Department of Commerce (DOC)
FY 23 Annual Evaluation Plan

Introduction and Background

The Foundations for Evidence-Based Policymaking Act of 2018 ("Evidence Act") requires that agency Evaluation Officers coordinate the development of an Annual Evaluation Plan that is published concurrent with the agency Annual Performance Plan. The Annual Evaluation Plan describes "significant" evaluations and related information for the subsequent fiscal year. The list to the right provides the criteria DOC considered when designating projects as significant evaluations. All evaluations presented in this draft FY 23 plan are supported by funding in the FY 23 President's Budget.

In addition to Annual Evaluation Plans, CFO Act agencies are required to develop multi-year Learning Agendas. The Learning Agenda describes both evaluations and other evidence that will be developed to support effective implementation of the Department's new 5-year Strategic Plan. A Capacity Assessment reporting the agencies resources for accomplishing the Learning Agenda is also required. Both the Learning Agenda and the Capacity Assessment are published with the FY 22/26 Department Strategic Plan.

SIGNIFICANT EVALUATIONS

Significant evaluations meet one or more of the following criteria:

- Fundamental to the DOC Mission
- Aligns with leadership priorities
- Has potential to create a major advance in benefits from an investment, efficiency and/or customer experience
- Supports economic recovery and/or resilience

Plan Development Process

The Annual Strategic Review (ASR) completed in the spring of 2021 was used to propose evaluation questions for the FY 23 Evaluation Plan. The cross-functional, multi-bureau Strategic Objective (SO) Teams that conduct the review on each SO were asked to suggest programs/initiatives/processes for evaluation.

Questions from the ASR were revised and refined based on Administration priorities and through the process of developing the Strategic Plan and Learning Agenda for FY 22/26. The Evaluation Plan was also influenced by Congressional interests, as reflected in

questions posed during confirmation hearings; leadership discussions with community groups and stakeholders; and Executive Orders issued by the White House.

Most notably, Executive Order (E.O.) 13985 is integral to the plan. The E.O. directs Federal agencies to "pursue a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality." This plan emphasizes the development of information needed to ensure all American's have full access to the services and products of the Department of Commerce. In the fall of 2021, additional input on the plan was received through a "listening session" that included organizations that represent historically underserved communities and populations.

Caveat Regarding Methodologies

The questions, methodologies and data sources presented in this plan reflect current knowledge and initial thinking and will be adjusted as activities get underway. Internal experts and/or academics will be engaged to develop the detailed approach to evaluating a program or policy. In addition, an internal peer review process will be employed to refine questions and methodologies and identify the best sources of data.

Dissemination of Evaluation Findings

At significant milestones in the evaluation process, drafts and preliminary findings will be shared with internal stakeholders and staff of collaborating organizations. When evaluation projects are complete, the reports will be posted on the public-facing websites of the sponsoring bureaus. However, documents will not be posted if there are legal restrictions on access to the information, e.g., for security or privacy reasons.

Significant evaluation findings are often presented at conferences and workshops to the appropriate communities of practices. Some evaluations are published in peer-reviewed journals as an objective measure of quality and to make the results more accessible.

Types of Evaluations

The project descriptions in this Evaluation Plan describe projects as being primarily in one of four categories. The categories are defined below and are excerpted from OMB M 20-12. However, OMB M 20-12 also provides that "evaluations can also examine questions related to understanding the contextual factors surrounding a program, as well as how to effectively target specific populations or groups for a particular intervention. They can provide critical information to inform decisions about current and future programming, policies, and organizational operations. Finally, evaluations can and should be used for learning and improvement purposes, as well as accountability purposes."

Formative Evaluation is typically conducted to assess whether a program, policy, or organizational approach, or aspect thereof, is feasible, appropriate, and acceptable before it is fully implemented. It may include process and/or outcome measures. However, unlike outcome and impact evaluations — which seek to answer whether the program, policy, or organization met its intended goals or had the intended impacts — a formative evaluation focuses on learning and improvement and does not aim to answer questions of overall effectiveness.

Impact Evaluation assesses if a program, policy, or organization, or aspect thereof, causes an increase in impact compared to those of a counterfactual. In other words, this type of evaluation estimates and compares impacts (e.g., increased jobs, business revenue), with and without the program, policy, or organization, or a feature of the program or policy. Impact evaluations include both experimental (i.e., randomized controlled trials) and quasi-experimental designs (i.e., a comparison group with similar demographics). An impact evaluation can help answer the question, " did the intervention lead to the observed outcome or impact?"

Outcome Evaluation measures the extent to which a program, policy, or organization has achieved its intended outcome(s) and focuses on outputs and outcomes to assess effectiveness. Unlike an impact evaluation, it typically cannot discern causal attribution. For instance, it can report if the number of jobs increased in a Federally assisted business but cannot conclude that the assistance caused the number of jobs to increase. An outcome evaluation can help answer the question "were the intended outcomes of the program, policy, or organization achieved?"

Process or Implementation Evaluation assesses how the program or service is delivered relative to its intended theory of change, and often includes information on content, quantity, quality, and structure of services provided. These evaluations can help answer the question, "was the program, policy, or organization implemented as intended?" or "how is the program, policy, or organization operating in practice?" Process evaluations are significant because an overly complex or time-consuming service delivery process can undermine the level of outcome/impact achieved even if the basic concept underpinning a program is sound.

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Evaluation and Evidence-Building Activities Descriptions

Section 1: Improved Statistics to Support Better and More Equitable Management of the Economy

Lead Bureau: Bureau of Economic Analysis (BEA)

FY 23 Significant Evaluation Question: What data and measurement challenges will be a major obstacle in the development of measures of the economic health of various population segments at the state level?

Related Strategic Objective(s):
Strategic Goal 4 – Expand Opportunity and Discovery through Data
Strategic Objective 4.2– Modernize economic and demographic statistics to better meet business, policymaker, and community needs

Rationale for Topic's Priority and How the Evaluation Findings will be Used: The COVID-19 pandemic has impacted economic growth and added to concern about the distribution of income. Though BEA has developed prototype estimates of the national distribution of income and is developing a distribution of state income, these estimates need further work both regarding data that can be used and in measurement techniques. The refined distribution

statistics will equip policymakers with the information they need to further support the economic recovery and drive future investment and economic development decisions.

Type of Evaluation (formative, process, outcome, impact): Formative Evaluation

Methodology/Approach for Evaluation: A Formative Evaluation will be conducted to assess the feasibility of improving and accelerating publication of statistics, consistent with Gross Domestic Product (GDP), on national measures of personal income distribution. Improvements include new and more timely data sources, better measurement tools, and continuation of the development of prototype state-level measures. The evaluation will also assess the feasibility of developing and delivering first-of-their-kind prototype statistics on business investment for each state, with the goal of producing annual measures of these statistics.

New methodologies are developed based on academic research that has been modified to consider national accounts (GDP) methods, definitions, and production needs.

Equity Component of Methodology: Methodology will focus on regional and income distribution measures, allowing for a better understanding of how policy can target specific communities.

Contractor/Academic or Unit Who Will Do the Research: BEA Office of the Chief Economist and Regional Economics Directorate

Data Source: Available – Federal data sources include — but not are not limited to — BEA's measures of personal income, personal disposable income and consumer spending, Census Bureau/Bureau of Labor Statistics (BLS) Current Population Survey data, Internal Revenue Service (IRS) Statistics of Income data, BLS Consumer Expenditure Survey data, data from the Congressional Budget Office, Federal Reserve Board Survey of Consumer Finance data, etc.

Need to Find or Create – New data sources will be identified, purchased, and integrated as necessary, consistent with FY 23 funding.

Challenges: The primary challenge is using existing data sources developed for other purposes and devising adjustments so that the data fits the definition and scope of the intended measures BEA would like to develop. In most circumstances, the bureau also requires data that is publicly available (for transparency purposes) and produced on a regular basis for use in the ongoing production of the BEA developed measures.

Dissemination: BEA will publish research as BEA Working Papers and in academic journals, present at conferences, and engage with external advisory committees. Newly developed statistics will be disseminated following existing procedures and made available on the BEA website.

Section 2: 2030 Census Research and Planning

Lead Bureau: Census Bureau

FY 23 Significant Evaluation Questions: What results and lessons learned from the 2020 Census can be used to inform the design of the 2030 Census to increase effectiveness and efficiency?

Related Strategic Objective(s):
Strategic Goal 4 – Expand Opportunity and Discovery through Data
Strategic Objective 4.2 – Modernize economic and demographic statistics to better meet business, policymaker, and community needs

Rationale for Topic's Priority and How the Evaluation Findings will be Used: The decennial census is the largest civilian mobilization in the Nation, comparable in scope only to military mobilizations for war. This expansive effort requires a complex operational design, including processes to ensure a complete and well-integrated design that supports the program strategy. The process produces operational and IT solutions needed to test the design and conduct the 2030 Census. Lessons learned from the 2020 Census will guide the rigorous assessment, research, and testing phase of the2030 operational design.

Type of Evaluation (formative, process, outcome, impact): This is a process evaluation.

Methodology/Approach for Evaluation: This evaluation will assess aspects of the 2020 Decennial approach and research and test possible improvements to establish the initial operational design for the 2030 Census, guided by four high-level Enhancement Areas:

- Streamline data collection to minimize respondent burden
- Modernize group quarters enumeration to address the complex and evolving living situations
- Integrate data processing with data collection to identify and address issues in real-time
- Streamline the operational support infrastructure to improve effectiveness

The evaluation will identify 2020 Census "lessons learned" through interviews with leadership, staff, and stakeholders. This qualitative approach and quantitative analyses of 2020 will be used to develop questions on the quality and effectiveness of operations. The questions will drive the research and testing leading to the initial operational design for the 2030 Census.

Equity Component of Methodology – The second Enhancement Area focusing on modernizing the approach to enumerating people in Group Quarters will have a strong focus on improving enumeration methods for some of the most underserved populations (e.g., persons experiencing homelessness, transitory populations, etc.).

Contractor/Academic or Unit Who Will Do the Research: Staff in the Decennial, Research & Methodology, and Demographic Directorates at the U.S. Census Bureau, as well as contract support provided by the Mitre Corporation.

Data Sources: 2020 Census operational assessments, evaluations, and lessons learned.

Challenges: The need for resources for conducting research and testing early in the decade must be clearly articulated to Congress. In past censuses, much of the infrastructure, particularly information technology, that has been built for the census has been decommissioned after the major operations and data releases have been completed, only to be rebuilt for the next census cycle. For the 2030 Census, the Census Bureau proposes to "flatten the peak" by investing in research, IT systems, and program management early in the decade, maximizing the potential to capitalize and build on the innovations implemented for the 2020 cycle with the goal of reducing the funding needed later in the decade when compared to previous cycles.

Need to find or create additional data sources to support innovations around data collection methodologies for housing units and group quarters.

Dissemination: Throughout the process of developing and testing the design for a Decennial Census, briefings are held for experts and the public. Input is requested. The operating design is routinely scrutinized by highly regarded experts in the different components of the execution approach.

Section 3: Economic Advances from EDA American Rescue Plan Programs

Lead Bureau: Economic Development Administration (EDA)

FY 23 Significant Evaluation Questions:
Question 1 – To what extent do the funds provided by EDA's American Rescue Plan (ARP) programs substantially reach historically underserved populations and geographies?

Question 2 – What are the long-standing baseline economic conditions in communities receiving an award from EDA's American Rescue Plan suite of programs?

Related Strategic Objective(s):
Strategic Goal 2 – Foster Inclusive Capitalism and Equitable Economic Growth
Strategic Objective 2.1 – Drive equitable, resilient, place-based economic development and job growth

Rationale for Topic's Priority and How the Evaluation Findings will be Used: Addressing economic disparities in historically underserved populations and geographies is critical to EDA's mission. EDA is prioritizing research on awards made under the American Rescue Plan, and the long-term economic conditions within underserved communities prior to the awards. Findings will identify improvements needed to ensure these communities are better served and have the foundation needed for long-term economic development. Research into these questions will provide the baseline information needed for future evaluations.

Type of Evaluation (formative, process, outcome, impact): Formative Evaluation

Methodology/Approach for Evaluation: EDA expects to use a mix of quantitative and qualitative analyses using EDA award data, modeled tract-level demographic data, and grantee questionnaire responses. Additionally, EDA will work with external researchers to collect baseline data on economic conditions both pre-award and during project deployment. A significant component of this research will be assessing the data/approach used to target benefits and the data available to track economic progress for small geographies.

Equity Component of Methodology: Competitive applications for EDA awards must be responsive to one or more of EDA's investment priorities, including the Equity investment priority. For an applicant to meet the Equity investment priority, they must demonstrate their economic development planning or implementation project "advances equity across America through investments that directly benefit 1) one or more traditionally underserved populations, including but not limited to women, Black, Latino, and Indigenous and Native American persons, Asian Americans, and Pacific Islanders or 2) underserved communities within geographies that have been systemically and/or systematically denied a full opportunity to participate in aspects of economic prosperity such as Tribal Lands, Persistent Poverty Counties, and rural areas with demonstrated, historical underservice.

A key component of this research will be to determine the extent to which EDA's American Rescue Plan-funded projects reflect this investment priority.

Contractor/Academic or Unit Who Will Do the Research: EDA expects to contract/award third-party entities to support these evaluations.

Data Source: Available – Universe of all EDA awards made under the American Rescue Plan, including project types and geographic project location details (complete data set expected by the end of FY 2022).

Need to Find or Create – 1) Modeled, tract level demographic data. 2) Grantee responses to equity questionnaire. 3) Long-term baseline economic data in specific geographies relative to EDA awards.

Challenges:

- A government-wide definition for "underserved" does not exist. EDA will be using definitions developed for its equity investment priority, which may not align with other agencies.
- Existing EDA grants management systems lack a sophisticated way for tracking detailed project location data, which is mostly captured in open text fields. Work towards a new EDA grants management system is underway but is expected to extend into FY 23. Given this, ARP Act project location capture will happen with its existing system in place.
- Obtaining permission, via Paperwork Reduction Act, to augment existing data collection processes to include questions geared towards equity.
- Because part of this evaluation will rely on grantee responses, grantee non-response could be a challenge, particularly with increased reporting requirements.
- Work on modeled, tract-level demographic data is just beginning with a third-party research partner. Project timeline development is under way and could extend into FY 23.
- EDA uses a competitive grant process to fund its evaluation work. An appropriate, competitive application must be received, reviewed, and awarded prior to FY 23.

Dissemination: Report(s) on this research will be available on the EDA website. Lessons learned on the approach and data adequacy will be presented in newsletters and/or workshops for the Federal, non-profit, and academic community researching equity issues.

Section 4: Trade Enforcement

Lead Bureau: International Trade Administration (ITA)

FY 23 Significant Evaluation Question: Have resources been effectively deployed to enforce U.S. trade laws? How do the configuration/deployment of Enforcement and Compliance (E&C) resources correlate with results in trade law enforcement?

Related Strategic Objective(s):
Strategic Goal 1 – Drive U.S. Innovation and Global Competitiveness
Strategic Objective 1.4 – Protect national security interests and enforce trade rules

Rationale for Topic's Priority and How the Evaluation Findings will be Used: ITA trade enforcement activity continues at historic high levels due to a record surge in requests for use of antidumping/countervailing duty trade laws to protect U.S. industries from unfairly traded imports. Greater understanding of the impact of E&C's resource allocation will help to inform ITA's plans for maximizing mission success.

Type of Evaluation (formative, process, outcome, impact): Process and Outcome Evaluation.

Methodology/Approach for Evaluation: Examination of actual E&C processes v. process design utilizing existing internal information and customer feedback. Data/information compiled (including review of administrative and outcome data, personnel interviews, and workflow mapping) will compare the level/type of current resource allocation with antidumping/countervailing duty trade law action and results.

Equity Component of Methodology: N/A.

Contractor/Academic or Unit Who Will Do the Research: Enforcement and Compliance staff

Data Source: Available – E&C standard operating procedures, resource plans, relevant statistics, interviews with staff and stakeholders

Need to Find or Create – N/A.

Challenges: E&C actions are only one part of the United States government trade remedy law enforcement mechanism. E&C is responsible for determinations of dumping and/or unfair subsidization; the International Trade Commission is responsible for determinations of injury to domestic industry, and Customs and Border Patrol are responsible for imposition of trade remedy duties. It may prove difficult to fully ascertain the impact of E&C's resource deployment when considering broad questions like the US government's success in enforcing U.S. trade laws. As these challenges are beyond Commerce Department control, E&C will focus on its role in U.S. enforcement of these laws and attempt to discern how its resource allocation affects the part of the U.S. mission for which it is accountable.

Dissemination: Findings of the research will be discussed with other agencies in the trade law enforcement space; findings will be available to the public depending on the sensitivity of the information.

Section 5: SelectUSA's Services Roll Out

Lead Bureau: International Trade Administration (ITA)

FY 23 Significant Evaluation Questions: How have SelectUSA services affected different industries and U.S. communities?
Have recent efforts to broaden and deepen SelectUSA Service delivery been effective? Are further process or policy changes needed to extend the benefits equitably?

Related Strategic Objective(s):
Strategic Goal 1 – Drive U.S. Innovation and Global Competitiveness

Strategic Objective 1.3 – Increase international cooperation and commerce

Rationale for Topic's Priority and How the Evaluation Findings will be Used: ITA and the Department will use foreign direct investment to build back better. There is particular emphasis on more/better assistance to underserved communities and building a more resilient supply chain. Knowing the outcome and equity of past SelectUSA work and methods of delivery are essential to targeting the most effective program interventions.

Type of Evaluation (formative, process, outcome, impact): Process and Outcome evaluation.

Methodology/Approach for Evaluation: The approach will utilize geo-coded outcome information (Client-verified WIN data) sourced from ITA's Salesforce platform onto an ArcGIS map. Another tool will be similarly geo-coded dimensions of analysis (such as industry, socio-economic indicators, cluster effects, deal value, deal jobs, and inverted cluster analysis) from the Census Bureau's American Community Survey (ACS). Analysis will be conducted at the county level to better understand the share of SelectUSA program impacts that benefit underserved communities versus other demographics. Further analysis will examine and identify underserved communities where SelectUSA impacts have not been observed. This will generate program recommendations for targeted, proactive Economic Development Organization (EDO) outreach.

Depending on the availability of resources, an audit of SelectUSA's WINs over time will also be undertaken. Interviews with former clients will be used and new data (Client-verified WINs) logged into Salesforce when an investment announcement is made. External economic factors that influence how much is invested 6 months, 2 years, etc. will be factored into the analysis. Interviews and survey data will provide insight into SelectUSA's influence on investments.

Equity Component of Methodology: Socio-economic indicator dimensions such as household income, poverty rates, and unemployment rates at the U.S. County level, crossed with inverse clusters in ArcGIS, will identify geographies that have experienced less SelectUSA-assisted WINs. By engaging directly with those geographies, SelectUSA hopes to equitably offer services to disadvantaged communities through evidence-based interventions.

Contractor/Academic or Unit Who Will Do the Research: SelectUSA Investment Research Team (In-house contract staff).

Data Source: Available – American Community Survey (ACS), Census; SelectUSA Master WINs Spreadsheet (Derived from Salesforce).

Need to Find or Create – Any official definition of disadvantaged communities/persons from a DOC statistical authority, publicly available at the county level would be ideal. Proxies will be used until this data is available.

Challenges: Data quality management in Salesforce is an ongoing effort that is essential to the reliability of evaluation work.

The lack of a definition for disadvantaged businesses and lagged data publication at the county level (ACS data needed for 2020 will not be available until March 2022) is also a challenge. ITA will consult with the Census Bureau and explore adapting EDA's definition of underserved communities.

Measurement challenges may be addressed by a limited pilot or demonstration project in selected locations to refine the research approach.

Dissemination: The final report will be available on a public facing website and presented to stakeholders in meetings and/or workshops.

Section 6: Minority Businesses Participation in Manufacturing

Lead Bureau: Minority Business Development Agency (MBDA)

FY 23 Significant Evaluation Questions: To what extent do minority business enterprises (MBEs) participate, innovate, and compete in manufacturing?
What Minority Business Development Agency (MBDA) interventions most effectively increase minority business enterprises (MBEs) participation, innovation, and competitiveness in manufacturing? What interventions increase MBEs' ability to participate, innovate, and compete in manufacturing?

Note: The Minority Business Development Act of 2021 directed MBDA to research questions related to minority businesses filling gaps in the US supply chain and the viability of alternative sources of financing for minority businesses. After dialogue needed to refine the questions, their scope, and identify funding, additional MBDA questions may be added to this Evaluation Plan.

Related Strategic Objective(s):
Strategic Goal 1 – Drive U.S. Innovation and Global Competitiveness
Strategic Objective 1.1 – Revitalize U.S. manufacturing and strengthen domestic supply chains
Strategic Objective 1.3 – Increase international cooperation and commerce

Strategic Goal 2 – Foster Inclusive Capitalism and Equitable Economic Growth
Strategic Objective 2.1 – Drive equitable, resilient, place-based economic development and job growth

Rationale for Topic's Priority and How the Evaluation Findings will be Used: The MBDA Advance Manufacturing Center (AMC) promotes the growth and global competitiveness of large, medium, and small businesses owned and operated by minority groups. The program specializes in providing business development services and capacity building. These services are designed to complement other Federal manufacturing services. This research will identify operational needs of minority manufacturers, with a view to guiding MBDA programs, and possibly overall Federal actions taken, to provide equitable access to manufacturing opportunities.

Type of Evaluation (formative, process, outcome, impact): Assessing data sets available for measuring minority business participation in manufacturing is a formative evaluation. The study will establish statistical benchmarks among firms of similar characteristics to those served by the AMC program and analyze the effectiveness of different types of interventions, i.e., impact evaluation.

Methodology/Approach for Evaluation: The formative evaluation will compare alternative sources of existing data on industry and firm-specific characteristics (e.g., value of capital assets, employees, firm age, financial condition, demographics, locations, size, export destinations, and industry presence). The impact analysis will use a quasi-experimental design to compare business size, growth, etc. of business receiving different types of assisted with unassisted businesses with similar characteristics. The results will suggest further research on effective ways of supporting minority manufacturers' growth; risk factors; innovation, technology, workforce needs; and opportunities for targeted government assistance. To provide comparative analysis to a wider universe of firms, data from other agencies (i.e., SBA, ITA, NIST, Federal Reserve) will be studied for minority manufacturing characteristics, types of assistance provided, international market challenges, regional factors, or the level of specialization in certain industrial sectors. Statistical indicators will be calculated to provide cross-comparisons among different data segments as well as visualization of trends, industry components, firm characteristics, etc. The results will be reported in dashboards to allow consistent and accessible overviews of the data.

Equity Component of Methodology: The study will help identify factors that support the success of minority-owned business: African Americans, Hispanic Americans, Native Americans, Alaska Native Americans, Asian and Pacific Americans and Subcontinent Asian Americans.

Contractor/Academic or Unit Who Will Do the Research: This study will be conducted through collaboration with the US Census Bureau and with the support of academics engaged directly through an IPA and/or in cooperation with the GSA Office of Evaluation Sciences.

Data Source: Available – The study will use data from MBDA's, Customer Relationship Management system which is the repository for the MBDA's Business Center and Specialty Center client data. Comparison group data is from the Census Bureau and NIST Manufacturing Extension Partnership. Further analysis will use data from other federal agencies (i.e., NIST MEP, Governors of the Federal Reserve, SBA, BEA).

Need to Find or Create – Additional data may be available through organizations such as minority chambers of commerce, minority serving academic institutions, and other entities serving minority businesses. Research on options is part of this project.

Challenges: Availability of information on race and ethnicity, which can be overcome by using imputation algorithms. Sample-selection bias may require two-step estimators or similar techniques.

Dissemination: The research report and findings will be available on the MBDA website and will be presented to stakeholders at workshops/conferences and in newsletters.

Section 7: Assessments by the National Academies of Science, Engineering and Medicine (NASEM)

Lead Bureau: National Institute of Standards and Technology (NIST)

FY 23 Significant Evaluation Questions: What are the technical merit, relevance, and impact of NIST's laboratory programs? The questions are answered by assessing the following:

1. The organization's technical programs.
2. The portfolio of scientific expertise within the organization.
3. The adequacy of the organization's facilities, equipment, and human resources.
4. The effectiveness by which the organization disseminates its program outputs.

Related Strategic Objective(s):
Strategic Goal 1 – Drive U.S. Innovation and Global Competitiveness
Strategic Objective 1.1 – Revitalize U.S. manufacturing and strengthen domestic supply chains
Strategic Objective 1.2 – Accelerate the development, commercialization, and deployment of critical and emerging technologies

Strategic Goal 3 – Address the Climate Crisis through Mitigation, Adaptation, and Resilience Efforts
Strategic Objective 3.1 – Increase the impact of climate data and services for decisionmakers through enhanced service delivery and improved weather, water, and climate forecasts

Strategic Goal 4 – Expand Opportunity and Discovery through Data
Strategic Objective 4.1 – Implement evidence-based decision making within the Department of Commerce to increase program and policy impact

Rationale for Topic's Priority and How the Evaluation Findings will be Used: NIST asks the NASEM to conduct an annual assessment of a portion of the NIST laboratories. A panel of independent technical experts conducts the study. These NASEM experts assess the technical merit, relevance, and quality of NIST's laboratory programs in the context of NIST's mission, which is "to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life." The results of the findings are used to shape future NIST research directions and focus for specific NIST technical programs.

Type of Evaluation (formative, process, outcome, impact): Process and Outcome Evaluation

Methodology/Approach for Evaluation: Study committees typically gather information through 1) meetings that are open to the public and that are announced in advance through the Academies' website; 2) the submission of information by outside parties; 3) reviews of the scientific literature; and 4) the investigations by the committee members and staff. In all cases, efforts are made to solicit input from individuals who have been directly involved in, or who have special knowledge of the problem under consideration. The technical merit is assessed using several criteria, such as the number of publications and the impact factor of the journals they are published in, number of patents or invention disclosures, level of external stakeholder interest and engagement, and participation in technology transfer activities.

Equity Component of Methodology **–** Equity is not a component of this assessment, but the committee must include experts with the specific expertise and experience needed to address the study's statement of task. The National Academies value diversity and equity and strive for a culture of inclusion in all work and activities, including the study process. NASEM brings together recognized experts from diverse disciplines and backgrounds who might not otherwise collaborate. NASEM is entirely responsible for the selection of panel members, and NIST has no say in the members selected unless to point out areas of conflict of interest.

Contractor/Academic or Unit Who Will Do the Research: National Academies of Science, Engineering and Medicine (NASEM)

Data Source: NIST's research labs

Determined – Engineering Lab's Smart Manufacturing Program, Physical Measurement Lab's Boulder campus
Undetermined – Material Measurement Lab's divisions to be assessed – TBD

Challenges: Uncertainty associated with the telework and remote work policies makes it challenging to plan for meetings.

Dissemination: Meetings that are part of the review are open to the public and are announced in advance through the Academies' website. The final report and findings will be available on the NIST website.

Section 8: The National-Level Economic Effect of the Manufacturing Extension Partnership (MEP)

Lead Bureau: National Institute of Standards and Technology (NIST)

FY 23 Significant Evaluation Questions: What are the estimated outcomes of MEP projects, including:

- Jobs created and retained
- Sales created and retained
- Cost savings
- Investments

Related Strategic Objective(s):
Strategic Goal 1 – Drive U.S. Innovation and Global Competitiveness
Strategic Objective 1.1 – Revitalize U.S. manufacturing and strengthen domestic supply chains
Strategic Objective 1.2 – Accelerate the development, commercialization, and deployment of critical and emerging technologies

Strategic Goal 4 – Expand Opportunity and Discovery through Data
Strategic Objective 4.1 – Implement evidence-based decision making within the Department of Commerce to increase program and policy impact

Rationale for Topic's Priority and How the Evaluation Findings will be Used: MEP Centers deliver technical assistance to primarily small- and medium-sized manufacturing establishments to help them improve their productivity and competitiveness. The Centers assist with product development, new investments, and improved products and processes and provide tools and resources for business expansion and business continuity planning that contribute to cost savings. These improvements increase the productivity, profitability, and competitiveness of client establishments, which in turn improves the economy by creating jobs, increasing earnings, and expanding the tax base. Each year, NIST MEP surveys their clients using an independent third-party vendor (Fors Marsh Group) to estimate the overall effect of NIST MEP on the U.S. economy.

Type of Evaluation (formative, process, outcome, impact): This is an Outcome Evaluation.

Methodology/Approach for Evaluation: Using a model developed by Regional Economic Models, Inc. (REMI), the study estimates the indirect and induced effects of the reported increase in jobs, sales, cost savings, and investments by MEP clients. Three scenarios are presented to estimate the output of NIST MEP:

- Scenario 1 is the unconstrained approach in which it is assumed that an increase in sales of one establishment does not affect or reduce the sales across other establishments. This scenario is included to serve as an upper bound on the estimates.
- Scenario 2 assumes that competition among establishments mitigates the overall effects of the estimated increase in sales and employment, since establishments that do not benefit from the services rendered by MEP may lose market share to those that do and thus grow less quickly than they would have otherwise.
- Scenario 3 estimates the fraction of reported outcomes required for the program to break even, as measured by the projected tax increases covering the annual cost of the program for FY2020 ($146 million). This allows the study to determine whether the cost of MEP is justified by the benefits it generates.

Equity Component of Methodology – The survey is administered to MEP clients across the country, covering all the geographical regions of the U.S.

Contractor/Academic or Unit Who Will Do the Research: Consulting support will be contracted.

Data Source: Self-reported survey on the outcomes of MEP 10,839 clients from across the country. Of the clients surveyed in FY2020, 8,500 (78.4%) responded to the survey.

Challenges: This analysis does not construct a control group of randomly selected companies to compare the performance of creating new and retained jobs and sales or on cost savings and investments. This limits the causality that can be assigned to MEP efforts in assisting establishments. Because of self-selection bias, establishments opting to use MEP services may also be more inclined to invest in workforce training, equipment, and other technology on their own.

Dissemination: The final report and findings will be posted on the NIST website.

Section 9: Deployment of Impact-based Decision Support Services (IDSS) to Underserved Communities

Lead Bureau: National Oceanic and Atmospheric Administration (NOAA)

FY 23 Significant Evaluation Questions: How well are Impact-based Decision Support Services (IDSS) being provided to benefit the communities they serve, especially in historically underserved and socially vulnerable communities (HUSVCs), and those communities that are particularly vulnerable to climate hazards?

Does NWS have the necessary people, technology, and expertise to support and deliver IDSS to emergency managers and HUSVCs?

Related Strategic Objective(s):
Strategic Goal 3 – Address the Climate Crisis through Mitigation, Adaptation, and Resilience Efforts
Strategic Objective 3.1 – Increase the impact of climate data and services for decisionmakers through enhanced service delivery and improved weather, water, and climate forecasts

Rationale for Topic's Priority and How the Evaluation Findings will be Used: Ninety-eight (98) percent of all presidentially declared disasters are related to weather, leading to approximately 500 deaths per year and nearly $15 billion in damage. The Nation is facing fast-growing societal needs and demands for new and expanded weather, water, and climate products and services across all sectors of communities, as well as providing IDSS across all government levels. Furthermore, the nation continues to experience a growing number of record-breaking extreme weather and water events throughout the entire year under the influence of climate change. Emergency managers tell NOAA that the NWS's improved impact-based forecasts, communicated through trusted relationships, have more effectively supported their life-saving work. This customer service-based approach helps emergency managers and communities make better decisions when responding to extreme weather and water events

Against this backdrop, NWS needs to enhance relationships with communities and organizations to ensure that products and services reach everyone in the country, regardless of socio-economic status, race, language, or other factors that might lead to inequitable access. In FY 21, NWS conducted a Service Equity Assessment in response to E.O. 13985. The assessment identified the need for an in-depth review of access to IDSS by all HUSVCs. The research will bolster understanding required to improve how life-saving decision support services are delivered and meet the needs of these communities. Every community should be responsive and resilient in the face of extreme weather and water events.

Type of Evaluation (formative, process, outcome, impact): Implementation Evaluation.

Methodology/Approach for Evaluation: NWS currently conducts three surveys of customers:
1) Annual Core Partner survey that covers the full breadth of NWS services provided,
2) Episodic Core Partner survey on specific weather, water, and climate events and
3) University of Oklahoma Center for Risk and Crisis Management, Weather and Society Survey.
Survey findings will be used to identify unmet service needs, resource requirements and process deficiencies.

Equity Component of Methodology: The NWS proposed surveys will help conduct a preliminary review of how NOAA services are supporting HUSVCs and what improvements are needed.

Contractor/Academic or Unit Who Will Do the Research: NWS Headquarters, Field Offices, and contractors.

Data Source: Available – 1) Annual Core Partner survey, 2) Episodic Core Partner survey 3) Initial Service Equity Assessment, 4) University of Oklahoma Center for Risk and Crisis Management, Weather and Society Survey

Challenges: Assessing IDSS message consistency among partners and forecast offices with different structures and staffing. Evaluating survey data or developing a methodology that specifically measures the impact on vulnerable communities with varying needs.

Dissemination: Findings will be published on NOAA's public facing website.

Section 10: Needs of Underserved Communities Impacted by Climate Change

Lead Bureau: National Oceanic and Atmospheric Administration (NOAA)

FY 23 Significant Evaluation Questions: Does NOAA's service delivery model meet the needs of underserved communities impacted by climate change?

Related Strategic Objective(s):
Strategic Goal 3 – Address the Climate Crisis through Mitigation, Adaptation, and Resilience Efforts
Strategic Objective 3.1 – Increase the impact of climate data and services for decisionmakers through enhanced service delivery and improved weather, water, and climate forecasts

Rationale for Topic's Priority and How the Evaluation Findings will be Used: NOAA's mission is to understand and predict changes in climate, weather, the ocean, and coasts; share that knowledge and information with federal agencies, states, and the public; and conserve and manage coastal and marine ecosystems and resources. NOAA provides climate information that helps safeguard communities from hazardous natural events, and helps businesses make decisions to operate more efficiently. NOAA's management programs for oceans and coastal areas help enhance both the current and future productivity of these economically vital resources. NOAA conducted a Service Equity Assessment of high impact programs and is further investigating barriers identified in the Equity Assessments to assure the needs of vulnerable underserved communities are met.

Type of Evaluation (formative, process, outcome, impact): Process Evaluation.

Methodology/Approach for Evaluation: As part of the requirements of E.O. 13985, NOAA is developing a comprehensive approach to assess and advance equity and effective service

delivery to underserved communities. NOAA identified high impact programs for a Service Equity Assessment (per OMB Guidance) and assessed these programs to identify access barriers faced by underserved communities.

As a next step, and to comply with E.O. 13985, NOAA will develop plans to further assess and address barriers to access that were identified by the equity assessment. In FY 21, in collaboration with GSA's Office of Evaluation Sciences (OES), NOAA developed service delivery changes designed to improve equitable delivery of NOAA services that help communities better prepare for climate change impacts. In FY 22/23, NOAA and OES will identify behavioral best practices and potential program changes to address these barriers. The evaluation will include gathering information on content, quantity, quality, and structure of services provided.

Equity Component of Methodology: The findings will allow NOAA to strengthen its service delivery to underserved communities affected by climate change.

Contractor/Academic or Unit Who Will Do the Research: GSA Office of Evaluation Services.

Data Source: The service-delivery model produced with OES in FY21 will help identify data that the Equity Assessment Teams will need to collect to assess service delivery. Data will be generated based on engagement and collaboration with stakeholders from underserved communities and local government organizations. Various engagement mechanisms will be used including formal surveys, councils, workshops, requests for comments, and requests for information.

Challenges: NOAA may need to develop and get approval of new Information Collection Requests (ICRs,) as required under the Paperwork Reduction Act, to conduct necessary surveys within the timeframe.

Dissemination: The information will be disseminated to the public and NOAA's stakeholders via webinars, workshops and/or roundtable discussions. This information will potentially provide increased access (web traffic) to tools that help communities become more resilient in the face of climate change, and equity measures.

Section 11: Offshore Wind Energy Effects

Lead Bureau: National Oceanic and Atmospheric Administration (NOAA)

FY 23 Significant Evaluation Questions: What survey process revisions will be needed for NOAA fisheries assessments and forecasts of the effects of planned offshore energy activities

on fishing, fisheries revenues, protected resources, and ecosystem productivity? How can the processes be improved?

Related Strategic Objective(s):
Strategic Goal 2 – Foster Inclusive Capitalism and Equitable Economic Growth
Strategic Objective 2.1 – Drive equitable, resilient, place-based economic development and job growth

Rationale for Topic's Priority and How the Evaluation Findings will be Used: Offshore wind energy development requires NOAA to engage in numerous environmental reviews, including Essential Fish Habitat consultations under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), Section 7 consultations under the Endangered Species Act (ESA), and incidental take authorizations under the Marine Mammal Protection Act (MMPA). NOAA's expertise in managing ocean species and habitats is critical to supporting the Administration's priority of deploying 30 gigawatts of offshore wind by 2030, by facilitating responsible renewable energy development while considering fishing interests and protecting species and ecosystems.

Offshore wind energy development is expected to have significant adverse impacts on NOAA scientific surveys because NOAA aircraft and vessels will not be able to safely operate within wind energy areas following current survey designs and protocols. New survey designs and methods will be required to address the anticipated changes in habitats in and around offshore wind developments.

Type of Evaluation (formative, process, outcome, impact): Process Evaluation.

Methodology/Approach for Evaluation: New survey designs and methods will be required to address the anticipated changes to existing survey areas lost to offshore wind farm infrastructure. Current approaches will be assessed, and new approaches will be developed and tested using simulation models and actual pilot tests. NOAA is planning to mitigate the effects of offshore energy activities on NOAA scientific surveys and will fund the scientific survey needs in the Northeast and Mid-Atlantic. NOAA is also assessing and developing Federal survey mitigation programs for impacted surveys along the West Coast, Gulf of Mexico, and South Atlantic.

Contractor/Academic or Unit Who Will Do the Research: NOAA Fisheries' Science Centers and the Headquarters' Office of Science and Technology

Data Source: Existing studies of European wind energy projects, and their effects, will inform consultations and forecasts for equivalent U.S. areas. Existing oil rig infrastructure in the Gulf of Mexico also provides a reference for anticipated effects of infrastructure on fisheries and protected species. Surveys of U.S. Exclusive Economic Zones in areas of proposed offshore wind energy projects will also provide baseline data on fisheries and endangered species for

comparison as projects are proposed in U.S. waters. As offshore wind energy projects are added, research will be expanded to include studies of the new areas.

Challenges: NOAA will conduct and partner internationally on reviews of existing studies of impacts from offshore wind farms that compete with other blue economies and involve conservation concerns. Providing economic analyses on implications of offshore wind farm operations on commercial and recreational fisheries, aquaculture, and endangered species is important in determining the best approaches to supporting the Administration's priority of deploying 30 gigawatts of offshore wind while protecting ecosystems.

Dissemination: Input, review, and decisions will be shared through the One Federal Decision process, a cooperative relationship among federal agencies for timely processing of environmental reviews and authorizations decisions on proposed major infrastructure projects

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Section 12: Providing Exceptional Customer Experiences at USPTO

Lead Bureau: U.S. Patent and Trademark Office (USPTO)

FY 23 Significant Evaluation Questions: What is the quality of the patent and trademark process based on customer experience? What factors contribute to customer satisfaction scores on initial application forms. USPTO will examine the factors that enhance and detract from the first-time website visitor experience to identify potential process improvements.

Related Strategic Objective(s):
Strategic Goal 5 – Provide 21st Century Service with 21st Century Capabilities
Strategic Objective 5.3 – Equitably deliver exceptional customer experience

Rationale for Topic's Priority and How the Evaluation Findings will be Used: The customer journey for all trademark filers funnels through the initial application forms. For FY 21, customers submitted almost 944,000 product class trademark applications, which is a 28% increase over FY 20 totals. Understanding and improving the initial application forms and process will benefit all customers, particularly those who are new to the process or not assisted by an attorney.

On the patent side, customers submitted almost 650,654 patent applications in FY 21 and the USPTO website received over 41 million unique page views. Preliminary findings indicate that first-time patent users have greater trouble navigating, understanding terms, and knowing where to go to file for a patent compared to return users. Examining the factors for these challenges and addressing them would improve their experience and make the process more accessible to all filers including underserved populations.

Type of Evaluation (formative, process, outcome, impact): Process Evaluation

Methodology/Approach for Evaluation: The approach will utilize human-centered design methodologies, which place end users, or customers, at the center of the research question and problem-solving approach. The USPTO collects, analyzes, and reports on customer attitudes, sentiment, and behavior based on surveys, interviews, focus groups, and user testing. USPTO is an OMB designated High Impact Service Provider. Lean Six-Sigma tools for process evaluation and re-engineering will be employed to address customer identified issues and concerns.

Equity Component of Methodology – Receiving feedback directly from a representative sampling of our customers gives voice to all customers and prospective customers, including those from underrepresented groups.

Contractor/Academic or Unit Who Will Do the Research: The research will be completed by USPTO staff and contractors providing the customer feedback survey tool.

Data Source: Available – USPTO's customer feedback surveys on the website, login, and trademark filing system. Customer behavior data on the website. Website usability testing results.

Need to Find or Create: None.

Challenges: Challenges include (1) collecting, combining, and analyzing datasets from multiple sources, (2) maintaining multiple skillsets necessary for collection, analysis, and dissemination of data across business units and offices therein.

Dissemination: Findings and recommendations will be posted on the USPTO website.

Section 13: Inclusive and Strong Intellectual Property (IP) Ecosystem

Lead Bureau: U.S. Patent and Trademark Office

FY 23 Significant Evaluation Questions: Can new metrics be developed to improve understanding of the participation of women and other underrepresented groups in the patent system, and what local economic factors influence their participation?

Related Strategic Objective(s):
Strategic Goal 1 – Drive U.S. Innovation and Global Competitiveness
Strategic Objective 1.5 – Promote accessible, strong, and effective intellectual property rights to advance innovation, creativity, and entrepreneurship

Rationale for Topic's Priority and How the Evaluation Findings will be Used: America's long-standing economic prosperity and global leadership in innovation depends on a strong, vibrant, and balanced intellectual property system. To maximize the potential of the Nation, it is critically important that all Americans can innovate, seek IP protection, and reap the rewards from innovation through entrepreneurship and commercialization. This includes underrepresented groups based on demographic characteristics, geography, and economic conditions. New metrics and approaches are needed to inform decision-making about how to increase access and how to expand the use of IP for all Americans.

Type of Evaluation (formative, process, output, impact): Formative Evaluation

Methodology/Approach for Evaluation: The USPTO will compile a new dataset containing demographic information about inventors on patents, the locations where these inventors reside, as well as socio-economic aspects of the inventors' locations. New metrics will be constructed and assessed. Descriptive statistics and regression models will be used to better understand how the socio-economic factors characterizing inventors' locations influence their participation in the patent system.

Equity Component of Methodology – The question addresses equity based on individuals' demographic characteristics such as gender and race.

Contractor/Academic or Unit Who Will Do the Research: The evaluation questions will be answered by USPTO staff, contractors, and an academic collaborator.

Data Source: Available – USPTO administrative data on patent and trademark filings, grants, registrations, and prosecution histories.

Need to Find or Create – A new dataset that combines USPTO data with information on individuals, their residence locations, and various socio-economic characteristics such as level of educational attainment.

Challenges: (1) collecting and compiling data on individuals; (2) locating and integrating location-specific socio-economic information from multiple sources.

Dissemination: Findings and recommendations will be posted on the USPTO website.