

Evaluation of R&D Grant results: thoughts about the challenges

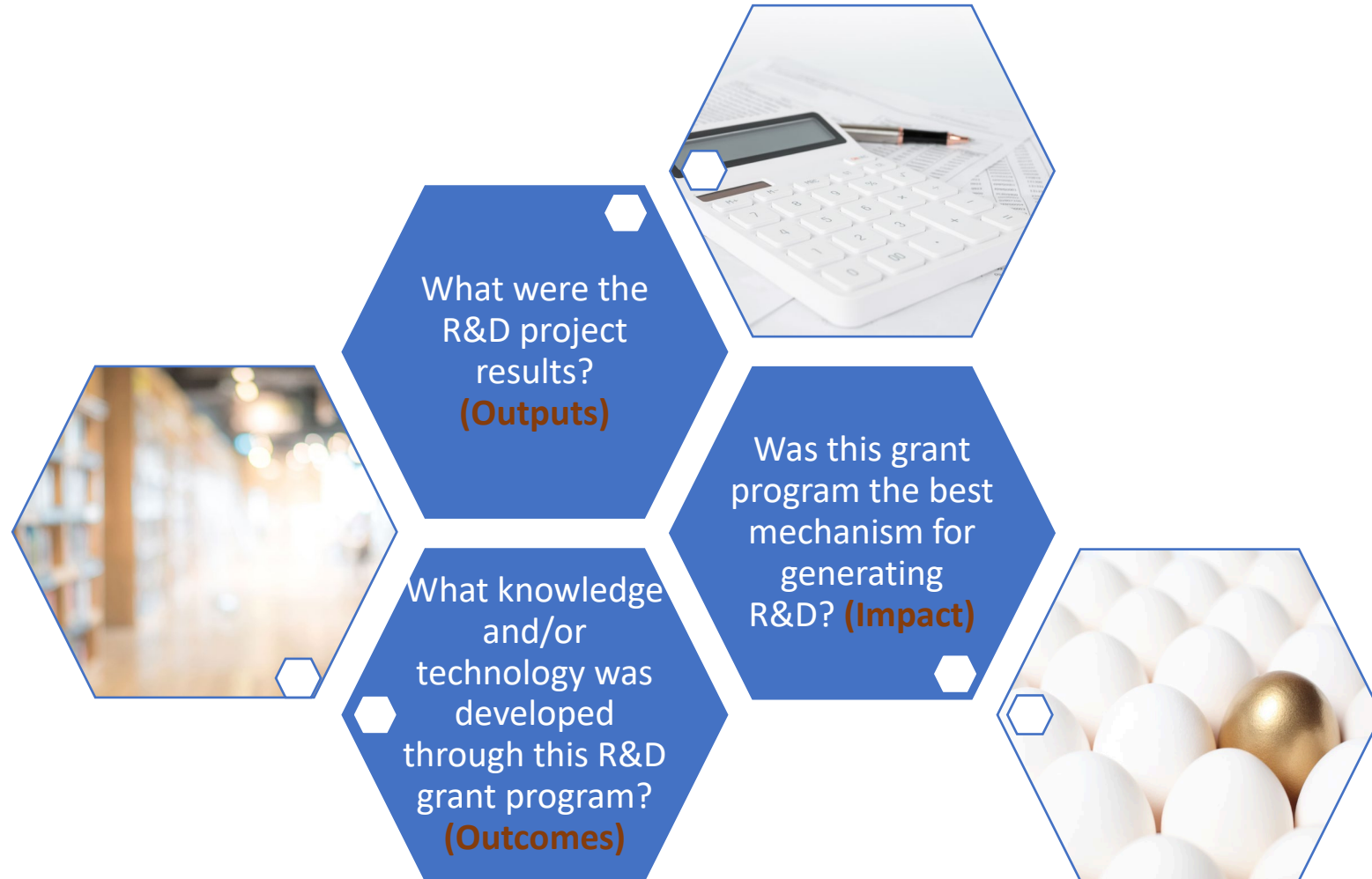
Workshop on Tracking and Evaluation of RD&D Programs at DOE
Hosted by RFF

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What is our evaluation question?

And what data do we need to answer the question?



EPA Grant Context*

* Includes R&D

2020

\$4 Billion in annual grant appropriations

Over 100 grant programs

1 400 grant program staff



2023

\$5 Billion in annual grant appropriations
\$80 billion in supplemental grant appropriations

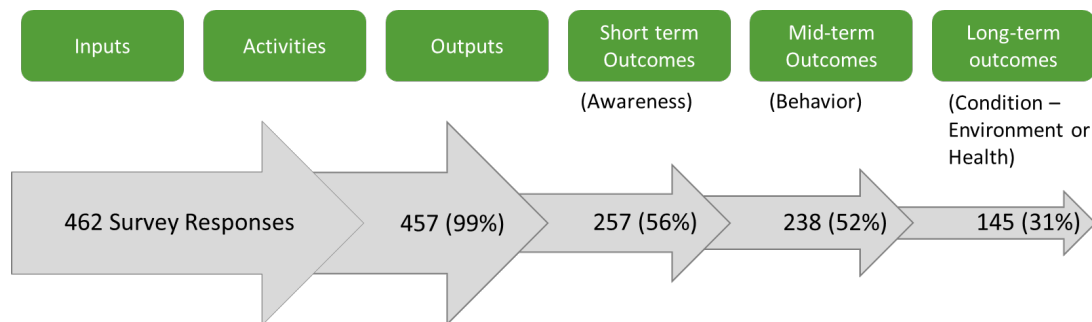
Over 100 grant programs
+ new grant programs

1 400 grant program staff
+ new grant program staff

Data and reporting

How do we measure results?

Grants



- Difficult to standardize and consolidate across programs
- Challenging to track collective progress
- Data is collected via word documents, pdfs, forms, email



- Missing data, hard to find data
- Variable definitions, variable frequency
- CBI, PII

[EPA Learning Agenda: Grants Commitments Met](#) (September 2022, March 2023)

R&D

Research Projects	
Total Number of Abstracts:	7740
Total Number of Abstracts, excluding Center sub-projects:	6412
Total Number of Progress Reports:	6087
Total Number of Final Reports:	4079
Total Number of Open Projects:	224
Publications:	
Total Number of Publications:	54410
Total Number of Publications with Full-Text Pubs:	12306
Total Number of Journal Articles:	17549
Total Number of Publications with Publication Abstracts:	15781
Total Number of Journals Containing Articles:	2905
Institutions:	
Total Number of Institutions:	1637
Total Number of Researchers:	16450
Principle Investigator	5707
Co-Investigators (may also be included in above number)	12003

[Summary of the research information housed in EPA's Grantee Research Project Results DB.](#)

Evaluation

How do we assess R&D grant program outcomes or impact?



<https://www.dol.gov/agencies/eta/skills-training-grants/community-colleges/evaluation>

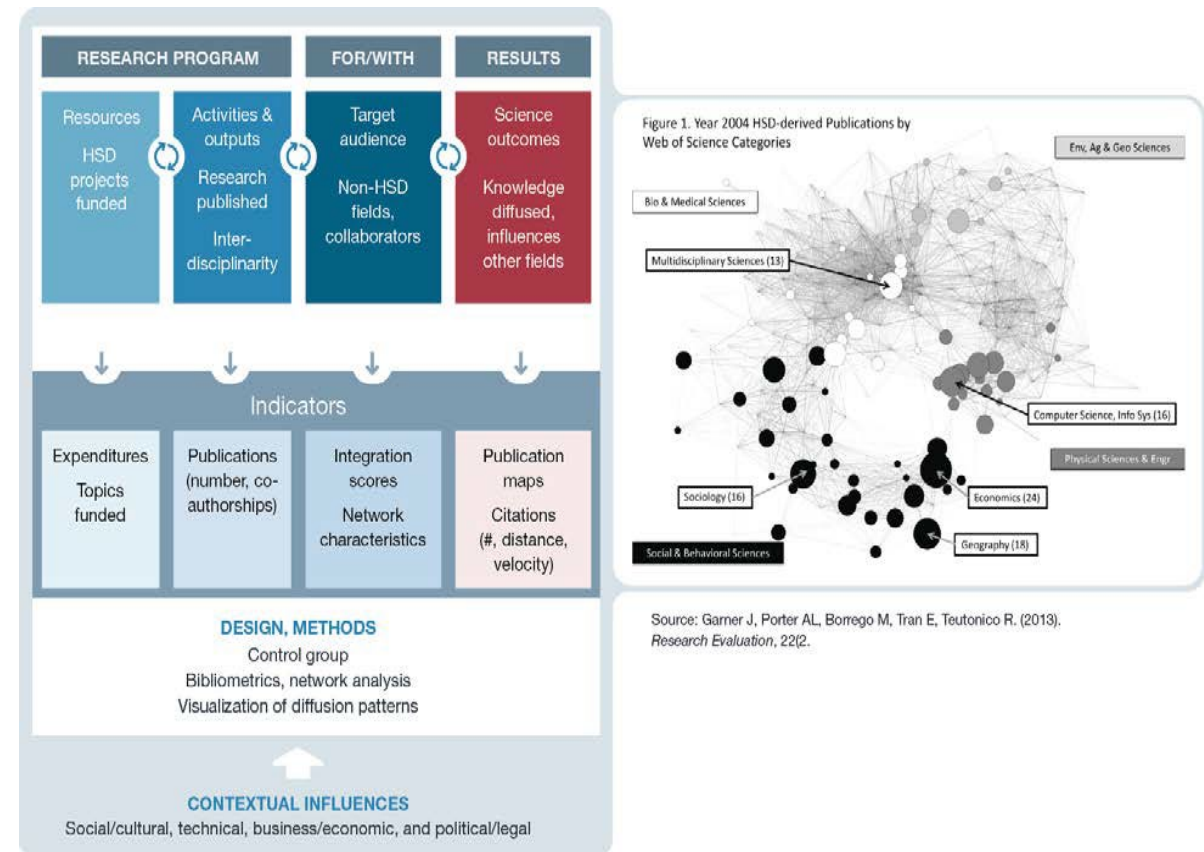


Figure A-1. A Logical Framework for a Basic Science Program Reference

Garner J, Porter AL, Borrego M, Tran E, Teutonico R. (2013). Facilitating social and natural science cross-disciplinarity: Assessing the human and social dynamics program. *Research Evaluation*, 22(2):134-144



OUR PATH FORWARD?

- Better data
- New evaluation planning approaches
- Evolve our R&D evaluation culture and expectations
- New partnerships

References

- [EPA Learning Agenda: Grants Commitments Met \(Year 1\) \(pdf\)](#) (EPA, September 2022)
- [EPA Learning Agenda: Grants Commitments Met \(Year 2\) \(pdf\)](#) (EPA, March 2023)
- [EPA Order 5700.7A1: EPA's Policy for Environmental Results under EPA Assistance Agreements](#) (EPA, January 2005, updated October 2021)
- [Grantee Research Project Results](#) (EPA/ORD, online)
- [National Evaluation of Trade Adjustment Assistance Community College and Career Training](#) (DOL/ETA, online)
- [Evaluating Outcomes of Publicly-Funded Research, Technology and Development Programs: Recommendations for Improving Current Practice](#) (Research, Technology & Development Topical Interest Group of the American Evaluation Association, February 2015)
- [Economic Report of the President, Chapter 7: Evaluation As A Tool For Improving Federal Programs](#) (March 2014)
- [Evaluating Research Efficiency in the U.S. Environmental Protection Agency](#) (National Research Council, 2008)
- [Overview of Evaluation Methods for R&D Programs](#) (EERE/DOE, March 2007)