

GAO Highlights

Highlights of [GAO-18-445](#), a report to the Subcommittee on Research and Technology, Committee on Science, Space, and Technology, House of Representatives

Why GAO Did This Study

The U.S. Department of Commerce's NIST provides measurement services and supports standards that promote U.S. competitiveness. For example, NIST provides calibrations for manufacturing equipment and reference materials used in testing. NIST also supports private sector organizations in developing standards to help ensure product performance, among other things, such as Wi-Fi. In recent years, NIST has sought to improve the delivery of its services and documentary standards activities.

GAO was asked to review NIST measurement services and standards-support activities. This report examines (1) the challenges NIST faces in providing measurement services and supporting documentary standards development, and (2) the extent to which NIST has taken steps to address these challenges and how those steps align with federal guidance and policy. GAO analyzed testimony, reports, laws, and policies; conducted focus groups with academics and industry representatives; and interviewed various stakeholders.

What GAO Recommends

GAO is making seven recommendations, including that NIST comprehensively review measurement services and documentary-standards activities, and work with other agencies to take steps to strengthen interagency coordination. The Department of Commerce agreed with six recommendations and disagreed with one, citing risks to the private-sector-led U.S. standards system. GAO clarified its recommendation and continues to believe this action is needed, as discussed in the report.

View [GAO-18-445](#). For more information, contact John Neumann at (202) 512-3841 or neumannj@gao.gov.

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NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

Additional Review and Coordination Could Help Meet Measurement Service Needs and Strengthen Standards Activities

What GAO Found

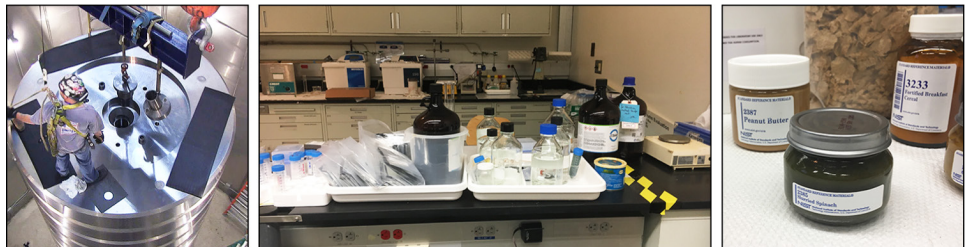
The National Institute of Standards and Technology (NIST) faces challenges in providing measurement services and supporting private sector development of specifications for products' designs or performance—referred to as “documentary standards.” Based on reviews of relevant testimony, reports, and other documents; interviews with stakeholders; and focus groups with academics and industry representatives, GAO identified challenges including:

- Identifying and prioritizing what measurement services, such as calibrating large force-measurement tools used by aerospace manufacturers, or what documentary standards activities, such as serving as a technical advisor on fire safety standards, are most needed by U.S. industry, and
- Coordinating with other federal agencies on standards development issues.

NIST has taken steps to address these challenges, including industry outreach and reviews of measurement services and standards activities. However, some efforts do not fully align with federal guidance or NIST policy. For example, NIST's measurement-services and standards-activity reviews have not included a comprehensive examination of how these services and standards activities align with stakeholder needs. Federal internal control standards call for managers to use quality information to determine if the agency is meeting its objectives. Comprehensively reviewing NIST's measurement services and documentary-standards activities would provide NIST with greater confidence that its services and activities align with stakeholders' needs.

GAO also found that NIST coordinates with other agencies on standards development and related activities, but that some efforts do not fully align with specific leading practices GAO has previously identified for enhancing and sustaining interagency collaboration. For example, NIST and other agencies coordinate on standards activities through a NIST-chaired interagency committee. However, GAO found that the committee has not updated its charter since 2000—contrary to leading practices to update and monitor collaborative agreements. GAO also found that NIST has not worked with other committee members to fully clarify agencies' roles and responsibilities. Without ensuring that member agencies' roles and responsibilities are current and fully clarified, NIST and other agencies may miss opportunities to strengthen coordination.

Examples of National Institute of Standards and Technology (NIST) Measurement Services



A worker stands atop NIST's million-pound deadweight machine (left); a laboratory bench at NIST (center); and containers of food-related standard reference materials produced by NIST.

Sources: NIST (left photo); GAO (center and right photos). | [GAO-18-445](#)