

Research Strategies Subcommittee: Status Update

Esther Takeuchi (Chair)
Marc Kastner (Vice Chair)

December 12, 2023



U.S. DEPARTMENT OF
ENERGY

Office of
Science

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BESAC Charge to the Subcommittee

To establish a subcommittee of BESAC to follow up on its 2021 benchmarking report and advise SC and BES on strategies for prioritizing BES research investments. The goal is to have the report approved by BESAC at the Spring or Summer 2024 meeting.

Subcommittee Members

Berry, Joseph	NREL
Chen, Lin	ANL/Northwestern
Cooper, Valentino	Oak Ridge National Laboratory
Daniels-Race, Theda	LSU
DeBeer, Serena	Max Planck Institute
Epps, Thomas	Delaware
Garcia, Jamie	IBM
Guzman, Javier	ExxonMobil
Helms, Brett	LBNL
Huq, Ashfia	SNL
Isaacs, Eric	Carnegie Institute
Kastner, Marc (Vice Chair)	MIT Retired
Mallapragada, Surya	Ames Laboratory, Iowa State
Meng, Shirley	ANL/U Of Chicago
Musumeci, Pietro	University of California, Los Angeles
Segalman, Rachel	UC-Santa Barbara
Takeuchi, Esther (Chair)	BNL/Stony Brook University
Tirrell, Matt	ANL/U Chicago

Progress to Date

- Subcommittee meeting monthly.
- Compilation, analysis and discussion of prior reports from other organizations relevant to assessment of research portfolios.
- Discussion of current approaches in use at DOE.
 - Information provided by BES staff on methods currently employed.
- Created four sub-groups to address specific items as next steps.

Major Documents Assessed by the Subcommittee

- **NIH Portfolio Assessment - Machine Learning Portfolio (2021-2025)**
 - Document: NIH office of portfolio analysis 2021-2025
 - Use AI/Machine learning techniques to quantify a retrospective method for future work
- **NASA: Foundations of a Healthy and Vital Research Community for NASA Science (2022)**
 - Analysis of needs and current portfolio for items relevant to NASA.
- **UK: The Metric Tide (2014)**
 - Document: RE-151221-TheMetricTideFullReportExecSummary(1)
 - Creation of the REF (research excellence framework) model
- **Future Research Assessment Programme (FRAP) (2020): discusses The Metric Tide**
 - Document: Harnessing the Metric Tide - December 2022 – final
 - Panel in the UK that discusses the impact of the REF model and provides recommendations

Major Documents Assessed by the Subcommittee

- **San Francisco Declaration on Research Assessment DORA (2012)**
 - Document for strategies for the future: DORA-Strategic-Plan-2023-2026-FINAL
 - One of the original groups to create a declaration to improve guidelines for research metrics
- **Leiden Manifesto (2015)**
 - Document: Leiden Manifesto
 - Use 10 principles to guide research assessment based on more qualitative judgment
- **Research on Research Institute (RoRI, 2021) Working Paper**
 - Document: RoRI_Responsible_Research_Assessment_2020
 - Create a summary on why DORA was created and provide case studies on how DORA + other leaders in the research metric community have impacted the way research is measured
- **Netherlands: Strategy Evaluation Protocol (SEP, 2021-2027)**
 - Document: Netherlands Standard Evaluation Protocol_2021-2027
 - Purpose: Highlight a different perspective on how to create a committee and assess research throughout a 6 year period. Specifically, self-evaluation from a research unit is discussed.

Subgroups

- **Sub Group 1** **Document the DOE BES objectives.**
Matt Tirrell (TL), Lin Chen, Tino Cooper, Javier Guzman

- **Sub Group 2** **Document the DOE BES current practices used for portfolio analysis.**
Eric Isaacs (TL), Joe Berry, Theda Daniels-Race, Rachel Segalman

- **Sub Group 3** **Summarize relevant aspects of prior reports compiled by the subcommittee.**
Pietro Musumeci (TL), Thomas Epps, Jamie Garcia, Surya Mallapragada

- **Sub Group 4** **Conduct test case of portfolio analysis for an area considered in the International Benchmarking Report.**
Shirley Meng (TL), Serena DeBeer, Brett Helms, Ashfia Huq

Status and Next Steps

- Subgroup 1 provided their update
- Subgroups 2, 3 and 4 will provide updates on their progress in the next 1-2 months.