Funders’ Influence & Impact

Funders can illustrate their influence and impact through public listings of research investments and research advances enabled by that support.

Challenges:

• Most research areas are supported by multiple funders
• Long term research products result from multiple investments over many years.

Two approaches

1. Collaborative projects to increase availability of funded research project information and the contributions of those investments towards research products.
   • NIH RePORTER, Federal RePORTER, and World RePORT each illustrate research support from multiple funders.

2. Collaborative projects that rely on the use of persistent identifiers to reduce burden on researchers in applying for research support and subsequent reporting.
   • ORCID identifiers and Digital Object Identifiers could provide a universal way to track funding support towards individuals and research products.
Public Listings of Research Investments and Advances

NIH RePORTER, Federal RePORTER, and World RePORT websites each illustrate research support from multiple funders:

• NIH RePORTER – NIH, other components of HHS, and VA

• Federal RePORTER combines funded project information from the NIH and other federal science agencies

• World RePORT – worldwide funders of biomedical research, including both direct awards and indirectly funded foreign collaborations
NIH RePORTER – Expenditures and Results
Research Investments, Research Advances and Other Outcomes Supported by the Projects

- PROJECTS: NIH intramural and extramural since FY 1985
- PUBLICATIONS supported by the projects on the first list
- PATENTS linked to the projects, as reported by the investigator
- Registered CLINICAL STUDIES linked to the projects through ClinicalTrials.gov
- VISUALIZE the characteristics of your search results, including clusters of topics
- View results on a MAP to see what states receive the most funding and where the projects have been awarded
- NEWS articles and NIH reports that specifically mentioned projects
Federal RePORTER

- Trans-federal searchable database of science awards information that enables studies of the portfolio of federal science investments
  - Project under STAR METRICS, trans-federal agency program with support from NIH, NSF, USDA, EPA, and OSTP
  - Data from 18 agencies, ~1 million projects
  - Publications available for 6 agencies
  - API and downloadable data facilitate reuse and analysis
World RePORT

- Open-access, interactive mapping database highlighting biomedical research investments and partnerships from some of the world’s largest funders
  - Data from 12 agencies, ~295,000 records
  - Provides a global view of directly funded research grants, and indirectly funded foreign research collaborations worldwide
Benefits of ‘bigger silos’

- Improve stewardship of public funds
- Support interactions among funders
- Identify experts in fields not typically supported in own area
- Identify institutions with existing research capacity
- Assist research planning, assessment, as well as portfolio and policy analysis
Data Challenges and Opportunities

Data Integration Challenges

- Manual effort in gathering and standardizing data
  - Each funder must retrieve data from their own system and restructure into standardized format
  - Lack of unique identifiers across funders hinders data disambiguation and integration

Opportunities

- Use persistent identifiers to disambiguate records across funders
- Simplify data additions and keep site up-to-date
  - Use automated feeds, where available
Goal: Improve the research impact infrastructure with persistent identifiers

Link
- Products (RRID, DOI)
- Funding (DOIs?)
- People (ORCID)
- Institutions (GRID, DUNS)

Enable
- Burden reduction
- Impact analysis
- Metrics
- Innovation and economic growth
Persistent identifiers

**ORCID**
- A persistent unique identifier for researchers
- Helps track and validate people/product associations
- Over 6.6M users, supported by thousands of journals and hundreds of institutions
- 11 funders committed to embedding ORCID in their funding process, including HHMI, Wellcome Trust and UK Research Councils.

**Digital Object Identifiers (DOIs)**
- Developed as a universal, persistent, overlay identifier
- Used as a universal article identifier supported by multiple publisher data systems
- Infrastructure for metadata, validation, citation tracking
- 63M articles, 11M books and book chapters, agency level funding identifiers, data sets, reviews, etc.
NIH integration with ORCID

- > 30,000 eRACommons profiles linked to ORCID
- > 17,000 as PI/PD on grant application
- > 10,000 PI/PD on awarded grant
- Applicants can import ORCID works into their NIH Biosketch
DOIs for funding (grants, contracts, etc)?

Utilize the publications tracking infrastructure to track grants

• Better tracking of people across their careers and funding agencies
• More accurate identification of research products
• More robust data to identify potential reviewers and assess conflicts of interest
• Validation for grant/product associations
• Instead of ‘acknowledging’ funding, cite funding source?

As an overlay, a universal funding number system for all funders

• Provide a ‘common denominator’ funding identifier format to all types of identifiers from grants, contracts, and other systems
• An inexpensive way for funders to develop unique identifiers for their funding. Requires permanent location for funding information

https://www.crossref.org/community/funders/
Moving ahead

• Share: Provide open access to investments, outputs, and outcomes to allow data re-use

• Bigger Silos: Participate in collaborative data integration projects like Federal RePORTERWorld RePORTOr those relevant to your field

• Create connections: Commit to integrating persistent identifiers
  • ORCID- Learn more at https://orcid.org/organizations/funders/orbit
  • CrossRefDOI for grants - learn more at https://www.crossref.org/blog/wellcome - explains-the-benefits-of-developing-an-open-and-global-grant-identifier/
Thank You

Need Help? RePORT@mail.nih.gov

RePORTER: https://projectreporter.nih.gov

Federal RePORTER: https://federalreporter.nih.gov

World RePORT: https://worldreport.nih.gov