NIST Overstated MEP's Economic Impacts to Congress and Other Stakeholders

FINAL REPORT NO. OIG-24-037-I

SEPTEMBER 25, 2024

U.S. Department of Commerce
Office of Inspector General
Office of Audit and Evaluation

UNITED STATES DEPARTMENT OF COMMERCE
Office of Inspector General
Washington, D.C. 20230

September 25, 2024

MEMORANDUM FOR: Laurie E. Locascio
Under Secretary of Commerce for Standards and Technology and Director, National Institute of Standards and Technology

FROM: Richard Bachman
Assistant Inspector General for Audit and Evaluation

SUBJECT: *NIST Overstated MEP's Economic Impacts to Congress and Other Stakeholders*
Final Report No. OIG-24-037-I

Attached is our final report on the evaluation of the National Institute of Standards and Technology's (NIST's) Hollings Manufacturing Extension Partnership (MEP). Our evaluation objective was to determine whether NIST's MEP effectively monitored and evaluated economic impact reporting.

Overall, we found that NIST's inadequate oversight of the fiscal year (FY) 2022 MEP economic impact reporting process resulted in unreliable economic impacts. Specifically, we found:

I. MEP's FY 2022 economic impacts are unreliable.

II. NIST overstated MEP's return on investment from FYs 2020 to 2023.

III. Centers require clients to take MEP surveys, contrary to Office of Management and Budget directive.

We further found instances of unreliable economic impact data from FYs 2021 and 2023. Finally, we found Centers did not accurately report program income and have reported this concern as an other matter.

On June 21, 2024, we received NIST's formal response to our draft report. NIST concurred with six of our recommendations, did not concur with two, and provided additional comments. We addressed NIST's comments in the "Summary of Agency Response and OIG Comments" section of this report. NIST also stated it will develop and submit a correction action plan. NIST's response is included in the report as appendix C.

Pursuant to Department Administrative Order 213-5, please submit to us an action plan that addresses the recommendations in this report within 60 calendar days. This final report will be posted on the Office of Inspector General's website pursuant to the Inspector General Act of 1978, as amended (5 U.S.C. §§ 404 & 420).

Pursuant to Pub. L. No. 117-263, Section 5274, non-governmental organizations and business entities specifically identified in this report have the opportunity to submit a written response for the purpose of clarifying or providing additional context to any specific reference. Any response must be submitted to Patricia McBarnette, Audit Director, at PMcBarnette@oig.doc.gov and OAE_Projecttracking@oig.doc.gov within 30 days of the report's publication date.

The response will be posted on our public website at https://www.oig.doc.gov/Pages/Audits-Evaluations.aspx. If the response contains any classified or other non-public information, those portions should be identified as needing redaction in the response and a legal basis for the proposed redaction should be provided.

We appreciate the cooperation and courtesies extended to us by your staff during our evaluation. If you have any questions or concerns about this report, please contact me at (202) 793-3344 or Patricia McBarnette at (202) 793-3316.

Attachment

cc: G. Nagesh Rao, Acting Director and Deputy Director, NIST MEP
James Watson, President and Chief Executive Officer, California Manufacturing Technology Consulting
Gene Russell, President and Chief Executive Officer, MANEX
Kelley Sowards, President and Center Director, Impact Washington
Aaron Patrick, Director, Manufacturing Assistance Programs, Business Services Division, Ohio Department of Development
Ethan Karp, President and Chief Executive Officer, MAGNET
Andy Carr, President and Chief Executive Officer, South Carolina MEP
Mike Kelleher, Executive Director, Maryland MEP
Tiffany Stovall, Chief Executive Officer, Kansas Manufacturing Solutions
Jessica Herbert, Director, Manufacturing and Innovation Programs, Empire State Development
Kinda Younes, Executive Director, ITAC

Report in Brief

September 25, 2024

Background

The National Institute of Standards and Technology's (NIST's) Hollings Manufacturing Extension Partnership (MEP) is a national network of MEP Centers—one in every state and Puerto Rico—that provide any U.S. manufacturer assistance with improving production processes, upgrading technological capabilities, and facilitating product innovation.

NIST makes federal financial assistance awards in the form of cooperative agreements to state, university, and nonprofit organizations to operate Centers. However, renewal funding for each Center is contingent, in part, upon successful reviews and evaluations of its operations, including its performance. NIST principally monitors MEP's performance through economic impact surveys completed by a Center's clients. The intent of the survey is to capture quantified impacts on a client's employment, sales, investment, and cost savings that occurred over the last 12 months, as a result of the services received.

NIST uses economic impacts from survey responses not only to monitor Center performance but also to gauge MEP's overall success. NIST reports MEP's economic impacts publicly in various ways, including to Congress, which uses the information to make annual funding decisions regarding MEP appropriations.

Why We Did This Evaluation

The evaluation objective was to determine whether NIST's MEP effectively monitored and evaluated economic impact reporting.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

NIST Overstated MEP's Economic Impacts to Congress and Other Stakeholders

OIG-24-037-I

WHAT WE FOUND

NIST's inadequate oversight of the MEP economic impact reporting process resulted in inaccurate and unreliable economic impacts. Specifically, we found that:

I. MEP's FY 2022 economic impacts are unreliable, including 48 percent of the total sales reported by Centers we reviewed.

II. NIST overstated MEP's return on investment from FYs 2020 to 2023—notably by 34 percent in FY 2020.

III. Centers require clients to take MEP surveys, contrary to federal directive.

WHAT WE RECOMMEND

We recommend that the Under Secretary of Commerce for Standards and Technology and the Director of NIST do the following:

1. Revise MEP's economic impact reports for FYs 2022 and 2023 and other references to economic impacts on MEP's website attributable to the Centers we reviewed; in addition, disclose MEP's reported economic impacts may be based on inaccurate data and therefore their reliance and use should be limited.
2. Establish procedures for NIST personnel to ensure data reliability (reasonably free from error and bias), including but not limited to (1) formal policies requiring staff to diligently review significant impacts for accuracy and connection to services provided by Centers and (2) techniques to analyze survey data for anomalies before it is finalized.
3. Establish and implement procedures for Centers and subrecipients to (1) comply with NIST guidelines and (2) ensure data reliability (reasonably free from error and bias), including but not limited to techniques that hold Centers accountable, such as including consequences for noncompliance and certification of Center executives confirming integrity, independence, and due diligence that the reported economic impacts represent what they are intended to: actual economic benefits realized over the last 12 months that are attributable to the services provided.
4. Establish procedures that hold Centers accountable for monitoring subrecipient compliance with NIST survey guidelines and ensuring data reliability (reasonably free from error and bias), including consequences for noncompliance.
5. Revise MEP's economic impact reports for FYs 2020 through 2023 to (1) accurately reflect NIST's return on investment and (2) clearly articulate that total federal investment does not include other federal funding sources that may contribute to reported economic impacts.
6. Establish procedures for NIST personnel to ensure future economic impact reports accurately reflect NIST's return on investment.
7. Direct MEP to immediately remove from NIST reporting guidelines statements that currently direct Centers to write the expectation of completing the MEP survey into contracts.
8. Direct MEP to immediately direct Centers and their subrecipients to remove contract clauses requiring clients to take the MEP survey.

Contents

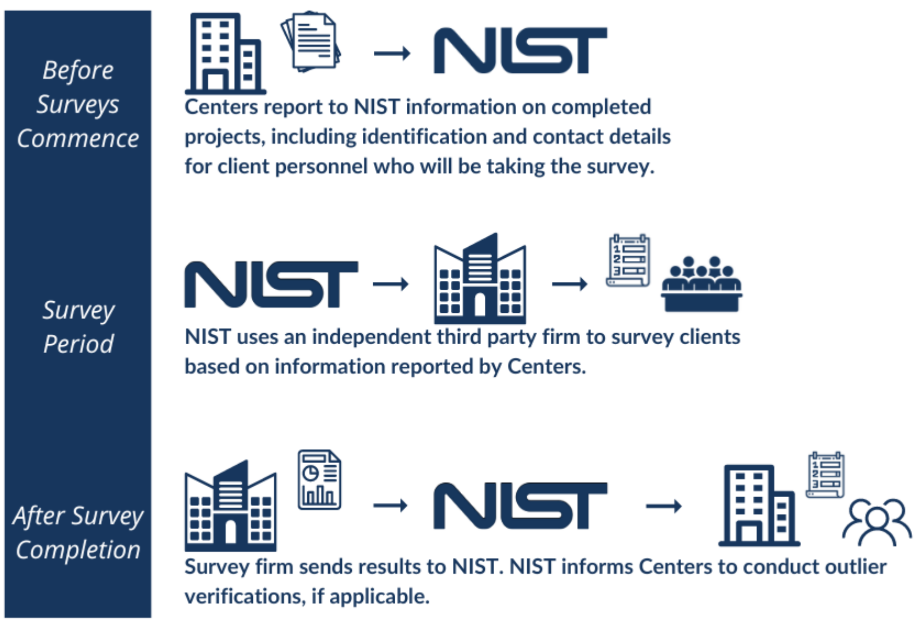
Cover: Herbert C. Hoover Building main entrance at 14th Street Northwest in Washington, DC. Completed in 1932, the building is named after the former Secretary of Commerce and 31st President of the United States.

Introduction

The U.S. Department of Commerce (the Department) National Institute of Standards and Technology's (NIST's) Hollings Manufacturing Extension Partnership (MEP) is a national network established by the Omnibus Trade and Competitiveness Act of 1988.[1] MEP's mission is to enhance the productivity and technological performance of U.S. manufacturing. According to NIST, there are currently 51 MEP Centers in all 50 states and Puerto Rico, with more than 1,440 advisors and experts at approximately 460 MEP service locations, providing any U.S. manufacturer with access to resources.[2] Centers assist manufacturers with improving production processes, upgrading technological capabilities, and facilitating product innovation.[3]

NIST makes federal financial assistance awards in the form of cooperative agreements to state, university, and nonprofit organizations to operate Centers. However, renewal funding for each Center is contingent, in part, upon successful reviews and evaluations of its operations, including its performance. NIST principally monitors MEP's performance through economic impact surveys completed by a Center's clients. The intent of the survey is to capture quantified impacts on a client's[4] employment, sales, investment, and cost savings that occurred over the last 12 months, as a result of the services received. Key steps in the MEP survey process are illustrated in figure 1 below and further described in the paragraph that follows.

Figure 1. Key Steps in MEP's Survey Process



Source: Office of Inspector General (OIG) review of MEP survey process

[1] Pub. L. No. 100-418, § 5121, 102 Stat. 1107, 1433 (1988).
[2] NIST, *Manufacturing Extension Partnership: About NIST MEP: Who We Are* [online]. www.nist.gov/mep/about-nist-mep (accessed April 26, 2024).
[3] NIST, *Manufacturing Extension Partnership: How the Network Helps* [online]. www.nist.gov/mep/mep-national-network/how-network-helps (accessed April 23, 2024).
[4] The intent of the survey is to capture only the economic impacts realized by the client—not a client's contractors, vendors, etc.

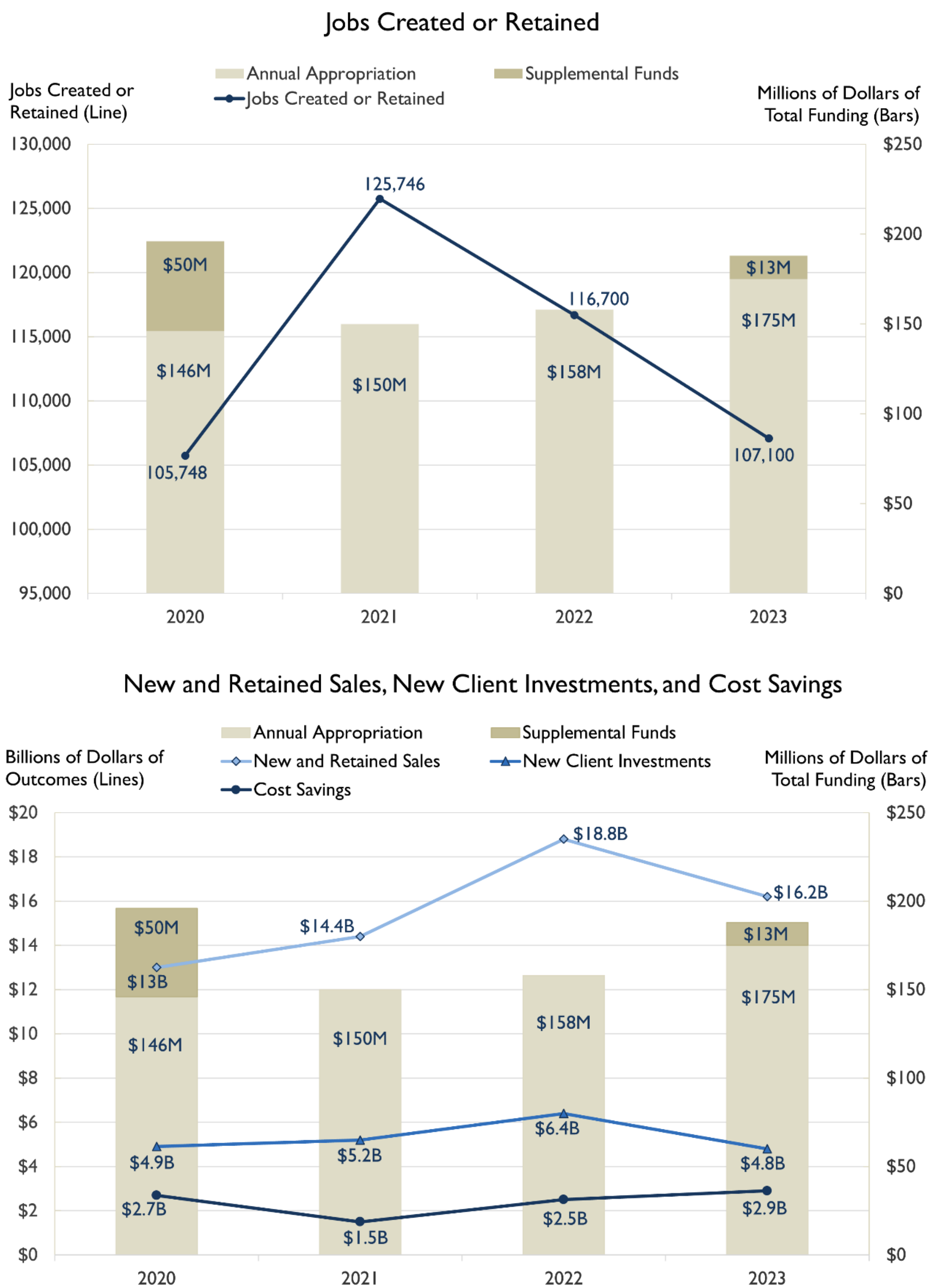
Before surveys commence, Centers report client contact and completed project (MEP-provided service) information to NIST. Within 6 to 12 months after reporting the MEP-provided services to NIST, clients are surveyed by an independent third-party firm on the economic impacts of those services. After survey completion, NIST receives survey results and informs Centers to conduct an "outlier verification" for economic impacts reported by a client exceeding 250 jobs created and retained or $5 million in combined sales, investments, and cost savings.

Outlier verifications require Centers to contact the client, confirm the accuracy of the reported economic impacts, and provide a justification to NIST explaining how the services provided by the Center led to the reported economic impacts. NIST conveys the importance of outlier verifications when it informs Centers of their respective outliers and explicitly states "this information is needed to provide an audit trail if/when these large survey results are questioned further (by the OIG, etc.)." Per NIST policy, the outlier verification process may only result in downward adjustments to reported economic impacts, and failure by a Center to conduct an outlier verification will result in zeroing out of the reported economic impacts. At the end of the survey year, NIST consolidates the economic impacts reported for all Centers and prepares its annual MEP economic impact report.

NIST uses economic impacts from survey responses not only to monitor Center performance but also to gauge MEP's overall success. NIST reports MEP's economic impacts publicly in various ways, including to Congress, which uses the information to make annual funding decisions regarding MEP appropriations. MEP's annual appropriations have steadily increased over recent years and have been supplemented as shown in figure 2 below. Notably, funding for MEP is authorized to surge over the next 3 years to $550 million in fiscal year (FY) 2027.[5] As illustrated in figure 2, despite a $30 million (nearly 19 percent) increase in funding between FYs 2022 and 2023, MEP reported an overall decrease in economic impacts.

[5] Research and Development, Competition, and Innovation Act, Pub. L. No. 117-167, § 10211, 136 Stat. 1366, 1472-74 (2022) (authorizing funds to be appropriated).

Figure 2. NIST Reported Economic Impacts for MEP, Compared with MEP's Federal Funding Levels, FYs 2020–2023



Source: OIG review of MEP economic impact data and NIST federal funding data for FYs 2020 to 2023

Objective, Findings, and Recommendations

The evaluation objective was to determine whether NIST's MEP effectively monitored and evaluated economic impact reporting. Appendix A provides a detailed description of our scope and methodology.

We found that NIST's inadequate oversight of the FY 2022 MEP economic impact reporting process resulted in unreliable economic impacts. For example, 48 percent of reported new and retained sales we sampled was unreliable. Specifically, we found:

- NIST and its Centers lacked adequate processes to ensure reported economic impacts were accurate and reliable; and
- Survey responses may be biased and, in some instances, not populated by clients.

We also found that NIST has overstated MEP's return on investment since FY 2020. Finally, we found that Centers contractually required manufacturers to take surveys, despite federal requirements that the surveys be voluntary—even denying services to one manufacturer as a result.

Consequently, MEP's reported economic impacts and return on investment for FYs 2020 through 2023 misinformed its stakeholders, including Congress and the American public, regarding the actual depth of MEP's impact on the economy. The Under Secretary of Commerce for Standards and Technology, who is also the Director of NIST, included the overstated economic impacts in congressional testimony, and NIST cited the economic impacts in budget submissions to Congress. As noted previously, annual funding for MEP is authorized to see a threefold increase by FY 2027. More reliable economic impact data would give Congress a more comprehensive and complete picture of MEP activities, enabling a more meaningful and ongoing analysis of its impact and ensuring taxpayer funds are well spent.

I. MEP's FY 2022 Economic Impacts Are Unreliable

NIST conducts an annual survey of Center clients to obtain actual, quantified economic impacts over the last 12 months from services provided by Centers. The survey results are used to calculate the number of jobs, sales, investments, and cost savings attributable to MEP services. NIST uses this information to demonstrate MEP's value and impact on the U.S. economy, support budget requests, and evaluate performance. However, we found NIST and its Centers lacked adequate processes to ensure reported impacts were accurate and reliable and that survey responses were free from error and bias.

NIST uses survey results to demonstrate MEP's value and impact, support budget requests, and evaluate Center performance.

Although services delivered by Centers can provide value to clients, our testing of economic impacts from seven Centers found the impacts reported for FY 2022 were largely overstated. As shown in table 1 below and further detailed in appendix B, we found that 48 percent of the total sales reported by the Centers we reviewed was unreliable and resulted in an overstatement of up to $3.5 billion for FY 2022. Similarly, we concluded that 25 percent of the reported jobs created or retained for these Centers for FY 2022 was unreliable and overstated by up to 8,814 jobs.

We further found instances of unreliable economic impact data from FYs 2021 and 2023. These results raise concerns about whether the MEP program provided the significant economic impacts claimed by NIST. At the same time, the Center's economic impact reporting processes re-emphasize concerns we noted in a prior report about NIST's inadequate monitoring of Centers.[6]

Table 1. FY 2022 Summary of Unreliable Economic Impacts

Economic Impact Category	Total Reported Economic Impacts for MEP	Centers Reviewed[a]		
		Reported Economic Impacts	Unreliable Economic Impacts[b]	Percentage Unreliable
Jobs Created or Retained	116,767	35,240	8,814	25%
New and Retained Sales	$18,825,815,964	$7,298,613,592	$3,513,903,585	48%
New Client Investments	$6,405,897,737	$1,181,581,338	$369,668,359	31%
Cost Savings	$2,479,084,919	$526,131,430	$256,637,261	49%

Source: OIG review of select FY 2022 MEP economic impact data

[a] Centers reviewed include California, Maryland, Ohio, South Carolina, Washington, Kansas, and a subrecipient of New York, ITAC.

[b] Based on our review of economic impacts from 53 judgmentally selected surveys compared with economic impacts from 2,716 completed surveys attributable to these Centers. Economic impacts from these Centers made up 30 percent, 39 percent, 18 percent, and 21 percent of MEP's total FY 2022 jobs created or retained, new and retained sales, new client investments, and cost savings, respectively.

A. *NIST and MEP Centers lacked adequate processes to ensure reported economic impacts were accurate and reliable*

NIST management is responsible for evaluating reported economic impacts to ensure quality information is used to make decisions and assess program performance. NIST places a great deal of importance on economic impact data—using it to measure Center performance and to report MEP's achievements to Congress and the American public. Controls to verify and validate information are critical to data reliability and can catch overstatements and other errors in data before they are finalized. Thus, NIST management must have control activities such as policies, procedures, and techniques to ensure the reliability of the reported economic impacts. However, NIST lacked

[6] Department of Commerce, Office of Inspector General, March 13, 2023. *NIST Must Improve Monitoring of MEP to Prevent Waste of Financial Resources*, OIG-23-014-I. Washington, DC: DOC OIG.

policies and procedures for reviewing and validating reported economic impacts and did not regularly review data to ensure reliability. Rather, NIST had only one control to verify select economic impacts (the previously described outlier verification), but it was ineffective.

NIST also took a "hands-off" approach in monitoring Center practices and did not hold them accountable for ensuring the accuracy of economic impacts—despite Centers' significant influence in the survey process. As a result, these Centers and their subrecipients also lacked adequate processes and contributed to the unreliability of economic impact reporting.

We identified the following issues stemming from a lack of adequate processes to ensure data reliability.

1. *NIST unilaterally revised economic impacts reported by survey respondents without any verification.* In one instance, at the South Carolina Center's request, NIST revised a survey's reported economic impacts from nearly $1 million in new and retained sales to nearly $1 billion—a 1,000-fold increase that accounted for 6 percent of all 51 Centers' total FY 2023 reported sales. According to the South Carolina Center, the services generating the high-dollar impact stemmed from approximately $1,700 of MEP-provided services.

2. *Reported economic benefits were not tied to MEP-provided services.* For example, the Maryland Center knew a client reported significant impacts in FY 2022 based on a multiyear, nearly $1 billion contract. According to our interview with the client, the contract award had no connection to the services received from the Center. Further, there was no actual delivery of services on the contract at the time the client was surveyed. Thus, the reported economic impacts, specifically the nearly $1 billion in new sales (5 percent of all 51 Centers' total FY 2022 reported sales) and 400 jobs created, were overstated.

   In another example, we found that the California Center leveraged pre-existing contracts for delivering services between other companies and their clients. The Center would pay full price to the company for delivering services while providing its clients with a significant discount for the services received. As a result, the Center reported the services to NIST as MEP-provided and claimed these clients as its own. Further, it contractually required those clients to take the economic impact survey or forfeit the discount, despite not providing services to the client. In one instance, the California Center provided a sizable discount to a client who later took the survey and reported $82 million in new and retained sales for FY 2022, even though the impacts were unrelated to the MEP program and therefore should not have been included. We found that other similar instances occurred during FY 2023, contributing to over $87 million in reported new and retained sales unrelated to the MEP program, which should not have been included.

3. *Reported economic benefits were not commensurate with provided services.* As an example, some Centers reported a client's paid "membership" to the Center's

manufacturing association as a MEP-provided service to NIST and then reported significant economic impacts. In one instance, a client of the Kansas Center reported $100 million in new and retained sales and over 300 jobs created or retained, attributable to the $300 membership fee paid to the Center in FY 2022. During an interview, the respondent explained the membership allowed the company to receive leadership training and attend meetings on various topics; however, the reported economic benefits had no relevance to the services received from the Center's membership program.

As another example, in FY 2023, the Kansas Center facilitated a tour of a client's manufacturing facility for approximately 25 high school students. The client reported that the tour created or retained 2,200 jobs (over 41 percent of the Center's total reported jobs impact), based on an apparent estimate of the client's total workforce.

4. *Economic impacts were based on a client's overall position or growth—not directly on the Center services provided.* For example, during FY 2022, a client of the California Center reported $25 million in new and retained sales based on year-over-year growth for the entire company, rather than sales realized based on services it received from the Center.

5. *Clients reported unrealistic statistics.* For example, a client of ITAC, a subrecipient of the New York Center, reported 700 jobs created in both FY 2021 and FY 2022 despite averaging only 60 employees during the timeframes surveyed. The client stated it had included its contractors in its reported economic impacts even though the survey asks for economic impacts realized by only the client.

6. *Clients reported duplicate economic benefits stemming from the same provided services.* We identified duplicate economic impacts reported by the same survey respondent from year to year.[7] For example, a client of MANEX (a California Center subrecipient) reported exactly the same economic impacts in FYs 2022 and 2023, which included approximately 1,000 jobs created or retained and nearly $20 million in investments based off of services received in 2019 and 2020. As another example, a client of MAGNET (an Ohio Center subrecipient) reported $3 million in new and retained sales and approximately $5 million in investments for both FY 2021 and FY 2022 for the same three services received in 2019 and 2020.

We also found that the one control that NIST and Centers rely on to ensure data reliability—outlier verification—was ineffective. NIST policy states that when economic impacts reported by a client exceed 250 jobs created and retained or $5 million in combined sales, investments, and cost savings, outlier verification is required by the Center before NIST accepts the submitted economic data. However, NIST's review of outliers lacked due diligence and did not ensure data reliability. Less than 10 percent of

[7] The economic impacts reported in the following examples were specific and exactly the same from year to year. However, the amounts have been rounded in our report at NIST's request.

completed surveys actually met NIST's threshold for outlier verification, and an even smaller number resulted in reductions to their reported economic impacts.[8] Further, NIST did not ensure Centers monitored their subrecipients' compliance with NIST survey guidelines, including conducting outlier verifications. NIST's process also lacked any sort of certification from Centers or their subrecipients to hold them accountable for accurate information.

NIST had inadequate processes to monitor compliance with policy and ensure data reliability.

For example, we identified Centers and subrecipients that did not conduct outlier verifications even though they claimed to have confirmed outlier verifications to NIST. Others claimed to conduct outlier verifications but could not provide reasonable explanations for how their services generated such high economic impacts or any supporting documentation for the impacts. In another example, NIST accepted reported economic impacts in FYs 2022 and 2023 from Centers that were unable to conduct outlier verifications—in contradiction to NIST's own policy. Although NIST stated it was an oversight, this led to reporting of economic impacts that should have been zeroed out—further contributing to MEP's overstated economic impacts. The unverified economic impacts included $64 million and over $8 million in new and retained sales for FYs 2022 and 2023, respectively.

B. Survey responses may be biased, and some surveys were not populated by clients

Federal standards for internal controls require that management evaluate sources of data for reliability—that is, data that is reasonably free from error and bias and faithfully represents what it is intended to.[9] MEP survey data is intended to represent actual economic impacts realized over the last 12 months directly attributable to Center services, as reported by clients. However, we found several instances where the surveys were either directed to biased individuals or were completed with Center influence. For example, we found that:

1. *Surveys were completed by board members, who were either owners or executives of companies that received Center services.* In some instances, Centers provided services to companies affiliated with their board members without charge or at a discounted rate. For example, both the Maryland Center and a subrecipient of the Ohio Center, MAGNET, provided free or substantially discounted services to companies whose owners or executives served on their respective boards of directors. Economic impacts we reviewed that were reported by three of MAGNET's board members made up $15 million in retained sales—nearly 17 percent of the subrecipient's total retained sales for FY 2022. We found that despite organizational conflicts and risks

[8] For FY 2022, 888 of the 9,111 completed surveys met MEP's threshold for outlier verification. The outlier verification process led to a reduction in the reported economic impacts for 60 of the 888 surveys. For FY 2023, 826 of the 8,887 completed surveys met the threshold, and reported economic impacts were reduced for 48 of them.
[9] U.S. Government Accountability Office, September 2014. *Standards for Internal Control in the Federal Government*, GAO-14-704G. Washington, DC: GAO, 13.04.

of bias associated with board members reporting economic impacts attributable to a Center on whose board they serve, NIST's own survey guidance encourages the use of board members to complete surveys because they are considered "slam dunks" and "easy wins" for survey completion.

2. *Centers influenced the client's survey results.* Centers have a vested interest to ensure respondents report significant economic impacts, and some even tell respondents their survey responses will be "confidential" or "not audited." One Center, not part of our review, has gone so far as posting a video on YouTube notifying respondents that no one else from the respondent's company could see their survey responses. These tactics can persuade respondents to carelessly report economic impacts. We found several concerning instances where Centers directed or may have influenced survey results, for example:

   - The South Carolina and Kansas Centers told their clients not to take the survey until Center staff were present and able to sit with them while taking the survey—despite NIST survey policies directing Centers not to sit with clients while taking the survey.
   - The Washington Center asked a respondent who worked for two related companies to report the same identical economic impacts, resulting in the duplication of approximately $75 million in new and retained sales and over $55 million in cost savings for each of the related companies within the FY 2022 survey year.[10] The Washington Center then asked the respondent to report the same economic impacts for one of those related companies in the FY 2023 survey.
   - The subrecipient to the California Center, MANEX, encouraged clients to report the entire impact over the life of the provided service, even though the MEP survey asks for actual impacts realized over the last 12 months. Also, MANEX's survey reminders directed clients to "provide a dollar amount of at least $500" for each impact question if their competitive position was improved. Finally, we found instances where MANEX notified its clients about upcoming surveys while simultaneously informing them of the significant impacts reported in the previous year—seemingly an attempt to influence the client to report the same high economic impacts again.
   - The Kansas Center and subrecipients of the Ohio and California Centers, MAGNET and MANEX, respectively, had clients identify projected economic impacts upon completion of an MEP-provided service to use as a guide for completing the NIST survey, which asks for actual economic impacts realized.

3. *Centers directed that surveys be completed by individuals no longer employed by their clients.* We found instances where survey respondents were not employed by the client when they took surveys for FY 2023. For example, the Washington Center had a former employee of a client complete the survey, even though he had retired

[10] The economic impacts reported in this example were specific and exactly the same for each related company. However, the amounts have been rounded in our report at NIST's request.

from the company a year before and therefore would not have had access to the company's current and sensitive financial information. Similarly, the California Center had a former employee who had left the client several months previously take the survey for the client. In both instances, the reported economic impacts, which do not express views of the client, were significant and included a combined $73 million in new and retained sales and over $70 million in investments.

The effects of NIST's unreliable economic impact reporting for MEP are significant. Most notable is that NIST has overstated the economic impacts of MEP to Congress and the American public—using these overstated economic impacts to justify the MEP program. For example, the Under Secretary of Commerce for Standards and Technology has represented MEP's economic impacts to Congress in congressional testimony,[11] and NIST recently cited MEP's FY 2022 economic impacts in its budget submission to Congress.[12]

NIST has overstated the economic impacts of MEP to Congress and the American public.

Centers use economic impacts to advertise how their services can assist manufacturers. As a result of the overstatements, manufacturers may be misinformed regarding the actual economic benefits they can realize through these services. Further, instances of clients affiliated with board members receiving free or discounted services raise concerns about favorable treatment and misuse of federal funds.

NIST also uses economic impacts as a primary means to evaluate Center performance for continued federal funding. However, reliance on these economic impacts may have resulted in the use of taxpayer money to fund Centers that overstated their economic performance. For example, our review of the California Center's economic impacts indicates the Center's performance achievements for FY 2022 were significantly overstated, including up to a 142 percent overstatement in total sales. However, NIST considered the Center's performance to be nearly perfect.

The California Center's overstated economic impacts in FY 2022, which included obtaining significant economic impacts for services provided by other companies in exchange for discounts, raise further concerns about the excessiveness of Center executive salaries. In our prior report on MEP, we found Center executive salaries were unreasonable and recommended NIST establish policy limits on executive compensation for MEP, including restrictions on Center and subrecipient salaries.[13] Notably, our prior report indicated one executive at the California Center was paid more than $400,000 in 2020. NIST responded

[11] *Testimony of Dr. Laurie Locascio Under Secretary of Commerce for Standards and Technology/Director, National Institute of Standards and Technology, United States Department of Commerce, Before the Committee on Science, Space, and Technology, United States House of Representatives, An Overview of the Budget Proposal for the National Institute of Standards and Technology for Fiscal Year 2024*, May 10, 2023.
[12] *National Institute of Standards and Technology/National Technical Information Service, Fiscal Year 2025, Budget Submission to Congress.*
[13] Department of Commerce, Office of Inspector General, March 13, 2023. *NIST Must Improve Monitoring of MEP to Prevent Waste of Financial Resources*, OIG-23-014-I. Washington, DC: DOC OIG, 8.

that these high salaries for Center executives were necessary to have staff with the expertise required to work with manufacturers and did not concur with the recommendation. Hence, our recommendation for NIST to implement limits on executive compensation remains unresolved[14] and is therefore not repeated as a formal recommendation in this report. However, our current evaluation found that the aforementioned executive at the California Center again received a substantial salary and bonus in 2022 totaling more than $430,000—predominately paid by MEP awards and therefore taxpayer funds—despite the Center falling short of reaching NIST's own metrics once unreliable economic impacts are removed.

Similarly, two executives at another Center whose FY 2022 economic impacts were also overstated received large bonuses. The performance assessments for each executive gave significant weight to the Center's reported economic impacts. One executive received a nearly $77,000 bonus, while the other received over $31,000. The Center paid for all of its FY 2022 bonuses with MEP funding, including bonuses for the two executives.

Recommendations

We recommend that the Under Secretary of Commerce for Standards and Technology and the Director of NIST do the following:

1. Revise MEP's economic impact reports for FYs 2022 and 2023 and other references to economic impacts on MEP's website attributable to the Centers we reviewed; in addition, disclose MEP's reported economic impacts may be based on inaccurate data and therefore their reliance and use should be limited.
2. Establish procedures for NIST personnel to ensure data reliability (reasonably free from error and bias), including but not limited to (1) formal policies requiring staff to diligently review significant impacts for accuracy and connection to services provided by Centers and (2) techniques to analyze survey data for anomalies before it is finalized.
3. Establish and implement procedures for Centers and subrecipients to (1) comply with NIST guidelines and (2) ensure data reliability (reasonably free from error and bias), including but not limited to techniques that hold Centers accountable, such as including consequences for noncompliance and certification of Center executives confirming integrity, independence, and due diligence that the reported economic impacts represent what they are intended to: actual economic benefits realized over the last 12 months that are attributable to the services provided.
4. Establish procedures that hold Centers accountable for monitoring subrecipient compliance with NIST survey guidelines and ensuring data reliability (reasonably free from error and bias), including consequences for noncompliance.

[14] A recommendation is considered unresolved when OIG has not concurred with an auditee's corrective action plan responding to the recommendation.

II. NIST Overstated MEP's Return on Investment from FYs 2020 to 2023

NIST's annual economic impact reports for MEP include the program's return on investment based on comparisons of economic impacts to federal dollars invested (the federal investment). However, we found NIST's return on investment computations were consistently based on inaccurate federal investment amounts—lacking consideration that other sources of federal funding contributed to MEP's reported economic impacts. As a result, NIST overstated MEP's return on investment over several years—notably by 34 percent in 2020.

This occurred for two reasons. First, NIST staff informed OIG they did not include supplemental funding received at the direction of former MEP directors. NIST staff added the supplemental funding was "one-time" funding and not part of MEP's regular appropriations. The federal investment amount disclosed in MEP's FY 2020 economic impact report omitted $50 million received through the CARES Act, despite NIST's own records indicating these funds contributed to reported economic impacts, including $3.6 billion in total sales during FYs 2020 to 2023. Similarly, the federal investment amount disclosed in MEP's FY 2023 economic impact report omitted $13 million in supplemental federal funding. Table 2 shows how NIST overstated MEP's return on investment by excluding supplemental funding during FYs 2020 and 2023.

Table 2. MEP Return on Investment for FYs 2020 and 2023, With and Without Supplemental Funding

Economic Impact Category	FY 2020		FY 2023	
	NIST Reported Return on Investment Without Supplemental Funding	Recalculated Return on Investment With Supplemental Funding[a]	NIST Reported Return on Investment Without Supplemental Funding	Recalculated Return on Investment With Supplemental Funding[a]
New Sales Generated (per $1 of NIST Investment)	$19.60	$14.58	$24.60	$22.88
New Client Investments Generated (per $1 of NIST Investment)	$33.70	$25.10	$27.50	$25.64
NIST Investment to Create or Retain One Job	$1,381	$1,853	$1,633	$1,754

Source: OIG review and analysis of NIST MEP's FY 2020 and FY 2023 economic impact reports

[a] These recalculated return on investment amounts are solely based on inclusion of supplemental funding for MEP. Actual returns on investment may be significantly lower after reducing annual economic impacts based on unreliable data identified in finding I.

Second, NIST regularly excluded funding other federal agencies provided to Centers, even though NIST encouraged Centers to take credit for economic impacts derived from other federal funding sources. For example, during FY 2022, the Maryland Center received federal awards from the Department's Economic Development Administration, the U.S. Department of Defense, and the U.S. Department of Labor. However, the federal funded amounts from these other sources were excluded from the total federal investment reported by NIST, even though 83 percent of the total sales reported by the Maryland Center was solely attributable to non-NIST funding.

NIST's consistent overstatement of MEP's return on investment compounds the unreliability of its economic impact reporting and takes credit for economic impacts attributable to funding from other federal agencies. Further, Congress may have relied on this information to make budgetary and resource allocation decisions.

Recommendations

We recommend that the Under Secretary of Commerce for Standards and Technology and the Director of NIST do the following:

5. Revise MEP's economic impact reports for FYs 2020 through 2023 to (1) accurately reflect NIST's return on investment and (2) clearly articulate that total federal investment does not include other federal funding sources that may contribute to reported economic impacts.
6. Establish procedures for NIST personnel to ensure future economic impact reports accurately reflect NIST's return on investment.

III. Centers Require Clients to Take MEP Surveys, Contrary to OMB Directive

NIST's use of surveys to collect economic impacts realized by manufacturers is contingent upon several "terms of clearance" set by the Office of Management and Budget (OMB), including the following: that Centers must disclose surveys are voluntary and that failure to respond will not result in a loss of service or other penalty.[15] However, Centers and their subrecipients we reviewed have made it a contractual requirement for manufacturers to take the MEP survey. As noted in finding I, the California Center provides discounts on services, but its contracts state the client's failure to take the survey will result in repayment of the discount. In addition, MAGNET, a subrecipient of the Ohio Center, informed us that it refuses to work with manufacturers that will not take the survey—even providing us an instance where MAGNET declined services to a manufacturer that was unwilling to take the survey. Despite knowing the requirement that Centers must disclose to manufacturers that surveys are voluntary and failure to respond will not have any

[15] The Paperwork Reduction Act of 1995 requires clearance from OMB prior to collecting most types of information from the public. OMB has approved NIST's collection of economic impacts realized based on terms that include disclosure to manufacturers that responses are voluntary and failure to respond will not result in a loss of service or other penalty.

negative consequences, NIST directs Centers to write the expectation of completing the survey into their contracts.

The taxpayer funds used to support MEP are intended to help manufacturers afford services through MEP. Imposing financial penalties on manufacturers that choose not to take the voluntary survey could create financial hardships, while refusing services denies manufacturers access to resources intended to help them grow.

Recommendations

We recommend that the Under Secretary of Commerce for Standards and Technology and the Director of NIST direct MEP to immediately:

7. Remove from NIST reporting guidelines statements that currently direct Centers to write the expectation of completing the MEP survey into contracts.
8. Direct Centers and their subrecipients to remove contract clauses requiring clients to take the MEP survey.

Other Matter

Centers Did Not Accurately Report Program Income

In our prior report on MEP, we noted concerns with program income generated by Centers—specifically, unexpended program income retained by MEP award recipients, including the California Center.[16] During the course of this evaluation, we learned the California Center did not report over $2.5 million in program income earned between FYs 2022 and 2023 through its current 5-year cooperative agreement with NIST. Further, MANEX, a subrecipient of the California Center, also did not report over $200,000 in program income generated between FYs 2016 and 2023 as a result of funding from multiple cooperative agreements with NIST.

The California Center's failure to accurately report all program income generated by NIST funds, including program income from its subrecipients, raises concerns about whether the Center and its subrecipient are abusing the federal financial assistance received from NIST. It also raises questions about whether the California Center is compliant with award terms and conditions, including whether it is adequately monitoring its subrecipients. We have informed NIST of our concerns for further action and will follow up as necessary.

[16] Department of Commerce, Office of Inspector General, March 13, 2023. *NIST Must Improve Monitoring of MEP to Prevent Waste of Financial Resources*, OIG-23-014-I. Washington, DC: DOC OIG, 8.

Summary of Agency Response and OIG Comments

On June 21, 2024, we received NIST's formal response to our draft report. NIST concurred with six of our eight recommendations and described actions it has taken, or will take, to address them. Further, NIST provided general comments regarding our report, which we discuss first below. Following that, we summarize NIST's responses to all eight recommendations and OIG comments on the responses. Notwithstanding NIST's nonconcurrence and additional comments, NIST stated it will develop and submit a corrective action plan. Appendix C of this report includes NIST's complete formal response.

NIST also provided technical comments in a separate document. We considered those comments but did not revise our report. Additionally, NIST requested we remove certain information it believes to be protected from disclosure from the public version of this report. We revised our report as we deemed necessary, including an update to reflect the most current information. In summary, though, we have not modified our conclusions or recommendations.

General Comments in NIST's Response and Our Comments

In addition to specific responses to particular recommendations, NIST's response included some more general comments and themes. Below we address some of these comments.

First, NIST stated that, in addition to economic impact survey results, it considers other measures to gauge the success of each Center, including annual reviews, panel reviews, and success stories. However, NIST's own policy states that economic impacts are the principal means of assessing Center performance. Further, the economic impact survey results drive the other measures identified by NIST. For example, NIST's template for documenting panel reviews states it is a performance-based evaluation that uses the economic impact measures.

NIST also indicated it has written policies and procedures addressing the survey process. However, we found that these policies and procedures were insufficient to effectively verify survey outliers.

Recommendation 1. Revise MEP's economic impact reports for FYs 2022 and 2023 and other references to economic impacts on MEP's website attributable to the Centers we reviewed; in addition, disclose MEP's reported economic impacts may be based on inaccurate data and therefore their reliance and use should be limited.

NIST Response

NIST did not concur with this recommendation. NIST stated that OIG's judgmental selection focused on large outliers attributable to the seven Centers selected for review.

OIG Comments

We disagree with NIST's comments. We designed our evaluation methodology in accordance with *Quality Standards for Inspection and Evaluation* issued by the Council of the Inspectors General on Integrity and Efficiency and used judgmental selection techniques to provide a reasonable basis for our findings and conclusions based on our evaluation objective. As for the judgmental selection, we selected economic impacts based on risk factors that we identified as part of our planning, and we reiterate that judgmental selection based on risk complies with applicable standards. As shown in table 1 of our report, the economic impacts from the seven Centers reviewed made up a significant portion of the total economic impacts reported across all 51 Centers. Specifically, the economic impacts from these seven Centers made up 30 percent, 39 percent, 18 percent, and 21 percent of MEP's total FY 2022 jobs created or retained, new and retained sales, new client investments, and cost savings, respectively.

Lastly, NIST did not dispute OIG's various examples provided in this report of unreliable economic impacts.

NIST Response

Regarding recommendation 1, NIST further indicated it made downward adjustments to economic impacts in both FYs 2022 and 2023, including reported jobs reductions of 2.2 million and 6.9 million, respectively. Also, NIST stated it requires Centers to provide a rationale for considering the outliers reported are accurate and justifiable. NIST referred to this process as a "form of certification." However, NIST stated it will revisit its guidance and processes.

OIG Comments

We are pleased that NIST stated it will revisit its current guidance and processes in response to our recommendation. However, we disagree that NIST and its Centers have adequate processes to ensure that reported economic impacts are reliable and outliers are fully addressed. As set forth in the report itself, the processes on which NIST relies are not fully addressing the unreliable economic impacts—thus misinforming its stakeholders regarding the actual depth of MEP's impact on the economy. Despite acknowledging overstatements during the course of our engagement, NIST has no plans to amend any of the reported economic impact data.

For FYs 2022 and 2023, NIST's outlier verification process led to a reduction in the reported economic impacts for 60, or approximately 7 percent, of the 888 surveys and 48, or approximately 6 percent, of the 826 surveys, respectively. However, as stated in this report, we found that NIST and MEP Centers lacked an adequate outlier verification process to ensure reported economic impacts were accurate and reliable. For instance, we found:

- Centers and subrecipients that did not conduct outlier verifications even though they claimed to have confirmed outlier verifications to NIST.
- Centers are not required to provide a rationale if revising the reported economic impacts to amounts less than the outlier verification threshold.

- NIST's review of Center verified outliers lacked due diligence and did not ensure data reliability.
- Examples of significant economic impacts that were not vetted for accuracy during the outlier verification process. To illustrate, at the South Carolina Center, economic impacts from a client included $800 million in retained sales and 250 jobs retained. The reported economic impacts stemmed from MEP-provided services for approximately $5,000.
- NIST's downward adjustments are a result of Centers correcting obvious errors during outlier verification—not from NIST's own diligent review of reported economic impacts to ensure data reliability. To illustrate, one survey respondent reported the creation of 2.4 million jobs before the amount was adjusted to 2 jobs due to an "error in the recorded" jobs created amount.

In addition, NIST personnel responsible for reviewing Center verified outliers acknowledged only spending approximately 5 minutes reviewing each outlier and, over the last several years, estimated returning only five outliers to Centers for further review. The few returns out of thousands of outliers over the course of several years exemplifies the lack of diligence during NIST's review.

Furthermore, we disagree with the suggestion that the requirement for verification of outliers is a form of certification. Our report itself identifies the weaknesses in this largely informal process. For example, an effective form of certification would require a signature from Center executives asserting they have diligently verified the reported economic impacts are accurate and resulted from the services received by the Center. Although NIST did not concur with our recommendation, NIST acknowledged that oversight and review of these large outliers can be improved and stated it would adjust its existing processes and future impact reporting using additional validation rules, refining outlier documentation requirements, and conducting more rigorous reviews of selected business outcomes. In addition, NIST stated that it will counsel the seven Centers on their economic impact verification submissions and their survey management processes. These actions are positive but are not, on their own, sufficient to resolve the concerns we have articulated.

Recommendation 2. Establish procedures for NIST personnel to ensure data reliability (reasonably free from error and bias), including but not limited to (1) formal policies requiring staff to diligently review significant impacts for accuracy and connection to services provided by Centers and (2) techniques to analyze survey data for anomalies before it is finalized.

NIST Response

NIST concurred with this recommendation but disagreed with "the implication that no formal policies or controls exist." However, NIST stated it will update procedures to expand its internal reviews and verification of survey data. It will also use additional analyses of survey data to identify anomalies before releasing data to the public.

OIG Comments

We are pleased that NIST is committed to updating its procedures and using additional analyses to improve MEP's economic impact reporting. However, OIG has not modified its conclusion that NIST lacked policies and procedures and did not regularly review and validate reported economic impacts to ensure data reliability. As stated in our report, NIST had only one control to verify select economic impacts, but it was ineffective. Furthermore, NIST personnel responsible for reviewing outliers stated there are no relevant survey policies or procedures.

Recommendation 3. Establish and implement procedures for Centers and subrecipients to (1) comply with NIST guidelines and (2) ensure data reliability (reasonably free from error and bias), including but not limited to techniques that hold Centers accountable, such as including consequences for noncompliance and certification of Center executives confirming integrity, independence, and due diligence that the reported economic impacts represent what they are intended to: actual economic benefits realized over the last 12 months that are attributable to the services provided.

NIST Response

NIST concurred with this recommendation with the caveat that it is committed to not only collecting business outcomes via its survey, but also to minimizing the public's reporting burden when completing the survey. NIST further stated it must balance the quantity and quality of the information collected with the time that it takes to complete the survey, as required by the Paperwork Reduction Act. NIST also stated it is updating its policies and procedures on survey management and data reliability.

OIG Comments

Although NIST concurred with our recommendation and has initiated actions to meet the intent of our recommendation, it is unclear from NIST's comment how the Paperwork Reduction Act relates to our recommendation. NIST is responsible for evaluating reported economic impacts to ensure quality information is used to make decisions and assess program performance. As stated in our report, we found that NIST and its Centers lacked adequate processes to ensure reported economic impacts were accurate and reliable, resulting in significant, unreliable reporting. Yet, NIST used these economic impacts in multiple settings.

Recommendation 4. Establish procedures that hold Centers accountable for monitoring subrecipient compliance with NIST survey guidelines and ensuring data reliability (reasonably free from error and bias), including consequences for noncompliance.

NIST Response

NIST concurred with this recommendation.

OIG Comments

We look forward to receiving NIST's corrective action plan.

Recommendation 5. Revise MEP's economic impact reports for FYs 2020 through 2023 to (1) accurately reflect NIST's return on investment and (2) clearly articulate that total federal investment does not include other federal funding sources that may contribute to reported economic impacts.

NIST Response

NIST did not concur with this recommendation. NIST stated that although the nonfederal cost share requirement was reduced in 2017, NIST believes it was Congress's intent for MEP's impact on U.S. manufacturers to still grow. As a result, NIST changed its policy to allow Centers to also report projects not expensed to NIST MEP awards for the survey—referred to as "facilitated" projects.

NIST also stated that Congress restricted the use of the supplemental funding it received, including $50 million through the CARES Act. Due to these restrictions, NIST excluded supplemental funding amounts from its economic impact calculations.

However, NIST concluded it will reevaluate its 2017 policy and added that in future reporting, it will consider methods to better segment impacts by funding source and additional disclosures.

OIG Comments

NIST's policy to report economic impacts attributable to other federal funding sources but exclude those other sources from the total federal investment amount reported by NIST is flawed and results in overstatements of MEP's return on investment. As illustrated in our report, 83 percent of the total sales reported by the Maryland Center during FY 2022 was solely attributable to non-NIST funding, including from the Economic Development Administration and other federal agencies—contributing to inaccurate measurements of return on investment. Had NIST solely removed this Center's new sales attributable to non-NIST funding, MEP's reported return on investment for FY 2022 would have dropped from $35.80 to $29.71—a step toward a more accurate metric to measure the impact of NIST MEP funding.

Further, we disagree with NIST's methodology that including only benefits of the economic impacts and excluding the cost of investments (amount spent) is a reasonable method of calculating return on investment. NIST's argument for including CARES Act economic impact results but excluding the CARES Act federal funding in its calculation of return on investment is unreasonable. As indicated in our report, NIST's reported economic impacts include those directly attributable to the $50 million received through the CARES Act—notably, $3.6 billion in total sales during FYs 2020 to 2023. However, the $50 million CARES Act funding was excluded without sufficient justification, and in turn, overstated MEP's reported return on investments during FY 2020 by 34 percent.

Return on investment is an important calculation, commonly used to help stakeholders make informed decisions. NIST's calculation of return on investment provides a way to measure benefits over costs, or in this case, economic impacts over the total federal investment amount, respectively. However, NIST's approach understates the total federal investment amount and thereby inaccurately reports higher economic impacts generated per federal dollars spent. To be an effective and valuable tool for decision makers, the calculation must include all of MEP's investment costs (amount spent). This will provide more reliable and transparent insights about MEP's economic impacts and aid all stakeholders.

Although NIST's planned actions are a step in the right direction, more significant action is necessary. However, NIST has no plans to revise any of its economic impact reports. Unless NIST ensures its reporting is accurate and reliable, it will continue to provide overstated information regarding MEP's actual economic impacts. We reaffirm our recommendation to ensure NIST provides reliable and transparent information to stakeholders regarding MEP's economic impact.

NIST Response

Regarding recommendation 5, NIST further stated that OIG previously recognized NIST's efforts on the rapid rollout of CARES Act funding to the Centers and this positive accolade demonstrates NIST's commitment to properly account for and report on the uses of its appropriated funding.

OIG Comments

The OIG report to which NIST refers did not address reporting on economic impacts.

Recommendation 6. Establish procedures for NIST personnel to ensure future economic impact reports accurately reflect NIST's return on investment.

NIST Response

NIST concurred with this recommendation, with caveats. NIST added that its current reporting is consistent with existing policies but agreed to update its existing performance measurement procedures and return on investment analysis, including its calculation of return on investment. NIST also stated MEP will improve and further clarify its distinction between reported impacts and amount of NIST MEP investment in the program, including supplemental funding.

OIG Comments

NIST's current method of reporting has resulted in overstatements of MEP's return on investment over several years and, therefore, needs to be revised to avoid publishing inaccurate economic impact data. Thus, we reaffirm our recommendation and strongly advise NIST to establish procedures to ensure the accuracy of future economic impact reports.

Recommendation 7. Remove from NIST reporting guidelines statements that currently direct Centers to write the expectation of completing the MEP survey into contracts.

NIST Response

NIST concurred with this recommendation.

OIG Comments

We look forward to receiving NIST's corrective action plan.

Recommendation 8. Direct Centers and their subrecipients to remove contract clauses requiring clients to take the MEP survey.

NIST Response

NIST concurred with this recommendation.

OIG Comments

We look forward to receiving NIST's corrective action plan.

Appendix A: Objective, Scope, and Methodology

The objective of our evaluation was to determine whether NIST's MEP effectively monitored and evaluated economic impact reporting. The scope consisted of reviewing FY 2022 economic impact reporting, but due to the relationship of economic impacts to surrounding years, we also reviewed, on a limited basis, economic impacts from FYs 2021 and 2023.

To accomplish our objective, we performed the following actions:

- Reviewed relevant laws and other guidance, including:
    - 15 U.S. Code § 278k, *Hollings Manufacturing Extension Partnership*, as amended
    - 2 Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*
    - GAO's *Standards for Internal Control in the Federal Government*, September 2014
    - OMB Circular A-11, Part 6, 260, *Federal Performance Framework,* July 2016
    - OMB 0693-0021*, MEP Client Impact Survey Documents*
    - *Department of Commerce Grants and Cooperative Agreements Manual,* April 2021
    - *Department of Commerce Financial Assistance Standard Terms and Conditions,* November 2020
    - *NIST MEP Program Evaluation and Economic Research Reporting Guidelines*
    - *NIST MEP Survey Boot Camp*
    - *NIST MEP General Terms and Conditions,* August 2017
- Accessed the NIST MEP Enterprise Information System to obtain and review project and event descriptions, survey question responses, and survey outlier data.
- Reviewed *NIST MEP Economic Impact* reports from FYs 2020 through 2023.
- Interviewed NIST personnel to obtain an understanding of MEP's economic impact reporting processes and to determine NIST-specific guidance regarding how Centers conduct the survey process.
- Interviewed Center and subrecipient personnel as well as manufacturing clients to obtain an understanding of MEP's economic impact reporting processes, including the client survey and outlier verification procedures.

We judgmentally selected to review economic impacts for FY 2022 from a total of seven Centers, including four subrecipients. Our selections were based on the total economic impacts reported, among other factors. However, due to the relationship of economic impacts to surrounding years, we also reviewed, on a limited basis, economic impacts from FYs 2021 and

2023. Because we used judgmental selection, results and overall conclusions are limited to the items tested and cannot be projected to the population of Centers subject to this evaluation.

We gained an understanding of internal controls significant within the context of the evaluation objective by interviewing NIST and Center officials, interviewing manufacturing clients, and reviewing relevant policies, procedures, survey responses, and outlier verification responses. We reported the internal control weaknesses in the "Objective, Findings, and Recommendations" section of this report.

In satisfying our evaluation objective, we did not rely solely on computer-processed data. However, we relied on computer-processed data from NIST. Although we could not independently verify the reliability of all the information we collected from NIST, we compared the information with other available supporting documents and interviewed NIST personnel to determine data consistency and completeness. Based on these efforts, we believe the information we obtained was sufficient for our detailed testing during fieldwork. Although we found the information obtained was sufficient for our purposes, we identified the reported economic impacts from Centers we reviewed were unreliable, as noted in finding 1.

We conducted our evaluation from April 2023 through May 2024 under the authority of the Inspector General Act of 1978, as amended (5 U.S.C. §§ 401-424), and Department Organization Order 10-13, as amended October 21, 2020. While we conducted site visits in California, Maryland, Ohio, South Carolina, and Washington, we also performed our fieldwork remotely.

We conducted this evaluation in accordance with *Quality Standards for Inspection and Evaluation* (December 2020) issued by the Council of the Inspectors General on Integrity and Efficiency. Those standards require that the evidence must sufficiently and appropriately support evaluation findings and provide a reasonable basis for conclusions and recommendations related to the objective. We believe that the evidence obtained provides a reasonable basis for our findings, conclusions, and recommendations based on our review objective.

Appendix B: FY 2022 Unreliable Economic Impacts by Center

Center Name	Jobs Created or Retained	New and Retained Sales	New Client Investments	Cost Savings
California Center	2,724	$481,200,000	$138,233,000	$61,415,000
Maryland Center	1,032	$1,040,000,000	$23,725,000	$10,114,000
Ohio Center	399	$95,750,000	$75,125,000	$2,718,000
South Carolina Center	2,580	$1,380,438,585	$43,734,359	$55,989,861
Washington Center	809	$316,365,000	$72,288,500	$126,000,400
Miscellaneous[a]	1,270	$200,150,000	$16,562,500	$400,000
Total unreliable economic impacts from OIG review	**8,814**	**$3,513,903,585**	**$369,668,359**	**$256,637,261**
Total reported economic impacts from Centers reviewed by OIG	**35,240**	**$7,298,613,592**	**$1,181,581,338**	**$526,131,430**
Percentage of unreliable data[b]	**25%**	**48%**	**31%**	**49%**

Source: OIG review of select FY 2022 MEP economic impact data

[a] Includes OIG analysis of judgmentally selected survey data from the Kansas Center and a subrecipient of the New York Center, ITAC.

[b] Based on our review of economic impacts from 53 judgmentally selected surveys compared with economic impacts from 2,716 completed surveys attributable to these Centers. Economic impacts from these Centers made up 30 percent, 39 percent, 18 percent, and 21 percent of MEP's total FY 2022 jobs created or retained, new and retained sales, new client investments, and costs savings, respectively.

Appendix C: Agency Response

NIST's response to our draft report follows on p. 27.

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-0001

MEMORANDUM FOR: Richard Bachman
Assistant Inspector General for Audit and Evaluation

FROM: Laurie E. Locascio, Ph.D., NAE LAURIE LOCASCIO Digitally signed by LAURIE LOCASCIO Date: 2024.06.20 19:31:28 -04'00'
Under Secretary of Commerce for Standards and Technology &
Director, National Institute of Standards and Technology

SUBJECT: NIST Response to OIG's Draft Report dated May 22, 2024, *NIST Overstated MEP's Economic Impacts to Congress and Other Stakeholders*

This memorandum provides the National Institute of Standards and Technology's (NIST) response to the draft report dated May 22, 2024, from the Department of Commerce Office of the Inspector General (OIG) entitled, *NIST Overstated MEP's Economic Impacts to Congress and Other Stakeholders*. The draft report contained the following findings:

I. MEP's FY2022 Economic Impacts Are Unreliable
    A. NIST and MEP Centers lacked adequate processes to ensure reported economic impacts were accurate and reliable.
    B. Survey responses may be biased, and some surveys were not populated by clients
II. NIST Overstated MEP's Return on Investment from FYs 2020 to 2023
III. Centers Require Clients to Take MEP Survey, Contrary to OMB Directive

NIST's Hollings Manufacturing Extension Partnership (NIST MEP) appreciates the insights provided by the OIG for the program to refine the guidance and processes that underpin how it collects and analyzes data. NIST MEP recognizes that improved communication with MEP Centers (non-federal entities who receive NIST MEP funding funding) and subrecipients is needed to enable Centers to strengthen their oversight of the economic impacts reported by their clients and ultimately reported to NIST MEP.

NIST MEP gathers business outcomes resulting from interactions between MEP Centers and clients to assess program effectiveness. NIST MEP gathers this data via an OMB-approved client impact survey.[1] NIST MEP's Client Impact Survey (survey), is a gauge of an MEP Center's client satisfaction with its services and an attempt to measure the business outcomes the client achieved because of the support it received from a Center.

[1] OMB approved NIST MEP's Client Impact Surveys on November 30, 2023. OMB's approval expires on November 30, 2026.

The survey collects business outcomes through a web-based survey instrument fielded by a third-party contractor. Clients are surveyed once a year to collect business outcomes generated over the previous 12 months from working with MEP Centers. MEP Centers identify an individual (respondent) at the client site with the most knowledge of the business outcomes, and with the best access to the data requested within the survey. The Centers educate the respondent on the concepts within the survey prior to the survey invitation being sent. Respondents have 30 days to complete the web-based survey with their business outcomes.

Data collected on business outcomes is imported from the third-party contractor and preliminary validation checks (e.g. number of records, invalid contact information, etc.) are performed. Once in the MEP Enterprise Information System (MEIS), an outlier verification process is initiated that identifies business outcomes with reported dollars of impact over $5 million and/or 250 jobs created and retained. For these outliers, the associated MEP Centers are required to reach out to their clients to confirm the reasonableness of the reported outlier business outcomes. The MEP Centers then provide a justification to NIST MEP for why the impacts entered should be considered valid. After outlier verification process is completed, the survey results become final in MEIS.

The survey is completed by approximately 70 percent[2] of the manufacturers that MEP Centers complete projects with. The survey is fielded by an independent third-party to mitigate potential bias and is structured for manufacturers to report their business outcomes in four categories:

- jobs created and retained;
- sales new and retained;
- cost savings; and
- investments.[3]

The survey is voluntary and does not require that manufacturers link their reported business outcomes back to their financial statements or financial projections.[4]

The survey is not the sole determinant of the value that NIST MEP provides to manufacturers nor the only measurement of the program's success. NIST MEP also conducts the following activities to measure the success of the MEP program:

- Quarterly and Semi-Annual Progress Reporting
- Annual Reviews

[2] In FY2022, NIST MEP attempted surveys with 12,763 manufacturing clients. 9,111 of those clients completed the survey (71%). Historically, the response rate to the NIST MEP survey has been around 70%.

[3] See NIST's Notice for Request and Comment on the NIST MEP Economic Impact Survey, OMB Control Number: 0693–0021 at https://www.govinfo.gov/content/pkg/FR-2023-04-07/pdf/2023-07363.pdf

[4] The survey's impact questions are structured with yes or no responses that allow respondents to quantify their business outcomes. Examples of survey questions are:

- "Did the services you received lead you to retain any jobs over the past 12 months?" Response options include "Yes, how many?", "No," and "Don't know."
- "Did the services you received lead to an increase in sales at your establishment over the past 12 months?" Response options include, "Yes, how much?", "No," and "Don't know."

- Panel Reviews
- Success Stories
- External Research

The strength of the MEP National Network (MEPNN) lies in its capacity to help small and medium-sized manufacturers grow their businesses, adopt new technologies and increase competitiveness. In FY 2023, the MEP National Network (MEPNN) completed over 18,000 projects with more than 11,000 unique businesses. Additional aspects of assessing Center performance and programmatic success are highlighted below.

In addition to the survey, NIST MEP also utilizes quarterly MEP Center reporting on client and project activities to measure the depth and type of engagement that the program has with manufacturers. This allows MEP to report on client interaction and market penetration numbers.

NIST MEP augments reported economic impacts and Center reported client and project activity with qualitative data. This includes semi-annual progress narratives that are reviewed by NIST staff. NIST also leverages its annual and panel reviews of MEP Centers to provide a more detailed look into Center performance trends and operations. Further, NIST MEP requires MEP Centers to submit success stories four times a year. These qualitative inputs allow NIST to take a more holistic approach to its oversight of the MEP Centers and their performance and operations.

Recently, NIST MEP leveraged an independent contractor to assess the economic impact of the program, including the return on investment (ROI) to the U.S. Treasury.[5] According to the report, it was projected that MEP would reach a break-even point on the federal base appropriation based on 5.8% of the reported FY 2023 economic impacts. Moreover, NIST MEP is currently working with external researchers to assess the effectiveness of MEP Center services on business performance using Census data rather than client-reported economic impacts.[6]

NIST would like to provide additional commentary in support of the information outlined in the report. The following comments provide additional context and highlight NIST's ongoing and planned efforts regarding improvements to the NIST MEP's economic impact reporting. NIST will discuss each OIG recommendation individually and provide comments and context for your consideration:

1. **Revise MEP's economic impact reports for FYs 2022 and 2023 and other references to economic impacts on MEP's website attributable to the Centers we reviewed; in addition, disclose MEP's reported economic impacts may be based on inaccurate data and therefore their reliance and use should be limited.**

NIST does not concur with recommendation #1. NIST recognizes that the draft report focused on larger outliers per the OIG's judgmental selection of economic impact data to review, which was 53 judgmentally selected surveys compared with economic impacts from 2,716 completed

[5] https://research.upjohn.org/cgi/viewcontent.cgi?article=1305&context=reports

[6] NIST MEP conducts an external research study that compares businesses who use MEP Center services to those who do not. Researchers have been approved and MEP anticipates completion of study by the end of 2024. This study is conducted every 5 to 7 years and the last study was conducted in 2017.

surveys attributable to these 7 Centers. Across the MEPNN, however, in FY22 were 60 instances (reductions of $3.7 billion in total dollar impact and 2.2 million jobs) where client impact records were adjusted downward and in FY23 there were 48 instances (reductions of $3.3 billion in total dollar impact and 6.9 million jobs) where client impact records were adjusted downward.

NIST MEP does require that Centers notate in MEIS the status of the outlier and provide a rationale for considering the numbers accurate and justifiable. This is a form of certification. NIST acknowledges that oversight and review of these large outliers can be improved. NIST will adjust its existing processes and future impact reporting using additional validation rules, refining outlier documentation requirements within MEIS and conducting more rigorous reviews of selected business outcomes. In addition, NIST will counsel the seven centers on their economic impact verification submissions and their survey management processes. NIST will also discuss takeaways from the OIG evaluation with the MEPNN at upcoming meetings and conferences.

NIST MEP has already begun the process of updating NIST MEP's Reporting Guidelines and bootcamp presentations, as well as building a comprehensive internal process book. NIST MEP also offers MEP Centers multiple training opportunities through survey bootcamps and other presentations as a way to reinforce current policy and procedures.

NIST MEP has a process in place to monitor client impact survey contact changes with the intent of minimizing or preventing unauthorized individuals from accessing the survey. NIST MEP guidance has always been to direct the survey to the best respondent, defined as the person most qualified to discuss the project. Each contact change is reviewed and then approved or disapproved by NIST MEP staff, and Centers are required to submit reasons for changes to contact and/or domain name. We will revisit our current guidance and internal as well as external processes.

2. **Establish procedures for NIST personnel to ensure data reliability (reasonably free from error and bias), including but not limited to (1) formal policies requiring staff to diligently review significant impacts for accuracy and connection to services provided by Centers and (2) techniques to analyze survey data for anomalies before it is finalized.**

NIST concurs with recommendation #2, with caveats. NIST disagrees with the implication that no formal policies or controls exist; however, NIST is committed to updating these procedures to expand its internal reviews and verification of survey data to address the OIG's concerns. NIST will utilize additional analyses of survey data to identify anomalies before releasing the data to the public. NIST is committed to implementing the best statistical methodology to obtain reasonable economic impacts from its Centers.

3. **Establish and implement procedures for Centers and subrecipients to (1) comply with NIST guidelines and (2) ensure data reliability (reasonably free from error and bias), including but not limited to techniques that hold Centers accountable, such as including consequences for noncompliance and certification of Center executives confirming integrity, independence, and due diligence that the reported economic impacts represent what they are intended to: actual economic benefits realized over the last 12 months that are attributable to the services provided.**

NIST concurs with recommendation #3, with caveats. NIST MEP's survey helps the program assess the impact of MEP Centers services on small and medium manufacturers. NIST MEP is committed to collecting business outcomes via its survey, but also to minimizing the public's reporting burden when completing the survey. NIST MEP must balance the quantity and quality of the information collected with the time (burden) that it takes to complete the survey, as required by law.[7] NIST takes this responsibility seriously. NIST MEP is updating its policies and procedures that provide guidance to Centers and subrecipients on survey management and data reliability. NIST MEP does require that Centers notate in MEIS the status of the outlier and provide a rationale for considering the numbers accurate and justifiable. This is a form of certification.

NIST MEP has initiated actions to address some of the OIG concerns. During its evaluation, the OIG identified 2 outliers, out of 888 total outliers generated by the entire MEPNN and reviewed by NIST MEP staff for FY 2022, that were unverified but that were mistakenly included in the economic impact. In response, NIST MEP has augmented its system controls in MEIS. For example, NIST strengthened validation checks, so that NIST staff receive a special alert if the outlier has not been validated by the deadline. This will assist NIST MEP staff in ensuring that all unverified records are identified and zeroed out.

NIST MEP will also consider adding a formal statement to the outlier verification submissions submitted by MEP Centers in MEIS. MEP Center leadership would confirm that due diligence was conducted by the Center over the reported economic impacts. However, confirmation will not require Center executives to confirm actual realized benefits as that is beyond their ability, based on available information.

As stated above, the MEP Client Survey is a voluntary survey of business outcomes. It does not require that manufacturers link their reported impacts to their financial statements and financial projections. Further, every survey, federal or private, should carefully consider sources of survey bias. This is precisely why NIST uses an independent third party, acquired via open competition, to perform the survey on NIST MEP's behalf. NIST also utilizes other performance evaluation practices (annual/panel reviews, external research, etc.) to support the economic impacts reported.

Separately, NIST MEP's aggregate economic impact report is not subject to the same requirements as formal federal financial reporting (e.g. financial statements compliance with generally accepted accounting principles). However, NIST MEP is committed to improving its internal controls over its economic impact reports by updating policies and procedures and expanding its analyses over reported data.

---

[7] The Paperwork Reduction Act (PRA) aims to reduce the burden on the public by streamlining federal information collection processes. The PRA requires federal agencies to submit information collection requests to the Office of Management and Budget (OMB) for review and approval. This ensures that agencies only collect necessary information and avoid unnecessary paperwork. *See*44 U.S.C. § 3501 *et seq*..

4. **Establish procedures that hold Centers accountable for monitoring subrecipient compliance with NIST survey guidelines and ensuring data reliability (reasonably free from error and bias), including consequences for noncompliance.**

NIST concurs with recommendation #4. The MEP Centers are responsible for monitoring and ensuring their subrecipients' compliance with MEP Terms & Conditions and policies and procedures, in accordance with 2 CFR §200.101(b)(2) and §200.332. NIST MEP currently reviews MEP Centers' survey management practices during each MEP Center's Panel Reviews.

If MEP Centers fail to ensure their subrecipients comply with NIST regulations and guidance, they will be subject to additional award conditions as specified in §200.208 and/or penalties outlined in §200.339.

5. **Revise MEP's economic impact reports for FYs 2020 through 2023 to (1) accurately reflect NIST's return on investment and (2) clearly articulate that total federal investment does not include other federal funding sources that may contribute to reported economic impacts.**

NIST MEP does not concur with recommendation #5.

In 2017, NIST MEP made a programmatic decision on how to handle outcome evaluation while the financial side of the program transitioned from 2:1 to 1:1 cost share requirements, per the American Innovation and Competitiveness Act.[8] Although the overall program was mathematically shrinking, NIST MEP believed Congress's intent was for MEP's impact on the nation's small and medium-sized manufacturers to not only remain the constant, but actually grow.

It was through this thinking that NIST MEP created project reporting options. By permitting Centers to report "direct" and "facilitated"[9] projects, MEP Centers were able to demonstrate more accurately their truer reach and impact on small and medium-sized manufacturers. Prior to 2017, NIST MEP's systems labeled each MEP Center's project and client files submitted to NIST MEP as a "direct" project or it was not included. There was no middle ground.

The MEPNN, including both NIST MEP and the MEP Centers, are known as go-to-resources for engaging and improving the business operations of small and medium sized manufacturers. MEP Centers play a critical role in local and regional manufacturing ecosystems nationwide. NIST MEP encourages MEP Centers to leverage their position to maximize the resources that they can bring to manufacturers. Additional funding and resources generated by MEP Centers supports the MEP mission, regardless of source, which is to improve the productivity, efficiency, and competitiveness of the manufacturer.

[8] Public Law 114–329 revised NIST MEP's authorizing statute at 15 U.S.C. § 278k(e) to allow the program to provide up to 50 percent of the capital and annual operating and maintenance expenses to support an MEP Center.
[9] NIST MEP defines facilitated projects as those projects that are not expensed to the cooperative agreement (including matching funds), but are made possible by virtue of the MEP Center's cooperative agreement.

The creation of the "facilitated" reporting option allowed Centers to identify clients and projects that are ancillary ("facilitated") by the Center. The theory behind these reporting options, was that while certain NIST MEP Center projects may not have been charged to the NIST MEP grant or grant matching funds, they were nonetheless made possible by virtue of NIST MEP funding because MEP Centers provided the fundamental infrastructure (e.g., facilities, Center brand recognition, core staff competencies, Board of Director guidance, general organizational oversight, center networking, etc.) needed to obtain the additional resources to serve the small and medium-manufacturer community; to fulfill the MEP mission. Other federal funding received as well as other non-federal funding (above cost-share requirements) received by MEP Centers may have been labeled when reporting its business outcomes to NIST MEP.

External funding to MEP Centers has consistently been a hallmark of MEP Center success when it is viewed as "leverage" in addition to just cost-share. Other federal funding cannot be used as cost share for NIST MEP funding without express statutory authorization.

In FY 2020, NIST MEP was appropriated emergency funding via the CARES Act (P.L. 116-136). Then in FY 2023, the Consolidated Appropriations Act (P.L. 117-328) provided funds for the NIST MEP's expansion awards pilot program. In both instances, Congress restricted the use of the funding to activities that fall outside of MEP's base activities authorized in MEP's governing statute.[10] Specifically, the CARES Act funding ($50 million) was to help assist manufacturers to prevent, prepare for, and respond to the coronavirus,[11] and the expansion award pilot program funding was to improve the resiliency of domestic supply chains.[12]

Due to these restrictions, these supplemental funding amounts were excluded from NIST MEP's economic impact calculations. MEP did report how its CARES Act funding was used in separate reports.[13] By October 1, 2025, NIST MEP will provide Congress a summary on the activities conducted by the expansion awards pilot funding awarded to the MEP Centers pursuant to 15 U.S.C. § 278k-2.[14]

Separately, the OIG previously recognized NIST's efforts on the rapid roll out of the CARES

---

[10] The objective of the MEP program is to enhance competitiveness, productivity, and technological performance in United States manufacturing, per 15 USC 278k(c). The authorized activities of a MEP Center are located at 15 USC 278k(d).

[11] https://www.govinfo.gov/content/pkg/COMPS-15754/pdf/COMPS-15754.pdf

[12] The Consolidated Appropriations Act of 2023 (Public Law 117-328) appropriated $13 million in funding to implement the Research and Development Competition and Innovation Act of 2022 (Public Law 117–167), which established NIST MEP's expansion awards pilot program. See 15 U.S.C. § 278k-2(e) for discussion of the allowed funding uses of the program. NIST MEP determined (as announced in its 2022 Request for Financial Assistance) that the $13M will be used to for services that will improve the resiliency of domestic supply chains, which is one of the allowed uses under the Research and Development Competition and Innovation Act of 2022.

[13] https://www.nist.gov/system/files/documents/2022/07/21/MEP%20Cares%20Act%20Impacts%20Summary-508.pdf and https://www.nist.gov/system/files/documents/2022/07/21/MEP%20Cares%20Act%20Stories%20by%20State-508.pdf

[14] *See* 15 U.S.C. § 278k-2(l).

Act funding to the Centers during the pandemic.[15] The OIG found that NIST was successful in distributing CARES Act funding to MEP Centers. This positive accolade demonstrates NIST MEP's commitment to properly account for and report on the uses of its appropriated funding.

NIST MEP will use this recommendation from the OIG as a cause to reevaluate the appropriateness of its 2017 policy in today's operating environment. In addition, NIST will consider methods in future reporting to better segment business impacts by funding source (direct vs. facilitated). Further, for supplemental funding awarded with separate reporting requirements, NIST MEP will consider additional disclosures in its future reporting, to distinguish funding sources.

6. Establish procedures for NIST personnel to ensure future economic impact reports accurately reflect NIST's return on investment.

NIST MEP concurs with recommendation #6 with caveats. Current reporting is consistent with existing policies, as detailed above. NIST MEP agrees to update its existing performance measurement procedures and ROI analysis in accordance with statutory requirements, including its calculation of its return on investment (ROI), and in accordance with the findings of the reevaluation of the 2017 policy described above. MEP will improve and further clarify its distinction between MEP Center client-reported business impacts and the amount of NIST MEP investment in the program, including supplemental funding.

7. Remove from NIST reporting guidelines statements that currently direct Centers to write the expectation of completing the MEP survey into contracts.

NIST concurs with recommendation #7. NIST is strengthening and reviewing existing processes and policies as well as developing new processes and policies as needed to reinforce and communicate that:

- The surveys are voluntary to clients and to remove any conflicting language implying survey completion requirements;
- Access to and the cost of MEP Center services is not conditional upon completing a client impact survey;
- MEP Centers may educate clients on the importance of the survey and answer questions on topics contained within the survey, but may not influence a client's survey responses or assist the client in completing the survey and
- NIST MEP will conduct an upcoming webinar on its revised guidance on survey intent and management.

8. Direct Centers and their subrecipients to remove contract clauses requiring clients to take the MEP survey.

---

[15] https://www.oig.doc.gov/Pages/NIST-Was-Effective-in-Implementing-the-Requirements-for-Awarding-Funds-Under-the-CARES-Act.aspx and https://www.oig.doc.gov/OIGPublications/Evaluation%20of%20NIST%20Pandemic%20Relief%20Final%20Report.pdf

NIST concurs with recommendation #8. NIST is strengthening and reviewing existing processes and policies as well as developing new processes and policies as needed to reinforce and communicate that:

- MEP Centers must remove any language from their contracts with subrecipients and clients that implies mandatory or required completion of the survey.

NIST will develop and submit a corrective action plan, as applicable, to address the recommendations identified upon receipt of the OIG's final report.

cc: Amy Egan, NIST OIG Liaison

REPORT

FRAUD WASTE & ABUSE

HOTLINE

Department of Commerce

Office of Inspector General Hotline

www.oig.doc.gov | 800-424-5197