Research Data Management @Harvard

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“Good data management is not a goal in itself”

Wilkinson et al., The FAIR Guiding Principles for Scientific Data Management and Stewardship, Nature Scientific Data, 2016

"Good data management is not a goal in itself"

- Enables continuity of research projects
- Facilitates data sharing and re-use
- Reduces research and data storage costs
- Helps with data reproducibility

Connecting Computing Resources and Data Management is critical

2014 → **2017**

HMS Data Management Working Group
(established in 2014, grassroots)

- Countway Library
- HMS IT
- HMS Basic Sciences
- HMS Sponsored Programs Admin
- Harvard Chan Bioinformatics
- HMS Research Computing
- HMS Academic and Research Integrity

Research Computing Council
(established in 2016 by CIO; Margulies, Cuff)

Data (Crosas)

Access (Yockel)

Talent (Adair)

- HUIT
- FAS Research Computing
- HMS Research Computing
- HBS Research Computing
- IQSS
- HU Library

Harvard Data Group
(established in 2016 by Office of Vice-Provost of Research; Tahmassian and Crosas)

- Office of Vice-Provost of Research
- IQSS
- HUIT
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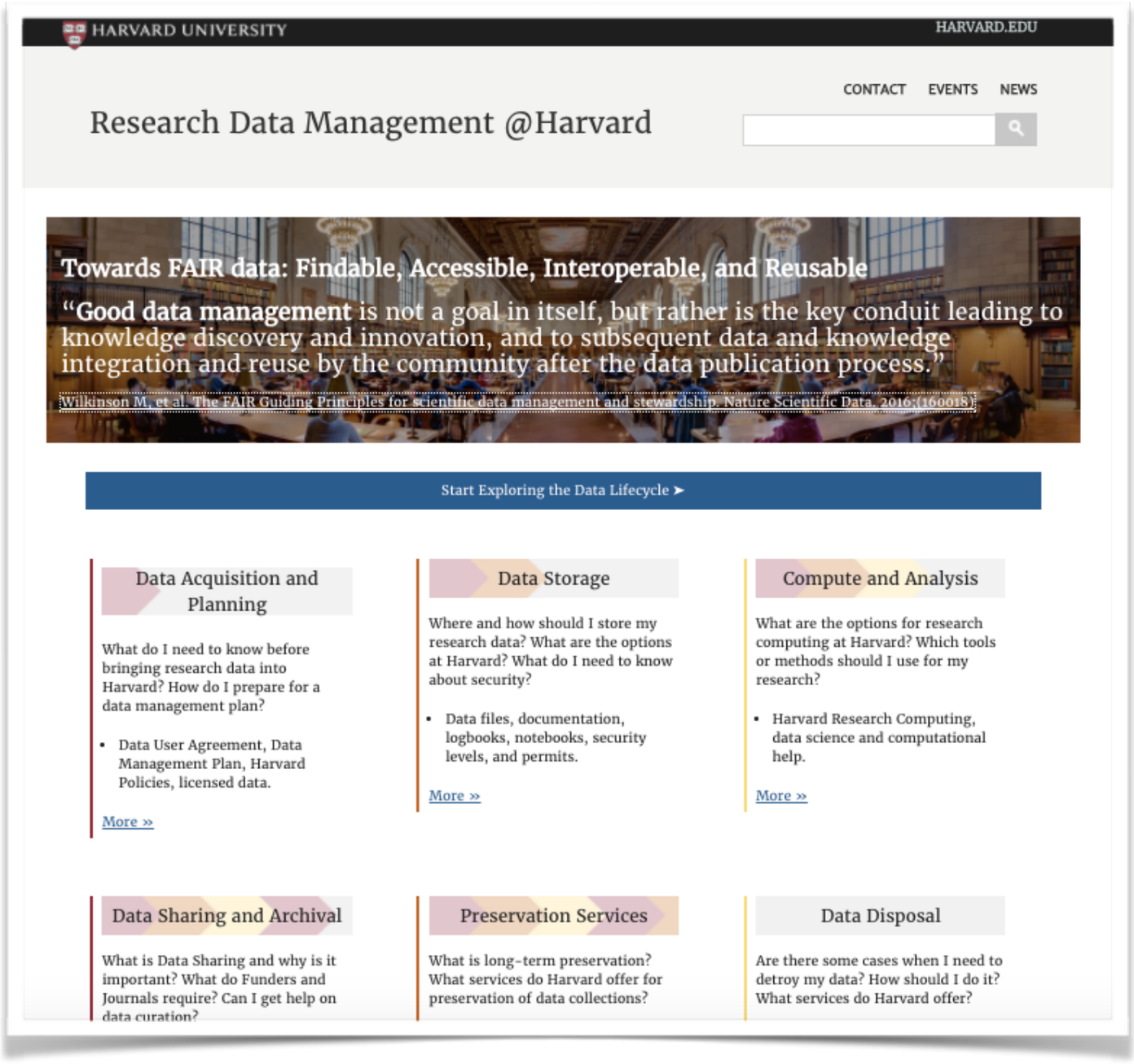
Harvard Data Group has concrete Tasks

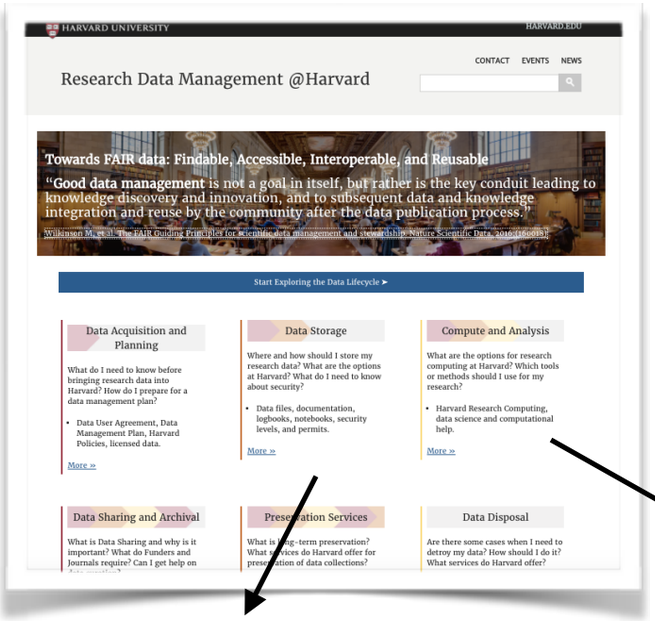
- Build a website for research data management @Harvard, coordinating with all existing resources (Spring-Summer 2017)
- Create a research data management training module, with custom modules for various research domains (2017-2018)
- Data User Agreements sub-group to coordinate DUA tracking and workflows, as part of data management support (2017)
- More in the future

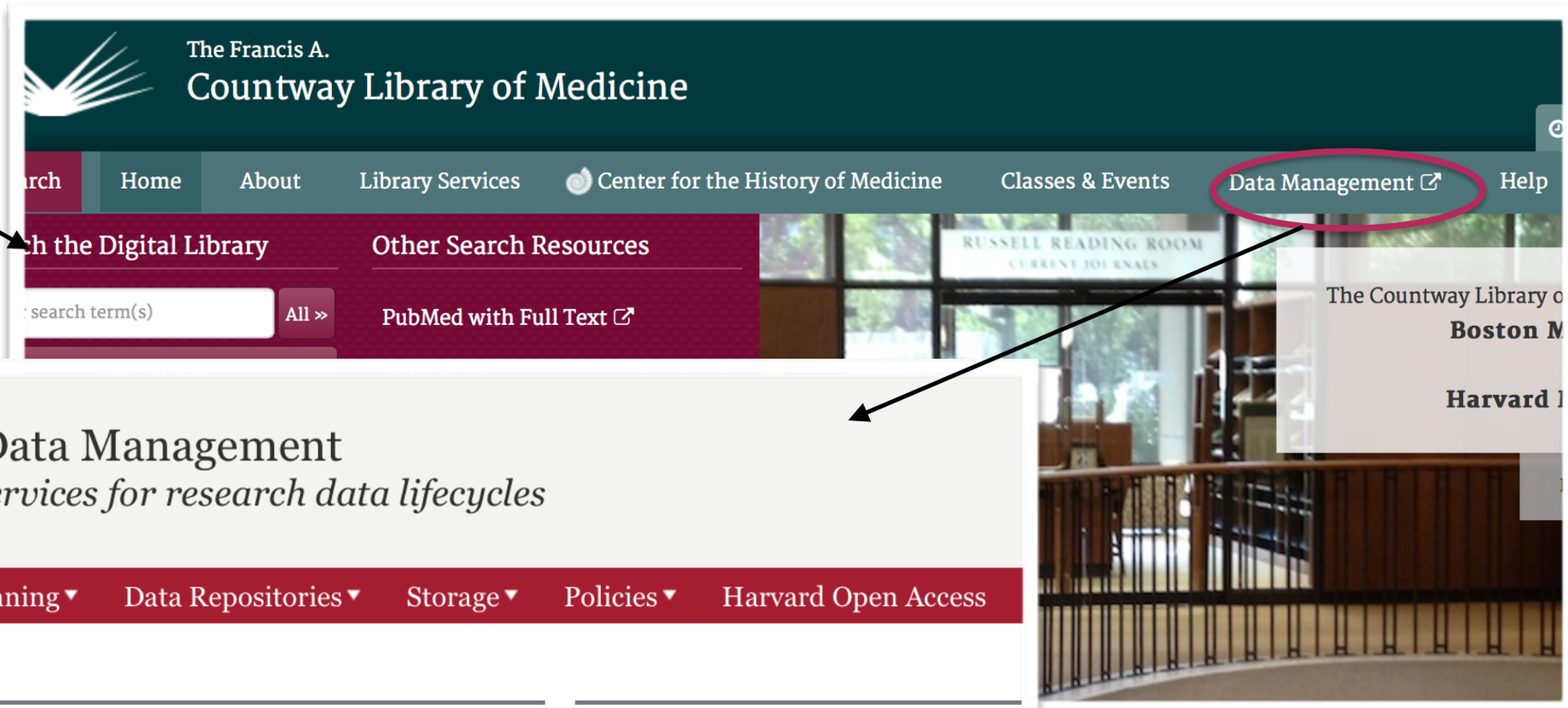
A Single Entry to Data Management Avoids Confusion

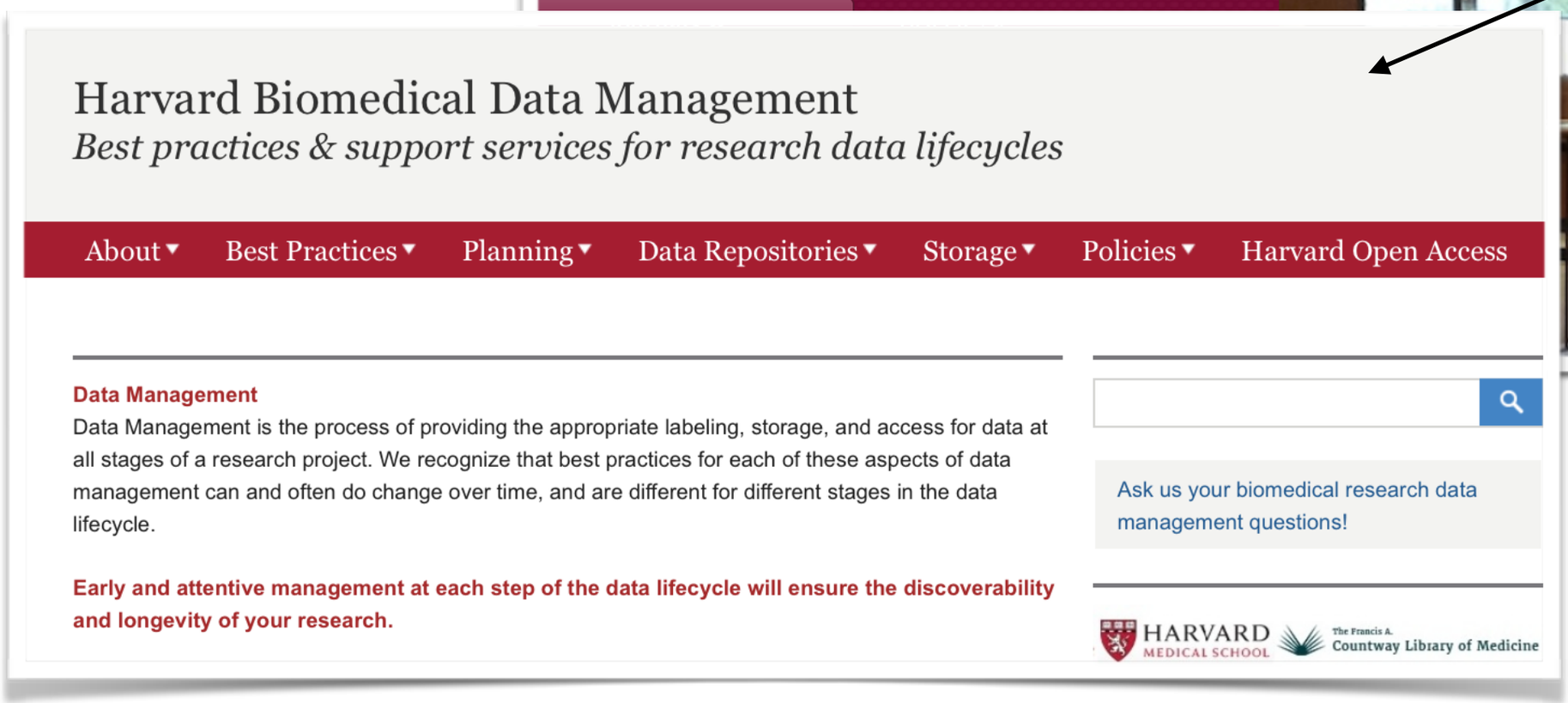
- For **researchers**, not for librarians, archivists, or trainers
- Cite scholarly work, evidence-based studies
- Concise; point to other resources as needed
- "good enough data management":
  - what you need to know
  - what Harvard can offer
  - other resources you can use



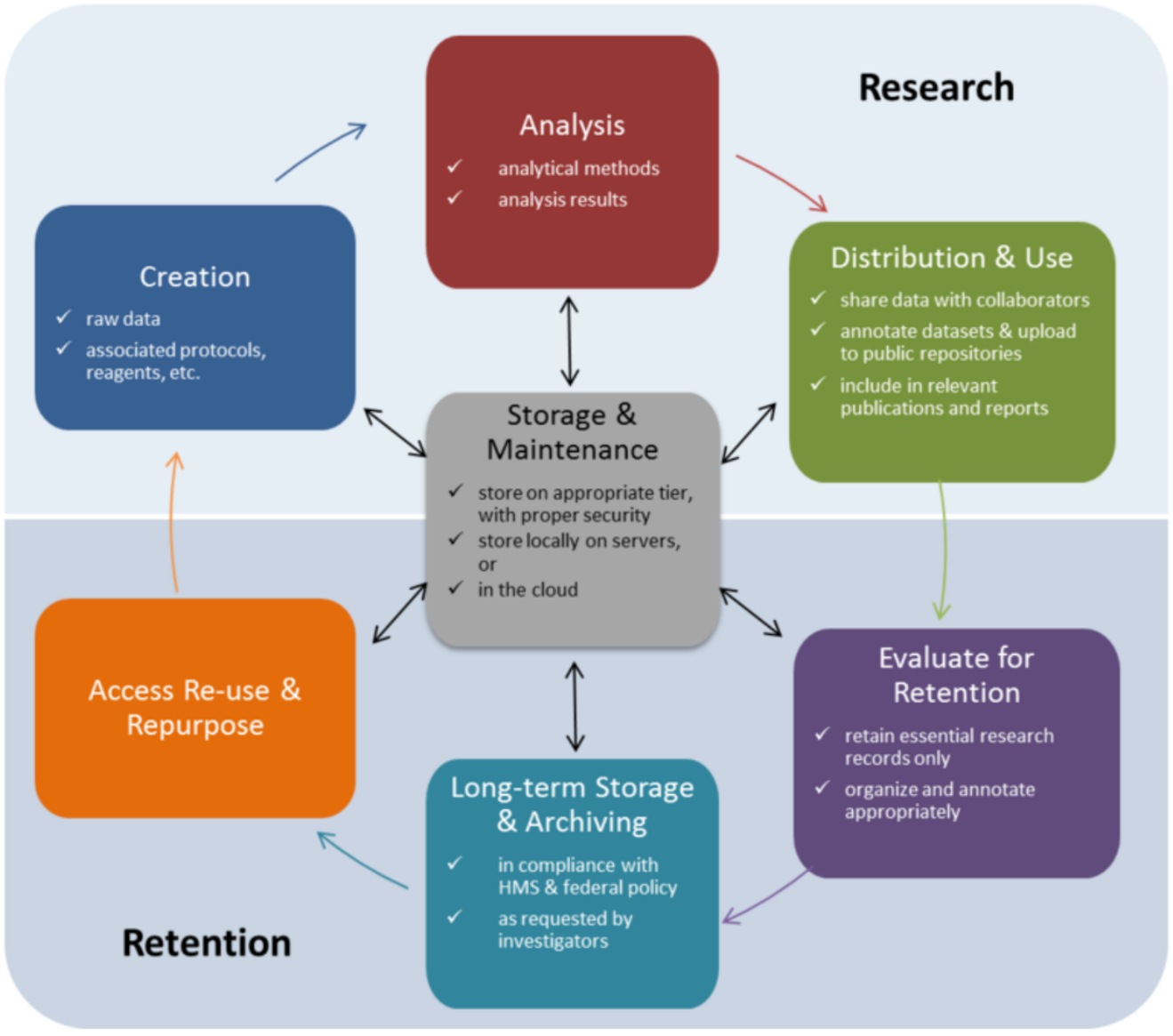
RDM @Harvard will link to HMS Data Management and Library sites







Data Management Training offered for Medical School & School of Public Health



- Organized by the HMS Data Management Working Group
- Based on the data lifecycle for biomedical research
- Has been offered a few times in 2016/2017
- Will be combined with Harvard wide training

Extension of Harvard Dataverse Curation Services

- Led by Sonia Barbosa (IQSS)
- 6 month pilot program with Harvard librarians
- Offers extended curation services to Harvard affiliates (and all users, when possible)
- Evaluating cost-based model
- Plus, office hours once a week

Data Management Support is not Sufficient

Layers of Support

Data Management Support

Data Science Support

Research Computing & Security Support

DataFest 2017 Brings Data Science Basic Training to researchers and staff

HARVARD gazette

SCIENCE & HEALTH > ENGINEERING & TECHNOLOGY

Inaugural DataFest reflects a growing interest

Conference builds awareness of data science resources at Harvard

February 3, 2017 |

By Kareem Carr, Harvard Correspondent

Photo by Dwayne Liburd

Students and researchers listen to a discussion on the challenges of working with big data at the Data Concepts Panel during Harvard DataFest.

The proof of Harvard's growing interest in data science became even clearer the third week of January when the inaugural session of the

More technology integration
and ease-of-use,
less training and support

Data Repositories can help Integrate the Data Lifecycle

Data Acquisition and Planning

What do I need to know before bringing research data into Harvard? How do I prepare for a data management plan?

- Data User Agreement, Data Management Plan, Harvard Policies, licensed data.

More »

Data Storage

Where and how should I store my research data? What are the options at Harvard? What do I need to know about security?

- Data files, documentation, logbooks, notebooks, security levels, and permits.

More »

Compute and Analysis

What are the options for research computing at Harvard? Which tools or methods should I use for my research?

- Harvard Research Computing, data science and computational help.

More »

Data Sharing and Archival

What is Data Sharing and why is it important? What do Funders and Journals require? Can I get help on data curation?

- Harvard Dataverse repository, domain repositories, Open Data policies.

Preservation Services

What is long-term preservation? What services do Harvard offer for preservation of data collections?

- Harvard Library services, format migration, suitable medium.

More »

Data Disposal

Are there some cases when I need to detroy my data? How should I do it? What services do Harvard offer?

- Contractual obligations, method of displosal, documentation

More »

Dataverse is an open-source platform for building any type of data repository, including institutional repositories. A growing community of developers and users

http://dataverse.org

22 Installations | 2,133 Dataverses | 48,690 Datasets | 2,400,322 Downloads

Public data repository

Harvard Dataverse

Texas Data Repository

Data from 20 Universities

Science Consortium

Madroño Consorcio Ciencia Datos

Repository in Fudan, China

ICRISAT

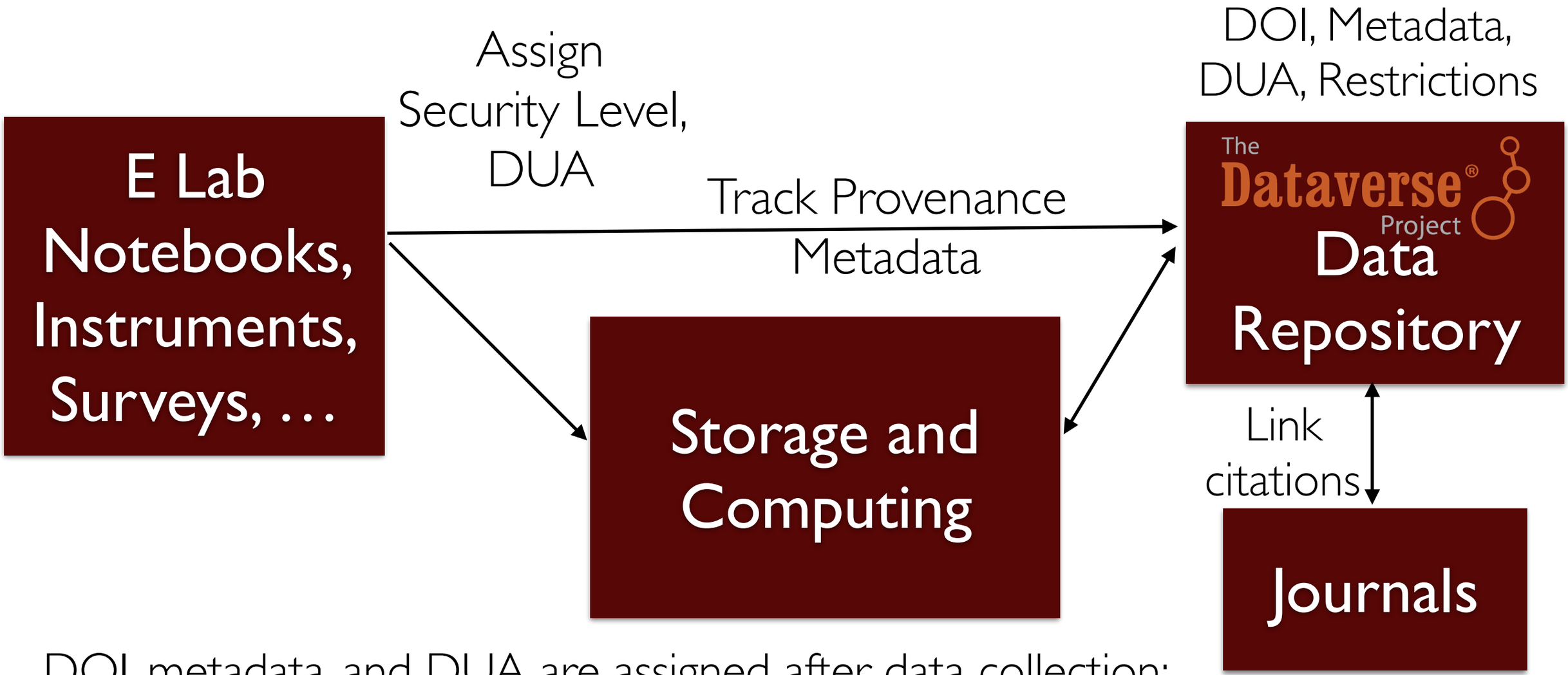
Agriculture data

The Dataverse® Project

Created at IQSS at Harvard University

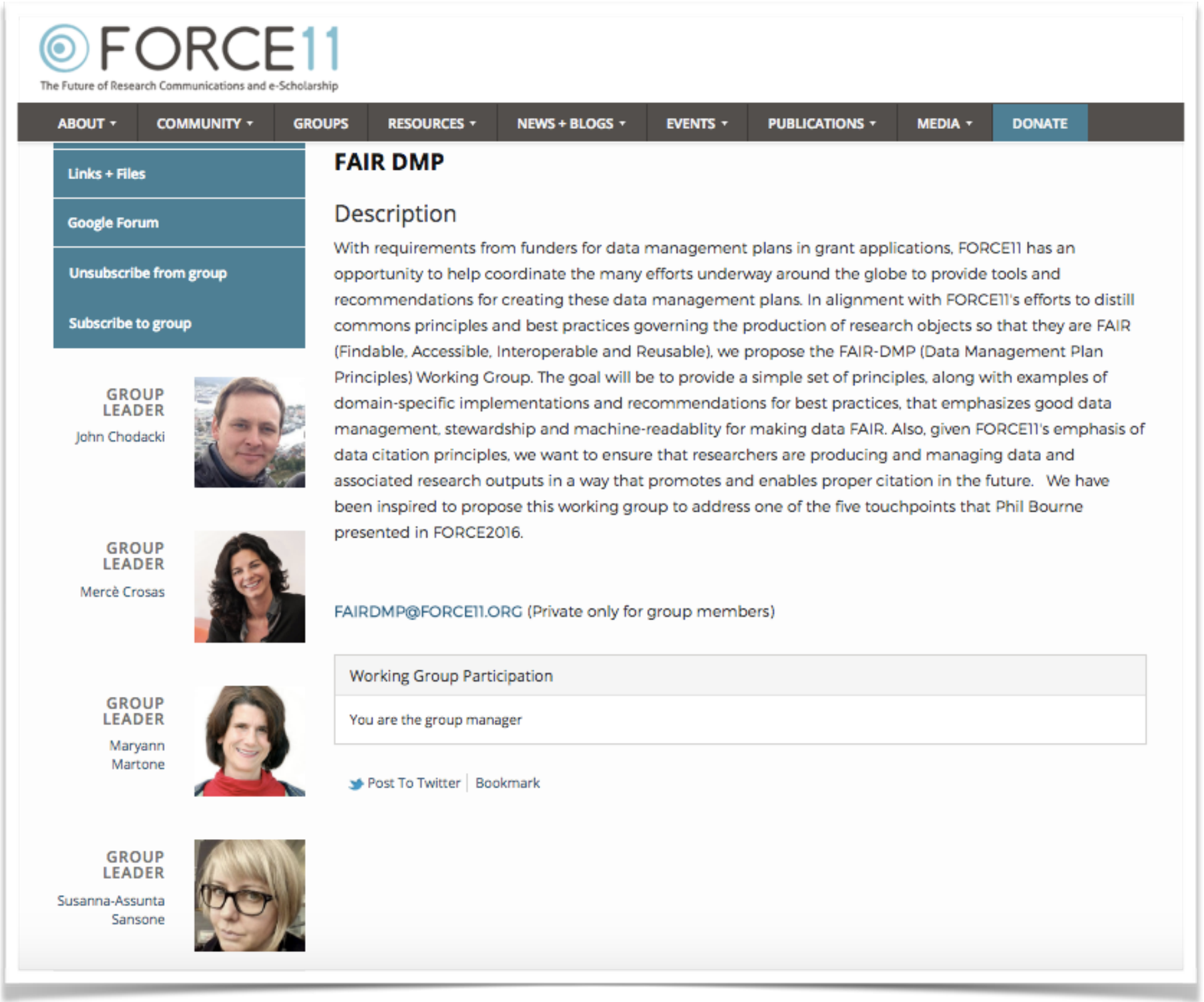
An Integrated Data Management and Computing Solution

Data Acquisition and Planning | Data Storage | Compute and Analysis | Data Sharing and Archival



DOI, metadata, and DUA are assigned after data collection;
Data repository enables **data-centric computing**

Machine-readable, FAIR Data Management Plans can help track data management



In summary:

- Coordinate, coordinate, coordinate (across groups)
- Integrate, integrate, integrate (across technologies)

THANKS!

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With contributions from Caroline Shamu, Radhika Khetani, and Sonia Barbosa