

# Data Sharing: A Roadmap



Is your organization considering adopting a data sharing policy (DSP), but you're not sure where to begin? HRA members have built this guide to provide an overview of the process and highlight available resources.

*Note: The steps outlined below are not necessarily linear – you may find that a different sequence is more conducive to your organization's goals, requirements, or timeline.*

## Explore and research

**Determine whether it's the right time.** Do you have the resources and support to undertake a large organizational change?

- Do the grants your organization fund generate big data (e.g. genomic databases, clinical trial databases, imaging databases, computational models)?
- Do you have enough administrative and programmatic support to adjust your grant practices to incorporate a DSP?

**Consider taking incremental steps** before/while your organization develops its own policy:

- Ask awardees to submit a data sharing plan absent of incentive and without encouragement in a particular direction.
- Add encouragement by stating that the organization wants data sharing, and that applications including data sharing plans that promote broad, rapid sharing will be scored favorably.
- Ultimately, your organization may require, score, and benchmark applications based on strong data sharing plans.

Notes & comments:

## Resources:

<b>Introduction to Data Sharing</b> ..... <ul style="list-style-type: none"><li>• HRA <a href="#">webinar</a> (July 2017)</li><li>• <a href="#">Summary</a> with links to additional resources</li></ul>	<b>(Re)Introduction to Data Sharing</b> ..... <p>HRA webinar (March 2019)</p>	<b>Efforts to Implement a Data Sharing Policy: Lessons Learned (So Far)</b> ..... <p><a href="#">Presentation</a> by Jason Gerson, PCORI</p>	<b>Implementation of a Data Sharing Policy</b> ..... <p><a href="#">Presentation</a> by Belinda Orland, AHA</p>
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## Pursue “buy-in”

**Discuss data sharing with leaders and stakeholders in your organization.** Have high-level conversations to ensure they are committed to the idea of data sharing and willing to invest the time and resources into implementing a policy. It is possible that your organization may need a third party expert to help steward this conversation.

Notes & comments:

## Resources:

Transparency and Openness  
[\(TOP\) Guidelines](#)



Self-assessment & recommendations



## Create a draft DSP

Based on your organization's mission and goals, define parameters such as:

- The [type\(s\) of data](#) your grantees will be expected to share
- The time frame expected for release of data
- Criteria for acceptable data sharing [repositories](#), if not mandating a repository (e.g. permanent, well-curated), as well as the duration over which shared data will be maintained, if applicable
- Budget support, if any, grantees will receive for data sharing services (e.g. bioinformatics, harmonization, storage)
- Whether you will encourage or require grantees to get a [Creative Commons Attribution license](#) to allow others to use their data
- Will you require data sharing plans for of all grantees/grants or only some (new/junior vs. senior/tenured; small lab vs. big team science)? If not required, will it affect the way proposals are scored? Will you consider and allow exceptions on a case by case basis?

Notes & comments: \_\_\_\_\_

## Resources:

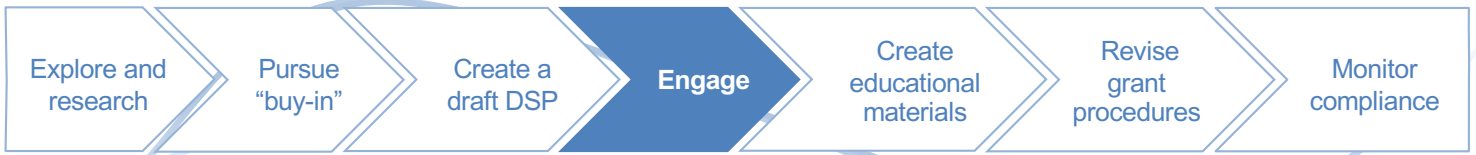
Incentivizing the sharing of research:  
[Funder Blueprint](#)



*Guides through selection/revision of specific language for a DSP*

Funder Data-sharing Policies: [Overview & Recommendations](#)





## Engage

**Discuss your DSP draft with key stakeholders in your organization** (e.g. scientific advisors, researchers, grantees). In some cases, this step may come *after* the creation of educational content (educational materials, templates) so that those can be shared as well.

Notes & comments:

## Resources:

[The State of Open Data](#)  
Figshare annual report (2017)  
.....  
Curated articles & analyses



# Create educational materials

When you publish the DSP on your foundation’s website, also ensure you have media to educate relevant audiences. Consider:

- **Applicants:** Provide *specific* resources for applicants; for example, links to useful websites (e.g. [BioArchiv](#), Creative Commons Attribution license). Consider providing an FAQ page with tips for navigating the data sharing portion of the grant application.
- **Reviewers:** Explain how reviewers should interpret the data sharing expectations as they review new grant applications. Determine if specific reviewer expertise might be required, and perhaps add those reviewers.
- **Institutions:** Attach or link the DSP to each applicable request for proposal (RFP), so administrators are aware of the new data sharing requirements.
- Consider creating a [glossary](#) of data sharing and technical terms.

Notes & comments:

## Resources:



by Center for Open Science  
.....  
Project management repository



by University of California  
.....  
Helps grantees build data management plans

National Network of Libraries of Medicine  
[Data Thesaurus](#)  
.....  
Definitions and links to additional resources

“Best Practices for Biomedical Research Data Management”  
.....  
Harvard Biomedical Library [online course](#)



## Revise grant procedures

**Modify grant application templates** to add specific data management questions, such as:

- What data will be produced during the course of research, and where will it be shared? Who will be in charge of preparing the data to share?
- What data [standards](#) will be used, and why? Which [metadata](#) will be released?
- What are the expected costs of preparing and sharing data?

**Modify reviewer templates** to include questions about how well data management (collection, annotation, sharing of data outputs) was incorporated into the study.

- Is your review committee equipped to assess and score data sharing plans?
- Are clearly stated plans for each step included? Did they address specific/required questions?

**Modify the grant contract.** Include the DSP as an appendix to the contract to facilitate institutional awareness and compliance.

Notes & comments:



## Monitor compliance

**Develop processes to determine if compliance has been achieved.** Even if you do not have a strict requirement, it may be useful to gather information on how many of your grantees do share data in some capacity. For example, you could fact check whether [Digital Object Identifiers](#) (DOIs) exist, and that data is 'discoverable' in the platform of choice.

If your organization uses **progress report questionnaires**, consider adding questions about data sharing progress:

- What data has been produced, and has it been shared/is there a planned release date?
- Are appropriate measures in place to protect confidentiality of subjects, if applicable?
- What platform and/or data standards are being used?

Notes & comments: