

GAO@100 Highlights

Highlights of [GAO-22-103979](#), a report to congressional committees

Why GAO Did This Study

In recent decades, the U.S. trade balance in advanced technology products declined, resulting in a \$130 billion deficit as of 2018. The Manufacturing USA institutes seek to stimulate leadership in advanced manufacturing innovation. Members include companies, nonprofits, academic institutions, and state and local governments. Members receive benefits such as access to shared facilities, equipment, and intellectual property. As of August 2021, Commerce, DOD, and DOE have provided \$1.7 billion to the institutes.

The Revitalize American Manufacturing and Innovation Act of 2014, as amended, includes a provision for GAO to assess the Manufacturing USA program. This third report examines institutes' progress toward technology goals, smaller manufacturers' engagement with the institutes, and implementation of prior recommendations, among other things.

GAO collected institute information via a questionnaire, surveyed a generalizable sample of institute members, and interviewed agency officials and institute representatives.

What GAO Recommends

In prior work, GAO recommended that Commerce develop network-wide performance goals with measurable targets and time frames and align performance measures with goals. Commerce partially concurred and worked with DOD and DOE to develop some measures, but has not fully implemented the recommendations. GAO maintains that the recommendations still warrant action.

View [GAO-22-103979](#). For more information, contact Candice Wright at (202) 512-6888 or wrightc@gao.gov.

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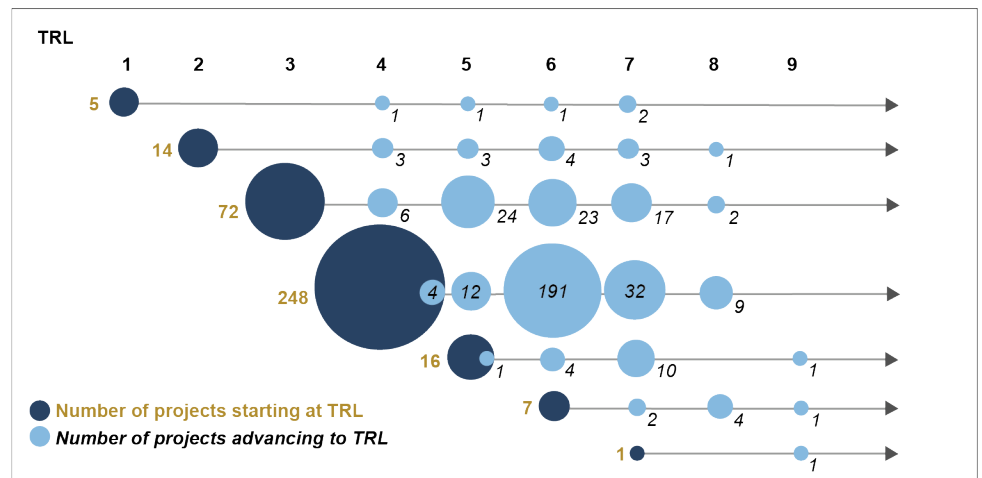
ADVANCED MANUFACTURING

Innovation Institutes Report Technology Progress and Members Report Satisfaction with Their Involvement

What GAO Found

The Departments of Commerce, Defense (DOD), and Energy (DOE) have established a network of innovation institutes—known as Manufacturing USA institutes—to promote research, development, and commercialization of advanced manufacturing technologies. Manufacturing USA institutes reported making progress toward achieving their technology goals. Progress on institute projects is often tracked using technology readiness levels (TRL), a standardized scale for assessing maturity and risk. GAO's analysis of institute information found that projects moved through a range of TRLs (see figure). Many moved from TRL 4 to 6, taking a manufacturing technology from a point where it could be demonstrated in a lab to a point where a prototype system could be created in a simulated production environment.

Advancement of Technology Readiness Level (TRL) for Completed Manufacturing USA Institute Projects, as of March 2021



Source: GAO analysis of data provided by Manufacturing USA institutes. | GAO-22-103979

Note: Circle size illustrates the number of projects (but is not in direct proportion).

Results from a survey administered by GAO to institute members found that smaller manufacturers (those with fewer than 500 employees) were generally engaged and satisfied with their institutes' activities, such as collaborating on projects and providing input on institute priorities. Larger businesses and academic institutions reported similar levels of satisfaction. Officials noted that some factors, such as cost of membership, may limit smaller manufacturer engagement, and identified initiatives to help offset the cost.

Commerce, DOD, and DOE have implemented GAO's prior recommendations on interagency collaboration and developing sustainability criteria. However, Commerce has not fully implemented two of GAO's prior recommendations related to network-wide performance goals for the Manufacturing USA program. By not implementing these recommendations, Commerce is missing an opportunity to better observe and report on progress made toward achieving the purposes of the Manufacturing USA program.