Making Connections Across The Federal Data Ecosystem

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Today's Discussion

- NCSES and our need for data to inform investment decisions

- The Search and Discovery Platform as an asset for
  - NCSES
  - The Federal Data Ecosystem

- Future considerations

National Center for Science and Engineering Statistics
Measuring America's progress in science, technology, and innovation

National Science Foundation's (NSF) Statistical Agency

Located within the Directorate for Social, Behavioral, and Economic Sciences (SBE)

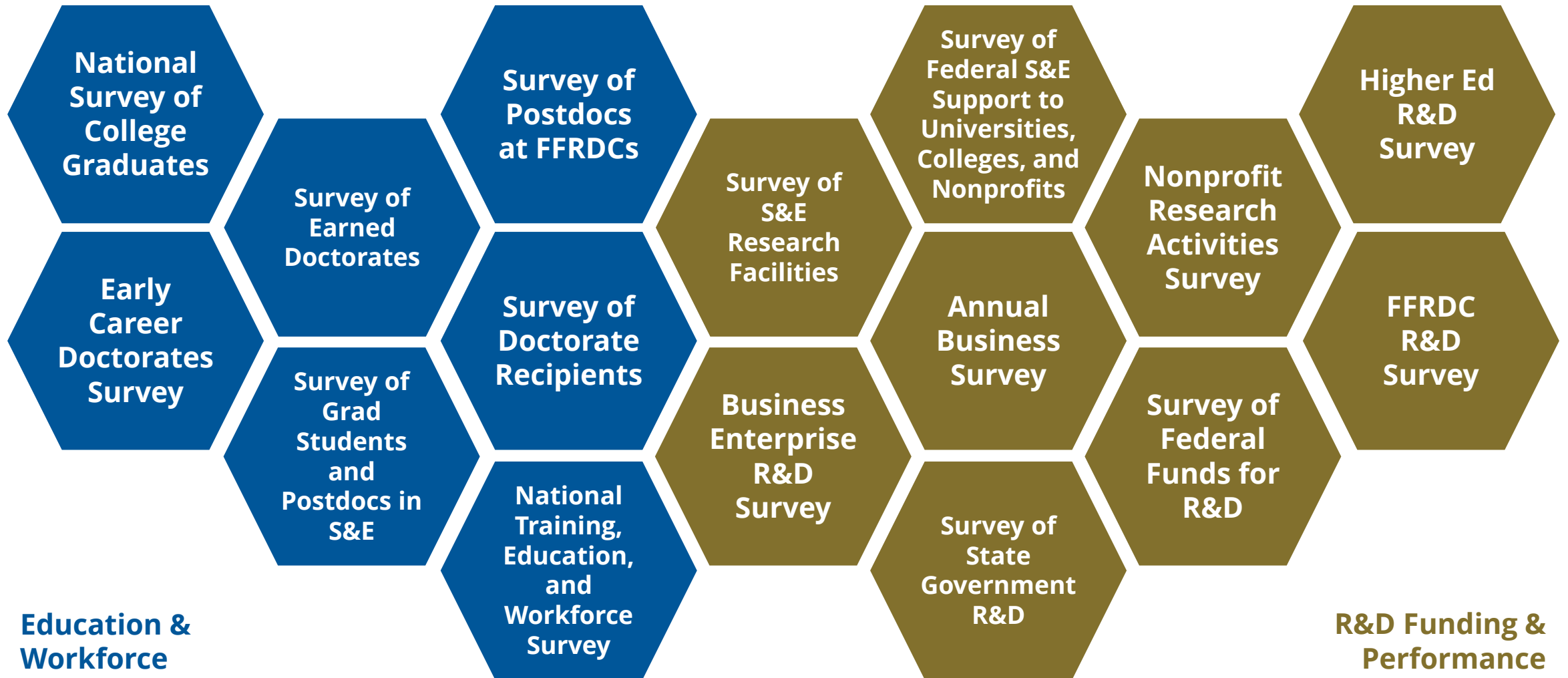### One of 13 principal federal statistical agencies

Overseen by the U.S. Chief Statistician within the White House Office of Management and Budget (OMB)

MISSION

Produce policy relevant, policy neutral **statistical information** on the **U.S. science and engineering enterprise**:

- Research and development
- Science and engineering workforce
- U.S. competitiveness in STEM
- STEM education in the United States

NCSES conducts more than a dozen surveys

National Survey of College Graduates

Early Career Doctorates Survey

Survey of Earned Doctorates

Survey of Grad Students and Postdocs in S&E

Survey of Postdocs at FFRDCs

Survey of Doctorate Recipients

National Training, Education, and Workforce Survey

Survey of S&E Research Facilities

Survey of Federal S&E Support to Universities, Colleges, and Nonprofits

Business Enterprise R&D Survey

Annual Business Survey

Survey of State Government R&D

Nonprofit Research Activities Survey

Survey of Federal Funds for R&D

Higher Ed R&D Survey

FFRDC R&D Survey

Education & Workforce

R&D Funding & Performance

NCSES's Search and Discovery Platform

NCSES's Search and Discovery Platform
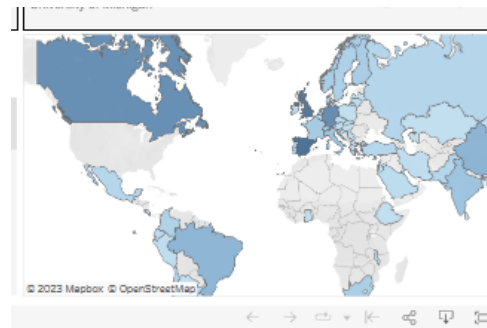
Key questions to inform NCSES investment decisions

- Who uses NCSES data, data tools and products?

- How are they linking NCSES data?

- What evidence are they building using NCSES data?

- What impact does NCSES data have?

Advancing our different objectives with a shared vision

- Pilot agencies have different priorities but a shared vision of utility of usage data

- Pilot agencies engaged in road shows to gather stakeholder input.

- America's Data Hub project to explore data usage platform as a federal data asset.

Why a Search and Discovery Platform is a federal data ecosystem asset

- The current legislative and policy landscape is in need for these data

  - OMB Policy Directives for transparency in official statistics
  - Evidence Act: Open Data, Data Access, and Standard Application Process
  - CHIPS and Science Act: National Secure Data Service
  - OMB Memo on open access for federally funded research
  - Trust Regulation (forthcoming)

- Potential shared service to serve the federal data ecosystem

As a shared service within the federal data ecosystem

- Enables a variety of data user communities to connect and partner on research, analysis, and application of the data

- Builds a data profile of the agency and system for decision-making

- Supports transparency objectives for improved data access and use

- Builds trust in official statistics through enhanced visibility of data application

Key questions that support a shared service model

- Who are the audiences that use federal data, how are they linking these data, and what evidence are they building?

- How can agencies apply usage data metrics to inform priorities, investments, and resource allocation?

- How do communities apply usage data to make informed decisions about research, partnerships, and planning?

- How can the usage data, their underlying assumptions, and their presentation be improved for greatest utility and maximum impact across a diverse audience?

Future considerations

- Generate topic-based analysis to inform future investments at the program and agency-level (i.e., not just look at survey usage)

- Build cross-disciplinary collaborations and facilitate routine engagement with research, program, and policy communities

- Create a cross-agency or system platform view to explore data sharing and linkage activities across the federal statistical system

- Use synergies within existing federal mandates to build upon and strengthen open access and transparency requirements

Key take away for the federal data ecosystem

DATA about your DATA can inform your agency priorities and meet broader system-wide goals and mandates

https://democratizingdata.ai/tools/dashboards/