# Data Sharing and Re-Use: Barriers and Incentives

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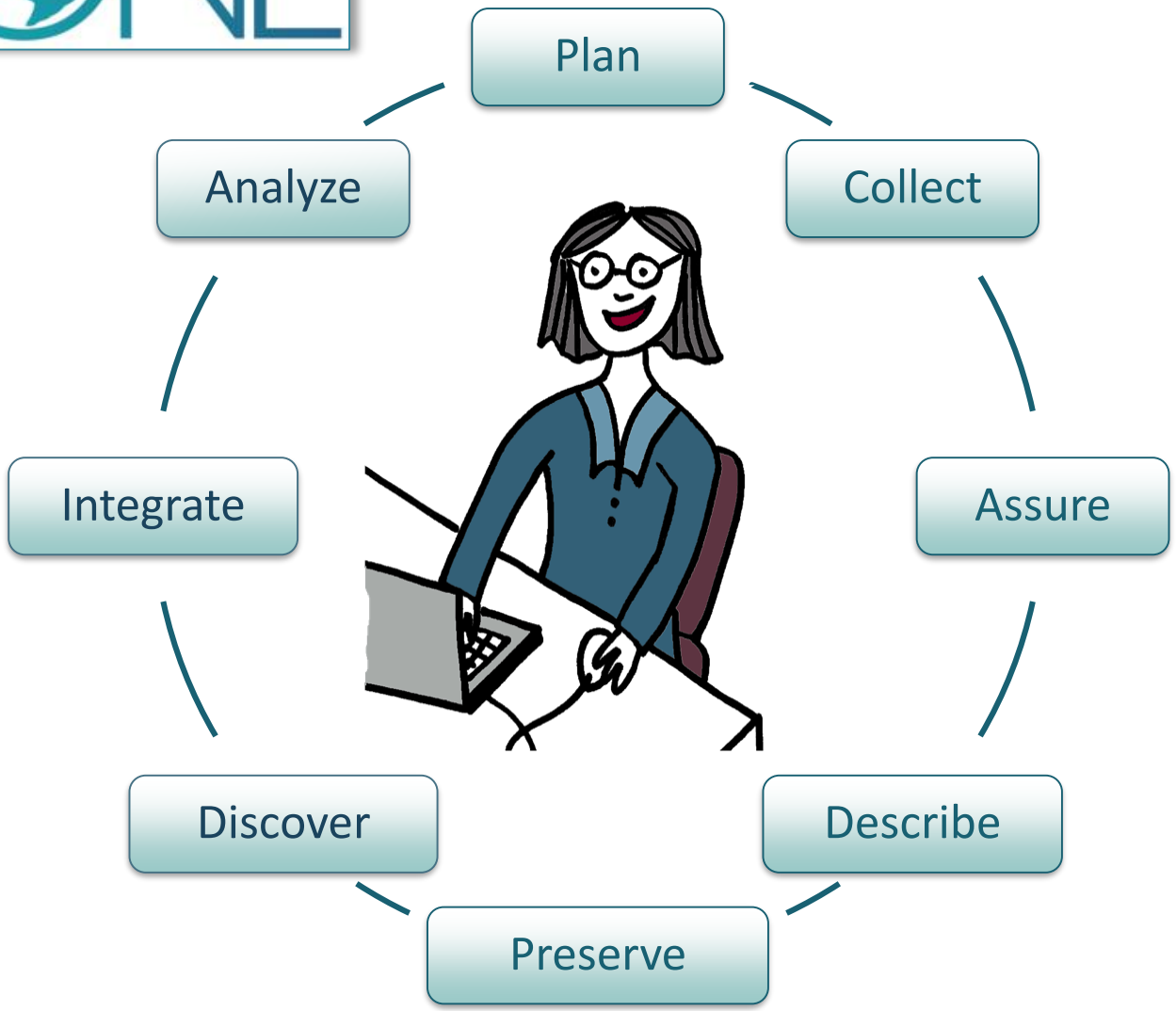
# Sharing…

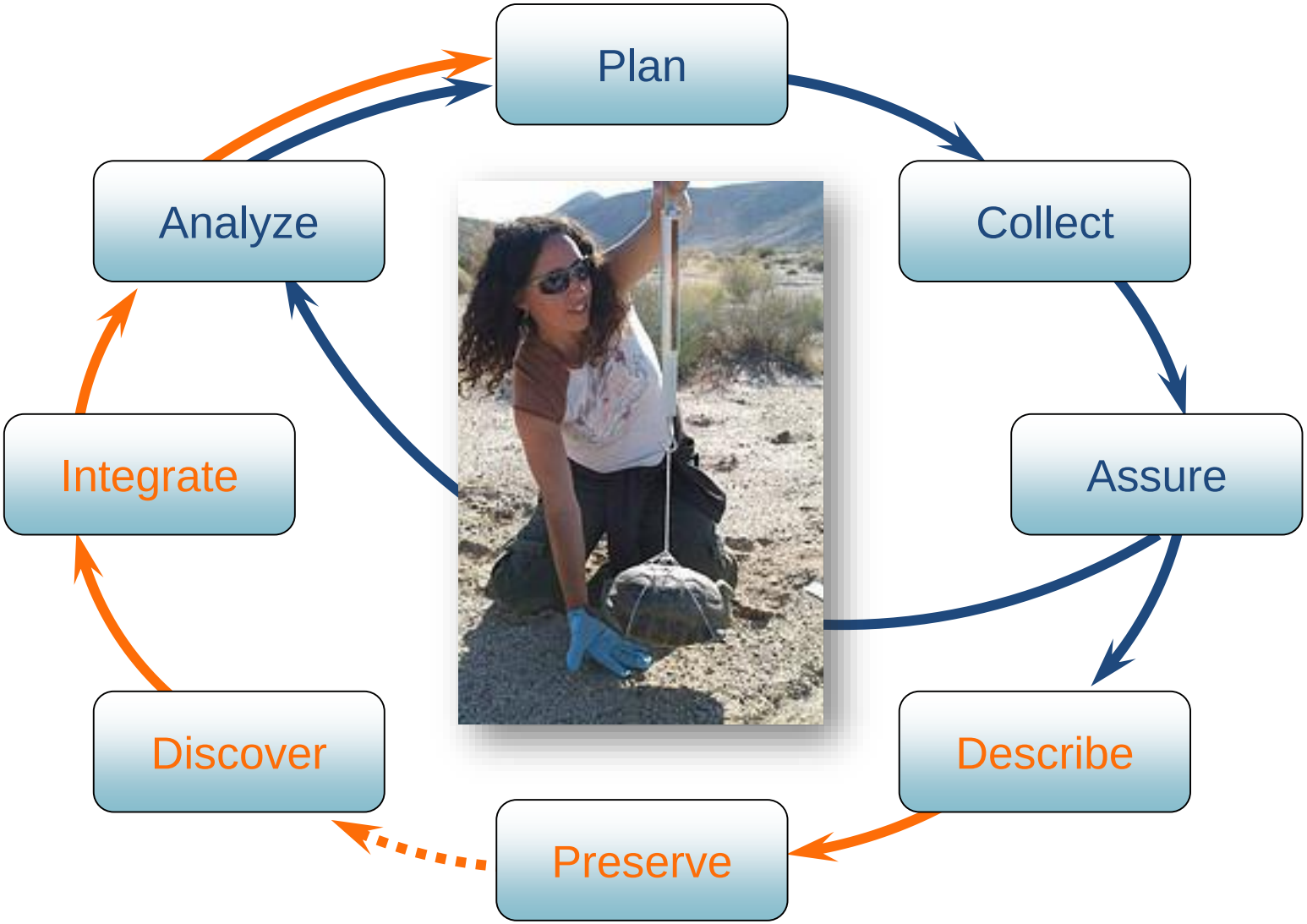
# Sharing…

# Reciprocity

# Data Lifecycle



# Researchers might…



# DataONE Assessment of Stakeholders

Public Officials

Publishers

Data Managers

Scientists

Students
& Teachers

Citizen-
scientists

Libraries
& Librarians

# We are learning about Scientists

## 1st Scientist Survey (2011)


**Views: 41,449**
**Citations: 273**
**Shares: 75**
(pub. Jun. 2011)

## 2nd Scientist Survey (2015)

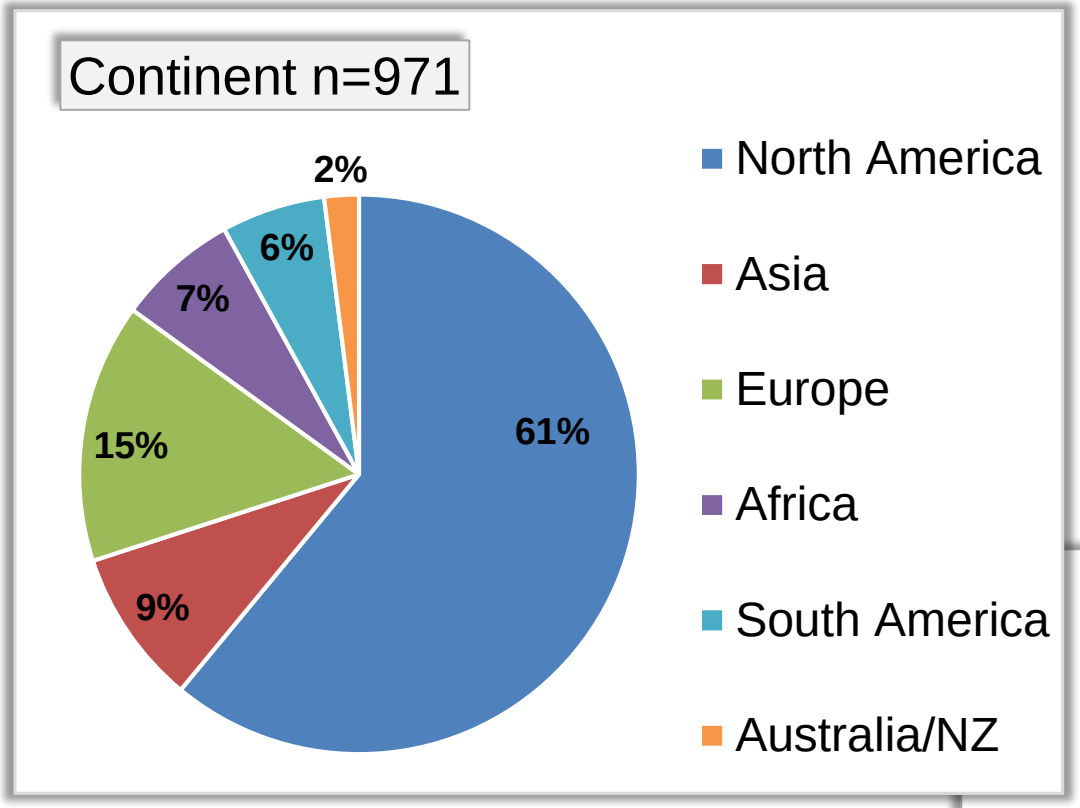

**Views: 10,868**
**Citations: 27**
**Shares: 175**
(pub. Aug. 2015)

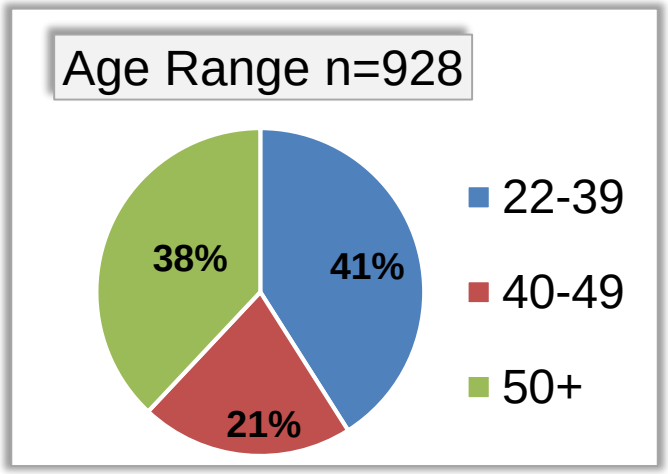
# Third Scientist Survey

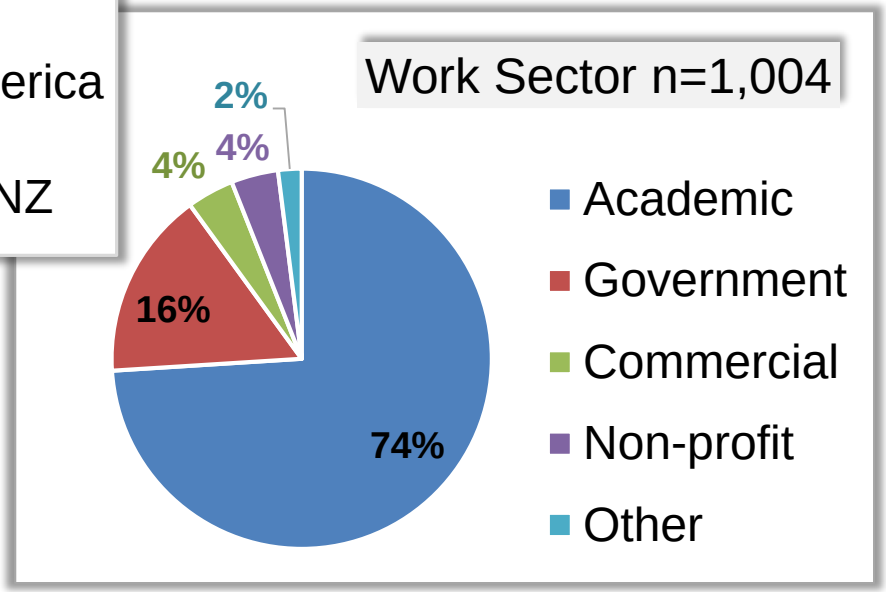
- Closed this month
- ~1400 responses
- Analyzing data now

# Respondents from Scientist Surveys

# 2015 Respondents

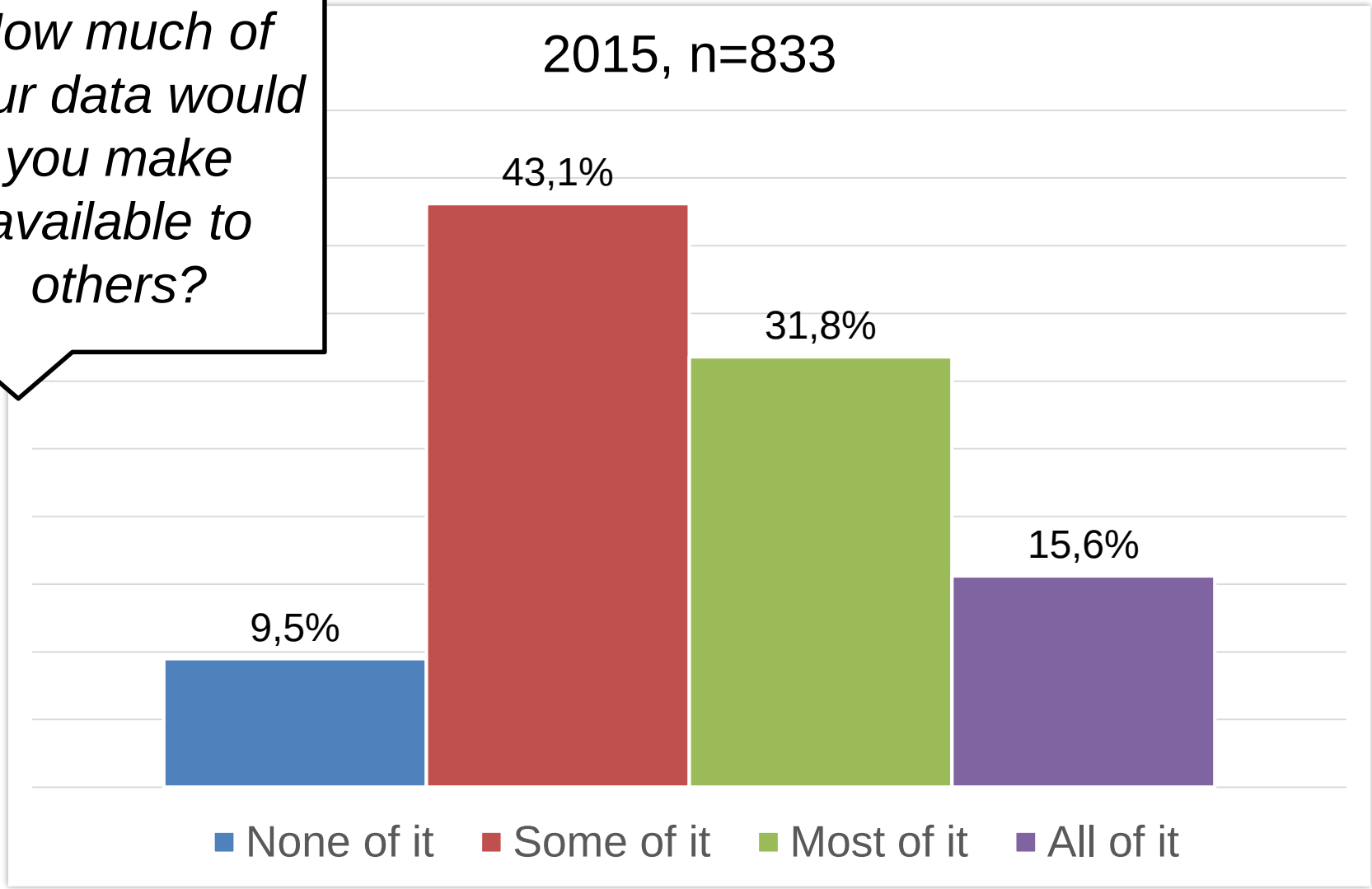


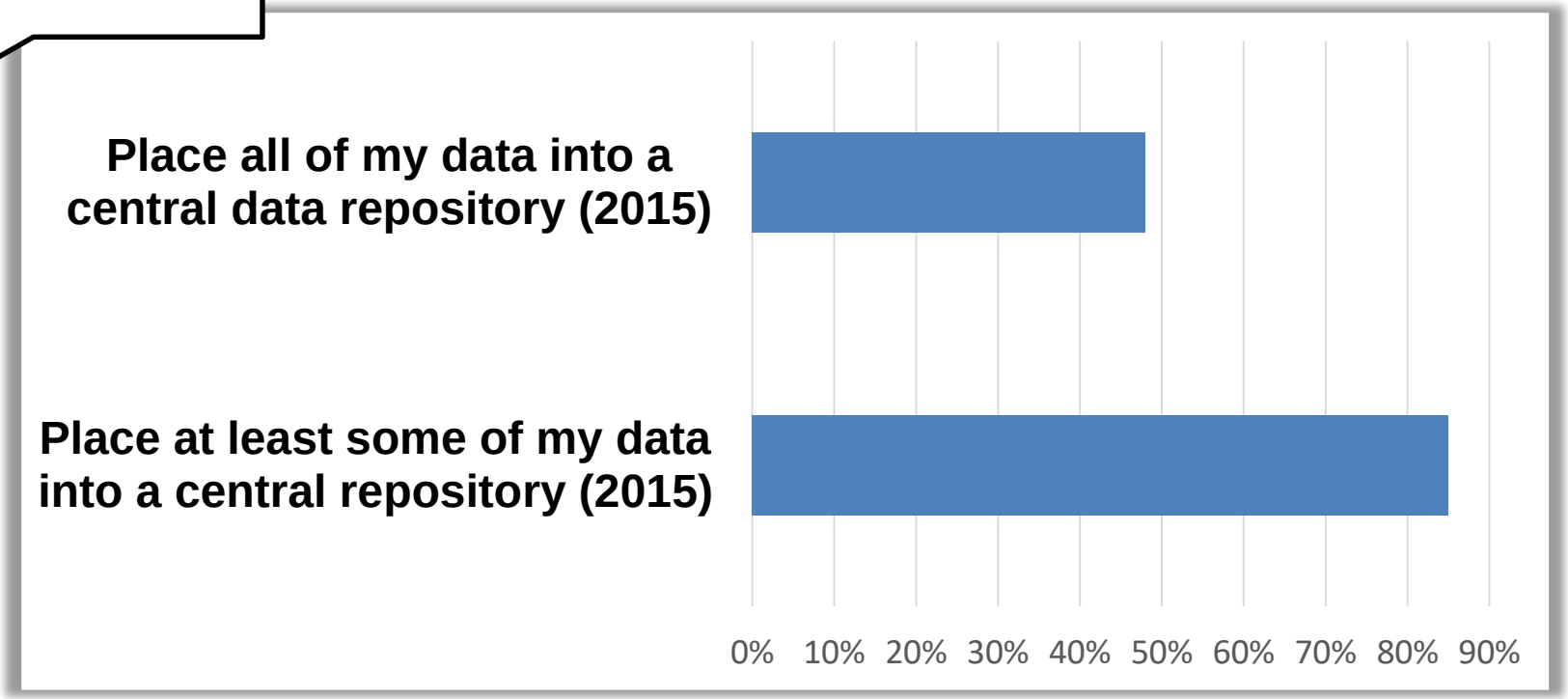
# Most are willing to share at least *some* data

*How much of your data would you make available to others?*



# *Some* is different from *all* in data repositories, too

*I am willing to…*



# Gap between willingness to share and accessibility

Although 80% of scientists agree,
"*I share my data*,"

Only 46% agree,
"*Others can access my data easily.*"

# And, lack of access to data …

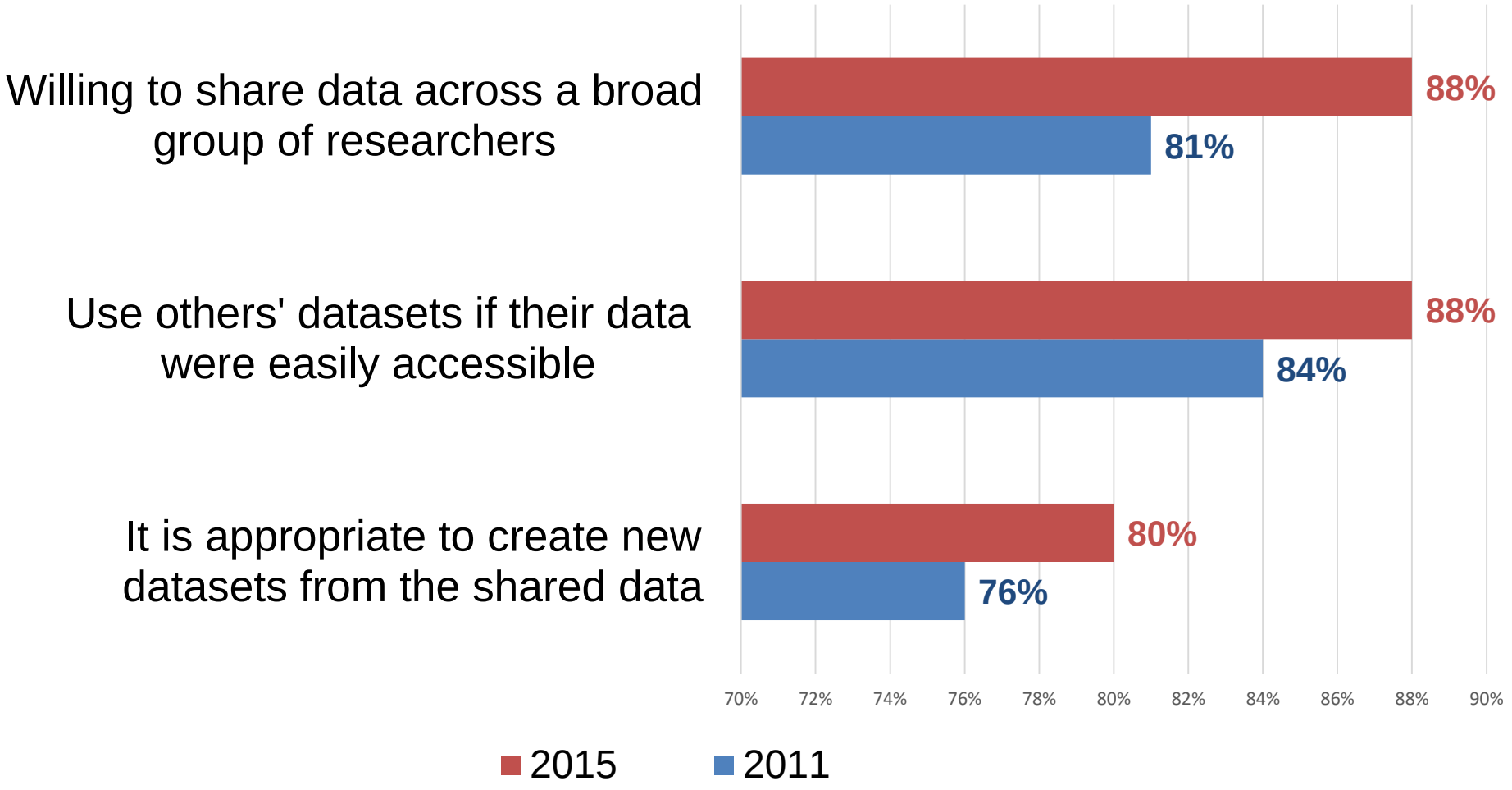
… is a major impediment to progress in science

**75% agree or strongly agree.**

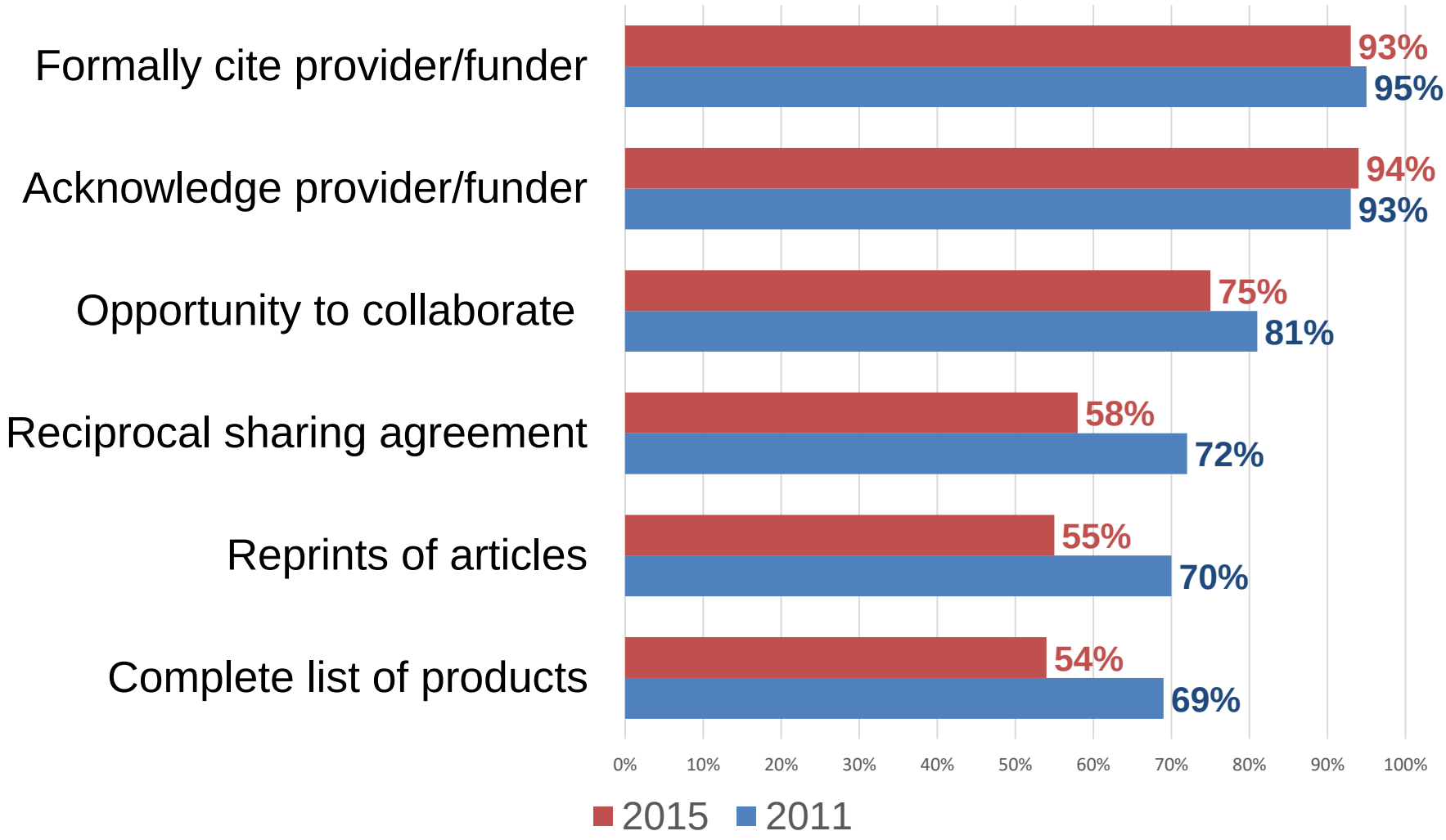
… has restricted my ability to answer scientific questions

**53% agree or strongly agree.**

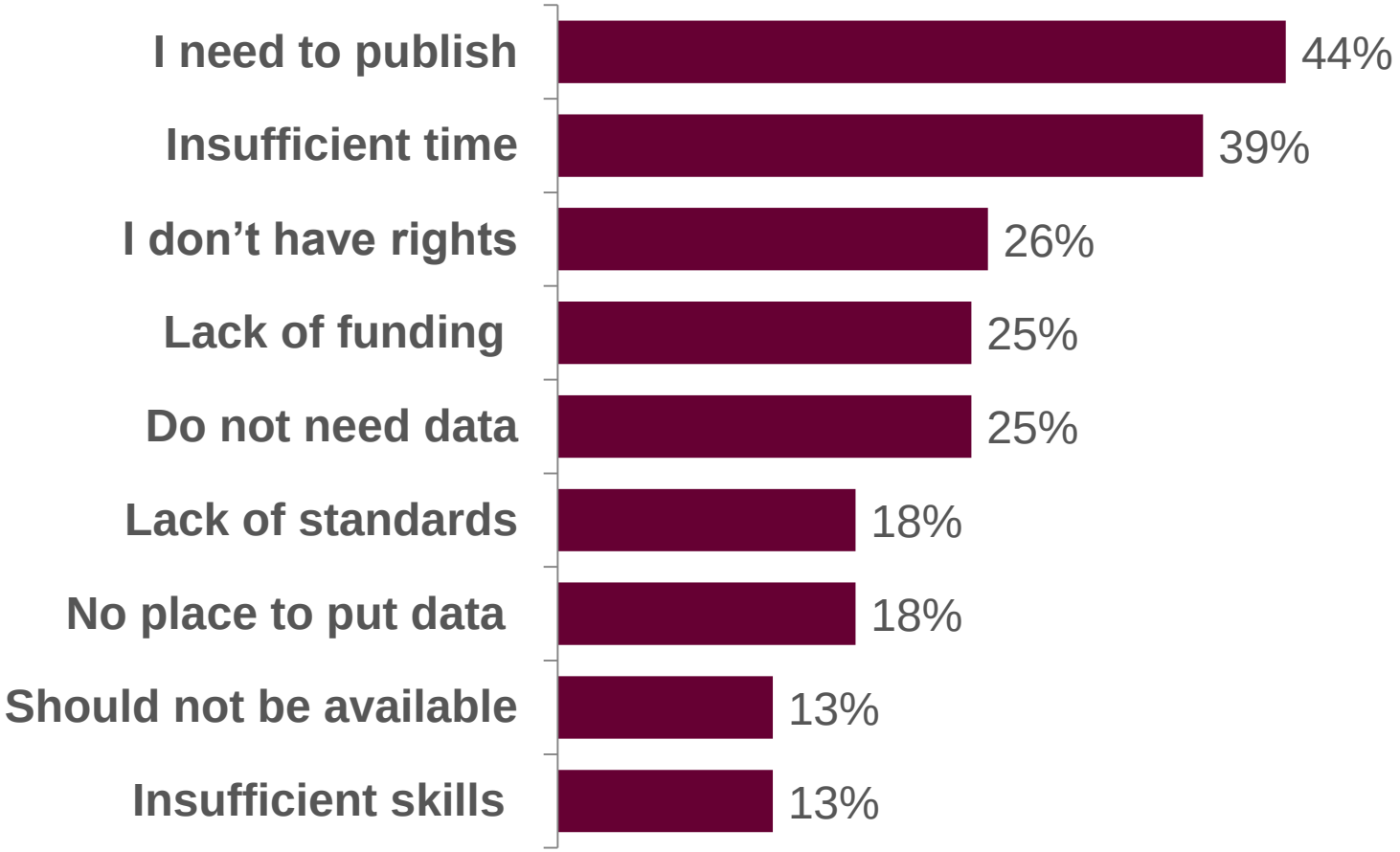
# Most agree in principle with data sharing or re-use



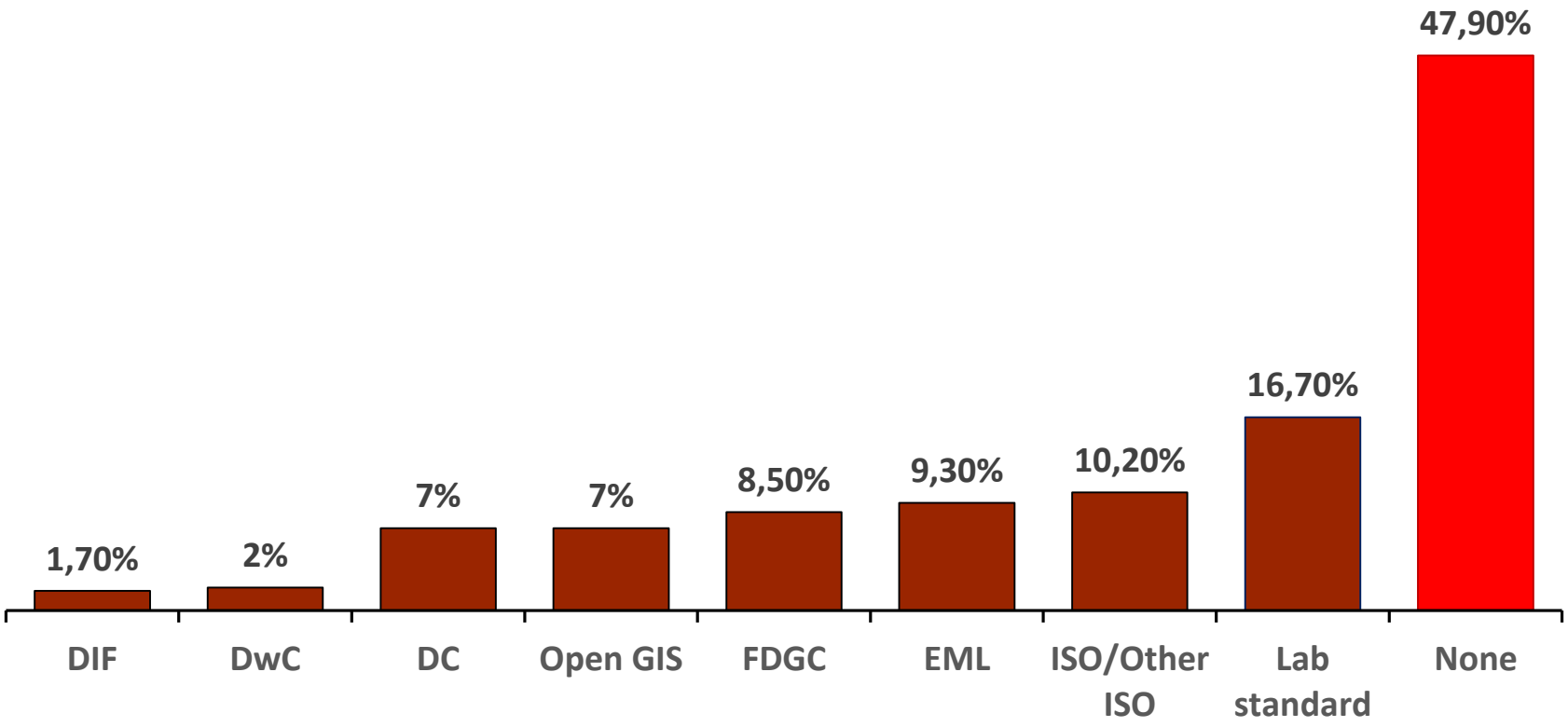
# But some conditions must be met…



# Barriers for scientists (2015)



# What metadata do you currently use to describe your data? (2015)



# How can barriers be overcome?

# 1. Flexible conditions

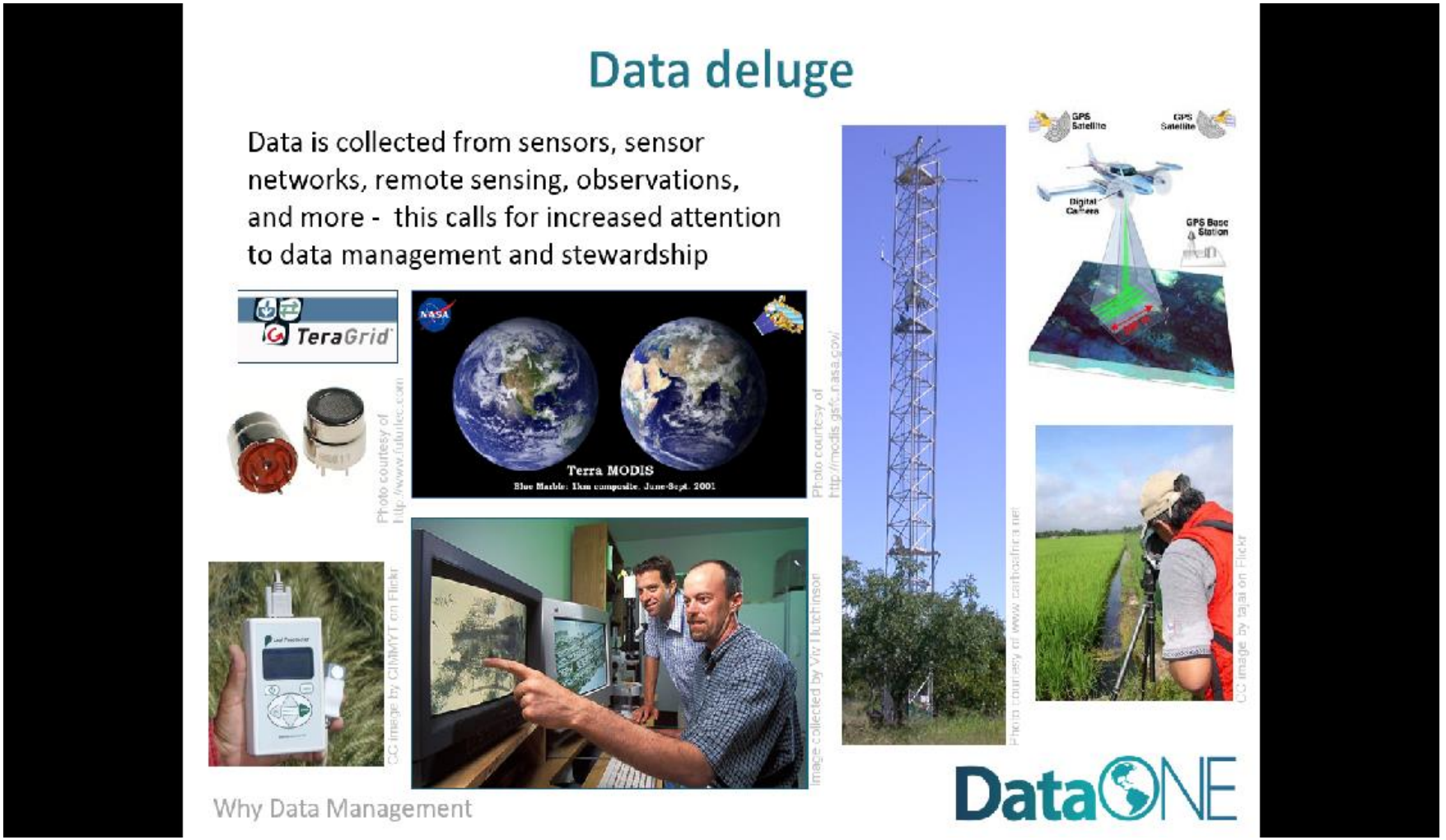


- Links to/from published articles
- Metadata-only exposure or embargoes
- Access controls


# 2. Collaboration & Assistance From Data Managers and Librarians


- https://dmp.cdlib.org/
- https://www.dataone.org/software-tools/dmp-tool

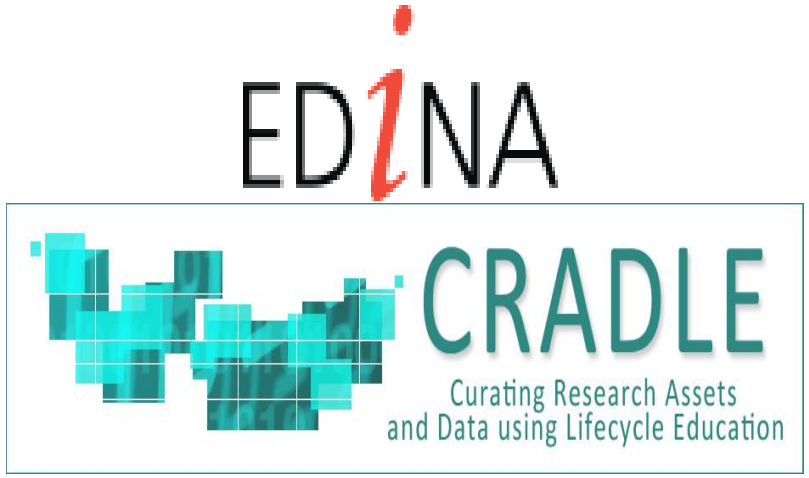
# 3. Education and Training




https://www.dataone.org/education-modules

# Assistance with training


http://datalib.edina.ac.uk/**mantra**/



Ligue des Bibliothèques Européennes de Recherche
Association of European Research Libraries

*LIBER is Europe's largest network of research libraries, with over 400 members.*

**Working Group on Scientific Information Infrastructures**

# Tools for RDS Education and Training

https://www.dataone.org/education-modules

DataONE

## Lesson 1: Data Management

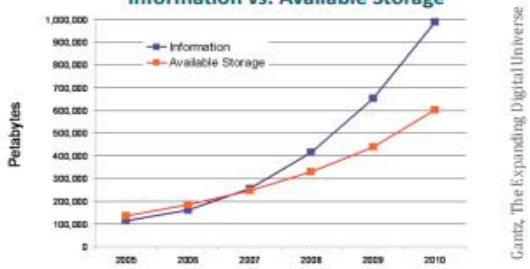
View all Education Modules at https://www.dataone.org/education-modules

### The world of data around us

The data deluge has created a surge of information that needs to be well-managed, discoverable, and accessible.

The amount of available storage is not keeping pace with the amount of data being produced.

**Information vs. Available Storage**




Gantz, The Expanding Digital Universe

### Causes of data loss

- Natural disasters
- Facilities infrastructure failures
- Storage failure
- Server hardware or software failure
- Application software failure
- Human errors
- Malicious attack
- Format obsolescence
- Loss of competencies
- Loss of funding
- Loss of insitutional commitment

### Why manage data: the researcher perspective

- Keep yourself organized ⇨ find your own files!
- Track your processes for reproducibility
- Better version control of data
- More efficient data quality control
- More backups to avoid data loss
- Format your data for reuse by yourself & others
- Document your data for understability and reuse
- Prepare it to share it & gain credibility and recognition for your scientific efforts


**Data management facilitates sharing and reuse.**

### Data Reuse Example

Researchers reused and aggregated data from several different sources to determine migration routes for specific bird species.

© Jerry & Sherry Ligori

### The Case for Data Management

# DataONE Education Modules

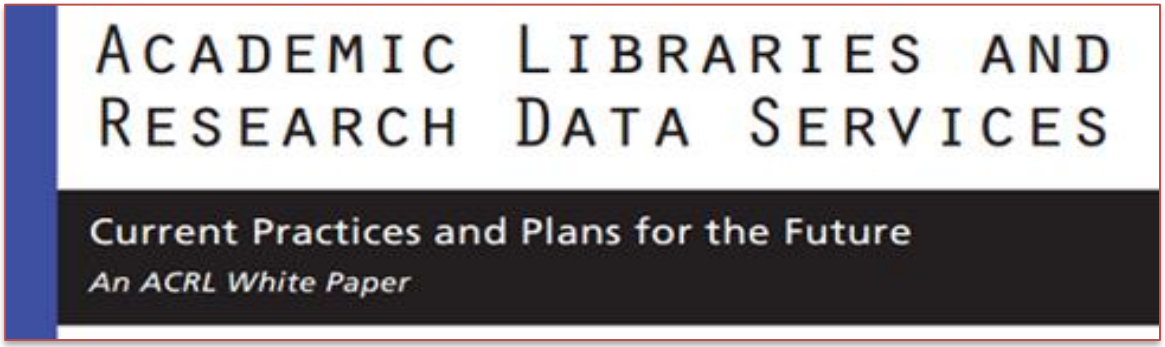
1. Why Data Management
2. Data Sharing
3. Data Management Planning
4. Data Entry and Manipulation
5. Data Quality Control and Assurance
6. Protecting Your Data
7. Metadata
8. How to Write Quality Metadata
9. Data Citation
10. Analysis and Workflows
11. Legal and Policy Issues

# Libraries…

- Facilitate interdisciplinary work and data knowledge through collections and services
- Understand metadata
- Know how to find information about data
- In partnership with other administrative units can take a leadership role in a variety of research data services

# European Survey Builds on DataONE Surveys

## 1st Library (2012)




Citations: 104 (published June 2012)

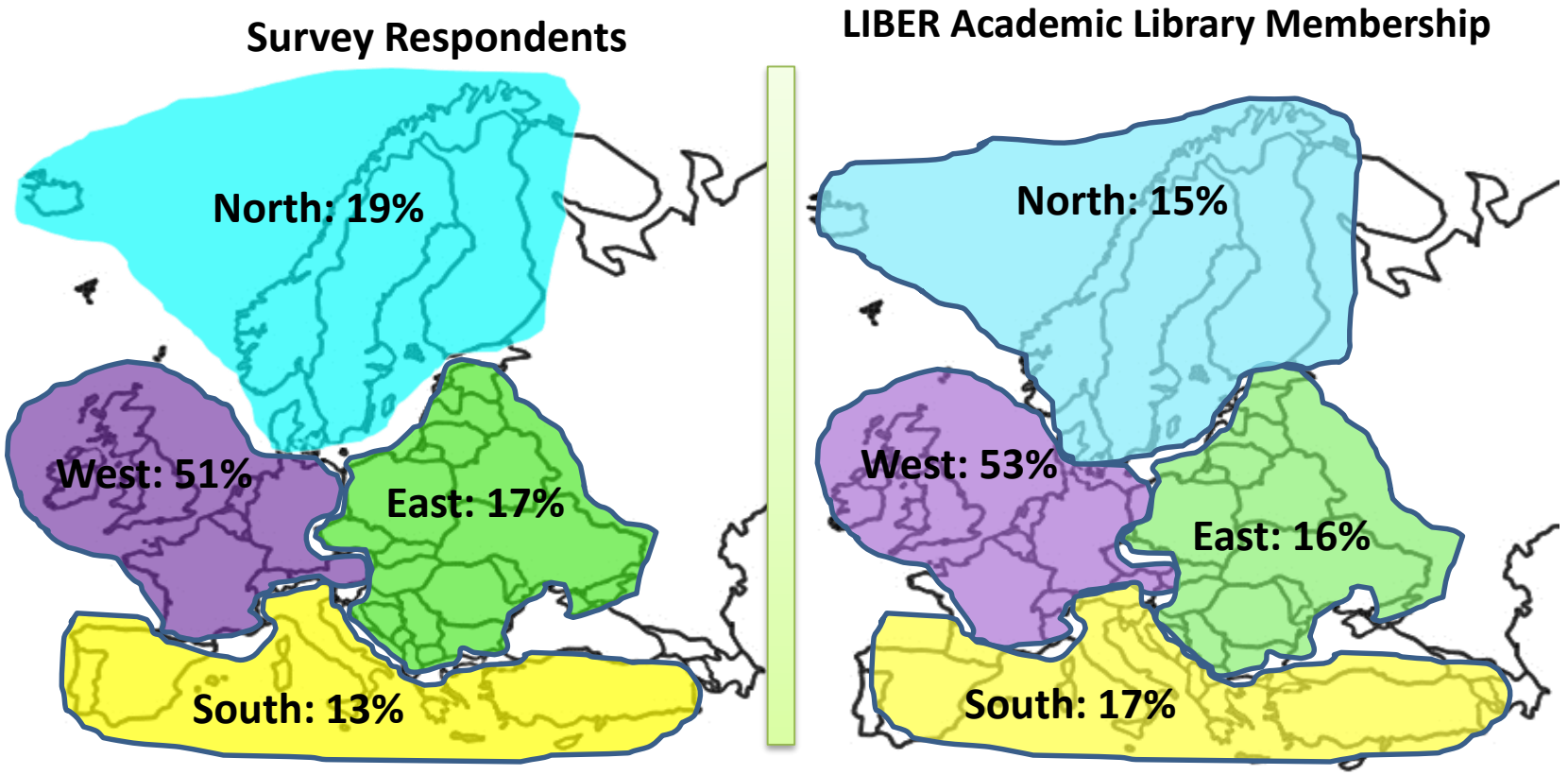
## 2nd Library (2015)


Citations: 23
2,148 downloads
(published Dec 2015)

LIBER QUARTERLY
The Journal of the Association of European Research Libraries

Tenopir, C. et al., (2017). Research Data Services in European Academic Research Libraries. LIBER Quarterly. 27(1), pp.23–44. DOI: http://doi.org/10.18352/lq.10180

# LIBER Survey of European Academic Research Libraries: 2016-2017



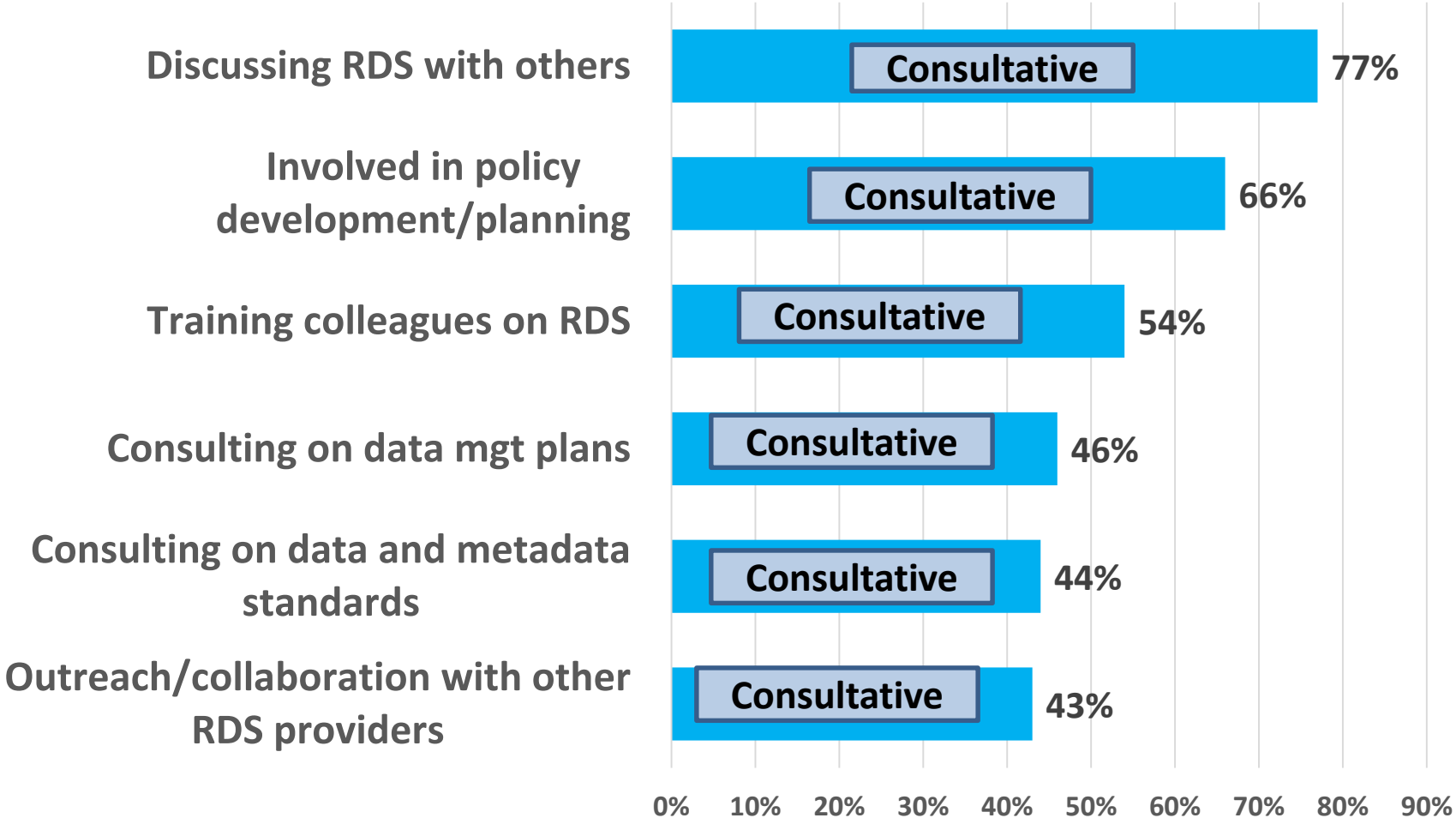
# Key Findings

1. LIBER academic libraries offer a range of Research Data Services, but…

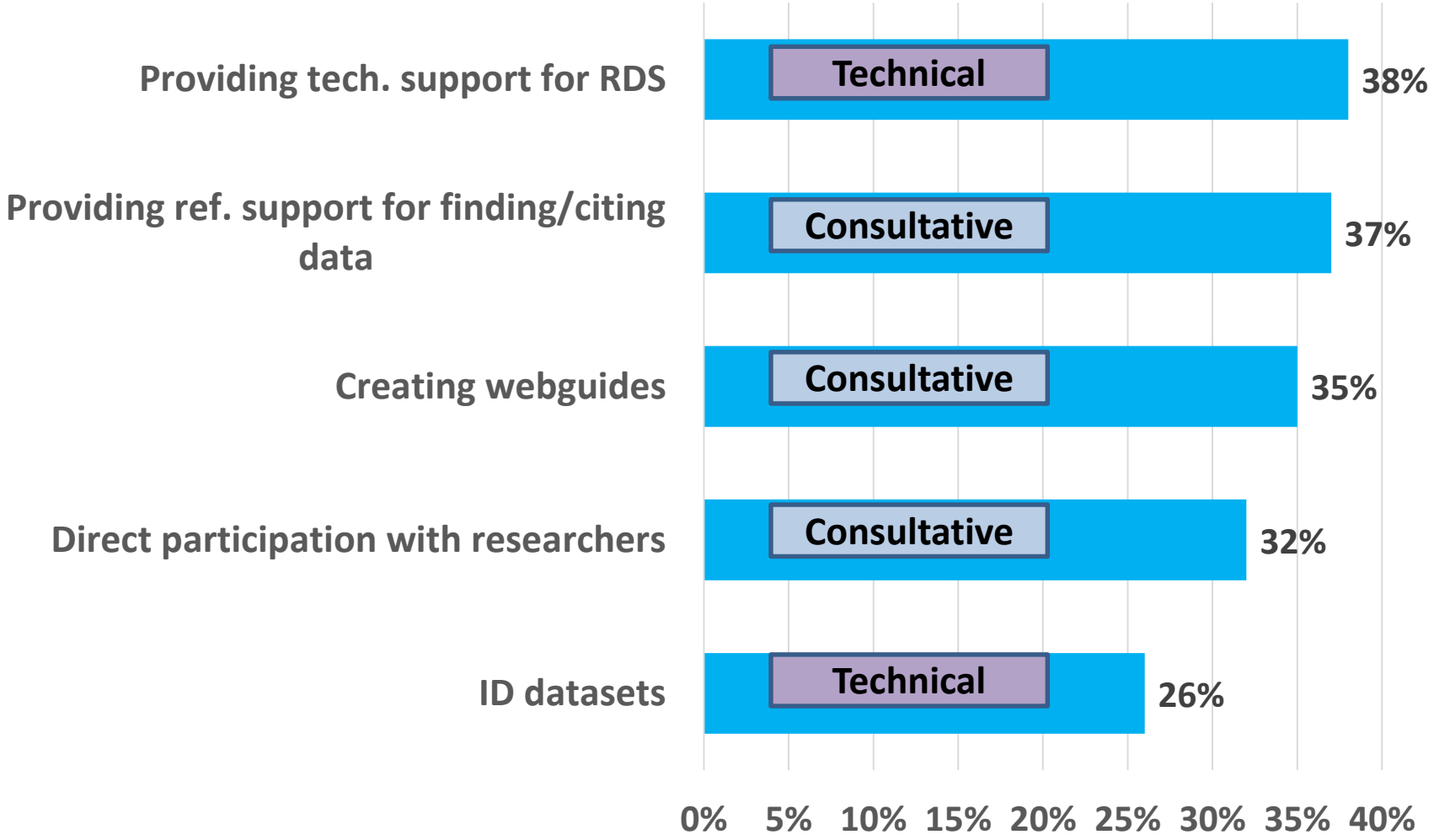
2. Consultative RDS are most common

# 1) LIBER academic libraries offer a range of Research Data Services

# RDS offered by most libraries currently

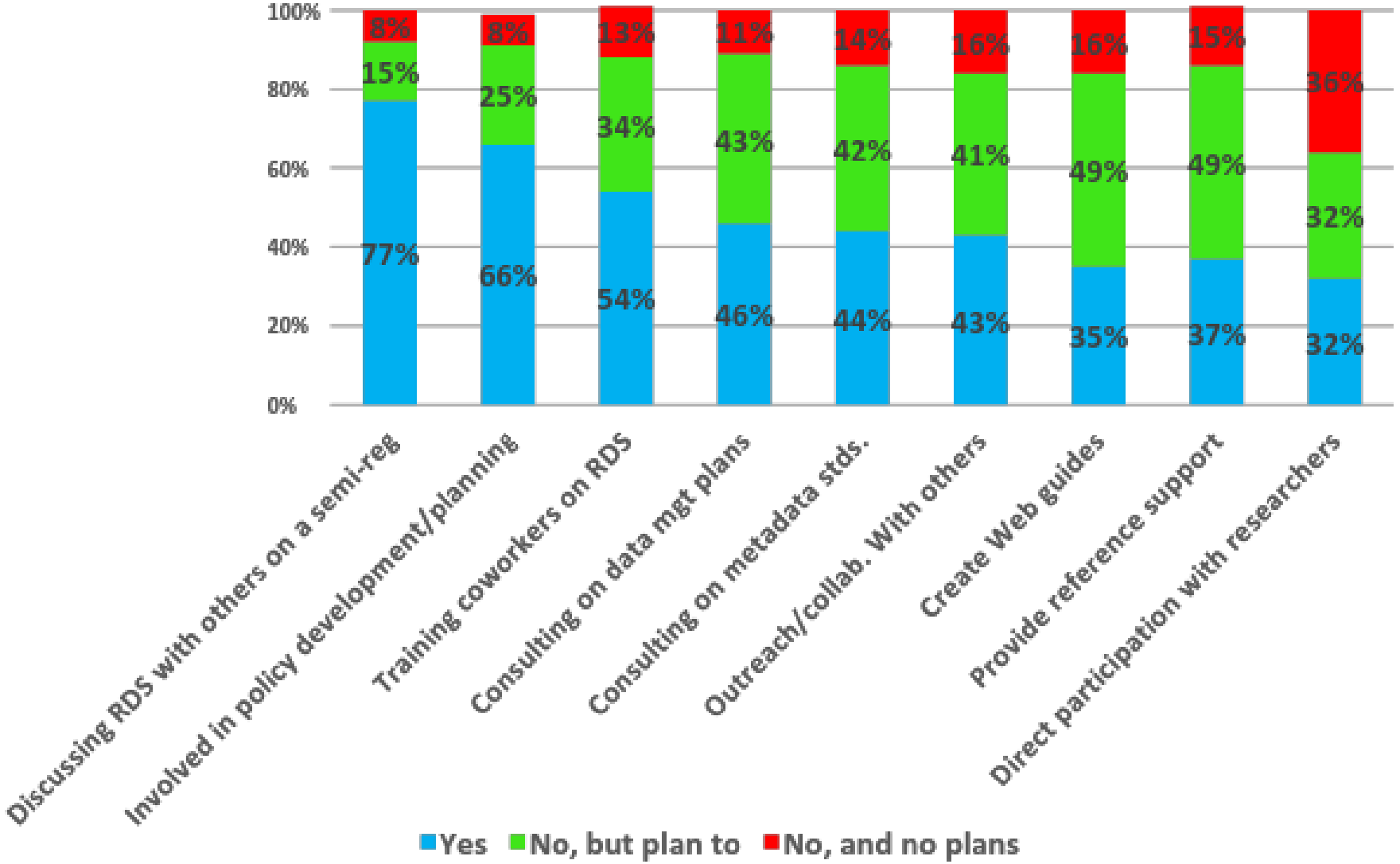


# RDS offered continued

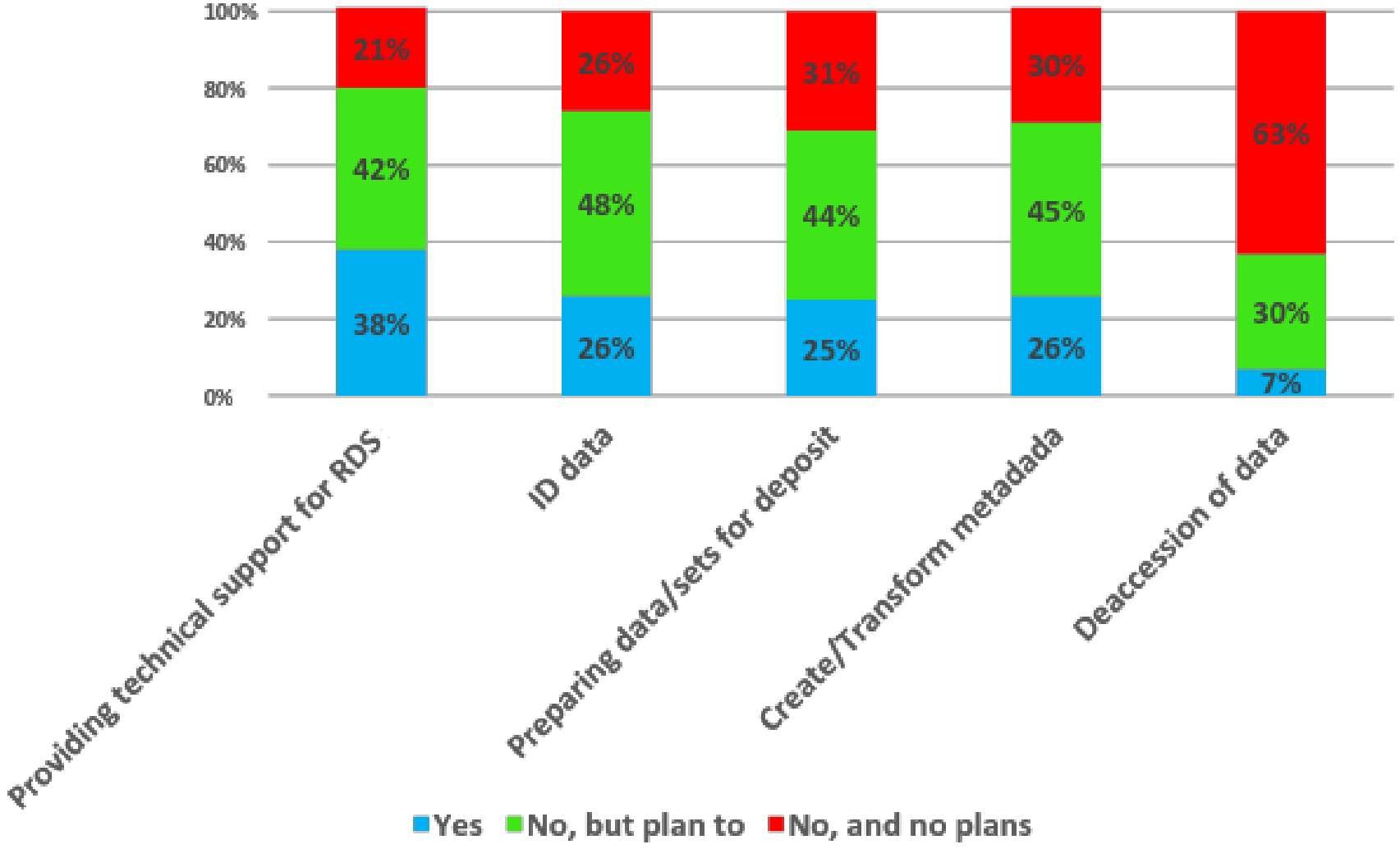


# 2) Consultative are more commonly offered than technical RDS

# Currently offered and future plans for consultative-type services



# Currently offered and future plans for technical-type services



# We also know…

- There is great variation between libraries
- Some universities and some countries within a region are ahead in RDS

# Thanks to the LIBER Study Team!

Research Data Services in European Academic Research Libraries. https://www.liberquarterly.eu/articles/10.18352/lq.10180/

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# Thanks!

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