

## Why GAO Did This Study

Governments at all levels, businesses, and the public rely on federal statistics to inform evidence-based decisions and enable the development of sound policies. Housed within the National Science Foundation, NCSES is the nation's source for science and engineering information and statistics. NCSES produces data and analysis on how the United States compares to other countries on key topics such as producing science and engineering graduates and spending on research and development in the context of rising global economic competition.

The Research and Development, Competition, and Innovation Act includes a provision for GAO to examine to what extent NSF has processes to ensure NCSES data and analyses meet current and future needs. This report (1) describes how NCSES ensures its data and analyses meet data quality standards including relevance, and (2) evaluates the extent to which NCSES has processes to identify emerging needs.

GAO reviewed NCSES planning documents, and interviewed NCSES officials and stakeholders of its statistical products. GAO compared NCSES processes to relevant standards and guidelines published by Office of Management and Budget and National Academies of Sciences, Engineering, and Medicine.

## What GAO Recommends

GAO is recommending that NCSES update its current communication plan to identify methods and tools for communicating with stakeholders on data collection and priorities. NCSES concurred with the recommendation.

View [GAO-23-106361](#). For more information, contact Candice N. Wright at (202) 512-6888 or [wrightc@gao.gov](mailto:wrightc@gao.gov).

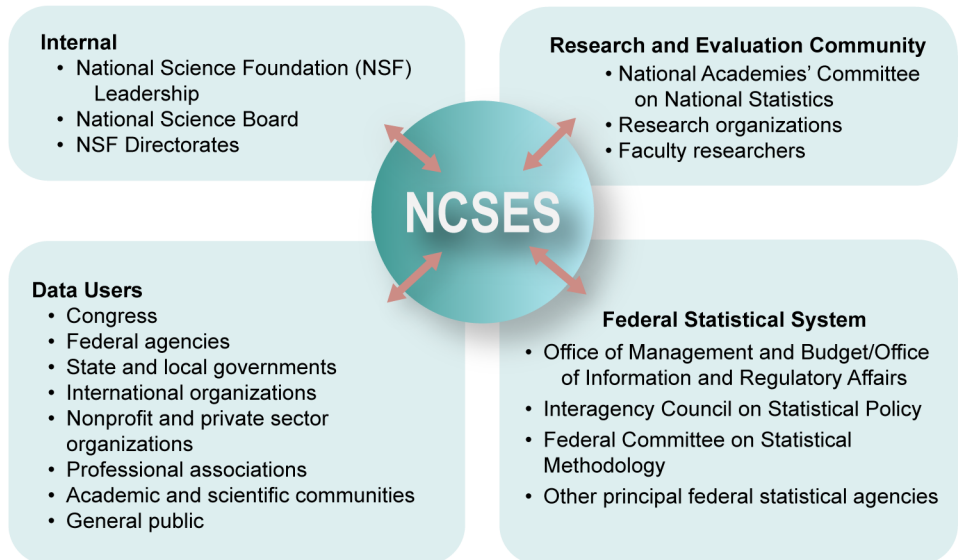
# SCIENCE AND ENGINEERING STATISTICS

## Improved Communication Needed with Stakeholders on Data Needs

### What GAO Found

To address its responsibilities as a federal statistical agency, the National Center for Science and Engineering Statistics (NCSES) evaluates its data quality and coordinates with agencies about current data needs. NCSES evaluates data accuracy, relevance, and timeliness, and it reports the results of these evaluations. To supplement its internal evaluation efforts, NCSES contracts with the research and evaluation community. These external evaluations can identify priority focus areas to ensure data remain relevant and can result in recommendations to improve processes. NCSES also coordinates with federal agencies, primarily through interagency groups, to communicate and plan new data collections and standardize data collection measures. Through its evaluation and coordination activities, NCSES interacts with a range of stakeholders to address science and engineering statistical needs (see figure).

### Examples of National Center for Science and Engineering Statistics (NCSES) Stakeholders



Source: GAO analysis. | GAO-23-106361

To identify emerging data needs, NCSES conducts research activities, but it has not communicated with stakeholders about agency priorities. In 2019, NCSES developed a strategic communication plan to guide engagement with stakeholders, but it has not updated this plan to account for new priorities. NCSES has also developed priority-setting documents, including a learning agenda, which identifies priority questions for evidence building. But NCSES has not engaged with external stakeholders about these priorities, potentially missing opportunities to better address needs, such as enabling academics to align their research to relevant policy questions. Communications strategies designed to ensure consistent, broad outreach could expand users' awareness of NCSES planned data collection, which could, in turn, more effectively enlist opportunities for stakeholders to provide input to ensure the relevance of these data.