

Library as Campus Research Partner

UC San Diego Library's Research Outputs Dashboard

Stephanie Labou | Data Science Librarian, UC San Diego | UC Libraries Forum, October 2025

An emerging research support need

The Research Data Curation group in the library started getting questions about research metrics

- UCSD faculty with patents related to [specific topic] in the past 10 years
- Which researchers & departments are collaborating most with institutions in other countries
- Bibliometric analysis of UCSD research published on [specific topic]

Questions mostly coming from other administrative groups on campus

Hey, we license a thing for that!

Most of the questions we were getting were theoretically answerable using the Dimensions platform

- Third-party research metrics aggregator licensed by campus, managed by Library

Library's Research Data Curation group doesn't provide boutique support for platform, but we can point people to Dimensions

HOWEVER

- Interface isn't flexible enough to handle complex queries
- "Can you do this search for me and send me the results"
- Question often requires access to bulk/raw data
 - We have limited API* keys + computational skills needed

Sounds like we need a self serve dashboard

Proposal: Can we build something that goes one step beyond Dimensions?

- Could incorporate local data (like departmental affiliations) that we get asked about, but isn't in Dimensions
- Could add Library-centric context (APC offset, "journal access provided by Library", etc.)

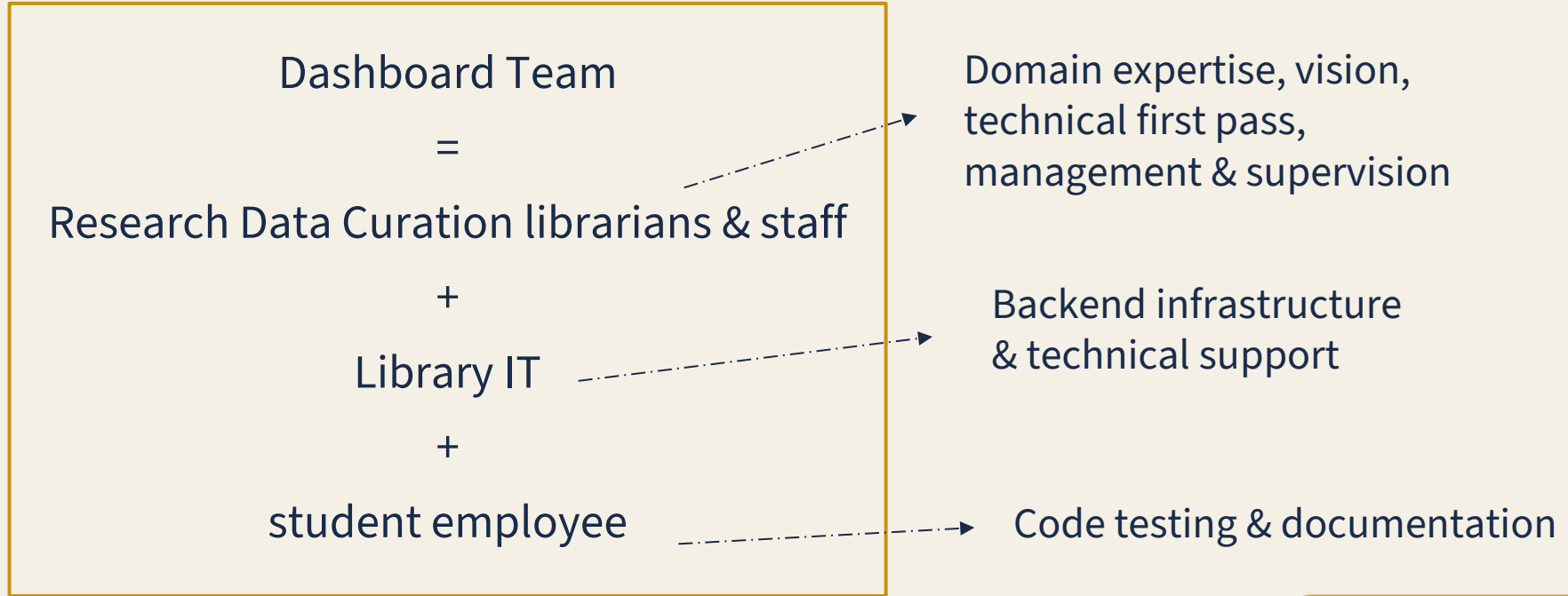
Outcome: Empower users to answer their own questions

- Options for interactive & custom data subsets, visualizations
- Visibility - center Library as research partner / integral to campus research

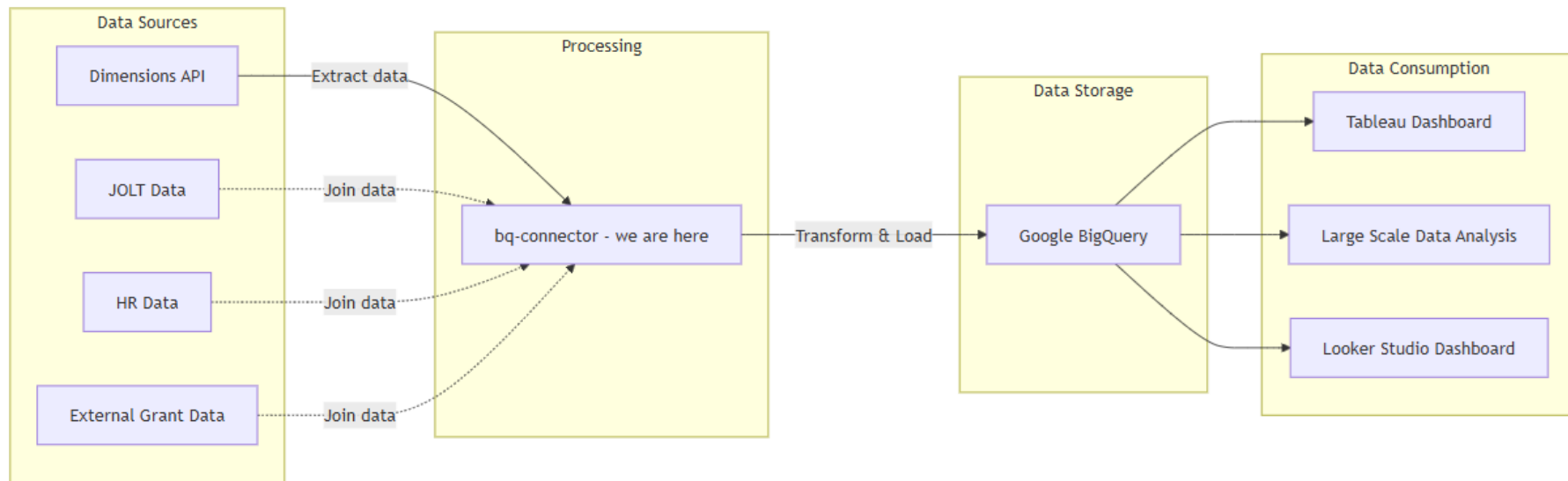
We have the data (the main part)

1. Dimensions
 - Aggregates publications, grants, datasets, and patents
2. UC San Diego data
 - Staff directory (for departmental affiliations)
 - Grant award full details from the campus Business Analytics Hub
 - Metadata for datasets from the Library's Research Data Digital Collections
 - not well indexed in Dimensions
3. UC data
 - Open access agreements from Journal Open Access Lookup Tool (JOLT)

Assembling the dream team (the necessary part)



Data retrieval and processing (the hard part)



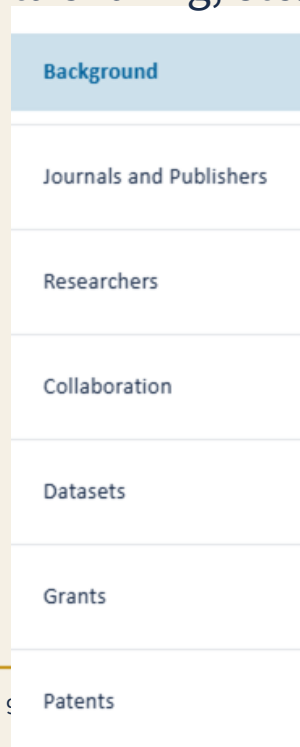
Full workflow can run with ✨ **one line of Python code** ✨

Kudos to An Ngo, student employee extraordinaire, for the flowchart and thorough documentation

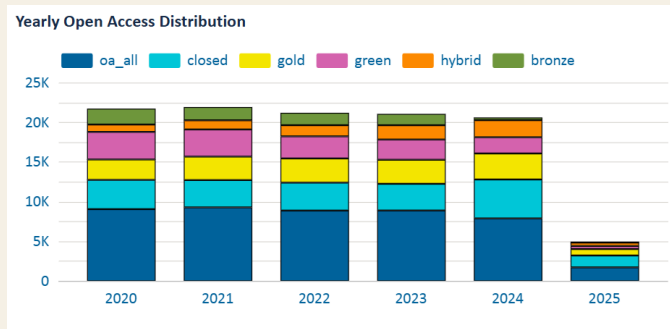
Data visualization (the fun part)

- Looker Studio dashboard for visualization, interactive exploration, and exporting of data subsets
- Drag and drop to create charts & tables → easy to add new ones if get new questions (no coding required!)
- Connects directly to BigQuery tables → automatic updates when underlying data changes

Different tab views for focus on journal metrics, researcher outputs, university collaboration, data sharing, etc.



Pre-created charts and graphs reflecting common questions



Popular Repositories

	Repository	Record Count ▾
1.	UC San Diego	15,677
2.	HEPData	10,839
3.	Public Library of Science	1,718
4.	Frontiers	1,006
5.	The Cambridge Structural ...	618
6.	Harvard Dataverse	617
7.	Springer Nature	410
8.	American Chemical Society	325
9.	American Association for ...	119
10.	Zenodo	82

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Filter by time period, publisher/journal, UCSD school, and facets

Filter Publications

Jan 1, 2020 - Mar 31, 2025 ▾

UCSD School ▾

Journal ▾

Publication Type ▾

Publisher ▾

Publication Categories ▾

Journals and Publishers (Data Derived From Publications)

Filter Publications

Jan 1, 2020 - Mar 31, 2025

UCSD School

Journal

UCSD School

Publication Type

Publication Categories

Reset Filters

Exclude Papers from Rady Children's Hospital-San Diego, VA San Diego Healthcare System, Salk Institute for Biological Studies

Publication Count
65,704

Total Journals
7,372

Total Publishers
571

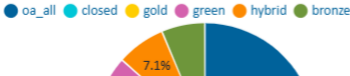
APC details are preliminary; visit [Journal Open Access Lookup Tool](#) and [UC San Diego OA options](#) for complete information

Journals and Publishers by Citations and Publication Count

Journal	Publisher	APC Coverage	APC Subvention	Citations	Publication Count
1. Nature	Springer Nature	null	null	44,903	226
2. Nature Communications	Springer Nature	null	null	26,926	
3. Science	American Association for the Advancement...	null	null	26,861	
4. Cell	Elsevier	null	null	20,649	
5. null	Institute of Electrical and Electronics Engin...	null	null	19,660	
6. Proceedings of the National Acade...	Proceedings of the National Academy of Sci...	null	null	19,287	
7. bioRxiv	Cold Spring Harbor Laboratory	null	null	12,043	
8. Journal of the American College of ...	Elsevier	null	null	11,750	

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Publication Count by Open Access



Yearly Open Access Distribution



Deposited Datasets (Data from Dimensions and Library Digital Collections)

Filter Datasets

Jan 1, 2020 - Dec 31, 2024

UCSD Schools

Category

Jan 1, 2020 - Dec 31, 2024

Funder

Reset Filters

Total datasets

31,862

Popular Repositories

Repository	Record Count
1. UC San Diego	15,677
2. HEPData	10,839
3. Public Library of Science	1,718
4. Frontiers	1,006
5. The Cambridge Structural ...	618
6. Harvard Dataverse	617
7. Springer Nature	410
8. American Chemical Society	325
9. American Association for ...	119
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Associated Journal Articles

Journal Title	Record Count
1. null	15,316
2. Journal of High Energy Physics	6,756
3. Physical Review D	2,216
4. PLOS ONE	950
5. European Physical Journal C	774
6. Physics Letters B	641
7. Physical Review Letters	346
8. Data and Information Management	293
9. PLOS Computational Biology	253
10. Frontiers in Immunology	163

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Dataset Licenses



Datasets deposited over time



Collaboration (Data Derived From Publications)

Filter Publications

Jan 1, 2020 - Mar 31, 2025

UCSD School

Publication Categories

Collaborating Organization

Reset Filters

Exclude Papers from Rady Children's Hospital-San Diego, VA San Diego Healthcare System, Salk Institute for Biological Studies

Publication Count
65,704

Collaborating Author Countries
209

Collaborating Countries by Publication Count



Publication Count per Country Over Time

	date (Date) / Publication Count		
Country	2020	2021	2022
United States	12,677	12,650	12,326
United Kingdom	1,042	1,180	1,081
Canada	890	935	881
Germany	1,010	902	902
China	953	888	952
France	622	619	641
Australia	564	557	605
Italy	524	493	519
Spain	457	445	490
Grand total	12,677	12,650	12,326

Publication Count per Collaborating Organization Over Time

Institution	2020	2021	2022	2023	2024

Researchers (Data Derived From Publications)

Reset Filters

Filter Publications

Jan 1, 2020 - Mar 31, 2025

UCSD School

Author Name

UCSD Department, use: (?).*[matched string].*

Publication Categories

Enter a value

Exclude Papers from Rady Children's Hospital-San Diego, VA San Diego Healthcare System, Salk Institute for Biological Studies

Publication Count
65,704

Total UCSD Authors
42,206

UCSD Authors Matched to a Department
27,800

UCSD Authors with Multiple Department Affiliations
5,220

For details on publication-departmental name matching, review the [Discover dashboard user guide](#).

Authors, Publications, and Citations

	Author Name	UCSD Department	Match Confidence...	Publication Count	Citations
1.	Miroslav Krstic	Mechanical & Aerospace Engineering	1	201	2,940
2.	Rohit Loomba	Medicine	1	392	27,774
3.	Atul Malhotra	Medicine	1	284	4,758
4.	Francesco Paesani	Chemistry & Biochemistry	1	160	1,339
5.	Siddharth Singh	Computer Science & Engineering	1	223	5,643
6.	Philip O. Anderson	MULTIPLE: Communication, Ethnic Studies	2	41	166
7.	Padmini Rangamani	Mechanical & Aerospace Engineering	1	143	1,975
8.	Rob Knight	MULTIPLE: Bioengineering, Computer Science & Engineering...	1	431	18,691
9.	Tarik Benmarhnia	Climate, Atmospheric Science & Physical Oceanography	1	208	3,258
10.	Rena Yadlapati	Medicine	2	137	3,398

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Publications by School

School Publication Count over Time

School of Medicine Jacobs School of E... Physical Sciences
Social Sciences Research Centers ... Unknown

From “project” to “service”

Developing an analytics service proposal to turn project into fully-developed, campus-integrated research support service

 Consultations = we get asked to do one-time Dimensions queries for patrons and partners on campus



 Project = see if we can create a multi-purpose dashboard to let patrons answer their own queries



 Service = partner with campus stakeholders to build and sustain a campus-wide research analytics service

*We are here,
summer 2025*



The timing is great for this!

- ✓ Internal capacity (funding, time)
 - Internal IT partners providing backend support
 - Line item for project student employee each year going forward
- ✓ Reorganizing into new “Research Impacts” program and reintroducing ourselves to campus research community
 - Could this be our flagship service??
- ✓ Campus collaborators are onboard & very supportive
 - This would address a real need!
- ✓ Memorandum of Understanding (MOU) with University of Göttingen Library → collaborators with interest *and* expertise in bibliometric analysis at scale
 - aka people we can ask for help when we get stuck

Oh wow, the timing is ~~great~~ *really bad* for this!

~~✗ Internal capacity (funding, time)~~

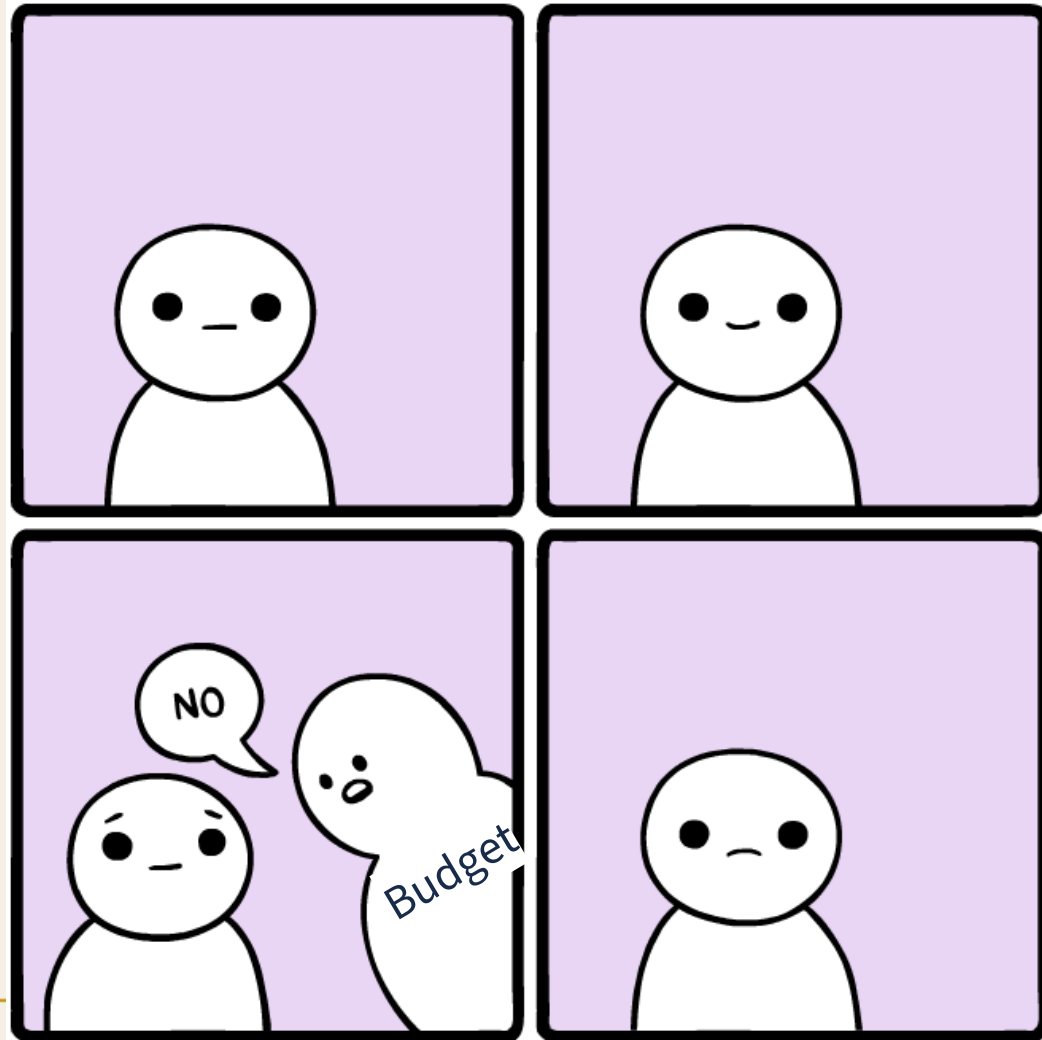
- Staff layoffs impact technical support & backend maintenance
- Budget cuts mean no student employee to support this work now or moving forward

~~✗ Reorganizing into new “Research Impacts” program and reintroducing ourselves to campus research community~~

- Reorganizing takes time and energy, we are very much **at capacity** with existing services offered
- From “do more with less” to “do less with less”

~~✗ All campus departments are getting cuts, and survival mode > launching new services~~

With drastically limited internal resources and capacity, thus ends the dashboard & research analytics project



So...what now?

We have stopped active development of dashboard and data integration pipeline

- ★ We still have a robust (and well documented!!) workflow we'd be happy to share with other UCs

Cancelled analytics service proposal

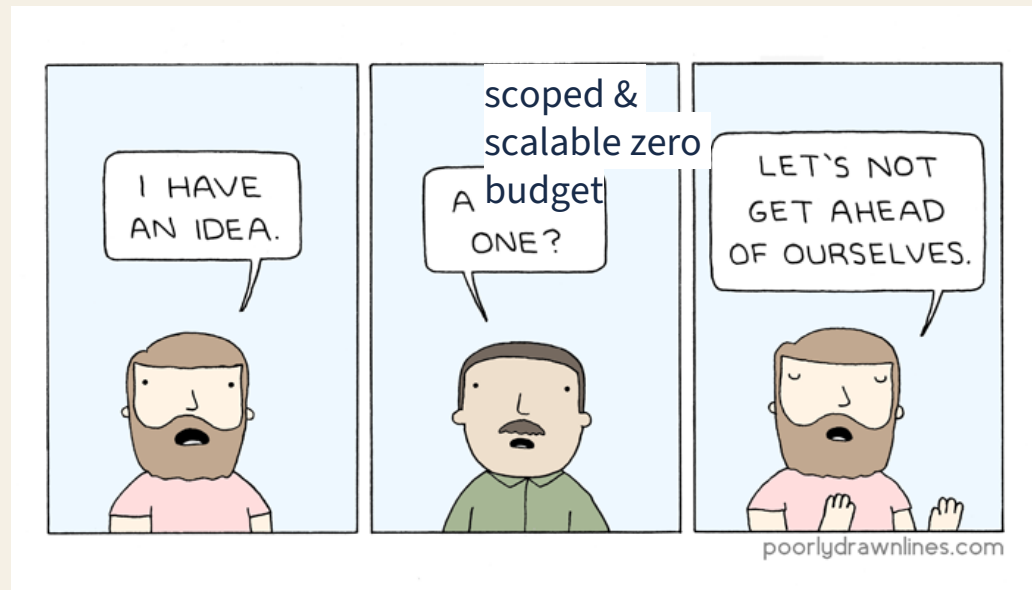
Shopping around to campus partners (not holding our breath)

Occasionally still poking at the data for internal curiosity & general information purposes

Lessons learned :(

Even with internal and external support, launching anything “new” requires resources which may not be reliably available (now more than ever)

Making something is easy, setting up a structure to maintain something is hard



Lessons learned :)

Maybe the “service” was the friends (aka campus connections) we made along the way

We took our first steps into bibliometrics

Reusable/adaptable code and workflow

★ Free to a good home!

Self reflection is useful, especially in times of change