual goals for FY19

2018-2019 goals

The unit goals for FY19 were as follows:

- Continue to contribute to leadership for the iDSI and thereby represent the RDS, the Library, and the diverse needs and groups encountered therein
- Continue to develop Illinois' reputation for and skills in data curation through co-leadership of the nation-wide Data Curation Network (DCN)
- Implement a research management training program for PIs and their graduate students
- Develop a professional relationship with the Center for Innovation in Teaching and Learning (CITL) by creating and delivering data management workshop(s) for the Grad Academy, a campus-wide orientation for graduate teaching assistants
- Collaborate with International Student and Scholar Services (ISSS) to conduct targeted outreach to international graduate students
- Evaluate Illinois Data Bank, including policies on deposit, preservation, and versioning

All unit goals for FY19 were completed, with the exception of one: "Implement a research management training program for PIs and their graduate students". The research management plan was designed in FY19, approved, and distributed to interested parties. Implementation will occur when interested parties are able to do so. It is also fair to note that as of December 2018, the iDSI ceased to exist as a formal initiative. However, former leadership in iDSI—including Heidi—remain invested in data science education and work to create opportunities for furthering data science initiatives at Illinois. For example, the RDS continued to hold runs of Hesitant Data Science throughout FY19.

Unit annual goals for FY20

In keeping with the Library's Strategic Framework 2019-23 (https://www.library.illinois.edu/geninfo/libraryinit/strategic-framework-2019/), the RDS has identified the following goals for FY20:

- Refine and expand promotion around the Illinois Data Bank (SD1)
- Implement mission-critical feature developments for the Illinois Data Bank (SD3)
- Develop goals for and formalize participation in the Data Curation Network (DCN) (SD1)
- Collaborate with partners in the DCN and at Illinois to expand the network of subject specialists who curate datasets (SD1)
- Develop strategic relationships with groups and programs on campus dedicated to training their cohorts in data-oriented skills (including Training in Digital Methods for Humanists, the College of Business' efforts in data science and analytics, the iSchool's MS/IM program, and the Office of Proposal Development) (SD2)
- Create and offer instructional events that embed data management principles and best practices in data science and analytics tools and methods (SD2)
- Create and implement onboarding and training programs for unit GA and ARL fellow interested in data science and analytics (SD4)

Needs

In order to continue providing excellent service to the University Library in particular and the campus community in general, the RDS has noted the following areas of need:

- Unit personnel co-location (office space capable of supporting our core FTE team members as well as GAs)
- Marketing paraphernalia refresh
- New or refreshed workstations capable of supporting large files
- Two (2) FTE positions that would provide the following services to and on behalf of the University Library:
  - FTE position 1: create and publish high-impact, curated datasets for reuse (SD1)
  - FTE position 2: provide support for community data science initiatives (SD3)

Number of GAs

The RDS employs **one (1)** GA. The incoming GA is identified as such:

- Livia Garza (incoming GA)

Funding source

The funding source for the RDS GA is the Office of the Vice Chancellor for Research (OVCR). The RDS GA is funded at a **fifty-percent (50%)** appointment, or twenty (20) hours per week over nine months. The RDS' GA appointment is renewable for up to two years, depending upon performance and the GA's continued interest in the position.

Major responsibilities assigned to the GAs

The RDS GA has several major responsibilities. Under the supervision of Hoa Luong, all RDS GAs are expected to participate in the following service areas:

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- Curation
- Education
- Outreach

Additionally, depending upon skill, interest, and career development goals, RDS GAs are invited to lead one or more of the following projects:

- Consultations with researchers
- Communications (Data Nudge creation, website redesign, flyer creation)
- Workshop support and delivery

II. Profile

Facilities

The RDS does not maintain a service point and has no physical space assigned to it. Two offices in Main Library are provided for RDS' three core staff members.

Number of hours open to the public per week

RDS staff supply services to the public according to the following policies:

- All email is acknowledged within **twenty-four (24) hours** of receipt
- All datasets are curated within **2-5 business days** of receipt. In practice, curation is often performed with twenty-four (24) hours of receipt; this includes over holidays and other breaks
- The Illinois Data Bank is available for depositing and downloading data on a **24/7 basis**, except in cases of scheduled maintenance

Personnel

In FY19, **seven (7)** people worked in the RDS in some capacity. These employees include a faculty member, several academic professionals, a graduate assistant, and a practicum student.

- Heidi Imker (faculty) (100 FTE)
- Hoa Luong (academic professional) (100 FTE)
- Ashley Hetrick (academic professional) (100 FTE)
- Colleen Fallaw (academic professional) (100 FTE)
- Daria Orlowska (graduate assistant) (0.5 FTE)
- Dena Strong (academic professional (0.1 FTE volunteer time; AP at Technology Services)
- Lisa Morrison (graduate assistant/practicum student) (0.25 FTE; practicum student)

User services

In FY19, RDS staff served both individual users and groups of users at over **two hundred (200)** points of contact, including consultations, dataset curation, and workshops.

In total, RDS staff directly served over **fifteen hundred (1500)** users.
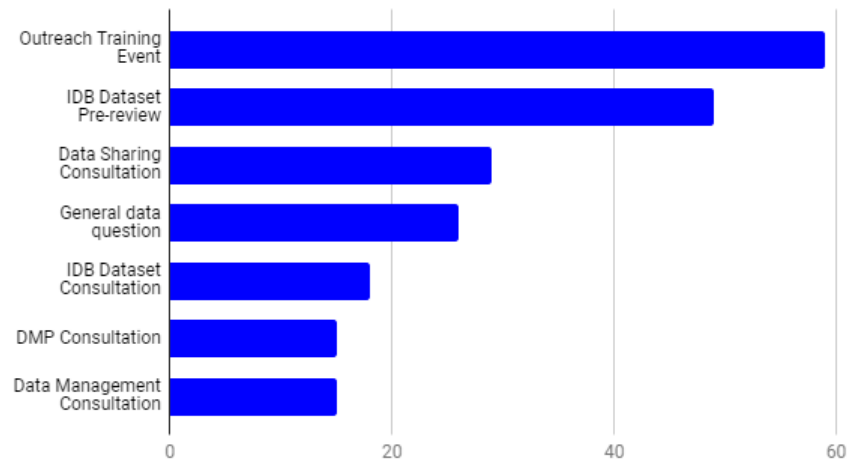
Points of contact FY19

Figure 4: Breakdown of points of contact by number offered in FY19

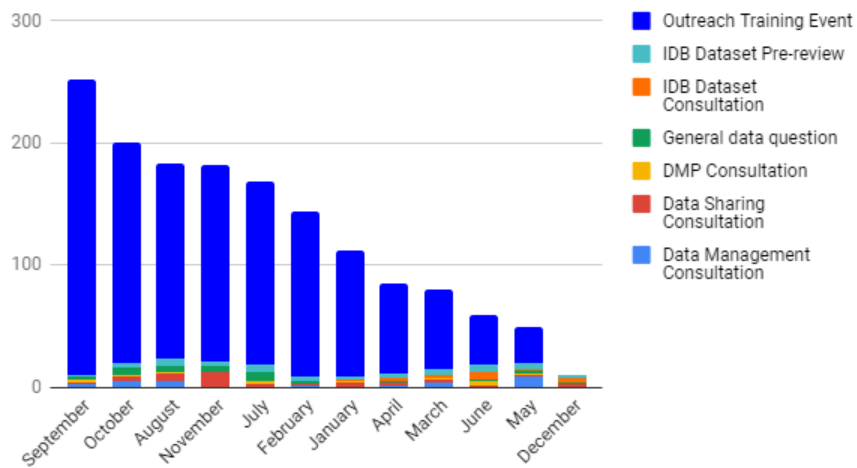## Monthly engagement with users by point of contact FY19

Figure 5: Breakdown of monthly user engagement by contact point

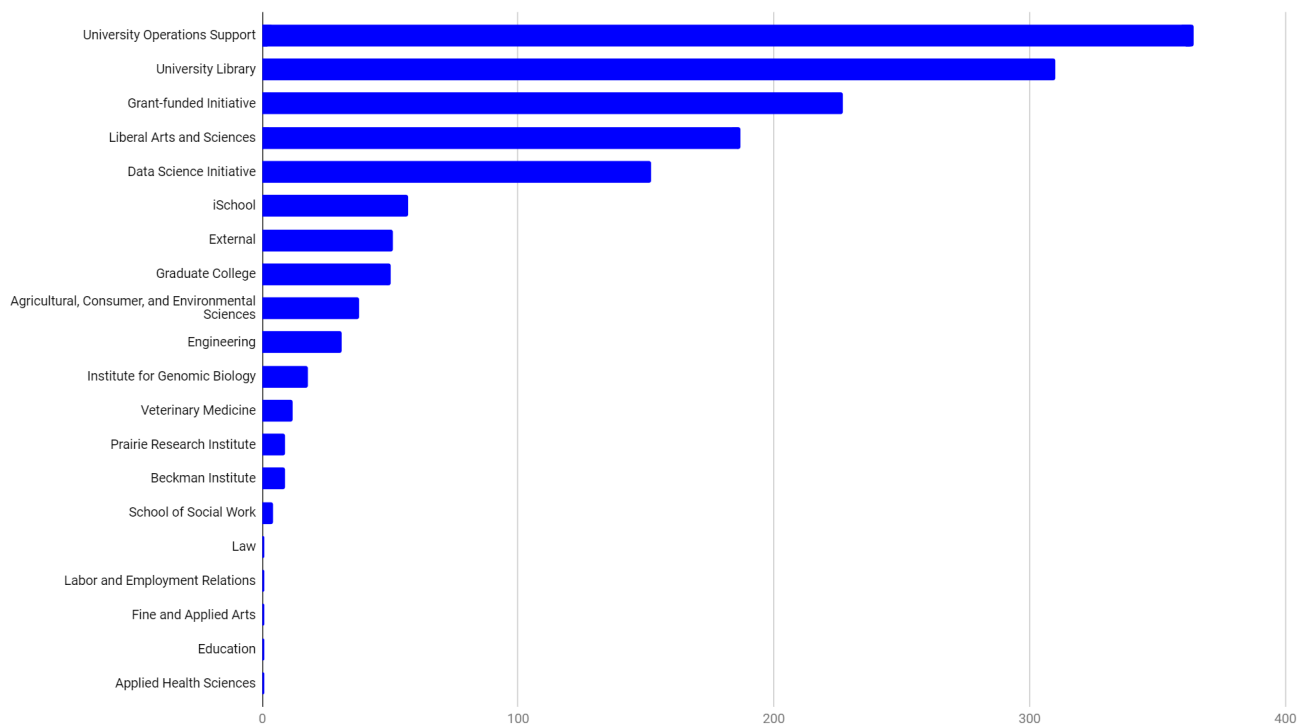Users served by primary college, institute, or service FY19

Figure 6: Breakdown of users served in some capacity by the RDS, by primary college, institute, or service

"University Operations Support" refers to users who administer or support services, like Technology Services at Illinois, CITL, and the Office of the Senate. "Data Science Initiative" refers to users who support or participate in data science education and outreach activities, like iDSI and Software and Data Carpentry workshops. "External" refers to users who are located outside of Illinois, like University of Arizona, Lurie Children's Hospital, and iPres2018.

RDS' users were appreciative of the service they received. These services include curation, the Data Nudge, and educational offerings. A sample of feedback for FY19 is provided below.

From the department of **Electrical and Computer Engineering:**
"Thank you for your feedback, and especially for catching the missing files! I've added the missing data, added the citation and link to the documents, and clarified the language about loudspeakers in the readme"

From the department of **Natural Resources and Environmental Sciences**:
"Thank you. I appreciate it. I told my advisor and lab mates that it was a great experience using the Data Bank, so we will definitely be utilizing the service."

From the department of **Physics**:

RESEARCH DATA SERVICE
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"I've subscribed to these data nudge newsletters for a while, and I've found them pretty useful. This one in particular is super important, especially because the culture of academia makes it so that certain people's work is acknowledged and recognised more than others'. Little things like this can go a long way in changing that culture. Thanks for sending these out!"

From the **Graduate Academy for College Teaching**:
"[The session] was engaging and practical and honestly useful for me as a researcher not just a teacher"

Other accomplishments

In addition to FY19's goals, RDS staff completed the following:

- Redesigned the RDS website to be easier for users to navigate and use
- Created and published the Snapshot, a short infographic that provides statistical information regarding service impact for each half of each fiscal year
- Created the Data Kit, a package of instructional materials that feature datasets published in the Illinois Data Bank
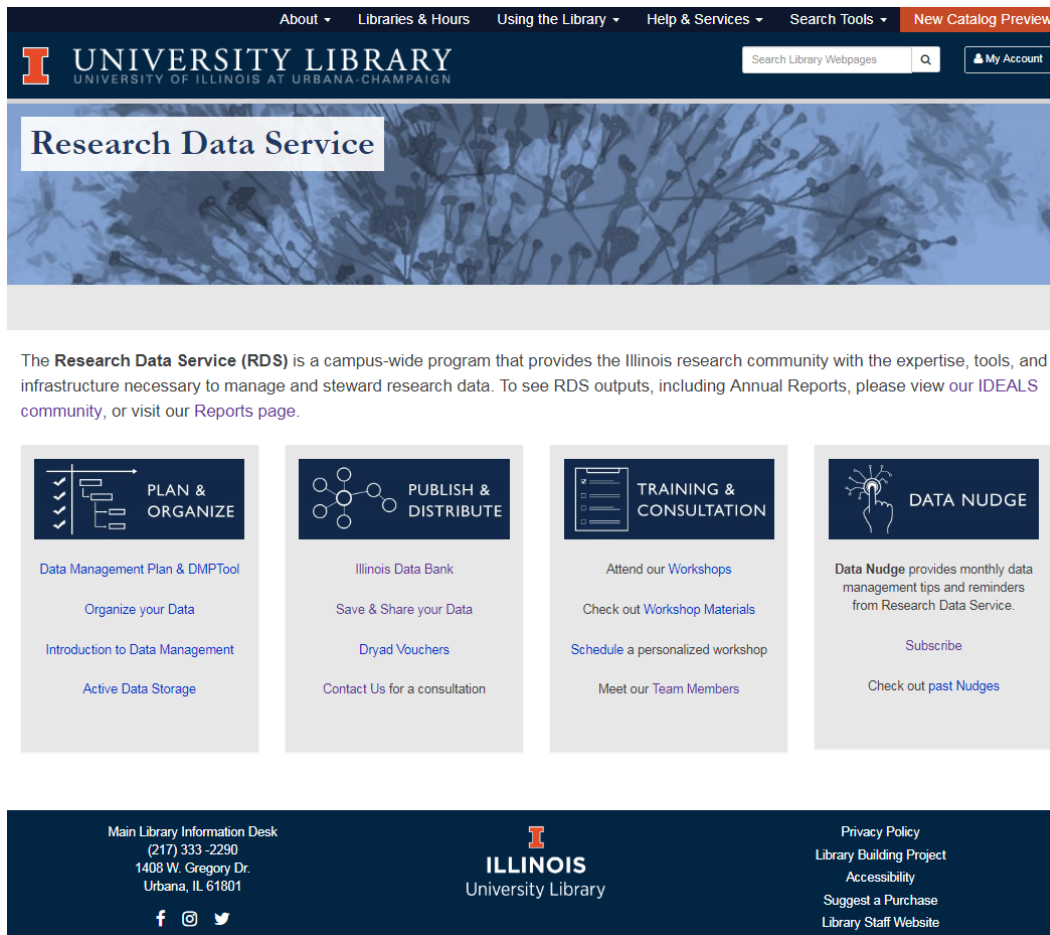
III. Appendices

RDS website redesign

https://www.library.illinois.edu/rds/

Figure 7: RDS website after redesign
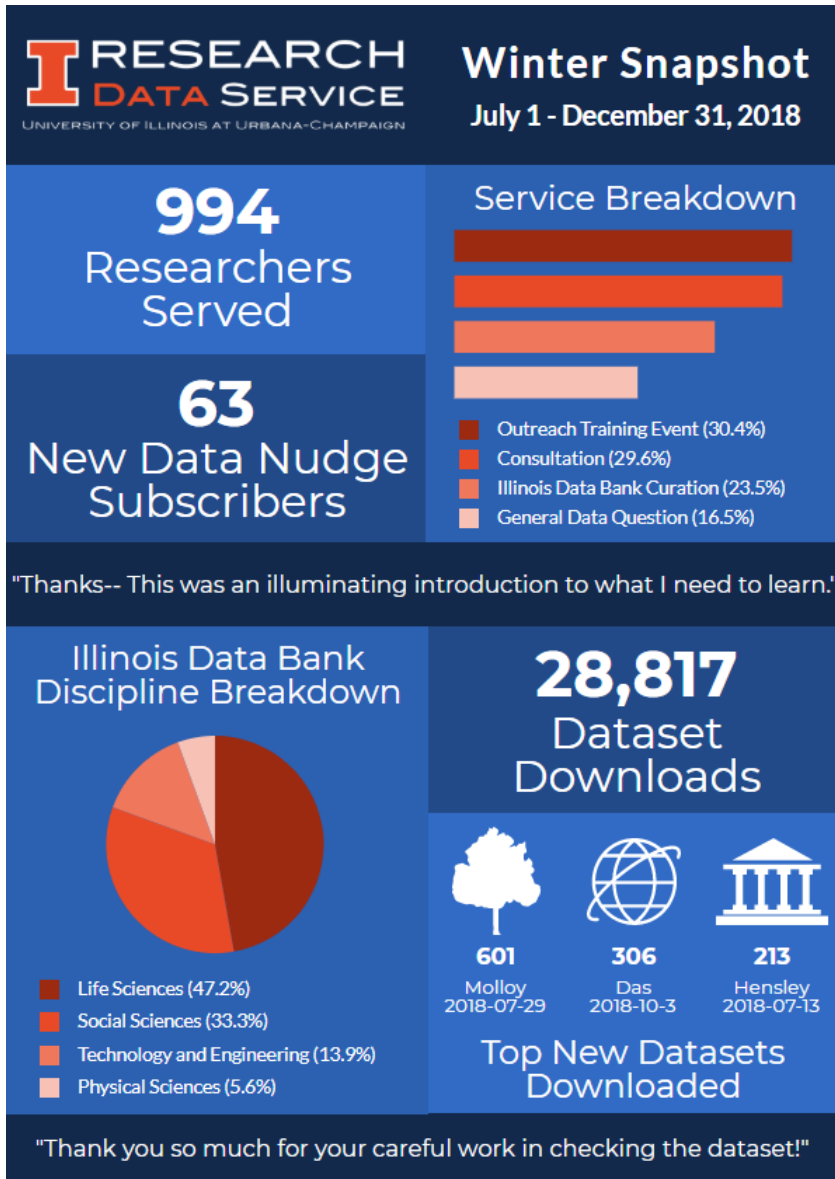
Snapshot

https://create.piktochart.com/output/35555502-rds-winter-snapshot-2018

Figure 8: RDS Winter Snapshot