



# U.S. DEPARTMENT OF COMMERCE

FY 2020 Annual Performance Plan

FY 2018 Annual Performance Report



### DEPARTMENT AT A GLANCE

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#### HISTORY AND ENABLING LEGISLATION

The Department of Commerce (DOC) was originally established by Congressional Act on February 14, 1903 as the Department of Commerce and Labor (32 Stat. 826; 5 U.S.C. 591) and was subsequently renamed the U.S. Department of Commerce by President William H. Taft on March 4, 1913 (15 U.S.C. 1512). The defined role of the new Department was “to foster, promote, and develop the foreign and domestic commerce, the mining, manufacturing, and fishery industries of the United States.”

#### LOCATION

The Department is headquartered in Washington, D.C., at the Herbert Clark Hoover Building, which is located on eight acres of land covering three city blocks. The Department also has field offices in all states and territories and maintains offices in more than 86 countries worldwide.

#### EMPLOYEES

As of March 1, 2019, the Department had approximately 46,000 employees.

#### BUDGET AUTHORITY

The Department’s FY 2018 net budget authority was approximately \$11.1 billion.

#### WEBSITE

The Department’s Internet address is <https://www.commerce.gov/>

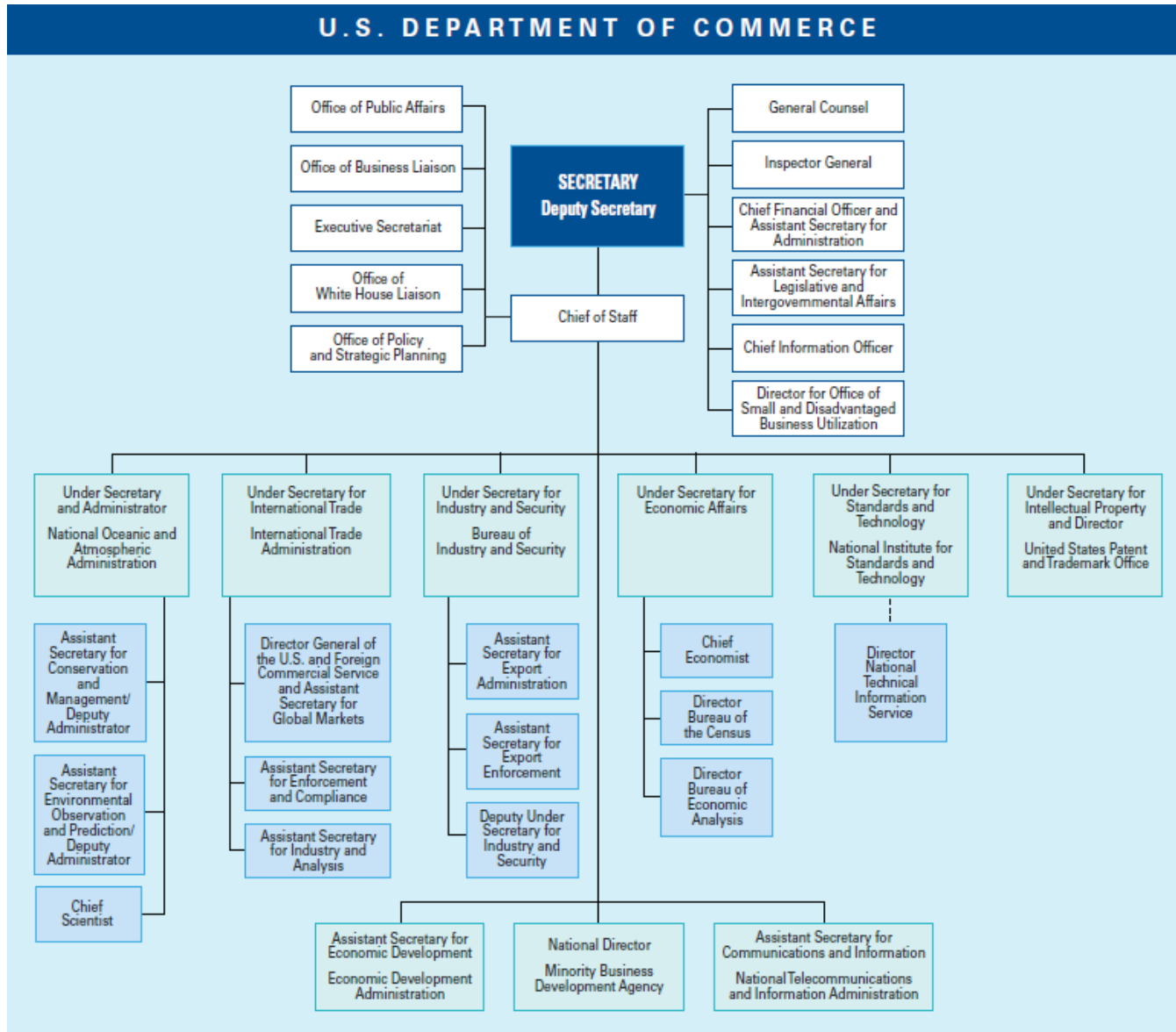
#### MISSION

The Department of Commerce creates the conditions for economic growth and opportunity.

## HEADQUARTERS OFFICES AND BUREAUS

- Office of the Secretary (OS)
- Office of Inspector General (OIG)
- Bureau of Economic Analysis (BEA)
- Bureau of Industry and Security (BIS)
- Census Bureau
- Economic Development Administration (EDA)
- International Trade Administration (ITA)
- Minority Business Development Agency (MBDA)
- National Institute of Standards and Technology (NIST)
- National Oceanic and Atmospheric Administration (NOAA)
- National Telecommunications and Information Administration (NTIA)
- National Technical Information Service (NTIS)
- U.S. Patent and Trademark Office (USPTO)

ORGANIZATIONAL STRUCTURE



## BACKGROUND ON STRATEGIC PLANNING AND REQUIRED REPORTING

The Government Performance and Results Act (GPRA) and the Modernization Act of 2010 (GPRAMA) require that federal agencies publish a new strategic plan by the first Monday in February following the year in which the term of the President begins. In February 2018, the Secretary of Commerce issued a 2018 – 2022 Strategic Plan in accordance with GPRAMA and the rules and timetable established by the Office of Management and Budget (OMB).

Prior to FY 2018, agency strategic plans were developed and published on different schedules. Synchronizing plans promoted coordination and collaboration among federal agencies. Further, OMB facilitated a multi-agency view by regularly bringing agency representatives together to discuss their plans as they evolved.

The Department's Strategic Plan was developed by a team of representatives from across all bureaus in collaboration with the Office of the Secretary. The Secretary and his Office of Strategic Planning and Policy made final decisions on the plan's structure, content, and emphasis.

In the spring of 2018, the Department conducted the OMB-required Annual Strategic Review (ASR) of progress implementing the Strategic Plan. The ASR findings were delivered to OMB in May. Subsequently, Department leadership met with OMB principals to review progress.

During the summer of 2018, the Department developed a draft Annual Performance Plan and Report (APPR). The draft was sent to OMB in September with the budget proposal. That draft provided details on Strategic Objective (SO) milestones that were achieved and set preliminary performance metric targets for the next two fiscal years. This document is the Department's finalized APPR, which is sent to Congress with the President's Budget. It reports all finalized performance indicator results for FY 2018 and sets finalized targets for FY 2019 and FY 2020 considering the President's Budget. The published APPR is posted on [www.Performance.gov](http://www.Performance.gov) for public view.

## COMMERCE PLAN MONITORING SPECIFICS

The Department's Chief Operating Officer, the Deputy Secretary, holds a series of meetings with the leads for the Strategic Objectives listed in the Department 2018 – 2022 Strategic Plan. These meetings are held between October and April and used to review data on related performance indicators and progress on milestones. In the spring of FY 2019, the Department will conduct its Annual Strategic Review (ASR). A summary of findings will be sent to OMB in May. The ASR process includes deliberations by Strategic Objective teams that foster learning and inform revisions to strategies and performance indicators.

Bureau-level performance indicator review processes vary in approach and schedule but are systematic. Data on mission support initiatives (e.g. Human Resources, Acquisition, Financial Management, etc.) are tracked on an online dashboard and reviewed at quarterly meetings with the Chief Financial Officer/Assistant Secretary for Administration (CFO/ASA). The various CXO Councils (e.g. Chief Financial Officer, Chief Human Capital Officer, and Chief Information Officer) also review performance metrics dashboards.



## AGENCY PRIORITY GOALS

The GPRAMA requires agencies to establish Agency Priority Goals (APG). APGs set two-year targets for initiatives that are significant and would benefit from a well-orchestrated sprint. Most major federal departments have three to five APGs that are selected by top leadership and approved by OMB, an extension of the White House. Available data on the FY 2018 – 2019 APGs are in the related Strategic Objective sections of this report. All four Commerce APGs are currently assessed as **on track**. Quarterly performance indicator data on APGs and Cross-Agency Priority (CAP) Goals, which address multi-agency priorities, are also posted to [www.Performance.gov](http://www.Performance.gov). The Department's FY 2018 – FY 2019 APGs are:

- **Remove Foreign Trade Barriers:** ITA will facilitate fair competition in international trade for U.S. firms and workers by improving the number of trade barriers reduced, removed, or prevented by 10 percent annually in fiscal years 2018 and 2019.
- **Accelerate Patent Processing:** By September 30, 2019, the U.S. Patent and Trademark Office will reduce patent pendency to less than 15 months for first action pendency and less than 24 months for total pendency from the end of the fiscal year 2017 results of 16.3 months and 24.2 months, respectively.
- **Mitigate Flood Impacts by Demonstrating Improved Decision Support Services to Emergency Managers:** By September 30, 2019, NOAA National Weather Service will improve decision support services by demonstrating a new flood inundation mapping capability serving 25 million people, which is 8 percent of the U.S. continental population, residing in flood-vulnerable freshwater basins and delivering an enhanced excessive rainfall outlook product that extends the lead time of high risk predictions from two to three days.
- **Prepare to Conduct a Complete and Accurate 2020 Decennial Census:** The U.S. Census Bureau will prepare to conduct a complete and accurate 2020 Decennial Census U.S. population count by conducting the 2018 End-to-End Census Test and analyzing and incorporating the results, initiating In-Field Address Canvassing by September 30, 2019, and designing for optimal self-response with a nationwide target of 60.5% in 2020.

The Office of the Secretary began the process of developing APGs for FY 2020 – FY 2021 in January 2019. The proposed APGs will be submitted to OMB for review in May 2019. The Department's finalized APG statements will be sent to OMB for clearance in September 2019.

## CROSS-AGENCY PRIORITY GOALS

The Department of Commerce is actively supporting the President's Management Agenda (PMA) and the Cross-Agency Priority (CAP) Goals that help drive implementation. The Department recognizes that the effort to modernize the Federal Government cannot be solely dependent on new resources. In a constrained budget environment, the Department continues to work within existing resources to advance the PMA.

The GPRA Modernization Act requires that the Cross-Agency Priority Goals be addressed in the agency strategic plan, the annual performance plan, and the annual performance report. Therefore, the following directs the reader to the sections of this report where CAPs are discussed and summarizes actions on CAPs co-led by Commerce executives. For more information refer to [www.Performance.gov](http://www.Performance.gov).

CAP Goals Co-Led by the Department of Commerce:

- **Lab-to-Market** (See below and SO [1.2](#) and [1.3](#))
- **Data, Accountability, and Transparency** (See below and SO [2.3](#), [4.1](#), and [4.2](#))
- **Improve Management of Major Acquisitions** (See below and SO [5.3](#))

Other CAP Goals Contributed to by the Department:

- IT Modernization (See SO [3.2](#) and [5.2](#))
- 21st Century Workforce (See SO [5.1](#))
- Improving Customer Experience (See SO [2.3](#) and [5.1](#))
- Sharing Quality Services (See SO [5.3](#))
- Low to High Value Work (SO [2.2](#))
- Category Management (See SO [5.2](#) and [5.3](#))
- Results Oriented Grants (See SO [5.2](#))
- Getting Payments Right (See SO [5.2](#))
- Federal IT Spending Transparency (See SO [5.2](#))
- Modernize Infrastructure Permitting (See SO [2.1](#) and [2.2](#))
- Security Clearance and Credentialing (See SO [5.1](#))

# Introduction

## Lab-to-Market

Responsible Official: Under Secretary of Commerce for Standards and Technology, Director of National Institute of Standards and Technology, U.S. Department of Commerce

CAP Goal Highlights: The Lab-to-Market CAP Goal aims to accelerate the transition of federal innovations from lab to market. It is evaluating ways to reduce administrative and regulatory burdens on federal laboratory partners. This should increase the development of federal technologies and entrepreneurship in the federal research and development (R&D) workforce. As of the end of FY 2018, NIST publicly launched the Return on Investment (ROI) Initiative and the Unleashing American Innovation Symposium on April 19, 2018. A public stakeholder engagement process that included a Request for Information and four public forums was completed. New online data portals from NASA, DOE, and the Federal Laboratory Consortium were developed. Numerous National Science Foundation Innovation Corp and Small Business Innovation Research activities were also completed. NIST's Advanced Encryption Standard (AES) led to a \$250B impact to the nation's economy.

The principal challenge is optimizing technology transfer in a way that increases ROI from federally-funded R&D. ROI is currently upwards of \$150 billion government-wide, annually. Moving forward, plans include the improvement of technology transfer policies and procedures, increased engagement with the private sector, and the development and expansion of workforce entrepreneurial education. Appropriate tools and services will be piloted to implement these aims. Metrics will be established to develop a better understanding of global science, technology trends, and the economic impacts of technology transfer.

## Data, Accountability, and Transparency

Responsible Official: Deputy Secretary, U.S. Department of Commerce

CAP Goal Highlights: The purpose of the Data, Accountability, and Transparency CAP Goal is to use data strategically to grow the economy and make federal operations more effective and transparent. The goal aims to make data more useful to the public and federal employees by creating a data strategy and infrastructure for the future. As of the end of FY 2018, Federal Data Strategy Principles and Practices and Proof Point processes were published on the public website: <https://strategy.data.gov>. Several forum and feedback sessions were hosted. These sessions brought together thought leaders from government, academia, and private industry. Many Commerce bureaus have also made their public-facing data websites more useful, accurate, and interactive.

The use of good data can transform the economy and increase public trust in the federal government. However, sharing incorrect or incomplete data will have the opposite effect. Quality control is a challenge, and current laws and policies on data management and evaluation are inconsistent and/or conflicting. Continued progress on this goal will require driving change to data policy, people, processes, and platforms. The CAP plan will establish policies on data governance, make useful data available to the public more quickly, teach leaders how to use data for decision making, and use data to improve accountability.



**Improve Management of Major Acquisitions**

Responsible Official: Senior Procurement Executive and Program Management Improvement Officer (PMIO), U.S. Department of Commerce

CAP Goal Highlights: The purpose of the CAP Goal, Improve Management of Major Acquisitions, is to increase attention on major acquisition program management. This will ensure agencies successfully meet taxpayer expectations and performance goals for key projects.

This goal aims to help agencies achieve the following three core strategies to satisfy the requirements of Appendix V of OMB Memorandum M-18-19, Improving the Management of Federal Programs and Projects through Implementing the Program Management Improvement Accountability Act (PMIAA):

- Talent – Ensure program and project managers have appropriate credentials and training;
- Governance – Agency has an Acquisition PMO, integrated acquisition and program/project management review functions, and an organizational chart showing the relationship between the PMIO, other agency executives, and review boards; and
- Portfolio Management – Programs and projects are organized to support agency strategic goals. Agencies use integrated governance data to inform acquisition, project, and program decisions.

OMB and DOC developed a maturity model to track agency advancement in these key areas. The plan is to tailor CAP Goal activities to meet the needs and capabilities of varying assets and services. Currently, OMB and DOC are meeting with federal agencies to determine agency maturity and identify portfolios for review.

## KEY TERMS AND DEFINITIONS IN THE STRATEGIC PLAN AND APPR

The U.S. Department of Commerce Strategic Plan 2018 – 2022 is organized by Strategic Goals, Strategic Objectives, Strategies, and Performance Indicators. This strategic planning structure forms the basis of the standardized **Federal Performance Framework** established in guidance from OMB and is used to organize content included in all federal agencies' APPR.

Within this APPR a standardized table is used to show selected performance indicator results and targets for each strategic objective. In these tables, it is noted if a performance indicator is new in this APPR. For new performance indicators, it is also noted whether baseline values are established or an N/A is listed if the data is not available. If needed, an explanation of targets is provided. Although not included in the APPR, all bureau GPRA performance indicator results and targets are listed in the bureau backup appendices included in the Department of Commerce FY 2020 Congressional Budget Justification document.

The following terms and definitions help readers understand the purpose and logic used to assess and report progress made during FY 2018 and plan the level of performance expected to be achieved during FY 2020.

**Strategic Goal** – Includes the goal statement and goal overview. The highest-level statement of aim or purpose that is included in the strategic plan. This plan's strategic goals articulate clear statements of what the Department wants to advance within its mission.

**Strategic Objective** – Includes the objective statement and the objective overview. This plan's 17 strategic objectives are the primary unit for strategic analysis and decision-making. Strategic objectives reflect the outcome or management impact the Department is trying to achieve.

**Strategy** – Represents key approaches, initiatives, and tactics that will be pursued to advance the related strategic objective.

**Performance Indicator** – A key performance measure used to track progress toward achieving a strategic objective. The Department will measure and monitor the trend for these indicators.

**Target** – A quantifiable or otherwise measurable characteristic typically expressed as a number that tells how well or at what level a Performance Indicator aspires to perform.

**Baseline Value** – A performance indicator's level over one or more time period which it is measured.

**Evidence** – The information used to formulate goals, objectives, and strategies in this plan. Evidence can be quantitative or qualitative and may include, but is not limited to, performance measurement, research studies, evaluations, statistical data series, and data analytics.

## SUMMARY OF STRATEGIC GOALS AND OBJECTIVES

The following chart summarizes the strategic goals and objectives established in the 2018 – 2022 Strategic Plan and the status of their progress during FY 2018. The complete strategic plan can be accessed online at: <https://www.commerce.gov/about/strategic-plan>.

Strategic Goal	Strategic Objectives	FY 2018 Status
<b>Goal 1 -</b> Accelerate American Leadership	1.1 - Expand Commercial Space Activities	On-track
	1.2 - Advance Innovation	On-track
	1.3 Strengthen Intellectual Property Protection	On-track
<b>Goal 2 -</b> Enhance Job Creation	2.1 - Increase Aquaculture Production	Focus for Improvement
	2.2 - Reduce and Streamline Regulations	On-track
	2.3 - Strengthen Domestic Commerce and the U.S. Industrial Base	On-track
	2.4 - Increase U.S. Exports	On-track
	2.5 - Increase Inward Investments Into the United States	On-track
<b>Goal 3 -</b> Strengthen the U.S. Economic and National Security	3.1 - Enforce the Nation's Trade Laws and Security Laws	On-track
	3.2 - Enhance the Nation's Cybersecurity	On-track
	3.3 - Reduce Extreme Weather Impacts	Focus for improvement
	3.4 - Deploy Public Safety Broadband	Noteworthy Progress
<b>Goal 4 -</b> Fulfill Constitutional Requirements and Support Economic Activity	4.1 - Conduct a Complete and Accurate Decennial Census	On-track
	4.2 - Provide Accurate Data to Support Economic Activity	Noteworthy Progress
<b>Goal 5 -</b> Deliver Customer-Centric Service Excellence	5.1 - Engage Commerce Employees	On-track
	5.2 - Accelerate Information Technology Modernization	On-track
	5.3 - Consolidate Functions for Cost Savings	On-track

## FY 2019 TOP MANAGEMENT CHALLENGES

The Commerce Office of the Inspector General (OIG) identified eight management challenges within the Department in the FY 2019 Top Management Challenges report, located online at: <https://www.oig.doc.gov/Pages/Top-Management-and-Performance-Challenges-Facing-the-Department-of-Commerce-in-FY-2019.aspx>. The Department also identifies challenges through processes that produce an inventory of “Mission Critical Programs and Activities” and a Risk Profile. These processes consider OIG findings, recommendations of the Government Accountability Office, past performance, and the insights and expertise of Commerce staff. Deliberations are multi-level and require involvement and approval by the Department executive councils. Outcomes inform the Department’s strategic planning, enterprise risk management (ERM), and topics for multi-disciplinary program review boards.

The following eight challenges are based primarily on the OIG FY 2019 Top Management and Performance Challenges but were also influenced the other internal assessments. The challenges are addressed by Strategic Objectives and the related strategies. As provided by OMB Circular A-11, Strategic Objectives are the primary unit of analysis for agency and OMB assessment of how the agency is achieving its mission. Strategic Objectives are supported by action plans that reflect the complexity of their subjects. The action plans in the charts below include high level milestones and links to additional public information.

<b>FY 2019 Management Challenge Identified by DOC OIG</b>	<b>Alignment to Department 2018-2022 Strategic Objectives to Address the Challenge</b>	<b>Official Responsible for Resolving the Challenge</b>
1. Successfully Completing 2020 Census Testing and Systems Integration of New Innovations in Time to Deliver a Cost-Effective, Accurate Decennial Census	SO 4.1 – Conduct a Complete and Accurate Decennial Census	Associate Director for Decennial Census Programs, Census Bureau
2. Maximizing Efficiencies of Environmental Satellite Programs	SO 3.3 – Reduce Extreme Weather Impacts	Deputy Assistant Administrator, National Weather Service, NOAA
3. Deploying a Nationwide Public Safety Broadband Network (NPSBN)	SO 3.4 – Deploy Public Safety Broadband	Chief Executive Officer of the First Responder Network Authority
4. Ensuring USPTO Provides High-Quality Intellectual Property Rights	SO 1.3 – Strengthen Intellectual Property Protection SO 5.2 – Accelerate Information Technology Modernization	Deputy Under Secretary and Deputy Director, USPTO
5. Continuing to Improve the Department's Cybersecurity Posture	SO 3.2 – Enhance the Nation's Cybersecurity SO 5.2 – Accelerate Information Technology Modernization	Chief Information Officer, Department of Commerce

## Management Analysis of Top Management Challenges

FY 2019 Management Challenge Identified by DOC OIG <i>(continued)</i>	Alignment to Department 2018-2022 Strategic Objectives to Address the Challenge	Official Responsible for Resolving the Challenge
6. Utilizing Resources and Developing Processes to Rebalance Trade Enforcement and Promotion Priorities	SO 2.3 – Strengthen Domestic Commerce and U.S. Industrial Base SO 2.4 – Increase U.S. Exports SO 3.1 – Enforce the Nation’s Trade and Security Laws and Objective SO 5.3 – Consolidate Functions for Cost Savings	Deputy Assistant Secretary for Enforcement and Compliance, ITA and the Principal Deputy Assistant Secretary for Industry and Analysis, ITA
7. Providing Adequate Oversight to Effectively Manage the Significant Increase in Disaster Assistance Funding to the Economic Development Administration	SO 2.2 – Reduce and Streamline Regulations SO 5.1 – Engage Commerce Employees	Deputy Assistant Secretary for Regional Affairs, EDA
8. Addressing Departmental Management Matters Involving Leadership, Acquisitions, and Financial Management	SO 5.1 – Engage Commerce Employees SO 5.3 – Consolidate Functions for Cost Savings	Senior Procurement Executive/Director, Office of Acquisition Management, Department of Commerce

# Management Analysis of Top Management Challenges

## FY 2019 TOP MANAGEMENT CHALLENGES – ACTION PLANS

Progress updates on action plans are submitted by Strategic Objective Leads to the Deputy Secretary during the Annual Strategic Review (ASR) process. More frequent progress updates are managed via periodic Strategic Objective Review Meetings, the Enterprise Risk Management process, Milestone Review Boards, and/or Agency Priority Goal meetings, as appropriate. The tables below illustrate key elements of these action plans for each of the seven management challenges.

1. Successfully Completing 2020 Census Testing and Systems Integration of New Innovations in Time to Deliver a Cost-Effective, Accurate Decennial Census		
Key Actions	Performance Indicators / Milestones	Links to Key Public Updates and References
<ul style="list-style-type: none"> <li>Update the Census Bureau Risk Management Program System and implement management reviews and quality controls.</li> <li>Identify and include potential cost overruns related to space acquisition activities as part of any contingency funding for the 2020 Census</li> <li>Strengthen controls for use of contracts and blanket purchase agreements</li> <li>Update the 2020 Life-Cycle Estimate informed by testing and actual costs</li> <li>Ensure 2020 Census Architecture and IT Roadmap reflects the latest Census System Design</li> </ul>	<ul style="list-style-type: none"> <li>Conduct In-Field Address Canvassing Operation for 2020 Census</li> <li>Complete the opening of the 2020 Census Offices</li> <li>Deliver updated 2020 Census Operational Plan</li> <li>Complete Authorization to Operate process related to the 2020 Census as scheduled with less than 15% of Plans of Action and Milestones exceeding their completion date</li> </ul>	<a href="https://www.performance.gov/commerce/APG_commerce_3.html">https://www.performance.gov/commerce/APG_commerce_3.html</a>



2. Maximizing Efficiencies of Environmental Satellite Programs		
Key Actions	Performance Indicators / Milestones	Links to Key Public Updates and References
<ul style="list-style-type: none"> <li>Update the cost and schedule baseline of the Polar Follow-On satellites (JPSS-3 and JPSS-4)</li> <li>Complete the acquisition strategy and formulate the space weather follow-on program</li> <li>Conduct trades, analyze and plan the procurement of future data sources and satellite architectures</li> </ul>	<ul style="list-style-type: none"> <li>Update the Polar Follow-On Milestone Decision Memorandum</li> </ul>	<a href="https://www.nesdis.noaa.gov/content/our-satellites">https://www.nesdis.noaa.gov/content/our-satellites</a>

3. Deploying a Nationwide Public Safety Broadband Network (NPSBN)		
Key Actions	Performance Indicators / Milestones	Links to Key Public Updates and References
<ul style="list-style-type: none"> <li>Deploy and ensure the sustainability of the NPSBN</li> <li>Secure public safety participation</li> <li>Ensure the successful performance of the contract awarded to the implementing contractor</li> <li>Ensure effective and efficient use of fees the implementing contractor provides annually to the FirstNet Authority</li> <li>Strengthen operational controls</li> </ul>	<ul style="list-style-type: none"> <li>Percentage of planned coverage achieved versus the plan</li> <li>Annual actual public safety adoption rate versus the adoption targets established by the organization</li> <li>Contract delivery milestones implemented</li> <li>Investment process created that includes feedback from external stakeholders and is vetted thorough established procedures</li> <li>Records management procedures developed; risk management processes improved; and standard operating procedures developed for fee review process</li> </ul>	<a href="https://www.firstnet.gov/resources">https://www.firstnet.gov/resources</a>  <a href="https://about.att.com/story/2019/firstnet_footprint_expansion.html">https://about.att.com/story/2019/firstnet_footprint_expansion.html</a>

## Management Analysis of Top Management Challenges

4. Ensuring USPTO Provides High-Quality Intellectual Property Rights		
Key Actions	Performance Indicators / Milestones	Links to Key Public Updates and References
<ul style="list-style-type: none"> <li>• Ensure the Patent Trial and Appeal Board (PTAB) operates fairly and effectively</li> <li>• Ensure examiners perform thorough patent application reviews</li> <li>• Improve management of information technology (IT) acquisitions and operations</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct internal training to educate Administrative Patent Judges on procedural changes and case law updates</li> <li>• Review AIA trial decisions to ensure consistency with procedural changes</li> <li>• Publish update to AIA Trial Practice Guide</li> <li>• Revise patent examiner performance appraisal plan (PAP)</li> <li>• Complete analysis of how search resources and processes can be enhanced to help examiners locate the best prior art</li> <li>• Develop IT assessment and roadmap</li> </ul>	<p><a href="https://www.uspto.gov/patents-application-process/patenttrialandappealboard">https://www.uspto.gov/patents-application-process/patenttrialandappealboard</a></p> <p><a href="https://www.uspto.gov/about-us/news-updates/us-patent-and-trademark-office-announces-revised-guidance-determining-subject">https://www.uspto.gov/about-us/news-updates/us-patent-and-trademark-office-announces-revised-guidance-determining-subject</a></p> <p><a href="https://www.uspto.gov/patent/laws-and-regulations/examination-policy/examination-guidance-and-training-materials">https://www.uspto.gov/patent/laws-and-regulations/examination-policy/examination-guidance-and-training-materials</a></p> <p><a href="https://www.uspto.gov/patent/laws-and-regulations/patent-examination-policy">https://www.uspto.gov/patent/laws-and-regulations/patent-examination-policy</a></p>

5. Continuing to Improve the Department's Cybersecurity Posture		
Key Actions	Performance Indicators / Milestones	Links to Key Public Updates and References
<ul style="list-style-type: none"> <li>• Continue to ensure successful continuous monitoring on its high-impact systems</li> <li>• Improve the hiring and retaining efforts for a robust IT security workforce within DOC</li> </ul>	<ul style="list-style-type: none"> <li>• Integrate ECMO and CDM activities using the Department's CDM dashboard</li> <li>• For bureau's with FIPS 199 HIGH systems, establish working group to develop a plan to implement an integrated real-time CDM monitoring capability</li> <li>• Perform cybersecurity workforce analyses under the guidance of OPM. Identify staffing and proficiency/ competency gaps and create action plans to close gaps</li> </ul>	<p><a href="https://www.dhs.gov/cdm">https://www.dhs.gov/cdm</a></p> <p><a href="https://www.chcoc.gov/content/guidance-identifying-addressing-and-reporting-cybersecurity-work-roles-critical-need">https://www.chcoc.gov/content/guidance-identifying-addressing-and-reporting-cybersecurity-work-roles-critical-need</a></p>

6. Utilizing Resources and Developing Processes to Rebalance Trade Enforcement and Promotion Priorities		
Key Actions	Performance Indicators / Milestones	Links to Key Public Updates and References
<ul style="list-style-type: none"> <li>• Build staff expertise for the self-initiation of AD/CVD cases</li> <li>• Institutionalizing processes for additional trade enforcement reviews</li> <li>• Institutional processes for managing the increased foreign investment review workload</li> </ul>	<ul style="list-style-type: none"> <li>• Hire staff specializing in injury determinations made by the International Trade Commission</li> <li>• Create system to access industry and company data crucial to successful self-initiation of AD/CVD investigations</li> <li>• Hire contractors to process exclusion requests</li> <li>• Develop streamlined, secure system for electronic filing of Section 232 exclusion requests and domestic-industry objections</li> <li>• Resolve security clearance bottleneck for new CFIUS staff hires</li> </ul>	None

# Management Analysis of Top Management Challenges

7. Providing Adequate Oversight to Effectively Manage the Significant Increase in Disaster Assistance Funding to the Economic Development Administration		
Key Actions	Performance Indicators / Milestones	Links to Key Public Updates and References
<ul style="list-style-type: none"> <li>• Establish and initiate Disaster Supplemental Implementation (DSI) team structure to ensure a comprehensive oversight implementation strategy</li> <li>• Recruit and train sufficient staff with appropriate proficiency (initial tranche)</li> <li>• Develop and execute operational systems to support funds disbursement, management, oversight and internal control</li> <li>• Acquire and establish technology-based capacities and performance metrics to implement, track and evaluate Disaster Supplemental awards</li> <li>• Develop outreach and communications strategy and materials to showcase Disaster Recovery support activities to internal and external stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Formation of DSI teams</li> <li>• Conduct end-of-year hiring surge</li> <li>• Provide guidance on special procedures related to disaster funds</li> <li>• Develop and implement enhanced internal controls</li> <li>• Obtain waiver from OMB of burdensome administrative requirements</li> <li>• Create public-facing award data tracker</li> </ul>	None

## 8. Addressing Departmental Management Matters Involving Leadership, Acquisitions, and Financial Management

Key Actions	Performance Indicators / Milestones	Links to Key Public Updates and References
<ul style="list-style-type: none"> <li>• Improve Monitoring of BPA's: Ensure FAR and DOC internal controls for BPA's are addressed when reviewing acquisition plans</li> <li>• Develop and maintain a competent acquisition workforce to maximize cost savings: Continue to reinforce competency training through the Big A conference</li> <li>• Establish oversight of mission-support service delivery: Incorporate Enterprise Services-Acquisition (ES-A) into DOC oversight processes</li> <li>• Ship Acquisition: NOAA proceeding with an acquisition process under an interagency agreement with the Navy for 2 NOAA AGOR Variant vessels</li> </ul>	<ul style="list-style-type: none"> <li>• BPA's: Controls addressed in acquisition plans</li> <li>• Workforce: Conduct Big A conference</li> <li>• Enterprise Services: Complete an Acquisition Management Review of ES-A</li> <li>• Ship Acquisition: Key acquisition milestones completed on time</li> </ul>	<p><a href="http://www.osec.doc.gov/oam/acquistion_management/policy/commerce_acquisition_manual_cam/documents/CAM%201307%201%20-%20Acq%20Planning%20(Final).pdf">http://www.osec.doc.gov/oam/acquistion_management/policy/commerce_acquisition_manual_cam/documents/CAM%201307%201%20-%20Acq%20Planning%20(Final).pdf</a></p> <p><a href="http://www.osec.doc.gov/oam/archive/big-a-acquisition-conf.html">http://www.osec.doc.gov/oam/archive/big-a-acquisition-conf.html</a></p> <p><a href="http://www.osec.doc.gov/oam/acquistion_management/policy/commerce_acquisition_manual_cam/documents/CAM_1372-000_Acquisition_Management_Review_Procedures.pdf">http://www.osec.doc.gov/oam/acquistion_management/policy/commerce_acquisition_manual_cam/documents/CAM_1372-000_Acquisition_Management_Review_Procedures.pdf</a></p> <p><a href="https://www.oma.noaa.gov/find/media/documents/noaa-fleet-plan-building-noaas-21st-century-fleet-0">https://www.oma.noaa.gov/find/media/documents/noaa-fleet-plan-building-noaas-21st-century-fleet-0</a></p>

### STRATEGIC OBJECTIVES' PERFORMANCE ASSESSMENT AND PLANNING

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#### STRATEGIC OBJECTIVE 1.1 – Expand Commercial Space Activities

Contributing Bureaus: OS, NTIA, NOAA

##### Key Strategies:

- Expand and elevate the Office of Space Commerce to have direct line of reporting to the Secretary, giving it a stronger voice to advocate for the U.S. commercial space industry
- Actively participate in the National Space Council to advance American Leadership in commercial space activities
- Support innovative American space companies to transform traditional space markets and create new ones
- Develop new capabilities to provide space situational awareness data and services to the public
- Drive and implement regulatory reform in remote sensing and export controls, and develop strategies for radio frequency spectrum allocation that supports U.S. space competitiveness
- Promote space weather and earth weather innovation, including support for NOAA commercial weather data pilots
- Deepen understanding of global space economy trends, including data sets and tools useful to U.S. industry

#### Executive Summary of Progress

**On-Track**

##### Expand Office of Space Commerce

During FY 2018, NOAA expanded the Office of Space Commerce (OSC) with the addition of a Director, two staff assignments from other bureaus, and one contractor. OSC supported DOC's submission of a FY 2018 reprogramming request to move OSC and Commercial Remote Sensing Regulatory Affairs (CRSRA) from NOAA to the Office of the Secretary. The office also collaborated on a legislative proposal for a new Bureau of Space Commerce led by an Assistant Secretary and on bills addressing DOC's role in space regulation.



## **National Space Council, Regulatory Reform**

OSC directly supported the Secretary and Deputy Secretary's attendance at three meetings of National Space Council. The Council approved recommendations for regulatory reform that the President incorporated into Space Policy Directives (SPD) 2 and 3. To support SPD-2, NOAA issued an Advanced Notice of Proposed Rulemaking on remote sensing regulatory reform and assessed public inputs received. OSC worked with NTIA to prepare recommendations for improving U.S. space sector competitiveness through spectrum policies, regulation, and U.S. activities at multilateral forums. OSC participated in White House efforts to pursue changes to the space export control system. OSC helped establish an FCC waiver for Galileo signal use in the United States. With NTIA, OSC successfully re-scoped an FCC Notice of Proposed Rulemaking on orbital debris mitigation to ensure alignment with SPD-2 and SPD-3.

## **Support American Space Companies**

OSC helped organize a Space Investment Summit during December 2018 that connected lending institutions and private equity firms with innovative space companies. OSC published a plain language guidebook to the U.S. space export control system. NOAA advanced several initiatives for greater partnership with the commercial space sector. They included contract awards for Round 2 of the Commercial Weather Data Pilot (CWDP) in October 2018, a Request for Information (RFI) for CWDP Round 3 in May 2018, and an RFI in July 2018 for a rideshare for low earth orbit (LEO) small satellite vendors. The RFI for LEO represents the first time NOAA has offered to rideshare a commercial payload on a federal satellite and may lead to exciting new public-private partnerships in support of Earth observations.

## **Space Situational Awareness (SSA)**

OSC led implementation of SPD-3, which designates DOC as the lead civil agency for space traffic management. OSC coordinated with Department of Defense (DoD) on transfer of authorities and conducted visits to Vandenberg Air Force Base, including one with the Secretary of Commerce, to gain understanding of capabilities and responsibilities. OSC led interagency planning activities, submitted a 90-day report to the White House, met with commercial firms and industry consortia to gain understanding of potential commercial solutions, and engaged with industry and academia on space traffic management standards and best practices.

## Management Analysis of Strategic Goal 1 – Accelerate American Leadership

### Performance Indicator Results and Targets

SO 1.1 – Expand Commercial Space Activities Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
NOAA - Number of engagements with the commercial space industry or within major space policy decision processes	Target	N/A	N/A	10	10	10	Met	16	16
	Actual	N/A	N/A	10	10	10			
NOAA - Number of workshops, reports, and other tools produced to facilitate growth and advancement of the U.S. commercial space industry	Target	N/A	N/A	1	1	1	Met	4	4
	Actual	N/A	N/A	1	1	1			
NOAA - Staff hired and trained to facilitate transition ( <i>new</i> )	Target	<i>New performance indicator. Baseline values not established, but targets are set</i>					N/A	4	10
	Actual								

<span style="color: blue;">■</span> Exceeded (over 100% of target)	<span style="color: green;">■</span> Met (90-100% of target)	<span style="color: red;">■</span> Not met (below 90% of target)
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### Other Evidence and Evaluation

The Department is reviewing potential metrics as part of the regulatory impact analysis of the proposed rule revising commercial remote sensing regulations. One metric will be a reduction in the time required to review and approve licenses.

OSC is evaluating options for leveraging existing capabilities in the Department and elsewhere to develop economic indicators for the commercial space industry.

## Strategic Conclusions and Recommendations

The Department is effectively leveraging staff and resources from across the bureaus to implement the Strategic Objective. Establishing new metrics to measure the impact of Commerce efforts is a priority. The Department stands ready to support new initiatives from the National Space Council.

The aim is to create a permissive, light touch regulatory environment for U.S. industry and promote the United States as the flag of choice for commercial space activities.

The Department's initiative to create a civil Space Situational Awareness/Space Traffic Management (SSA/STM) capability is focused in four areas: 1) developing a transfer landing team for Vandenberg Air Force Base; 2) engaging industry across a wide range of activities; 3) developing an open architecture data repository, starting with the DoD authoritative catalog, where companies can demonstrate innovative capabilities; and 4) capturing international leading practices and standards for the SSA/STM mission. All these inputs will help identify regulatory actions that stimulate U.S. industry and/or space safety and stability.

## Actions to Advance Progress through FY 2020

There are plans to seek congressional approval of the Department's legislative proposals including the budget reprogramming request. Consistent with applicable appropriations law and guidance, plans include:

- Expand the Office of Space Commerce staff through new hires, contractors, and staff assignments from other bureaus and agencies
- Advocate for regulatory reform in export controls and other space market areas. Develop and publish notice of proposed rulemaking for commercial remote sensing licensing. Coordinate and finalize radiofrequency spectrum recommendations for submission to the President
- Work with the Department of Defense for seamless transfer of responsibility to Commerce regarding provision of space situational awareness data and services to the public
- Develop improved understanding of developments and trends in the global space economy, including data and tools for U.S. industry
- Support new National Space Council initiatives and Space Policy Directives

# Management Analysis of Strategic Goal 1 – Accelerate American Leadership

## STRATEGIC OBJECTIVE 1.2 – Advance Innovation

Contributing Bureaus: OS, NIST, NOAA, NTIA, NTIS, USPTO

Key Strategies:

- Promote research, applications, and standards for quantum computing
- Promote research, applications, and standards for artificial intelligence
- Enhance precision measurements and standards to drive innovation in advanced manufacturing
- Strengthen the competitiveness of America’s manufacturing base through technology development and deployment
- Lead the development of measurements and standards to facilitate digital commerce, wireless technologies, and autonomous vehicles
- Ensure spectrum is available for federal government and commercial activities
- Promote effective sharing of spectrum for multiple uses

### Executive Summary of Progress

**On-Track**

The Department, working in partnership with industry and state and local governments, provides the foundation for American innovation. NIST performs advanced research in quantum science, artificial intelligence, advanced manufacturing, and Internet-of-things (IOT) based technologies. NTIA ensures that radio spectrum is available for both critical government missions and growing private sector demand.

#### Quantum Science

NIST, a world leader in quantum research, had multiple breakthroughs including the creation of a record setting 53 qubit quantum simulator, a limited type of quantum computer. They demonstrated a quantum certified random number generator—a critical breakthrough for secure communications. NIST’s quantum breakthroughs are also revolutionizing the dissemination of weights and measures with NIST providing three new quantum-based standards last year.

#### Artificial Intelligence

NIST scientists are working to address the measurement and standards needs of this transformational technology. They apply artificial intelligence (AI) and

# Management Analysis of Strategic Goal 1 – Accelerate American Leadership

machine learning (ML) approaches to multiple technology areas from advanced materials to biometrics. NIST researchers were able to demonstrate that combining AI with human facial recognition systems improved overall performance.

## **Advanced Manufacturing**

NIST research in advanced materials, smart manufacturing, microelectronics, and robotics provides manufacturers with tools that increase efficiency and competitiveness. This year NIST worked with over 450 companies on critical measurement and technology challenges. For example, NIST developed calibrations that will prevent costly mistakes for semiconductor manufacturers.

## **Spectrum Availability**

NTIA's spectrum management operations ensure federal agencies have enough access to spectrum to conduct both their current and future missions. NTIA certified approximately 290 spectrum-dependent systems required to support national security and emergency communications, approved over 75,000 radio frequency assignments to authorize the federal systems to operate, and coordinated hundreds of satellite actions with foreign governments and domestic operators to bring satellite systems into use.

To create new opportunities for innovation while protecting U.S. government requirements, NTIA developed specialized dynamic spectrum sharing techniques to maximize the commercial use of the 3.55-3.65 GHz band while protecting DoD mission critical capabilities.

## **Unmanned Earth System Observation**

NOAA is expanding innovative and cost-effective unmanned systems to improve the effectiveness, and safety of observing operations for weather prediction and earth system monitoring and to support oil and chemical spill response.

## **Intellectual Property**

Predictable and reliable intellectual property rights are critical for creating new jobs and driving technological progress across all industries. Intellectual property protection supports innovation in vital areas from curing cancer, and exploring space, to improving the quality of life for people around the world. USPTO continues to optimize patent and trademark reliability and timeliness while strengthening intellectual property protection.

## **Data Access and Analytics**

NTIS advanced the President's Management Agenda helping agencies deliver mission critical services more efficiently. Working with joint venture partners, NTIS streamlined data access and interoperability, launched shared service platforms, and incorporated process automation technologies. For example, NTIS and U.S. Citizenship and Immigration Services improved verification of employment eligibility through enhanced data analytics, ultimately decreasing the time for employers to enroll in E-Verify by 46% and improving timeliness and quality of data collection.

# Management Analysis of Strategic Goal 1 – Accelerate American Leadership

## Performance Indicator Results and Targets

SO 1.2 – Advance Innovation Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
NIST - Number of businesses using NIST research facilities	Target	215	225	275	325	325	Exceeded	325	300
	Actual	514	444	435	442	450			

NIST - Citation Impact of NIST Publications	Target	1.5	1.5	1.5	1.6	1.6	Exceeded	1.3	1.3
	Actual	1.53	1.7	1.8	1.66	1.62			

NIST - International Adoption of NIST Quantum SI Standards <i>(new)</i>	Target	N/A	N/A	N/A	N/A	3	Met	4	5
	Actual	N/A	N/A	N/A	N/A	3			

NTIA - Percentage of spectrum assignments transitioned on time, based on approved plans <i>(new)</i>	Target	N/A	N/A	N/A	N/A	80%	Exceeded	75%	75%
	Actual	N/A	N/A	N/A	N/A	92%			

Exceeded (over 100% of target)
Met (90-100% of target)
Not met (below 90% of target)



## Other Evidence and Evaluation

Working in fast moving emerging technology spaces requires close and frequent connection with the broader research community to ensure that the Department's programs and activities are focused on the most pressing challenges. NIST continues to engage with stakeholders in academia, industry, and across the government to assess measurement science and standards requirements in areas of strategic technical importance. Engagements include hosting workshops, consortia, and other collaborations to create roadmaps for required measurement research, measurement services, and standards to support innovation. Examples of recent evidence used to guide NIST research efforts include:

- [2018 Atomistic Simulations for Industrial Needs Workshop \(NIST, 2018\)](#)
- [Workshop on Artificial Intelligence for Materials Science \(NIST, 2018\)](#)
- [Smart Manufacturing: Industry Forum: Monitoring, Diagnostics, and Prognostics for Manufacturing Operations \(NIST 2018\)](#)
- [Structural Reliability Partnership Workshop \(NIST Boulder, 2018\)](#)
- [DOE/NIST Advanced Energy Materials Discovery, Development, and Process Design Workshop \(DOE, 2018\)](#)
- [High-Throughput Experimental Materials Collaboratory \(HTE-MC\) Workshop \(NIST, 2018\)](#)
- [2018 NIST/Thermodynamics Research Center Consortium Workshop \(NIST Boulder, 2018\)](#)
- [Rapid Microbial Testing Methods Workshop \(NIST 2018\)](#)
- [2D Materials Beyond Graphene: Government Workshop of the Washington, DC Metro Area \(NIST/NRL, 2018\)](#)
- [NIST Global City Teams Challenge \(2018\)](#)

The National Academies of Science, Engineering, and Medicine periodically evaluate NIST programs to assess capabilities and impact. During 2018, NIST's programs in quantum science and advanced networking, and cybersecurity were evaluated. Pursuant to the Commercial Spectrum Enhancement Act, in July 2018, NTIA submitted its annual report to Congress on federal agencies' progress transitioning radio communications systems and associated spectrum assignments from spectrum reallocated to commercial use. This report provides details on two separate spectrum transitions through December 2017 and information on adherence to milestones and timetables.

In October 2018, NIST and NTIS signed an agreement to create a partnership to better connect entrepreneurs, industry, and investors with inventions created because of federally funded research and development. The new partnership supports the Lab to Market goal of increasing the economic impact of federally funded research and development by accelerating the transition of new technologies from the laboratory to the commercial marketplace.

## Strategic Conclusions and Recommendations

The Department is making significant progress in its work to Advance Innovation and the Strategic Objective is on track. However, the U.S. is in a highly competitive environment. Many other countries are outspending the U.S. by orders of magnitude, threatening to outpace our ability to maintain technological leadership. For example, the U.S. Government's estimated \$200 million annual allocation in quantum research is matched by the European

## Management Analysis of Strategic Goal 1 – Accelerate American Leadership

Union's 10-year investment of €2 billion and dwarfed by China's announced \$10 billion quantum computing center. A large Chinese e-commerce company plans to establish a \$15 billion research academy that includes quantum computing research. China is aggressively investing in AI, as evidenced by a flurry of publications and patents, and has a goal to grow their AI industry to \$150 billion by 2030.

### Actions to Advance Progress through FY 2020

#### NIST

NIST continues to prioritize its R&D efforts in quantum science, artificial intelligence, advanced manufacturing, and advanced communications to continue to provide the measurement science and standards infrastructure necessary to support innovation. Highlighted NIST efforts include:

#### Quantum Science

- *Fostering the Quantum Technology Ecosystem:* NIST will increase its investment in centers for basic research on quantum information science at the University of Maryland (JQI and QuICS), creating and disseminating its quantum know-how to other government agencies, industries, and academia. NIST/JQI/QuICS research will promote the development of new quantum technologies and fill a pipeline of quantum-capable scientists and engineers for the nascent U.S. quantum technology sector. Planned strategic hires will expand the JQI's reach into quantum engineering from FY 2018 through FY 2019.
- *Establish the Quantum Economic Development Consortium:* NIST will help lay the foundation for the nascent quantum industry with the establishment of an industry consortium to accelerate quantum-related research and applications during FY 2019.
- *Commercialization of NIST Quantum-based measurement technologies:* Through the NIST-on-A-Chip Program, NIST will continue to aggressively pursue agreements and partnerships with industry to commercialize quantum-based measurement technologies. Currently NIST has 24 different quantum SI chip-scale devices in development and has existing agreements with industry or is negotiating partnerships to commercialize these technologies through FY 2024.
- *Atom-Scale Fabrication for Solid State Quantum Computing:* NIST will spearhead advances in atom scale fabrication that are compatible with state-of-the-art semiconductor manufacturing. NIST will demonstrate atom-based test structures that are foundational components for quantum information processing, and new measurement methods for quantifying atomic scale displacements critical to quantum device operation during FY 2019.
- *High Fidelity/Efficiency Quantum Networks through Single Photon Detection on Integrated Photonic Chips:* Future quantum computers will be connected via new types of quantum networks which will differ significantly from today's internet. This type of network will require protocols that can preserve quantum entanglement between any two points and will use single photons to carry information. NIST will increase efficiency measurements of single photons in integrated photonic structures to ensure the fidelity and speed of these quantum protocols during FY 2019.
- *Metrology for Superconducting Quantum Metrology for Quantum Computing:* Using fabrication and measurement technology for 5 GHz and 30 mK operation, including quantum circuit theory and simulation, NIST will demonstrate a multi-qubit chip design with high-fidelity quantum gates

# Management Analysis of Strategic Goal 1 – Accelerate American Leadership

in FY 2019.

- *International Standards:* With like-minded partners, including key foreign counterparts, NIST will lead the development of international standards for quantum technologies. NIST also supports U.S. leadership by identifying and prioritizing measurement standards that can be transitioned into international standards rapidly through FY 2020.

## Artificial Intelligence

- NIST will continue to build expertise in using ML/AI tools in its research, and to measure and enhance the security and trustworthiness of AI systems. As part of this effort, NIST will establish partnerships in AI research and standardization to leverage the expertise of academia, industry, and government. The partnerships will also allow NIST to anticipate technological advances and long-term use of AI in identifying research and standards gaps through FY 2020.
- NIST will issue a plan for federal engagement in the development of technical standards and related tools in support of robust, and trustworthy systems that use AI technologies. NIST will lead the development of this plan with participation from other federal departments and agencies and in consultation with the private sector, academia, and other stakeholders during Q3 FY 2019.
- NIST will lead the development of international standards for big data for AI, and trustworthiness and reliability in AI systems, through engagement in global standards bodies including International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) ongoing through FY 2020.
- To build expertise of ML/AI tools across its research staff, NIST will provide a specialized online and small group training course for up to 200 employees and will develop an ML/AI expert team as a resource during FY 2019.
- NIST will continue to serve as the co-chair for the National Science and Technology Council's Subcommittee on AI during FY 2019.
- NIST will continue to provide Science and Technology policy leadership on the White House Select Committee on AI during FY 2019.

## Advanced Manufacturing

- NIST will continue to lead the development of standards, methods, and tools to advance enterprise and supply chain management, including; enabling predictive analytics, advanced sensing and control, and support for real-time monitoring and simulation of production machines during FY 2019.
- NIST will continue to lead the development of measurement science, standards, and tools for enabling cybersecurity, traceability, and trustworthiness in smart manufacturing systems, components, data, and supply chains. They will promote the adoption of these through bilateral and multi-lateral engagements in global for a during FY 2020.
- NIST will develop and deploy measurement science, standards, and test methods that advance manufacturing robotic system performance, safety, and ease of implementation. Participation in the American Society of Mechanical Engineers (ASME) and the American Society for Testing and Materials (ASTM) International will promote wider adoption of robotics during FY 2019 and FY 2020.
- NIST will develop and deploy measurement science, standards, and best practices in additive manufacturing. They will enable rapid design-to-product through advances in: material characterization; in-process sensing; performance qualification of materials and parts; and methods to

## Management Analysis of Strategic Goal 1 – Accelerate American Leadership

support part quality and reproducibility during FY 2019 and FY 2020.

- NIST will accelerate advanced materials discovery and address concerns about dependence on foreign countries for critical minerals during FY 2019 and FY 2020.
- NIST will improve the reliable measurement of protein, cell, and DNA for advancement of biomanufacturing systems, processes, and products during FY 2019 and FY 2020.

### Measurements and Standards to Facilitate Digital Commerce

- NIST is developing test and measurement procedures to evaluate commercial wireless systems that may be deployed in the newly-established 3.5 GHz Citizens Broadband Radio Service frequency band. The band will provide spectrum in a three-tier sharing arrangement between the U.S. Navy, LTE providers and other licensees, and general users during FY 2019.
- NIST will develop measurement tools and insights to enable more efficient use of IOT in smart manufacturing and the use of machine learning algorithms in communication applications. NIST will develop technical requirements for smart communication infrastructures using millimeter wave frequencies to support work cell IOT analytics during FY 2019.
- NIST will develop and release for public comment draft guidance on managing IOT cybersecurity and privacy risks during FY 2019.
- NIST will lead a study to review international cybersecurity standardization for IOT and identify existing standards and standards gaps used for IOT applications during FY 2019.
- NIST will develop high frequency measurements to characterize noisy manufacturing environments. NIST will also develop simulations to evaluate machine learning algorithms for optimizing beam forming and tracking functionalities that allow stable, high-speed mobile communications in FY 2020.

### NTIA

NTIA will continue to perform its spectrum management, planning, and policy responsibilities to ensure both government and industry have enough access to maintain US economic prosperity and national security.

NTIA will: 1) certify approximately 600 spectrum-dependent systems; 2) approve over 150,000 radio frequency assignments; and 3) coordinate several hundred satellite actions with foreign governments and domestic operators to bring satellite systems into use; and 4) support operations associated with disasters. Subject to available funding, NTIA is planning to initiate a multi-year effort to modernize NTIA's spectrum management. NTIA will re-engineer processes for spectrum authorizations, improve data accuracy and integrity, and implement advanced spectrum sharing analysis and efficiency evaluation tools.

In accordance with the October 2018 Presidential Memorandum, NTIA will lead the: 1) development of a National Spectrum Strategy and 2) provide guidance and collect data on current spectrum usage and future spectrum requirements of the federal agencies. NTIA will work closely with the new White House led Spectrum Strategy Task Force.

## Management Analysis of Strategic Goal 1 – Accelerate American Leadership

Additionally, NTIA will facilitate early access to transitioning spectrum bands by making at least one contact with licensees per quarter to ensure that 80 percent or more of designated spectrum assignments are transitioned on time. NTIA will submit its next annual report to Congress under the Commercial Spectrum Enhancement Act in the second quarter of FY 2019.

Pursuant to the MOBILE NOW Act of 2018, NTIA will: 1) complete an analysis of the 3.10-3.55 GHz band to determine the feasibility of accommodating commercial wireless services; 2) continue to work closely with the Federal Communications Commission and other federal agencies to identify and make available an additional 255 megahertz of spectrum for commercial wireless services; 3) complete a study and generate a plan to incentivize federal entities to relinquish or share spectrum; and 4) provide recommendations on the changes needed to the spectrum relocation fund to cover the cost of sharing spectrum with unlicensed radio technologies or licensed by rule operations.

NTIA will lead federal agencies at the International Telecommunication Union (ITU) World Radiocommunication Conference (WRC) in early FY 2020. The ITU WRC is the treaty-status forum that sets up spectrum regulations for international operations. The WRC is the culmination of three years of study and preparation – NTIA is on track for a successful WRC. In other international efforts, NTIA will coordinate critical spectrum issues along the borders with Canada and Mexico to prevent harmful interference.

NTIA will establish a Boulder city-wide testbed by September 2019 to test distributed radio frequency sensing applications under real-world conditions and measure the impact of the Internet of Things on spectrum usage.

NTIA will continue to develop policy advice, as necessary, on emerging technologies, including AI through FYs 2019 and 2020.

NTIA will continue to serve as a member of the Organization of Economic Cooperation and Development's (OECD) Expert's Group on Artificial Intelligence, which is currently developing policy principles for adoption and trust in AI through FYs 2019 and 2020.

### **NTIS**

NTIS will continue expanding its interagency data science innovation projects that enhance citizen-services, serve veterans, recoup taxpayer funds, advance health and safety, counter unfair imports, and increase commercialization of federally funded research and development.

NTIS will continue to advance the President's Malaria Initiative (PMI). PMI is a historic U.S. Government effort to lead the fight against malaria by developing a system for efficient data integration, analytics, and dissemination. The system would enable medical experts and PMI staff to perform cross-sector and interdisciplinary analyses.

NTIS will continue supporting the Veteran Administration's Technology Transfer Program (VA-TTP) to strengthen their organizational capabilities from data collection to processing to dissemination. The VA-TTP oversees VA innovations, including commercialization, to benefit U.S. Veterans and the American public.

# Management Analysis of Strategic Goal 1 – Accelerate American Leadership

## STRATEGIC OBJECTIVE 1.3 – Strengthen Intellectual Property Protection

Contributing Bureaus: OS, ITA, MBDA, NTIA, NIST, USPTO

Key Strategies:

- Strengthen the protection of intellectual property
- Optimize patent reliability and timeliness and trademark quality and timeliness

### Executive Summary of Progress

**On-Track**

The United States Patent and Trademark Office is committed to issuing reliable and predictable Intellectual Property (IP) rights to spur job creation and innovation in the United States. The U.S. patent system is a crown jewel of the nation’s economy, culture, and history. Protecting IP is vital to maintain the incentives for research and development, creating quality jobs, driving our economic prosperity, and providing important benefits to society. The USPTO also works to educate the public on the importance of IP to American businesses. In all our activities, the USPTO strives towards providing strong, reliable, and predictable intellectual property rights.

#### Patent Examiner Time Analysis

The Patent organization initiated an Examiner Time Analysis (ETA), to better understand the factors that impact the amount of time required to examine a patent. The insight is helping PTO make better informed decisions on management of the examination process. The previous comprehensive review of patent examination time was over 40 years ago. Since then, significant changes to the patent examination process have occurred, including new technologies, growth of available prior art, increased use of electronic tools, transition to a new classification system, and changes in the legal landscape and examination practices. An approach was also developed to make the system more responsive to changing requirements. USPTO also continued to refine Patent Trial and Appeal Board (PTAB) proceedings and issue guidance regarding subject matter eligibility.

#### Trademark Exceptional Office Action

The USPTO’s Trademarks organization is committed to improving the quality of trademark application examination and ensuring that all examiners have the knowledge, and skills to perform their jobs well. To raise the bar, the Trademark organization instituted its Exceptional Office Action initiative. It emphasizes comprehensive excellence in office actions and expands upon the existing first and final action standards for correct decision-making.

### **IP Training**

The USPTO trains foreign officials and U.S. stakeholders on best practices in intellectual protection and enforcement worldwide. USPTO's Global IP Academy (GIPA) trained 5,082 people by the end of Q3 of FY 2018, which exceeds the annual target of 5,000. Training activities continued through Q4 and included domestic IP rights owners and users and foreign officials, (e.g. patent, trademark, and copyright officials; judges; prosecutors; police; customs officials; and IP policymakers).

ITA is a training partner with USPTO. ITA provides IP outreach such as STOPFakes.gov roadshows, personal outreach, and materials such as Industry Specific brochures to 805 recipients. Seventy minority businesses took part in this outreach total.

### **Digital Economy Intellectual Protection**

In close coordination with USPTO, NIST staff took part in the US Government delegation to the G20 Digital Economy Task Force. Strong IP protection provisions were included in the G20 Digital Economy Ministerial Declaration.

### **Return on Investment Initiative**

NIST kicked off this initiative to maximize the economic value of federal investments in science and technology. This effort directly supports the President's Management Agenda and has the goal of accelerating private sector commercialization of government research. Initial activities during 2018 included a kickoff symposium in April, four public forums across the U.S. during May through June, and a public Request for Information.

# Management Analysis of Strategic Goal 1 – Accelerate American Leadership

## Performance Indicator Results and Targets

SO 1.3 – Strengthen Intellectual Property Protection Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
USPTO - Patent Average First Action Pendency <i>*APG - 15 months by 2019</i>	Target	17.4	15.7	15	15	15	Met	15	14.7
	Actual	18.4	17.3	16.2	16.3	15.8			
USPTO - Patent Average Total Pendency <i>*APG - 24 months by 2019</i>	Target	26.7	26.4	24.2	24.2	24	Exceeded	24.2	22.8
	Actual	27.4	26.6	25.3	24.2	23.8			
USPTO - Trademark Average First Action Pendency	Target	2.5-3.5	2.5-3.5	2.5-3.5	2.5-3.5	2.5-3.5	Met	2.5-3.5	2.5-3.5
	Actual	3.1	2.9	3.1	2.7	3.4			
USPTO - Trademark Average Total Pendency	Target	12	12	12	12	12	Exceeded	12	12
	Actual	9.8	10.1	9.8	9.5	9.6			
USPTO - Number of minority businesses receiving information on intellectual property protection	Target	120	120	120	120	120	Exceeded	150	150
	Actual	126	147	143	143	151			
USPTO - Number of people, including foreign government officials and U.S. stakeholders, trained on best practices to protect and enforce intellectual property	Target	4,300	6,300	5,000	5,000	5,000	Exceeded	5,000	5,000
	Actual	4,960	5,283	4,975	4,134	7,242			

<span style="color: blue;">■</span> Exceeded (over 100% of target)	<span style="color: green;">■</span> Met (90-100% of target)	<span style="color: red;">■</span> Not met (below 90% of target)
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## Other Evidence and Evaluation

### USPTO

The USPTO is a demand-driven, fee funded organization with a commitment to delivering reliable IP protection and information to its various stakeholders and serving inventors, entrepreneurs, and businesses in the United States and around the world. As a result, USPTO continuously engages its stakeholders and the public via a variety of informal/informal mechanism and evaluations. Examples of recent methods used to guide USPTO efforts include:

- Federal Register: Used for formal requests for comments, notices of proposed rulemaking, roundtables, and survey vehicles.
- Evaluation of Examination Time: The Patents program began an Examination Time Analysis (ETA) project to have a better understanding of factors that affect examination time. Following an analysis, an ETA team developed robust data models and flexible frameworks to facilitate further evaluation.
- Cooperative Patent Classification (CPC) Routing: The Patent program is exploring routing of new applications for examination to the appropriate Technology Center/Art Unit using initial CPC classifications.
- Website Customer Surveys: USPTO is collecting survey data to improve the user experience on its website. Survey information is collected on the website generally. The Patent webpages and Trademark webpages collect specific information including the experience customers have when filling a patent on line.
- Application Prosecution Survey: This survey measures exchanges between USPTO examiners and our customers.
- Call Center Survey: This survey measures customer satisfaction with the Trademark Assistance Center.
- NIST Request for Information: In 2018, NIST issued a Request for Information to gather input about the current state of Federal technology transfer. NIST will assess the public's ability to engage with Federal laboratories and access federally funded R&D through collaborations, licensing, and other mechanisms. 104 responses were received from academia, industry, and other stakeholders.

## Strategic Conclusions and Recommendations

USPTO continues to improve its processes and customer experience. PTO will continue to collaborate with ITA and other Bureaus on outreach and education to U.S. stakeholders on intellectual property protection and enforcement.

## Actions to Advance Progress through FY 2020

USPTO services are paid for by the customer. Since service requests are often received in one fiscal year and fulfilled in a subsequent year, multi-year planning and budgeting is required. USPTO relies heavily on indicators of global and domestic economic activity, policies and legislation, process efficiencies, and trends in applicant behavior to forecast workload and fee collections. These workload variables in turn affect production models used by the Patent and Trademark organizations. Monitoring and updating the models are ongoing activities and central to USPTO operations.

## Management Analysis of Strategic Goal 1 – Accelerate American Leadership

Other FY 2019 – FY 2020 actions USPTO will take to achieve Strategic Objective 1.3 include:

- Training Stakeholders and Foreign Nationals: Continue to provide training that promotes the protection and enforcement of IP of American innovators and creators on both the domestic and international levels.
- Examiner Hiring: Hire at a level that allows the USPTO to make progress toward pendency targets while aligning examination ability with incoming workload to ensure a soft landing if application pendency is best.
- Trademark Hiring: With a sustained economic recovery, new application filings are expected to increase by about 332,893 applications by FY 2023 compared to FY 2018. To keep pace with the workload and support business development and implementation of new and improved IT systems, the Trademark organization will increase the number of examining attorneys.
- Lab-to-Market Acceleration: NIST, with the interagency Lab to Market Subcommittee of the National Science and Technology Council, is analyzing stakeholder input and developing recommendations to improve practices and policies for technology transfer. A report on the recommendations is due in Q1 of FY 2019 and directly supports the President's Management Agenda. Implementation of recommendation will begin later in the fiscal year.

## STRATEGIC OBJECTIVE 2.1 – Increase Aquaculture Production

Contributing Bureaus: OS, NOAA

Key Strategies:

- Create a more predictable and timely permit review process and allow businesses to begin operation more rapidly, thus accelerating the growth of the U.S. seafood industry
- Support research and extension programming to advance marine aquaculture

### Executive Summary of Progress

**Focus Area for Improvement**

#### **Expediting Permitting**

An interagency agreement was signed in 2016 to improve coordination among Federal agencies and streamline regulatory permitting processes associated with aquaculture operations in Federal waters.

#### **Web-based Permitting and Siting Tool**

The [AquaMapper](#) website tool was released to the public in February of 2018. This tool will be valuable to the industry for identifying optimal siting for offshore farms and will be critical to facilitating the permitting process.

#### **Aquaculture Strategic Research Plan**

This plan is under development and will identify key research priorities and targeted advances (from 2019 to 2024) and direct efforts to support a domestic marine aquaculture industry. This plan is scheduled to be completed in FY 2019.

# Management Analysis of Strategic Goal 2 – Enhance Job Creation

## Performance Indicator Results and Targets

SO 2.1 – Increase Aquaculture Production Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
NOAA - Reduction in time to review, consult, or approve aquaculture permits <i>(new)</i>	Target	<i>New performance indicator. Baseline values and targets not established</i>					N/A	TBD	TBD
	Actual								
NOAA - Annual number of aquaculture research products transitioned to a new stage (development, demonstration, or application) <i>(new)</i>	Target	<i>New performance indicator. Baseline values and targets not established</i>					N/A	TBD	TBD
	Actual								
NOAA - Number of fishermen, seafood processors and aquaculture industry personnel who modify their practices using knowledge gained in fisheries sustainability and seafood safety <i>(new)</i>	Target	New performance indicator. Baseline values established and FY 2019 target set. FY 2020 target not set					N/A	15,000	TBD
	Actual	53,000	62,200	40,243	19,900	17,796			

\*Actuals apply to Sea Grant program. FY 20/21 targets are tentative until a baseline is established for Aquaculture.

<span style="color: blue;">■</span> Exceeded (over 100% of target)	<span style="color: green;">■</span> Met (90-100% of target)	<span style="color: red;">■</span> Not met (below 90% of target)
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### Other Evidence and Evaluation

An Analysis of Nearly One Billion Dollars of Aquaculture Grants Made by the US Federal Government from 1990 to 2015, a Johns Hopkins study published in the Journal of the World Aquaculture Society, October 2017, indicates a 37-fold return on investment in aquaculture since 2000: <https://onlinelibrary.wiley.com/doi/full/10.1111/jwas.12425>

Annual Fisheries of the United States 2017 statistical data on U.S. recreational catch, commercial fisheries landings and value, as well as other aspects of U.S. commercial fishing: <https://www.fisheries.noaa.gov/content/fisheries-united-states-2017> Reports from previous years: <https://www.st.nmfs.noaa.gov/commercial-fisheries/publications/index>

### Strategic Conclusions and Recommendations

The Department of Commerce has identified increasing aquaculture production as one of its key strategic objectives to increase the nation's seafood supply, improve our trade balance with other nations, and create jobs. Because the Aquaculture Program is a startup, it has been categorized as a focus area for improvement. The Department of Commerce will propose an Aquaculture Agency Priority Goal for the next two-year cycle.

### Actions to Advance Progress through FY 2020

#### **One-Stop-Shop Permitting**

The Department will continue to work with the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, other federal agencies, and coastal states to streamline federal marine aquaculture permitting. Commerce will also support legislative efforts to provide NOAA unambiguous authority for aquaculture permitting in federal waters. This will create a more predictable and timely permit review process.

#### **Research and Extension Programming**

In collaboration with industry, NOAA will support the creation of pre-competitive commercial scale demonstration facilities, co-funded by— industry and coastal seafood communities. These pilot programs will facilitate the commercial viability of new marine aquaculture businesses. NOAA will use aquaculture research to remove production bottlenecks related to siting, disease, genetics and genomics, hatchery seed stock, and feed availability.

#### **Regional Research and Testing**

A Programmatic Environmental Impact Statement will be developed for the Pacific Islands Region to analyze the potential environmental impacts of a proposed offshore aquaculture management program. Regional pilot projects (e.g., kelp and seaweed farming and offshore aquaculture) will be

## Management Analysis of Strategic Goal 2 – Enhance Job Creation

established and expanded.

### **Tools and Best Practices**

In collaboration with industry, NOAA will support the creation of pre-competitive commercial scale demonstration facilities, co-funded by— industry and coastal seafood communities. NOAA will also release and continue development of the Ocean Reporting Tool which utilizes the Marine Cadastre to provide spatial analysis for industry to inform siting decisions. These pilot programs will facilitate the commercial viability of new marine aquaculture businesses. NOAA will use aquaculture research to remove production bottlenecks related to siting, disease, genetics and genomics, hatchery seed stock, and feed availability.

## STRATEGIC OBJECTIVE 2.2 – Reduce and Streamline Regulations

Contributing Bureaus: OS, All bureaus

Key Strategies:

- Review agency regulations and remove or modify rules that unnecessarily burden businesses and economic growth
- Review and streamline permitting processes while achieving statutory objectives
- Facilitate a One Federal Decision timeline

### Executive Summary of Progress

**On-Track**

The Department’s Regulatory Reform Task Force met twice in FY 2018 to identify deregulatory actions and monitor progress on those actions. Throughout the year, the Department’s Regulatory Reform Officer, an appointee within the Office of the Secretary, works closely with the heads of all bureaus to identify potential deregulatory actions and feasible timelines for completion.

# Management Analysis of Strategic Goal 2 – Enhance Job Creation

## Performance Indicator Results and Targets

SO 2.2 – Reduce and Streamline Regulations Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
OS - Number of deregulatory actions issued that address recommendations by the Regulatory Task Force	Target	N/A	N/A	N/A	7	25	Not Met	33	10
	Actual	N/A	N/A	N/A	7	14			
OS - Total cost savings from deregulatory actions	Target	N/A	N/A	N/A	\$1.1M	\$750k	Exceeded	\$3.13M	TBD <sup>1</sup>
	Actual	N/A	N/A	N/A	\$1.2M	\$46.8M			
NOAA - Average number of days to complete informal ESA Section 7 consultations <i>(new)</i>	Target	<i>New performance indicator. Baseline values established and targets set</i>					N/A	50	47
	Actual	122	122	122	53	45			

<sup>1</sup> FY 2020 target is still in negotiation with OMB to finalize calculation method that would impact the proposed FY 2020 target

<span style="background-color: blue; color: white; padding: 2px;"> </span> Exceeded (over 100% of target)	<span style="background-color: green; color: white; padding: 2px;"> </span> Met (90-100% of target)	<span style="background-color: red; color: white; padding: 2px;"> </span> Not met (below 90% of target)
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## Other Evidence and Evaluation

### Streaming the Permitting Process

In FY 2018, NOAA reduced processing time for informal consultations under Section 7 of the Endangered Species Act (ESA) by 15%, from 53 days to 45. Since efficiency measures were first implemented in 2016, processing time for informal consultations has been reduced by 63%. Timely consultation with Federal agencies expedites actions that support infrastructure, jobs, and the economy while incorporating reasonable and prudent measures to minimize harmful impacts to threatened or endangered marine species.



### Strategic Conclusions and Recommendations

The Department has made significant progress in this objective to reduce and streamline regulations. During the past two years, many of the most feasible opportunities for reduction and streamlining have been identified and action taken. Going forward, this objective will focus on ensuring that for any new regulation that the Department may propose at least two regulations will be identified and repealed.

### Actions to Advance Progress through FY 2020

The following is a summary of the activities that the Department will focus on to continue to advance progress in this strategic objective:

- The Department's Task Force for Regulatory Reform will continue to meet periodically to consider and evaluate potential deregulatory actions within the various bureaus.
- The Department will continue to work closely with the White House Office of Information and Regulatory Affairs (OIRA) to properly calculate future years' total cost savings.
- The Department will work expeditiously to issue proposed rules for deregulatory actions currently on its list of long-term actions on the Unified Regulatory Agenda.

## Management Analysis of Strategic Goal 2 – Enhance Job Creation

### STRATEGIC OBJECTIVE 2.3 – Strengthen Domestic Commerce and the U.S. Industrial Base

Contributing Bureaus: OS, All bureaus

Key Strategies:

- Expand broadband infrastructure and access
- Promote digital commerce and internet governance
- Increase the understanding and use of Commerce data in partnership with industry (also see Strategic Objectives 3.3 and 4.2)
- Build trust in digital commerce through strong encryption standards (also see Strategic Objective 3.2)
- Amplify the economic value of recreational and commercial fisheries
- Promote and support a strong and sustainable manufacturing and defense industrial base
- Build community and regional capacity for entrepreneurship and innovation (also see Strategic Objective 1.2)

#### Executive Summary of Progress

**On-Track**

#### Defense Industrial Base

BIS works with the Department of Defense and other agencies to measure the health and competitiveness of the U.S. Defense Industrial Base by conducting at least two industry sector assessments per year, as well as other Section 232 import investigations. These assessments provide stakeholders with a single, consistent source of information and highlight interdependencies between agencies and programs. Together BIS and ITA gather information on the U.S. industries at issue, trade statistics, technical information on the products being investigated, and develop plans to implement recommendations.

BIS conducted the following industrial base survey and assessment activities in FY 2018:

- U.S. Textile and Apparel Industry, and U.S. Footwear Industry Assessments
- U.S. Industrial Capabilities Assessment – Critical Facilities
- U.S. Air Force C-17 Aircraft Supply Chain Impact Assessment
- U.S. Rocket Propulsion Industrial Base Assessment

- U.S. Bare Printed Circuit Board Supply Chain Assessment
- U.S. Integrated Circuit Design and Fabrication Industry Assessment

Additionally, BIS started the following industrial base studies with initial phases to be completed in FY 2019:

- Software Integration in Information Network Systems and Critical Infrastructure
- U.S. Air Force Industrial Base Sustainment and Readiness

In response to Executive Order 13806, BIS supported the Department of Defense's 2018 report on the defense industrial base with critical industrial and supply chain data and analysis.

### **U.S. Shipbuilding**

To promote and support a strong and sustainable manufacturing and defense industrial base, the ITA Industry and Analysis unit conducted analysis of cost competitiveness factors affecting U.S. shipbuilding capacity.

### **Amplify the Economic Value of Recreational and Commercial Fisheries**

Forty-four U.S. marine fish stocks have been rebuilt since 2000, the highest level of sustainability in recent years. Ending overfishing and rebuilding stocks supports U.S. fisheries' economic contribution which exceeded \$212 billion in 2016 and supports communities and marine ecosystems. The Status of U.S. Fisheries report for 2017 shows a new all-time low number of stocks overfished, showing that the U.S. fishery management system is achieving its long-term sustainability goals.

### **Seafood Import Monitoring Program (SIMP)**

NOAA established SIMP on January 1, 2018. Reporting and recordkeeping requirements were put in place to prevent illegal, unreported and unregulated (IUU) caught and/or misrepresented seafood from entering the U.S. These requirements promote global food security and the sustainability of our shared ocean resources. Importers of record must report key data from the point of harvest to the point of entry into U.S. for imported fish and fish products on a list of products vulnerable to fraud.

### **Broadband**

NTIA's BroadbandUSA provided support to more than 1,000 communities through its regional events and workshops, educational webinars, and technical assistance activities. To create a new broadband map, NTIA worked with federal agencies, state governments, and industry to find innovative approaches to collecting data on broadband availability. NTIA also promoted digital commerce and government through a year-long statutorily-mandated consultation with the U.S. Copyright Office. This collaboration identified new opportunities for innovation in the online ecosystem. To build trust in digital commerce, a

## Management Analysis of Strategic Goal 2 – Enhance Job Creation

new multi-stakeholder process increased software security by improving the visibility into third-party software imbedded in products and is developing a new framework for privacy.

### **Development of Post Quantum Encryption standards**

NIST will announce the second round of quantum resistant algorithms during Q2 FY 2019.

### **Bureau of Economic Analysis (BEA) website**

BEA created and launched a new external, topic-driven website that makes it easier for users to find data and provides information about BEA's statistics. Users can now access statistics by topic, geography, and other means. To better connect with a diverse customer base, including non-economists, plain language content was developed for a wide-ranging number of topics. Topics include how major economic barometers are calculated, what they measure, and how they can be used. A Learning Center was created on the new website. It provides plain language information about BEA's major statistics as well as other resources. BEA expanded the channels for customers to connect with customers, including subject matter experts.

### **Grant funding**

EDA made 234 grants totaling almost \$123 million during FY 2018 to communities and regions to help build community and regional capacity for entrepreneurship and innovation. These grants will help develop or improve community assets that businesses need to succeed.

### **BIS On-time On-Scope**

100% of Industrial Base assessments have been completed within the timeframe set forth in the Memorandum of Understanding between BIS and the survey sponsoring agency or entity.

### **NIST Post Quantum Encryption Standards project on schedule**

As part of its efforts to develop quantum resistant cryptography, NIST completed the first round of cryptographic analysis of Quantum Resistant Algorithms. NIST also has updated the Federal Information Processing Standards (FIPS) 140, *Security Requirements for Cryptographic Modules*, as called for in the U.S. American Technology Council (ATC) Modernization report, and this is currently awaiting approval by the Secretary.

# Management Analysis of Strategic Goal 2 – Enhance Job Creation

## Performance Indicator Results and Targets

SO 2.3 – Strengthen Domestic Commerce and the U.S. Industrial Base Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
<b>BIS - Number of industrial base surveys, data, and analysis distributed to federal agencies and critical sector (new)</b>	Target	<i>New performance indicator. Baseline values not established, but targets are set</i>					N/A	2	2
	Actual								
<b>NOAA - Fish Stock Sustainability Index (FSSI)</b>	Target	756	749	758	754	763	Met	769.5	778
	Actual	746	761.5	754	756.5	757.5			
<b>NOAA - Percent of Stocks For Which Catch is below the Specified Annual Catch</b>	Target	N/A	79.5%	81%	82%	83%	Exceeded	84%	86%
	Actual	91%	89.7%	90.7%	91.9%	90.2%			
<b>NTIA - Impact of NTIA providing broadband support (new)</b>	Target: K-12 Community Anchor Institutions (CAIs)	<i>New performance indicator. Baseline values established and targets set</i>					N/A	7,000	7,700
	Target: K-12 Students							3,150,000	3,400,000
	Target: Hospitals							1,250	1,350
	Actual: K-12 Community Anchor Institutions (CAIs)	N/A	N/A	N/A	N/A	6,300			
	Actual: K-12 Students	N/A	N/A	N/A	N/A	2,875,000			
	Actual: Hospitals	N/A	N/A	N/A	N/A	1,150			

Exceeded (over 100% of target)
Met (90-100% of target)
Not met (below 90% of target)

# Management Analysis of Strategic Goal 2 – Enhance Job Creation

## Other Evidence and Evaluation

### BIS

Below are completed industrial base assessments from the last three years:

- U.S. Air Force C-17 Aircraft Supply Chain Impact Assessment – 2018
- U.S. Footwear Industrial Base Assessment – Summer 2017
- U.S. Textile and Apparel Industrial Base Assessment – Summer 2017
- U.S. Strategic Material Supply Chain Assessment: Rare Earth Elements – 2016
- U.S. Strategic Material Supply Chain Assessment: Titanium – Spring 2016
- U.S. Strategic Material Supply Chain Assessment: Carbon Fiber Composites – Fall 2015
- Defense Industrial Base Assessment of the U.S. Underwater Acoustics Transducer Industry – Summer 2015
- Cost-Metric Assessment of Diminishing Manufacturing Sources and Material Shortages (Update) – February 2015

### NOAA

- Annual Report to Congress on the Status of U.S. Fisheries 2017: <https://www.fisheries.noaa.gov/national/2017-report-congress-status-us-fisheries>
- Quarterly Fishery Stock Status Updates: <https://www.fisheries.noaa.gov/national/population-assessments/fishery-stock-status-updates>
- Annual Fisheries of the United States, 2017 (statistical data on U.S. recreational catch and commercial fisheries landings and value as well as other aspects of U.S. commercial fishing): <https://www.fisheries.noaa.gov/content/fisheries-united-states-2017>
- Reports from previous years: <https://www.st.nmfs.noaa.gov/commercial-fisheries/publications/index>
  - Imports and Exports of Fishery Products Annual Summary, 2017: <https://www.st.nmfs.noaa.gov/Assets/commercial/trade/Trade2017.pdf>
  - Summaries from previous years: <https://www.st.nmfs.noaa.gov/commercial-fisheries/publications/index>
- Annual Fisheries Economics of the United States, 2016 (economic information related to commercial and recreational fishing activities, and fishing-related industries in the United States): <https://www.fisheries.noaa.gov/content/fisheries-economics-united-states-2016>
  - Reports from previous years: <https://www.fisheries.noaa.gov/national/commercial-fishing/fisheries-economics-united-states>

## Strategic Conclusions and Recommendations

In collaboration with the U.S. Regional Fishery Management Councils and other key partners, NOAA is making progress toward increasing seafood production and exports, reducing the seafood trade deficit, and ensuring U.S. fishermen are not disadvantaged by illegal or unregulated fishing and unfair trade practices.

### Actions to Advance Progress through FY 2020

#### **BIS Actions**

BIS will continue its partnership with the Department of Defense and defense industrial base trade associations to ensure that the right target audience is reached. Data analysis will continue to evolve, providing more capacity and better-informed recommendations on license applications and more highly focused public outreach.

#### **NOAA Actions**

NOAA will review chain of custody records of imported fishery products to monitor for Illegal, Unreported, and Unregulated (IUU) shipments and fraudulently labeled seafood.

Technological solutions will be developed to support fishing practices designed to minimize bycatch of fish and protected species.

Electronic Monitoring and Electronic Reporting options will be implemented in key fisheries identified by FY 2020.

In collaboration with U.S. Regional Fishery Management Councils, the cost-effectiveness of catch share programs will be improved using new technologies. Catch share programs dedicate a share of fish to individual fishermen, cooperatives, or fishing communities.

The timeliness of U.S. marine fish stock assessments will be improved.

Recovery plans will be developed and implemented to improve the status of Endangered Species Act (ESA) listed species.

Timely consultations and authorizations for all Federal agencies' proposed actions, per the ESA Section 7, will be provided.

#### **NIST Actions**

NIST will continue to analyze algorithms provided as part of NIST's Post Quantum Encryption Standards project and will announce further rounds of algorithms in FY 2019 and FY 2020.

# Management Analysis of Strategic Goal 2 – Enhance Job Creation

## STRATEGIC OBJECTIVE 2.4 – Increase U.S. Exports

Contributing Bureaus: OS, BEA, Census, ITA, MBDA, NIST

Key Strategies:

- Reduce the costs and complexities of exporting to enable more U.S. companies to become successful exporters
- Connect more U.S. companies—especially small and medium-sized businesses—to foreign markets and prescreened buyers
- Advocate for the selection of U.S. firms in foreign government procurements through Commerce- led interagency efforts
- Address government actions and policies that impede exports of U.S. goods and services

### Executive Summary of Progress

**On-Track**

ITA responded to over 137,000 inquiries from more than 33,000 U.S. exporters, 83% of which were small and medium-sized enterprises. On average, clients reported an increase of 20% in revenue due to ITA’s assistance. Overall, during FY 2018, ITA helped support over 550,000 jobs in the United States. The FY 2018 initial estimate is \$85.7 billion in program impact of which \$6.1 billion is exports enabled by trade barriers reduced, removed, or prevented.

#### **Addressing Foreign Government Actions and Policies Impeding U.S. Exports**

ITA exceeded its FY 2018 target by 10 percent and reduced, removed, or prevented 138 foreign trade barriers. This is an estimated impact worth approximately \$6.1 billion in economic benefit to American businesses.

#### **United States- Mexico-Canada Agreement (USMCA)**

ITA actively supported negotiations and outreach to U.S. companies to identify and work to remove, reduce, and eliminate trade barriers and generate new commercial opportunities for U.S. businesses.

#### **Early-Warning System**

An early-warning pilot system was created to identify and eliminate non-tariff barriers before they become official foreign trade policies and



regulations. ITA is working to fully implement this approach across the enterprise in FY 2019.

### **Deal Teams**

In FY 2018, ITA successfully led interagency deal teams that included the State Department, Overseas Private Investment Corporation (OPIC), U.S. Trade and Development Agency (USTDA), and U.S. Exim Bank to provide U.S. exporters with comprehensive U.S. Government aid and secure U.S. export deals. In Brazil alone, a Deal Team approach resulted in U.S. companies winning over \$300 million in projects.

### **Discover Global Market (DGM) Design and Construction**

The 17<sup>th</sup> annual DGM event organized by ITA had an estimated 350 attendees from 28 States, over 500 one-on-one business-to-government meetings with foreign officials from 23 countries, and over 400 business-to-business matchmaking meetings with foreign buyers from 16 countries.

### **Advocacy Deals**

In FY 2018, ITA helped facilitate 97 signed contracts with an estimated U.S. export content of \$75.8 billion. This accomplishment represents an almost 80% increase of the U.S. export dollar value in Advocacy deals from the \$42.3 billion reported in FY 2017.

### **Access Asia**

In FY 2018, ITA developed an Access Asia effort in support of the Administration's Indo-Pacific strategy. ITA held a series of events in 12 U.S. cities and reached 350 new U.S. exporters. ITA provided U.S. exporters with market expertise and opportunities in Indo-Pacific countries (e.g. Japan, Korea, Taiwan, Philippines, Vietnam, Indonesia, India, etc.) and focused on fast-growing sectors such as aerospace, defense, life sciences, information and communication technology, energy, and advanced manufacturing.

### **President's Advisory Council on Doing Business in Africa (PAC-DBIA)**

A PAC-DBIA mission to Ethiopia, Kenya, Cote d'Ivoire, and Ghana from June 24 to July 6 was led by the Secretary and ITA executives. In addition to over \$1 billion in private sector deals announced during the trip, Commerce signed groundbreaking MOUs with the governments of Ethiopia, Kenya, and Ghana that aim to drive expansion of the U.S. business presence in those markets.

### **Thessaloniki International Fair (TIF)**

From September 6 to September 7, 2018, ITA, in partnership with AmCham Greece, organized a U.S. pavilion for 55 U.S. companies from a variety of industry sectors under the theme Harnessing the Power of Innovation and Creativity. The Secretary of Commerce attended the TIF as the head of the U.S. delegation and met with the Prime Minister. The United States was selected as the Honored Country for 2018. Following the event, a minority-

## Management Analysis of Strategic Goal 2 – Enhance Job Creation

owned Connecticut small manufacturer of consumer recycling equipment, had their first of 14 recycling centers inaugurated by the Greek Ministry of Defense. This firm reported \$9 million worth of U.S. exports to Greece during 2018.

### **Ukraine and Locomotives**

In February 2018, a U.S. company signed a \$1 billion long-term agreement with Ukraine's railway system that included an initial \$99 million purchase of 30 U.S. made freight locomotives. Commerce Department offices in Washington and in Ukraine worked together with this company and Ukrainian counterparts for more than two years to help Ukraine replace aging Soviet-era equipment with modern U.S. rail technology. The first locomotive was rolled off assembly lines in Erie, PA in July 2018.

### **Strategic Bilateral Commercial Dialogues**

ITA continues to lead business-driven strategic commercial dialogues to remove, reduce, and prevent trade barriers affecting U.S. exports. Dialogues were held with:

- Nigeria: Established the U.S.-Nigeria Commercial & Investment Dialogue. (November 2017)
- Qatar: Established the first ever U.S.-Qatar Strategic & Economic Dialogue. (February 2018)
- Japan: The Vice President and Deputy Prime Minister met to discuss Economic Dialogue. (October 2017) Working level meeting of the Bilateral Trade Working Group. (January 2018)
- India: The Secretary launched the first session of the U.S. - India Commercial Dialogue to expand trade and investment opportunities and promote cooperation in standards, ease of doing business, and travel and tourism. (October 2017)

### **Online Tools for Exporters**

During FY 2018, ITA continued developing and improving online tools for U.S. Exporters. Tools included: Interactive Global Steel Trade Monitor, Market Diversification Tool, eCommerce Innovation Lab and Exporter Portal. These tools aim to maximize ITA's digital service delivery, engage and serve more U.S. exporters, and improve efficiency for staff and businesses. The tools support the President's Management Agenda Goals of improving customer service, IT modernization, and replacing low value work with high value work.

## Performance Indicator Results and Targets

SO 2.4 – Increase U.S. Exports Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
ITA - Number of U.S exporters assisted	Target	22,150	23,000	23,000	28,000	24,000	Exceeded	24,000	28,750
	Actual	17,593	25,029	28,692	30,110	33,086			

ITA - Percentage of U.S. exporter clients that achieved their export objectives	Target	69%	71%	73%	75%	74%	Exceeded	74%	73%
	Actual	73%	73%	78%	78%	81%			

ITA - Number of Commercial Diplomacy/Advocacy Written Impact Narratives (WINS)	Target	225	250	300	330	240	Exceeded	240	450
	Actual	343	287	472	459	479			

<span style="color: blue;">■</span> Exceeded (over 100% of target)	<span style="color: green;">■</span> Met (90-100% of target)	<span style="color: red;">■</span> Not met (below 90% of target)
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## Other Evidence and Evaluation

### Customer Segmentation Analysis

In FY 2018, ITA completed a needs assessment of ITA’s clients as part of the first phase of a Customer Segmentation Analysis. This assessment examined ITA’s clients’ current and future stated needs, target markets, revealed needs which are a type of assistance provided to current ITA clients, actual utilization of ITA services, interaction preferences which are preferred channels of assistance, perceptions of ITA or satisfaction with ITA’s assistance, and

## Management Analysis of Strategic Goal 2 – Enhance Job Creation

their export experience to include export length, revenue share, and number of countries exporting to.

The assessment found that ITA has six customer segments distinguished by their export experience level and the size of their organization in terms of number of employees. The analysis also found that experienced, small to medium sized (0-100 employees) exporters (SMEs) tended to create more jobs and have higher export revenue percent increases, while experienced, large (500+ employees) exporters had the highest overall dollar revenue from ITA's assistance, exported to the highest number of countries, and safeguarded the highest number of jobs.

### ITA Annual Customer Survey

The annual results provide ITA with information on customer characteristics, satisfaction, needs, opportunities, and yearly economic impact.

The following is an overview of ITA clients:

- The majority are small- and medium-sized enterprises (83% of total client population).
- ITA clients are experienced exporters. Over 60% of ITA's clients had over 10 years of export experience with a median export experience of 15.7 years.
- They export to nearly 23 countries on average.
- Roughly 31% of their revenue is attributed to exports.
- They dedicate close to 20% of their operating budget to international business development.
- Having access to contacts was cited as the main barrier to exporting (20%), followed by market intelligence (15%), and understanding regulations (13%).
- Over 70% of ITA clients stated that ITA's assistance was significant in achieving their results.
- On average, ITA clients increased revenues by nearly \$2 million, created over 13 jobs, and safeguarded 20 jobs.

### Addressing Foreign Government Actions and Policies Impeding U.S. Exports

To achieve better ITA-wide coordination, ITA reviewed how trade barriers are identified and tracked, and issued new trade barrier tracking guidance to standardize how casework is documented. In FY 2019, ITA will continue to refine procedures.

### Exporter Portal

Significant market research was conducted to understand trends in client-centric design. USDA and SBA best practices were reviewed. Meetings were held with top IT firms to learn about best-in-breed technology and processes. A Request for Information was issued and the Salesforce Ignite program was completed. The Ignite program uses design thinking to envision an exporter-centric web experience which would transform the way clients engage with ITA, as well as how ITA tracks and assesses its effectiveness with those clients.

## Enhanced Workforce

ITA conducted a comprehensive talent management assessment. The skill sets needed for its core International Trade Specialist position were refreshed which will help guide recruitment and development of skills in the current workforce.

## Vision 2020 Products and Services Optimization Survey

During FY 2018, the Vision 2020 Products and Services Optimization working group evaluated ITA’s current suite of products and services. They recommended that ITA increase its reach by providing web-based self-service assistance, dedicating more resources to develop and maintain ITA’s products and services, and enhancing the client experience by increasing consistency in how staff provide assistance.

## Strategic Conclusions and Recommendations

ITA’s research, evaluation, and evidence-gathering support the following:

- U.S. exports of goods and services are an important part of the U.S. economy, accounting for nearly 13 percent of our nation’s GDP.<sup>1</sup>
- In 2016, 10.7 million U.S. jobs were supported by U.S. exports.<sup>2</sup>
- U.S. exporting companies grow faster, are more productive, and are less likely to go out of business than non-exporting companies.<sup>3</sup>
- Workers in export-intensive manufacturing industries earn, on average, 15 to 20 percent more than their counterparts in other manufacturing industries.<sup>4</sup>

## Actions to Advance Progress through FY 2020

Commerce bureaus, notably ITA, will support Secretarial engagement in the following activities:

- Discover Global Markets;
- Brexit/US-UK trade and investment;
- U.S.-EU trade scoping exercise;
- US-China trade and investment discussions;
- US-India Commercial Dialogue;

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<sup>1</sup> <http://data.worldbank.org/indicator/NE.EXP.GNFS.ZS>

<sup>2</sup> Rasmussen, Chris, (2017): “Jobs Supported by Exports 2016: An Update”. Office of Trade and Economic Analysis, International Trade Administration, U.S. Department of Commerce.

<sup>3</sup> *ibid.*

<sup>4</sup> Riker, David, (2010): “Do Jobs in Export Industries Still Pay More? And Why?” Manufacturing and Services Economics Brief, International Trade Administration, U.S. Department of Commerce

## Management Analysis of Strategic Goal 2 – Enhance Job Creation

- US-CEO Forum;
- US-Japan Economic Dialogue;
- U.S.-Argentina Commercial Dialogue;
- USMCA Implementation.

ITA will recalibrate existing tools (e.g. the Overseas Resource Allocation Model) and develop new tools to meet organizational challenges, effectively manage costs, and better align organizational capabilities to export strategy.

## STRATEGIC OBJECTIVE 2.5 – Increase Inward Investment into the United States

Contributing Bureaus: OS, BEA, ITA, MBDA

Key Strategies:

- Advocate globally for the United States as the premier destination for investment
- Provide tailored assistance to investors and states and localities to facilitate increased investment in U.S. communities
- Lead coordination of investment promotion across the U.S. government and key partners

### Executive Summary of Progress

**On-Track**

#### **Facilitate Job-Creating Investment in the United States**

FY 2018 resulted in a total of 148 investment promotion WINS totaling an estimated \$20.1 billion, creating 22,181 jobs, and retaining 4,932 existing jobs.

#### **SelectUSA Investment Summit**

In June 2018, ITA organized the fifth SelectUSA Investment Summit, the nation's premier event for promoting foreign direct investment (FDI) into the United States. The 2018 Summit, held in the Washington, D.C. area, brought together more than 3,000 attendees from over 66 international markets, including over 1,000 representatives of international firms and over 700 representatives of the U.S. economic development organizations (EDOs) community. Over 20 U.S. federal agencies and programs impacting FDI were convened at the U.S. Government Pavilion where they answered questions from investors and U.S. economic development organizations. Investment projects worth more than \$600 million were announced at the Summit.

#### **FDI in Rural America Report**

SelectUSA released its third original research report, *Foreign Direct Investment (FDI) in the Rural United States*, at the 2018 SelectUSA Investment Summit. The Deputy Secretary and U.S. governors promoted the research during a press conference. Findings from the report include:

- Since 2003, the value of greenfield FDI in non-metro areas has totaled nearly \$56.8 billion and created nearly 95,000 jobs.
- The average value of an FDI project in a non-metro area is \$64.5 million, which is 89 percent higher than those in metro areas.

## Management Analysis of Strategic Goal 2 – Enhance Job Creation

- The average number of jobs created by an FDI project in a non-metro area is also greater than that in a metro area: 108 jobs created in a non-metro area, compared to an average of 86 jobs created by projects in metro areas.
- More than 18 percent of all greenfield FDI projects in non-metro areas are in the automotive components sector.

### International Road Shows

ITA completed four international road shows in key FDI markets. These events connected U.S. economic development organizations with overseas investors and took place in Italy, Brazil, China, and the Nordics – Finland, Sweden, Norway, and Denmark.

### International Engagement Ready Communities (IERC) Toolkit

The IERC Toolkit is a study of key success factors for effective international engagement strategies. Recommendations for EDOs were based on the findings. This work was a collaboration among ITA, the Economic Development Administration (EDA), and the Trade Promotion Coordinating Committee (TPCC) and was funded through the Job-Creating Investment (JCI) Cross-Agency Priority (CAP) Goal.

### Training Modules

ITA, through the JCI CAP Goal initiative, developed five training modules to scale investment promotion services across ITA. These modules will be on-line and provide a fundamental understanding of ITA investment promotion services, and FDI data and resources. Modules will be available to ITA staff in early FY 2019.

## Performance Indicator Results and Targets

SO 2.5 – Increase Inward Investment into the United States		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
ITA - Number of investment clients assisted	Target	900	1,600	1,760	2,400	3,500	Exceeded	3,040	3,190
	Actual	1,038	1,651	6,072	6,671	6,850			

<span style="color: blue;">■</span> Exceeded (over 100% of target)	<span style="color: green;">■</span> Met (90-100% of target)	<span style="color: red;">■</span> Not met (below 90% of target)
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## Other Evidence and Evaluation

### 2018 SelectUSA Investment Summit Survey

ITA administers and analyzes a customer satisfaction survey of Summit participants. Survey results identify areas for improvement and are used to inform plans for the 2019 Summit. Highlights include:

- 257 respondents (76% of all respondents) anticipate at least one result in the next 12-24 months.
- 199 respondents (59% of all respondents) said ITA played a significant to moderate role in their results.
- 38% of leads generated were considered “strong” leads.
- On average: 7 leads per participant were reported.

### Investment Promotion Agency Best Practices Study

This initiative gathered investment promotion best practices from best-in-class global investment promotion agencies. It resulted in a report with recommendations on topics, such as service delivery, structure, and program evaluation, and was completed in September 2018. Meaningful lessons learned, that were recently implemented, include enhancements to ITA’s pipeline of projects tracker and the development of a comprehensive communication plan.

### Annual Customer Survey

ITA will administer a customer satisfaction survey in the beginning of FY 2019. The survey will be used to inform enhancements to investment promotion services, service delivery, and tools.

## Action to Advance Progress through FY 2020

ITA will lead the Department’s Strategic Objective 2.5 Increase Inward Investment into the United States through actions such as:

- 2019 SelectUSA Investment Summit
- SelectUSA Road Shows
- Inaugural Meeting of 2018 – 2020 U.S. Investment Advisory Council
- Inaugural Meeting of the Interagency Investment Working Group
- Training for In-Market Staff
- Re-Investment Analysis

# Management Analysis of Strategic Goal 2 – Enhance Job Creation

- Global FDI Trends Analysis
- SelectUSA for U.S. Firms

## STRATEGIC OBJECTIVE 3.1 – Enforce the Nation’s Trade Laws and Security Laws

Contributing Bureaus: OS, BIS, ITA, NOAA, USPTO

Key Strategies:

- Enforce U.S. trade laws to defend American manufacturers, workers, and farmers from unfair trade
- Monitor and ensure compliance with trade agreements
- Protect sensitive American technology and uphold sanctions through a strong export control system
- Assess foreign direct investment impacts on national security
- Improve international intellectual property protections

### Executive Summary of Progress

**On-Track**

#### **Antidumping (AD)/Countervailing Duty (CVD) Investigations**

In FY 2018, ITA initiated 59 new AD/CVD investigations, including the investigations of aluminum sheet from China, which were the first self-initiated by ITA in over 25 years. ITA anticipates a continued upward trend in new AD/CVD investigations and expects domestic manufacturers to file a significant number of petitions in FY 2019. Over the last three years, ITA issued an average of 395 AD/CVD determinations per fiscal year. In FY 2018, ITA issued 405 preliminary and final AD/CVD determinations compared to 403 issued in FY 2017.

#### **Trade Agreements Compliance**

In FY 2018, ITA successfully closed 39 compliance cases which exceeded the FY 2018 target of 35 through its Trade Agreements Compliance Program. Executing the Department’s statutory mandate to monitor and seek compliance with trade agreements, ITA investigates non-tariff barriers that may indicate country non-compliance with their multilateral, regional, and/or bilateral agreement obligations and engages offending governments to seek their voluntary compliance so enforcement actions are not necessary.

# Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

## Trade Barriers and Export Enforcement

ITA exceeded its Agency Priority Goal target for FY 2018. 138 foreign trade barriers were reduced, removed, or prevented, which exceeded the FY 2018 target of 126. BIS Export Enforcement exceeded its target for FY 2018 and is on track to reach its FY 2019 goal of 1,200 actions resulting in a deterrence or prevention of a violation and cases resulting in a criminal or administrative charge.

## Foreign Investment Risk Review Modernization Act (FIRRMA)

DOC implemented FIRRMA in August 2018. FIRRMA strengthened the ability of the Committee on Foreign Investment to review transactions involving foreign entities that could present national security concerns. In FY 2019, DOC will meet the President's call for prompt implementation by engaging in rule-making and setting up pilot provisions authorized in the legislation.

## Review and Remedy of Intellectual Property Rights Violations and USTR Special 301 Report

Commerce supports the U.S. Trade Representative's (USTR's) review of objectionable Chinese intellectual property rights and technology transfer practices and identification of appropriate remedies. Through ITA, USPTO, NTIA, and others, Commerce contributed information and expertise to USTR's problem pursuant to Section 301 of the Trade Act of 1974. During trade remedies phases of investigations, ITA informed Administration policy with expertise on tariff options, domestic economic impact, and stakeholder concerns. ITA and other DOC components also assisted in gathering stakeholder perspectives by examining submissions and public testimony and making recommendations based on an assessment of domestic economic impact.

## Advances in Intellectual Property Rights

- Brazil: USPTO and their Brazilian counterpart finalized the Patent Prosecution Highway Memorandum of Understanding (MOU).
- India: progress continues on a MOU and Trade Policy Forum discussions.
- China: a new system is in place for priority document exchange.
- Chile: the USPTO and the National Institute of Industrial Property of Chile are improving work-sharing and are working on a MOU.
- Progress continues on cooperative agreements with the Philippines, Vietnam, Taiwan, Tunisia, Eurasia, Saudi Arabia, Mexico, Bhutan, and the Pacific Islands Forum.

## Tariff Exclusion Requests

The President accepted the Commerce Department's conclusion that imported steel and aluminum threaten to impair national security and acted. Presidential Proclamations 9704 and 9705 order Section 232 imposed tariffs on imports of steel and aluminum products. As of December 10, 2018, Commerce received 62,624 steel and aluminum exclusion requests, including resubmissions, and 54,617 objections to exclusion requests. ITA and BIS staff review these submissions.

# Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

## Other Investigations

ITA was involved in Section 201 safeguard investigations regarding solar cells and large residential washers.

## Performance Indicator Results and Targets

SO 3.1 – Enforce the Nation’s Trade Laws and Security Laws Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
ITA - Trade barriers removed, reduced, or prevented (annual) <i>*APG</i>	Target	N/A	70	75	80	126	Exceeded	136	150
	Actual	74	41	110	115	138			
ITA - Number of trade agreement compliance cases resolved successfully	Target	N/A	32	33	34	35	Exceeded	36	37
	Actual	20	24	33	36	39			
BIS - Number of actions resulting in a deterrence or prevention of a violation, and cases resulting in a criminal or administrative charge <sup>1</sup>	Target	1,100	1,000	1,000	1,200	1,200	Exceeded	1,200	1,200
	Actual	1,473	1,442	1,717	1,832	1,777			

<sup>1</sup> The number and type of preventive enforcement actions conducted, include: detentions of suspect exports, seizures of unauthorized shipments, industry outreach, issuance of warning letters, recommended denials of license applications based on enforcement concerns, and recommendations for parties to be added to the BIS Entity List and Unverified List. This measure also includes Office of Antiboycott Compliance (OAC) Advice Line inquiries resulting in prevention or deterrence.

Exceeded (over 100% of target)	Met (90-100% of target)	Not met (below 90% of target)
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# Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

## Other Evidence and Evaluation

### Review of Administration of Unfair Trade Laws

To administer unfair trade laws in a transparent manner, ITA routinely seeks public comment on proposed changes to practice. Comments are largely received in response to Federal Register solicitations. ITA's AD/CVD determinations are subject to judicial review by the Court of International Trade with appeals to the Federal Circuit. ITA determinations are also subject to evaluation by the World Trade Organization (WTO) Dispute Settlement Body for consistency with WTO Agreements and by North American Free Trade Agreement (NAFTA) when the determination involves Canada or Mexico.

### Trade Barrier Process Review

To achieve better ITA-wide coordination to advance ITA's efforts under the trade barriers removed, reduced, or prevented APG, ITA reviewed how trade barriers are identified and tracked. The review included two pilot programs testing approaches to collaboration. Based on test results, ITA issued new trade barrier tracking guidance to standardize how trade barrier casework is documented. In FY 2019, ITA will continue to refine and implement these procedures.

### FIRRMA Implementation

Commerce analyzed staff and resource requirements needed in FY 2018 through FY 2020 and began discussion with OMB and Congress on those requirements.

## Strategic Conclusions and Recommendations

Targets set for FY 2018 under the Strategic Objective 3.1 have been met. However, results on foreign trade barriers and compliance with trade agreements is somewhat exogenous to ITA efforts (i.e. dependent on foreign government willingness to voluntarily end the barrier or come into compliance). ITA will continue challenging itself to execute Sections 232 and 301 demands in expected timeframes, especially new executive actions occur. Demand may divert resources from foreign trade barrier and compliance work. FIRRMA will also need ITA and BIS resources dedicated to fulfilling DOC's statutory responsibilities.

In FY 2019 and FY 2020 ITA will continue identifying trade barriers, negotiating strong trade agreements, advocating for enhancements to the Automated Commercial Environment AD/CVD Portal, aiding U.S. companies facing obstacles in export markets, utilizing technology to support 301 reviews, and self-initiating AD/CVD investigations. BIS Export Enforcement's Office of Antiboycott Compliance (OAC) prioritize smart investigative research to more precisely identify likely violators of the antiboycott regulations. OAC will continue to monitor emerging boycott activity and legislation to assess and prepare for any potential impact on the antiboycott program. Export Enforcement will focus on national security objectives including countering weapons of mass destruction proliferation, countering support to terrorism, and preventing unauthorized military end-use of U.S. items.

### Actions to Advance Progress through FY 2020

Achieve more visibility on the complete suite of ITA services to solve stakeholder trade problems.

Establish a dedicated team to investigate and develop strategies that address circumvention and duty evasion of AD/CVD measures.

Analyze foreign company pricing practices, foreign government subsidies, and U.S. industry and market conditions to self-initiate AD/CVD investigations when indications point to the most appropriate and effective tool to address unfair pricing and subsidization.

Increase ITA intake of trade barriers affecting U.S. industry.

Analyze product-specific exclusion requests for the Section 232 cases on steel and aluminum in coordination and Section 201 safeguard on solar cells.

Review public comments regarding the proposed tariff response to China's policies and practices.

Continue to engage on FIRRMA discussions to assess projected future case load and associated resource need.

## STRATEGIC OBJECTIVE 3.2 – Enhance the Nation’s Cybersecurity

Contributing Bureaus: OS, NOAA, NTIA, NIST

Key Strategies:

- Provide industry and government with robust technical standards and cybersecurity best practices
- Drive cybersecurity policy in government and industry
- Convene stakeholders to develop and drive adoption of cybersecurity best practices

### Executive Summary of Progress

**On-Track**

NIST works to secure the digital environment through programs that bridge foundational and applied cybersecurity research and development. They address topics from encryption to identity management and work to ensure that emerging technologies like the Internet of Things (IOT) and AI are secure. In collaboration with stakeholders, NIST develops publicly available standards and technical guidance that enhance the Nation’s cybersecurity.

NTIA works to ensure that the equities of innovation, economic growth, and an open Internet are factored into cybersecurity policy decisions. Working both with government and private sector stakeholders, NTIA engages on a broad range of cybersecurity policy matters.

NOAA delivers products and services that support the commercial and safety interests of America regarding weather, environment, and the blue-water economy. NOAA protects its data, networks, equipment, intellectual property, and personnel and offers cybersecurity services to the Department and other federal agencies.

In FY 2018, the Department made significant progress in providing industry and government with robust technical standards and cybersecurity best practices, driving and shaping cybersecurity policy in government and industry, and bringing stakeholders together to drive the adoption of cybersecurity best practices.

- Through the National Cybersecurity Center of Excellence (NCCoE) NIST worked with 176 industry partners to address cybersecurity challenges impacting multiple industry sectors including financial services, energy, public safety, and transportation reaching over 7,000 companies and organizations.



## Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

- NIST issued Draft Interagency Report 8202, Blockchain Technology Overview, to explain blockchain, discuss current uses and show its broader applications.
- NIST issued final Framework for Improving Critical Infrastructure Cybersecurity version 1.1.
- NIST issued foundational draft Guideline on Managing IOT Security and Privacy Risks for public comment.
- NIST and NTIA delivered the report to the President on Enhancing the Resilience of the Internet and Communications Ecosystem Against Botnets and Other Automated, Distributed Threats, and are working with interagency and private stakeholders to delineate federal government priorities, map out a path forward, and coordinate activities.
- NTIA advocated for policies in U.S. Government interagency discussions over the course of FY 2018 on cyber and national security matters that promote both strong security and continued innovation and economic growth in the ecosystem.
- NTIA convened multi-stakeholder processes on IOT Cybersecurity and software component transparency to develop policy focused on best practices.
- NTIA developed policies and implementation strategies for addressing security concerns about the telecommunications supply chain.
- NOAA hosts the Department's Enterprise Security Operations Center providing Department wide oversight over cybersecurity incidents and operations.

# Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

## Performance Indicator Results and Targets

SO 3.2 – Enhance the Nation’s Cybersecurity Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
NIST - Number of collaborators on NCCoE projects <i>(new)</i>	Target	N/A	N/A	N/A	N/A	123	Exceeded	140	140
	Actual	N/A	N/A	N/A	N/A	176			
NIST - Number of resources (e.g., guidance documents) from the Framework for Improving Critical Infrastructure Cybersecurity <i>(new)</i>	Target	N/A	N/A	N/A	N/A	70	Exceeded	80	80
	Actual	N/A	N/A	N/A	N/A	94			
NIST - Number of organizations exposed to NCCoE produced cybersecurity products <i>(new)</i>	Target	N/A	N/A	N/A	N/A	5,500	Exceeded	6,000	6,000
	Actual	N/A	N/A	N/A	N/A	7,710			

Exceeded (over 100% of target)
  Met (90-100% of target)
  Not met (below 90% of target)

## Other Evidence and Evaluation

### NIST

NIST’s programs are periodically evaluated by the National Academies of Science, Engineering, and Medicine to assess their capabilities and impact. In 2018 NIST’s programs in advanced networking and cybersecurity were evaluated.

## Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

NIST's cybersecurity programs continually work with stakeholders via consortia, workshops, requests for information, and partnerships like the National Cybersecurity Center of Excellence to gather feedback about cybersecurity products and insight for increasing their value.

- In October 2018, NIST hosted the Cybersecurity for IOT Workshop bringing stakeholders from the government, industry, and academia together to discuss ways to improve the cybersecurity of IOT devices <https://www.nist.gov/news-events/events/2017/10/iot-cybersecurity-colloquium>
- The National Initiative for Cybersecurity Education convenes and partners with peer institutions to prepare the cybersecurity workforce of the future. Some examples include:
  - NICE Conference and Expo (NIST, 2018)
  - Cybersecurity Education and Training for Operational Technology Workforce (NIST, 2018)
  - State Governments Pursuing New Tactics in the War for a Skilled Cybersecurity Workforce (NIST, 2018)
  - Preparing Students through Career and Technical Education and Cybersecurity Programs of Study (NIST, 2018)

### NTIA

Active stakeholder participation in the development of the botnet report and road map processes, with strong stakeholder engagement and support.

Active stakeholder participation in the development of strong multi-stakeholder outcomes to improve cybersecurity. Efforts include:

- Successful conclusion of the Internet of Things Security Upgradability and Patching multi-stakeholder process, resulting in publication of documents on: 1) how manufacturers can better communicate to consumers about IOT devices' abilities to receive security updates; 2) a voluntary framework for enhancing update process security; 3) Incentives and Barriers to Adoption; and 4) an IOT security standards catalog. NTIA convened multi-stakeholder discussions on promoting software component transparency in late FY 2018.
- Successful launch of the Software Component Transparency process, with groups focusing on 1) understanding the problem; 2) use cases and state of practice; 3) standards and formats; and 4) a health care proof of concept.

### NOAA

Successful implementation of the DHS Continuous Diagnostics and Mitigation (CDM) program and a mature perimeter protection capability.

## Strategic Conclusions and Recommendations

Engagement with Department leadership and coordination of efforts across the Department will help ensure that Commerce continues to deliver in a timely fashion the products and services needed to strengthen U.S. cybersecurity.

# Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

## Actions to Advance Progress through FY 2020

### NIST

NIST will continue to prioritize its research and standards efforts in cybersecurity through internal research in partnership with the private sector, academia, standards development organizations, other government agencies, and national and international stakeholders. Planned NIST efforts include:

- Develop and issue best practices at the NCCoE, in collaboration with industry and standards developers, to strengthen core Internet infrastructure technologies used by organizations. (FY 2019 Q1)
- Issue draft Federal Information Processing Standards 199 and 200 for public comment as directed in the IT Modernization Report. (FY 2019 Q3)
- Develop and issue a Privacy Framework to help organizations better manage privacy risks, foster the development of innovative approaches to protecting individuals' privacy, and increase trust in products and services. (FY 2020 Q1)
- Increase use of the NIST Cybersecurity Framework through development and sharing of resources to help organizations better understand and manage cybersecurity risks. (FY 2019 Q4)
- Develop and issue IOT cybersecurity and privacy guidance to help organizations manage risks associated with their use of IOT devices. (FY 2019 Q4)
- Issue updates to key Federal Information Processing Standards Publications in cryptographic testing requirements (FY 2019 Q2) and in Federal Security Program Baselines. (FY 2019 Q3).
- Initiate the creation of new encryption standards and update existing standards to maintain strong cryptography used by the USG in commercial products in areas of light weight ciphers and modes of operation. (FY 2019 Q2).
- Convene Government and Industry to address cybersecurity workforce shortages by addressing qualified workforce issues, skill gaps, and increasing inclusion and outreach to underserved communities and underrepresented populations. (FY 2019 Q4)
- Drive alignment of content and credentials offered by education and training providers to respond to employer needs and address the tasks, knowledge, and skills included in the National Institute for Cybersecurity Education (NICE) Cybersecurity Workforce Framework. (FY 2019 Q4)
- Create foundations for sound and effective use of AI/ML in cybersecurity policy through use of AI/ML to solve challenges in cybersecurity and in research in security AI/ML from threat activity and from authorized unintended misuse. (FY 2020 Q1)
- Develop and issue practical, standards-based example solutions to public and private-sector cybersecurity challenges through collaborations with industry. (FY 2019 Q4)
- Develop and disseminate resources to small businesses to help them identify, assess, and manage cybersecurity risks. (FY 2019 Q4)

### NTIA

- Participate in at least four major interagency policy workstreams, including the Cyber Response Group, the Vulnerabilities Equities Process, and other National Security Council-led processes, during 2019. This will reflect effective policy development and efficient coordination across the

## Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

Department.

- Initiate, facilitate, and/or conclude at least three stakeholder processes by the end of FY 2020.
- Drive industry attention and action on continuing work to address the problems of botnets in the Internet ecosystem.
- Lead, with Department of Commerce partners, the development of strategies and processes to address concerns about security risk in the telecommunications supply chain.

### NOAA

- Develop a cloud IT security strategy to maintain the confidentiality, integrity, and availability of NOAA data.
- Establish an Internal Risk Mitigation Program to reduce opportunities for loss of NOAA intellectual property.
- Establish a pipeline for cybersecurity talent through staff development and by establishing internship programs with universities.

## STRATEGIC OBJECTIVE 3.3 – Reduce Extreme Weather Impacts

Contributing Bureaus: OS, NOAA, NIST

Key Strategies:

- Evolve the National Weather Service to deliver better forecasts, earlier warnings, and clearer communication of high-impact weather and water events
- Strengthen partnerships with America’s weather industry and other members of the weather, water, and climate enterprise
- Deploy the next generation of satellites, aircraft, ocean-going ships, and observation and data gathering systems
- Develop and deploy next-generation environmental observation and modeling systems to make informed planning, resources management, and investment decisions

### Executive Summary of Progress

**Focus Area for Improvement**

#### Agency Priority Goal (APG)

APG milestones continue to be achieved for Mitigate Flood Impacts by Demonstrating Improved Decision Support Services to Emergency Managers, including implementation of version 1.2 of the National Water Model. The APG is on track and on time for completion. For more information see: [https://www.performance.gov/commerce/APG\\_commerce\\_2.html](https://www.performance.gov/commerce/APG_commerce_2.html)

#### Satellites

During FY 2018, NOAA successfully launched two new satellites, JPSS-1/NOAA-20 (Q1) and GOES-S/GOES-17 (Q2).

#### New Weather Model

fv3, a new weather prediction model was developed as part of the Next Generation Global Prediction System (NGGPS). The NGGPS serves as the staging area for developing, testing, and evaluating models prior to using them in NWS operations.

# Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

## NOAA Big Data Project

Over 40 NOAA datasets have moved to the Collaborators’ systems and all five Cooperative Research and Development Agreement Collaborators have agreed to extend the agreements to May 2019.

## Recapitalization

NOAA proceeded with acquisition activities to replace and modernize its ships and aircraft.

## Partnerships

- NOAA’s National Weather Service (NWS) organized and facilitated four partner meetings to strengthen partnerships with America’s weather industry.
- As of August 2018, all U.S. Integrated Ocean Observing System (IOOS®) Regional Associations were certified as Regional Information Coordination Entities, therefore meeting NOAA standards for data management practices. Certification expands the pool of federal-quality observing data available for use in NOAA and third-party products and services.

## Windstorm Impact Reduction

NIST published the Strategic Plan for Windstorm Impact Reduction and conducted a technical investigation of the effects of Hurricane Maria on Puerto Rico using the National Construction Safety Team Act authority.

## Performance Indicator Results and Targets

SO 3.3 –Reduce Extreme Weather Impacts Performance Indicator		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
NOAA - American Customer Satisfaction Index	Target	<i>NWS does not provide targets for this indicator</i>					N/A	80	80
	Actual	84	80	82	82	85			

Note: Scores are based on public opinion; scores in the 80s are considered excellent by the CFI Group.

Exceeded (over 100% of target)	Met (90-100% of target)	Not met (below 90% of target)
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## Other Evidence and Evaluation

### Stakeholder Consultations

To strengthen partnerships with America’s weather industry and other members of the weather, water, and climate enterprise, the NWS organized four meetings with these stakeholders. The meetings were designed to build relationships, discuss specific topics such as data dissemination and NWS observation programs, and gather input. The meetings opened dialogue on issues, brought new and valuable context to problem and solution identification, and provided an opportunity for sharing best practices. One meeting was a joint meeting with the Federal Highway Administration (FHWA) focused on the FHWA Pathfinder Initiative and was attended by members of state Departments of Transportation as well as the private weather industry. The Pathfinder Initiative provides the public with information on road conditions.

### Assessment of New Observation Capabilities

NOAA’s Office of Marine and Aviation Operations (OMAO) will gather evidence on their new platform’s operational readiness. The data and analysis will offer evidence for decision-making on the unmanned systems program’s development and implementation.

## Strategic Conclusions and Recommendations

The science involved in weekly forecasting is advanced and requires continued focus and leadership to fully utilize the most promising outputs of NOAA research and development and evolve the NWS. NOAA operations are being examined to better utilize the most promising outputs of NOAA research and development. Its processes for identifying research and development activities that best support operations need to be strengthened.

Ship and aircraft acquisitions are on track for FY 2018 through FY 2020 to meet the out-year strategies for replacement of aging ships and aircraft.

## Actions to Advance Progress through FY 2020

### Water Model 2.0

To meet the APG milestones and targets, version 2.0 of the National Water Model will be released in FY 2019 and tabletop exercises with Emergency Managers will be conducted. To increase the lead time for predicting excessive rainfall from two to three days, the NWS will begin testing high risk for excessive rainfall products on day three.

### Human Capital



## Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

To help evolve the organization, the NWS is working towards a FY 2019 implementation of a GS 5-12 progression for forecasters. This career ladder will help recruitment and retention by allowing advancement to the GS-12 level without having to change stations.

### **Unmanned System Operations**

A new unmanned systems operations program is in the planning stage for FY 2020 implementation. This effort will centralize unmanned systems support and guidance across NOAA.

### **Ship Recapitalization**

NOAA will continue with planned procurement activities with the U.S. Navy for the new N/V Class A AGOR ship acquisition.

## STRATEGIC OBJECTIVE 3.4 – Deploy Public Safety Broadband

Contributing Bureaus: OS, NTIA, NIST, MBDA

Key Strategies:

- Deploy, maintain, and operate a nationwide public safety broadband network

### Executive Summary of Progress

#### Noteworthy Progress

##### FirstNet Authority

Expansion - More than 250,000 device connections are using FirstNet services since the launch of the Nationwide Public Safety Broadband Network (NPSBN) in March of 2017. As of March 2018, the FirstNet Core is online and operational, as is the dedicated Security Operations Center. As of December 2018, the NPSBN now has thousands of sites on-air which has resulted in the delivery of some network services approximately six months ahead of the scheduled contract milestones.

Throughout FY 2018, the FirstNet Authority with the FirstNet Public Safety Advisory Committee (PSAC), continued to conduct successful nationwide advocacy and outreach to public safety officials. These efforts have resulted in an increase in public safety awareness of FirstNet deployment and adoption.

Band 14 Adoption - All Band 14 spectrum was cleared as part of the Band 14 Spectrum Relocation Federal Grant Program. A Coverage and Capacity Task Order to the NPSBN contract was issued in March 2018. The contractor has met the initial Coverage and Capacity milestones and the FirstNet Deployable Service has been delivered. Seventy-two Band 14 deployables (e.g., Satellite Cell Sites on Light Trucks [SatCOLTs]) were delivered on schedule. They provide dedicated additional resources during emergencies, response or recovery operations, at no extra cost to FirstNet subscribers.

The first round of Band 14 devices was approved and made available to public safety entities in partnership with NIST. As of December 2018, NIST certified 67 devices for use on the FirstNet network consisting of rugged handhelds, smartphones, In-vehicle Routers, hotspots, tablets, Internet of Things and laptops. See additional detail below under NIST Progress.

## Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

Continued Improvement and Future Expectations - FirstNet's application ecosystem continues to grow and garner interest within the applications software development community. There are 37 high-value applications and solutions in the FirstNet Applications Catalog available to FirstNet public safety subscribers.

The FirstNet Innovation and Test Lab Band 14 and Band 12 eNodeB's have been installed and commissioned with AT&T production and lab Cores.

The FirstNet Authority is establishing a comprehensive roadmap to advance the FirstNet network. It balances the needs of public safety with the technical aspects of the NPSBN. The FirstNet Authority, NTIA, and the Department of Commerce are working together to formalize the investment review process.

### **NIST**

Setting Standards - As required by the Middle-Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96), NIST began providing a list of certified devices that meet protocols and standards for access to, use of, or compatibility with the NPSBN. For details, see [//www.nist.gov/ctl/pscr/process-document-nist-list-certified-devices](http://www.nist.gov/ctl/pscr/process-document-nist-list-certified-devices).

Providing Support and Incentives for Progress - NIST provided funding to advance public safety communications research. NIST's Public Safety Innovation Accelerator Program awarded grants and cooperative agreements to universities and companies.

The Open Innovation Program leverages expertise and innovative solutions from a diverse array of contributors by incentivizing creativity through performance-based awards.

During FY 2018, seven awards totaling \$6.4 million went to universities and businesses for augmented and virtual reality technologies for first responders. Two awards totaling \$750,000 were made to the city of Memphis and the Hancock County Emergency Management Agency for a 3D-indoor-point cloud. The project advances R&D in indoor mapping, localization, and measurement of the quality of first responders' experience using mission critical voice systems.

During FY 2018, \$422,500 worth of cash prizes were offered to competitors in four prize competitions focused on virtual reality, unmanned aerial systems, mobile applications for indoor localization, and data privacy for public safety.

### **NTIA**

Public Safety Broadband Network - Between July 2013 and February 2018, 54 total states, territories, and the District of Columbia spent \$74.7 million in State and Local Implementation Grant Program (SLIGP) funds planning for the Nationwide Public Safety Broadband Network. Activities included stakeholder outreach and engagement, consultation with the FirstNet Authority, data collection, and other planning projects.

## Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

In March 2018, NTIA awarded \$12.6 million in SLIGP 2.0 funds to 46 States and territories to continue planning for the NPSBN during the FirstNet deployment phase.

In November 2018, NTIA awarded a second increment of funding totaling \$20.6 million to the SLIGP 2.0 grantees. With this second round of funds, a total of \$33.3 million is available for the SLIGP 2.0.

FirstNet Retention - In November 2017, NTIA developed and released a Notice of Funding Opportunity for the State Alternative Plan Program. The Notice of Funding Opportunity provided the application requirements, evaluation methodology and criteria, and radio access network construction funding levels for States and Territories that were considering opting out of the FirstNet deployment.

After considering their options, all States and Territories chose to accept the FirstNet State Plan within their 90-day statutory decision deadline. The SAPP grant program was effectively closed in March 2018 after no applications were received

### **MBDA**

MBDA launched its Fiscal Year Broad Agency Announcement, which is like a Federal Funding Opportunity, to support innovative projects promoting minority enterprise participation in FirstNet contract opportunities. This is one of 13 initiatives launched under this announcement.

# Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

## Performance Indicator Results and Targets

SO 3.4 – Deploy Public Safety Broadband Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
NTIA - Percentage of public safety adoption targets achieved <i>(new)</i>	Target	<i>New performance indicator for FY 2020. Baseline values not established, but targets are set</i>					N/A	N/A <sup>1</sup>	50% of 2023 Target <sup>2</sup>
	Actual								
NTIA - Percentage of planned coverage achieved <i>(new)</i>	Target	<i>New performance indicator. Baseline values not established, but targets are set</i>					N/A	20% of 2023 Target <sup>3</sup>	60% of 2023 Target <sup>4</sup>
	Actual								

<sup>1</sup> Per the terms of the NPSBN contract, adoption targets begin in IOC-3 and therefore will not be available to report on in FY 19.

<sup>2</sup> Per the terms of the NPSBN contract, % of adoption targets met for 2020 are based on the targets for 2023.

<sup>3</sup> Per the terms of the NPSBN contract, % of planned coverage achieved is based on the targets for 2023.

<sup>4</sup> Per the terms of the NPSBN contract, % of planned coverage achieved is based on the targets for 2023.

<span style="color: blue;">■</span> Exceeded (over 100% of target)	<span style="color: green;">■</span> Met (90-100% of target)	<span style="color: red;">■</span> Not met (below 90% of target)
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## Other Evidence and Evaluation

To achieve this strategic objective, the FirstNet Authority, NTIA, and contributing agency partners rely on data, other evidential information, and stakeholder feedback to guide strategic and operational decisions. Quarterly reviews of public safety feedback and regular assessments of stakeholder engagements are held to capture and incorporate public safety sentiment.

NIST hosted the 2018 Public Safety Broadband Stakeholder Meeting in San Diego, CA. The meeting attracted over 500 attendees, including current grant recipients demonstrating over 40 projects supporting public safety communications research.

In FY 2018, the FirstNet Authority's Public Safety Advocacy team conducted over 1,000 engagements, including major conferences, national and state association meetings, and events focused on agencies. The engagements reached nearly 63,000 stakeholders. They provided the FirstNet Authority with critical feedback on the building and deployment of the NPSBN.

The 43-member Public Safety Advisory Committee aids the FirstNet Authority by providing expertise and recommendations on innovative technologies, public safety operational methods, and policies. Executive committee meetings, informal meetings and monthly webinars are conducted throughout the year to solicit guidance.

Data and evidence are also gathered through:

- Monthly program management reviews of the implementing partner's contract performance;
- Quarterly analysis of enterprise strategic risks and development of target mitigation strategies;
- Periodic incorporation of key audit recommendations<sup>5</sup> into FirstNet Authority's operating plans; and
- Quarterly meetings with the Deputy Secretary to inform FirstNet Authority's operations and strategic direction.

In addition to the strategies above, FirstNet Authority is evolving a highly disciplined project management approach to track, monitor, and report progress towards this strategic objective. Customer satisfaction and organizational effectiveness measures will be important components of program monitoring.

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<sup>5</sup> In November 2018, the Department of Commerce issued a consolidated summary and analysis of the Department-wide FY 2018 OMB Circular No. A-123 Appendix A efforts. The FirstNet Authority's test work resulted in zero overall findings, proving the organization's ability to maintain strong internal controls and identify and improve targeted controls in key business process areas

## Strategic Conclusions and Recommendations

In October 2018, the FirstNet Authority developed a draft FY 2019-2022 Strategic Plan. This plan maps the organization's direction, guides operations, and encourages growth, change and collaboration. The plan includes five key strategies: positive sentiment, successful contract performance, recognized differentiation, enablement across government, and organizational effectiveness.

Corresponding measures focus on public safety sentiment of the NPSBN, solution impact, ecosystem market generation, opportunity development, differentiation, partnership satisfaction, public safety adoption, contract performance, operational impact, and empowerment across government as well as organizational effectiveness and employee engagement. This strategic plan is undergoing final review by the Department of Commerce.

The FirstNet Authority made refinements to the organization's operations that align to the proposed strategic plan. The FY 2019 budget ensures the availability of resources for the efficient oversight of the NPSBN contract and continued engagement with public safety entities, industry, and government stakeholders.

## Actions to Advance Progress through FY 2020

Over the next two fiscal years, the FirstNet Authority's operations and programmatic activity will be guided by the objectives and measures proposed above. Specifically, FirstNet Authority will focus on the following actions through FY 2020:

### **The Network**

Oversight of the NPSBN Buildout and ensuring an independent validation and verification of public safety network coverage.

### **Public Safety Advocacy**

Outreach and advocacy to federal, tribal, state, and local public safety to ensure the network meets their needs. Actively engage with public safety to remain current with their needs and assist public safety entities to maximize the value they derive from the NPSBN.

### **Innovation**

Differentiate the FirstNet experience for public safety by creating opportunities to improve operations across an ecosystem that includes public safety, industry, government, and academia. Stimulate innovation by raising awareness of the global public safety broadband market, the FirstNet offering, the operational needs that broadband can solve, and opportunities for collaboration.

## Management Analysis of Strategic Goal 3 – Strengthen U.S. Economic and National Security

### Investment

Implementation of an investment framework that captures and creates potential investment options. Conduct in-depth analysis and make recommendations for future reinvestment efforts on behalf of public safety, guided by a yearly and multi-year investment plan.

Launch several prize competitions leveraging a new NIST Blanket Purchase Agreement for open innovation opportunities in support of public safety communications. Awardees will be announced early in 2019. Plans include multi-year challenges on real-time automated analytics of public safety data, location-based services, public safety identity authentication, mobile application security vetting, image and video capture quality, and a host of other issues. NIST also plans to issue funding opportunities for R&D supporting mission critical voice capabilities.

Consistent with Fiscal Year 2019 funding levels, promote opportunities for MBEs to engage in support of broadband infrastructure projects in rural and urban communities. Areas of opportunity for MBDA will include: investment, development, construction, business support of public and/or private infrastructure projects.



## STRATEGIC OBJECTIVE 4.1 – Conduct a Complete and Accurate Decennial Census

Contributing Bureaus: OS, Census

Key Strategies:

- Test the 2020 Census Design throughout the Decade
- Research improvements in partnership with Advisory Committees
- Overcome and mitigate challenges and risks
- Incorporate key GAO and OIG findings and recommendations to operational planning and systems development and testing as appropriate

### Executive Summary of Progress

**On-Track**

#### Lessons Learned and Collaborations

The Census Bureau evaluated prior decennial census operations to determine what worked well and what could be improved. The Bureau has also worked closely with the Government Accountability Office (GAO) and the Office of Inspector General (OIG). Action plans based on their recommendations and lessons learned have been developed and implemented.

#### Research and Testing

Throughout the decade, research and testing has iteratively influenced and improved the design of the decennial census. The final 2020 Census Operational Plan continues to reflect the final design which incorporates lessons learned from the 2018 End-to-End Census Test.

#### Expert Input

The Census Bureau actively sought expertise from both the public and private sectors to help guide the design of the 2020 Census. Partnerships have been established with the National Academy of Sciences and the Census Scientific Advisory Committee. The Census Bureau National Advisory Committee on Racial, Ethnic and Other Populations is an important channel of communication on the identification of new strategies for improved census operations, survey and data collection methods, including identifying cost-efficient ways to increase census participation and reduce the undercount.

## Management Analysis of Strategic Goal 4 – Fulfill Constitutional Requirements and Support Economic Activity

### **Milestones and Challenges**

The Census Bureau has completed the 2018 End-to-End Census Test and moved into 2020 Census operations while innovating and addressing challenges. Complications occurred when establishing Area Census Office locations but, in collaboration with the General Services Administration, the challenges were addressed. In anticipation of cybersecurity threats, the Census Bureau's Office of Information Security is ensuring that every system integrated into the production system's environment has passed rigorous testing to obtain an Authority to Operate. The Local Update of Census Addresses is fully underway with nearly 73 percent of the 11,550 participating governments filing their submissions. This covers 95.5 percent of the population and 95.7 percent of the housing.

### **Accessibility**

The 2020 Census program finalized the Language Support Plan and successfully produced the questionnaires and non-questionnaire materials in 12 languages in addition to English. The 2020 Census will be the first to offer three ways to self-respond: via the Internet, on paper or by phone.

# Management Analysis of Strategic Goal 4 – Fulfill Constitutional Requirements and Support Economic Activity

## Performance Indicator Results and Targets

SO 4.1 – Conduct a Complete and Accurate Decennial Census		
Performance Indicator: 2020 Decennial Census planned operational efficiencies and program milestones met		
Year	Census Milestone	Actual
2013	N/A	N/A
2014	Two field tests that inform cost and quality goals	Completed
2015	Preliminary design for key components to achieve cost and quality goals	Completed
2016	Conduct testing of self-response strategies; Conduct one field test: (field staff management and operations control); Prove in approach to field management processes and systems; Conduct research and testing on approaches for supporting non-English; Conduct feasibility test of field operations; Conduct testing of Group Quarters design	Completed
2017	Complete 2016 address canvassing test; Conduct a nationwide mail-out test of self-response; Begin building of partnership database in FY 2017 and begin planning of 2020 Integrated Communications	Completed
2018	Finalize the Language Support Plan and non-English questionnaires and non-questionnaire materials; Implement LUCA for the 2020 Census; Conduct Self-Response operations for 2018 End-to-End Test; Deliver 2020 Census Questions to Congress; Open 2020 Regional Census Centers; Identify space, sign leases, and design/buildout Wave 1 and Wave 2 Area Census Offices; Complete Authorization to Operate process related to the 2020 Census on schedule with less than 15% of Plans of Action and Milestones exceeding completion date	Completed
2019	<i>Conduct the In-Field Address Canvassing Operations; Open Area Census Offices; Ensure 2020 Census Architecture and IT Roadmap reflects the latest Census System Design; Deliver Updated 2020 Operational Plan; Complete Authorization to Operate process related to the 2020 Census as schedule with less than 15% of Plans of Action and Milestones exceeding completion date</i>	
2020	<i>Conduct 2020 Census; Deployment of non-CEDCaP systems</i>	

<span style="color: blue;">■</span> Exceeded (over 100% of target)	<span style="color: green;">■</span> Met (90-100% of target)	<span style="color: red;">■</span> Not met (below 90% of target)
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## Other Evidence and Evaluation

### Continuous Refinement of Plans Based on Tests

The Decennial Census Program is continually evolving the operational approach based upon the results of ongoing systems testing and industry best practices. Evaluations feed into a formal governance structure to ensure a coordinated, coherent program, supported by all the relevant stakeholders.

### Public Awareness

For the past three years, the Decennial Census Program has released a revised operational plan to the public, with the most recent one scheduled for release on February 1, 2019. The evolution of this programmatic blueprint reflects the adaptive implementation strategy.

### 2020 Census Barriers, Attitudes and Motivators Study

This study consisted of a nationwide survey and a series of focus groups. Results from the study are being used to refine the 2020 Census communications strategy that includes demographic-specific messaging.

### Reviews and Audits

The Decennial Census Program continues to benefit from Department, OIG, GAO, and expert oversight. In July 2018, the Department of Commerce completed a third Milestone Review Board with a focus on management of the Decennial Census. On a quarterly-basis, a Program Management Review, open to the public and media, has been conducted to further promote transparency. The final review occurred on February 1, 2019. As of early December 2018, the GAO and OIG had a combined eight open Decennial audits. Responsive action is in progress. The National Advisory Committee and Census Scientific Advisory Committee met on November 1-2, 2018 and December 6-7, 2018, respectively.

### Technology Assisted Address Canvassing

The Census Bureau Master Address File is updated regularly using information from the U.S. Postal Service and data from state, local, and tribal governments. During In-Office Address Canvassing, two different vintages of satellite imagery are compared. An area is classified as stable with no change if the number of housing units in the imagery matches. If no discrepancies exist, the area is classified as active and needs additional research or on-hold and requires clearer imagery. In the Spring of 2019, Census Bureau's Geography Division will deliver the In-Field Addressing Canvassing universe. Most areas designated as active or on-hold at that time will be canvassed in the field in preparation for the 2020 Census.

## 2018 End-to-End Test

These results will be combined with results from all the tests throughout the decade to update the Life-Cycle Cost Estimate. The integrated master schedule (IMS) will also be revisited. In December 2017, the Decennial program baselined the IMS, following GAO best practices. The schedule now consists of 86 projects, 23,226 activities, and 40,689 relationships. The program progress is measured against this schedule baseline on a weekly basis.

## Strategic Conclusions and Recommendations

The decennial census continues to integrate innovations and improvements using a data-driven approach. One of the highest priorities of the program is to ensure the security of an increasingly systems-based design.

## Actions to Advance Progress through FY 2020

The final 2020 Census Operational Plan must be completed and ready for implementation by the end of FY 2019 Q2 to implement an effective program design. In addition, to begin the Address Canvassing operations on time for the 2020 Census, the systems test readiness review must be completed by the end of FY 2019 Q3.

To complete the opening of the Area Census Offices, Decennial and Census Bureau leadership work proactively with the General Services Administration to address and overcome issues identifying viable space for Census field operations by the end of FY 2019 Q4.

To prepare to launch the Internet Self-Response system for the 2020 Census, performance testing must be completed by FY 2020 Q1.

Finally, to conduct a complete and accurate 2020 Census U.S. population count, Nonresponse Follow-up operations must continue through FY 2020 Q4.

## STRATEGIC OBJECTIVE 4.2 – Provide Accurate Data to Support Economic Activity

Contributing Bureaus: OS, BEA, Census, MBDA, NOAA, NTIS

Key Strategies:

- Disseminate social, economic, housing, and demographic information about the U.S. population
- Provide a timely and accurate portrait of the nation’s economy
- Develop new data products and services that capture the dynamic U.S. economy

### Executive Summary of Progress

#### Noteworthy Progress

#### Gross Domestic Product (GDP)

BEA released the 2018 Comprehensive Update of the GDP Accounts and the Industry Accounts, featuring the publication of the 2012 Benchmark Input-Output Tables. Major features include the incorporation of newly available source data, improved seasonal adjustment, and innovations in measuring the prices of software, medical equipment, and cellphones.

#### New GDP by County Statistics

BEA published prototype GDP statistics for the nation’s 3,100 plus counties.

#### Economic Census

Census Bureau began collecting data from the 2017 Economic Census; results will feature new information on products and services based on the North American Product Classification System (NAPCS) as well as new e-Commerce statistics.

#### New Statistics on Key Sectors of the Economy

BEA and NTIA released new statistics on the economic impact of recreation, the role of and culture in the economies of all 50 states, and the importance of the digital economy.

### **New Annual Business Survey**

Census and MBDA established development of new products on business ownership and the characteristics of already-established and new businesses, including new data on minority business enterprises and nascent technologies such as machine learning, robotics, and automated vehicles.

### **Joint Venture Partnerships**

NTIS Innovative data science capabilities and technologies help combine data, increase data interoperability, and improve citizen-services delivered in collaboration with industry, universities, and non-profits.

### **American Community Survey (ACS)**

Census released social, economic, and housing data on schedule. The ACS provides vital information on a yearly basis about the United States and its people, helping local officials, community leaders, businesses, and the public plan. The ACS informs decisions based on the changes taking place in their communities.

### **Business Formation Statistics**

Census issued a beta product that provides timely and high frequency information on new business applications and current and future employer business formations in the U.S.

### **Ocean Economy**

NOAA and BEA released new statistics as part of Economics: National Ocean Watch. This provides statistics on the number of business establishments, employment, wages, value added, self-employed workers, and gross receipts for six economic sectors that are directly dependent on the resources of the oceans and Great Lakes such as commercial fishing, tourism and recreation, marine transportation, marine construction, offshore mineral extraction, and ship and boat building. Prototype statistics for the U.S. pacific island territories were released.

### **Great Lakes Activities**

BEA and NOAA released experimental statistics on the economic impact of the ocean and the Great Lakes activities on the national economy.

### **GDP for Puerto Rico**

Launched an initiative to produce GDP statistics for Puerto Rico, including facilitating a formal kick-off meeting with Puerto Rico government officials and developing an initial work plan.

# Management Analysis of Strategic Goal 4 – Fulfill Constitutional Requirements and Support Economic Activity

## Performance Indicator Results and Targets

SO 4.2 – Provide Accurate Data to Support Economic Activity Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
Census - Release economic indicators on time (number of scheduled releases issued on time) <sup>1</sup>	Target	N/A	N/A	N/A	N/A	190	Exceeded	190	190
	Actual	N/A	N/A	N/A	N/A	192			
BEA - Reliability of GDP index (percent of GDP estimates that are statistically reliable) <sup>2</sup>	Target	83%	83%	83%	85%	85%	Exceeded	85%	85%
	Actual	84%	87%	89%	88%	91%			
BEA - Milestones met in releasing new economic indicators ( <i>new</i> )	Target	N/A	N/A	N/A	N/A	Complete Milestone	Met	Complete Milestone	Complete Milestone
	Actual	N/A	N/A	N/A	N/A	Completed			




<sup>1</sup> Target in FY 2018 forward reflects total planned data releases from the Census Bureau (120) and BEA (70).

<sup>2</sup> Formerly referred to as the “accuracy of GDP index.” Because accuracy is typically assessed against some “true” or benchmark value that does not exist for GDP, BEA has renamed this measure to emphasize that it rates the performance of revised GDP estimates over time, most typically associated with “reliability.”



## Management Analysis of Strategic Goal 4 – Fulfill Constitutional Requirements and Support Economic Activity

SO 4.2 – Provide Accurate Data to Support Economic Activity		
Performance Indicator: Milestones met in releasing American Community Survey estimates on schedule		
Year	Census Milestone	Actual
2013	Core ACS tables released on schedule	Met
2014	Core ACS tables released on schedule	Met
2015	ACS data products released on schedule	Met
2016	ACS data products released on schedule	Met
2017	ACS data products released on schedule	Met
2018	ACS data products released on schedule	Met
2019	<i>ACS data products released on schedule</i>	
2020	<i>ACS data products released on schedule</i>	

 Exceeded (over 100% of target)	 Met (90-100% of target)	 Not met (below 90% of target)
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### Other Evidence and Evaluation

Key Question: What aspects of the U.S. economy are in most need of new or expanded statistics?

Based on feedback from government stakeholders, advisory boards, and the American public, the Department of Commerce is developing tools that spotlight key sectors of the evolving U.S. economy. For example:

- Evolving Measurement for an Evolving Economy: Thoughts on 21st Century US Economic Statistics (Census, 2019)
- Working Paper: Measuring and Defining the Digital Economy (BEA, 2018)
- High Spending Growth Rates for Key Diseases in 2000–14 Were Driven by Technology and Demographic Factors (Health Affairs, 2018)
- Reengineering the Census Bureau’s Annual Economic Surveys (National Academies of Sciences, Engineering, and Medicine, Committee on National Statistics, 2018)
- Business Formation Statistics: A New Census Bureau Product that Takes the Pulse of Early-Stage U.S. Business Activity (Census, 2018)
- New U.S. Census Bureau Data Links College Degrees and Earnings (Census, 2018)

## Management Analysis of Strategic Goal 4 – Fulfill Constitutional Requirements and Support Economic Activity

- Computers and Internet Use in the United States: 2016 (Census, 2018)
- NOAA Report on the U.S. Ocean and Great Lakes Economy and by the Numbers (NOAA, 2018)
- Experimental Estimates of Wages and Gross Output by Business Size and Industry, 2002–2012 (BEA, 2017)
- Trends in U.S. Trade in Information and Communications Technology (ICT) Services and in ICT-enabled Services (BEA, 2016)

Key Question: How reliable are the official statistics produced by the Department of Commerce? Prior research: The Department of Commerce routinely evaluates its statistical products and data collection methods and reports these findings to the public. For example:

- The Revisions to GDP, GDI, and Their Major Components (BEA, 2018)
- An Analysis of the Reliability of BEA's International Transaction Accounts (BEA, 2017)
- American Community Survey Multiyear Accuracy of the Data (5-year 2012-2016) (Census)

### Strategic Conclusions and Recommendations

Considering the notable progress made, the contributing Bureaus will stay the course on executing the key strategies for this strategic objective, including implementing the planned actions described below.

### Actions to Advance Progress through FY 2020

#### **Outdoor Recreation**

BEA will collect public feedback on prototype outdoor recreation statistics and publish finalized data and methods in early FY 2019. Identify resource requirements for developing regional measures of outdoor recreation.

#### **Digital Economy**

BEA and NTIA will collect public feedback on initial measures of the digital economy. Develop a Digital Economy Satellite Account that includes all goods and services related to the digital economy.

#### **Ocean Economy**

BEA and NOAA will review and refine prototype national-level estimates of ocean-dependent economic activity in the United States.

## **Small Business Activity**

BEA will expand and improve on experimental estimates of small business activity, ultimately developing more detailed and comprehensive measures of GDP by business size and industry.

## **GDP of Puerto Rico**

BEA will release preliminary GDP statistics, working closely with the Puerto Rican government and private data providers in Puerto Rico.

## **Business Data Collection**

Census will work with advisory committees, academia, and industry leaders to lock down technology questions and content for 2019 Annual Business Survey collection.

## **American Community Survey (ACS)**

Census will continue to strengthen the ACS with exhaustive research that covers topics ranging from messaging to public education campaigns.

## **New Principal Economic Indicator**

Census will work with the Office of Management and Budget to designate the Business Formation Statistics as a new principal economic indicator.

## **Annual Economic Surveys**

Census will implement key recommendations from the National Academies of Sciences' report on Reengineering the Census Bureau's Annual Economic Surveys.

## **Alternative Data Sources**

Census will use alternative data sources to substitute or supplement survey responses and add geographic and industry detail to improve data relevance.

## STRATEGIC OBJECTIVE 5.1 – Engage Commerce Employees

Contributing Bureaus: OS, All bureaus

Key Strategies:

- Align human capital with new strategic plan
- Improve talent management
- Improve the customer experience

### Executive Summary of Progress

**On-Track**

#### **Align human capital with the new strategic plan**

- Strategic Objective 3.3 strategy to evolve the National Weather Service has been affected in part by developing a workforce planning model. The planning model produced a new position schematic and an approach to updating the schematic. The model is a pilot for other Commerce workforce planning efforts.
- Strategic Objective 3.4 strategy to operate a nationwide public safety broadband network supported by a redesign of the position distribution and structure for the FirstNet organization. The new structure was fully implemented.
- Strategic Objective 5.2 strategy to modernize and consolidate information technology included the development of a new workforce plan for IT and cybersecurity.

#### **Improve talent management**

- A survey of nearly 700 supervisors and managers was conducted on performance management and training. A contractor designed a department-wide training course based the results and leading practices.
- Industry best practice performance management systems were benchmarked.
- The new performance management training program is available to managers and supervisors on-line and through in-person workshops. Participation is being tracked to assure all staff who manage individual performance benefit from it.

### Improve the customer experience

- Commerce’s High Impact Service Provider, USPTO, has developed detailed customer experience maps as a critical tool for service improvement. USPTO also has expanded its SMILE program that assists patent applicants who don’t have patent attorneys. Four field offices Silicon Valley, Denver, Dallas, and Detroit now reduce travel and time needed to access PTO services.
- Commerce bureaus have, or are standing up, Customer Relationship Management Systems. These systems track customer interactions and preferences. They are invaluable for assuring follow up and for determining the information and services in demand.
- Census, BEA and ITA are moving data sets and data analysis tools online. BIS has an online Turbo system to determine if a product is covered by export controls.

A principal challenge for Strategic Objective 5.1 is change management. Realigning human capital, increasing performance accountability, and systematically improving service require culture change and changes in what and how work is done. The challenge is addressed by tying individual performance plans more directly to the strategic plan, increased communication on performance management, and building customer feedback buttons into websites and tools. Implementation of the new Customer Experience section of OMB Circular A-11 Part 6 will also support Strategic Objective 5.1.

## Management Analysis of Strategic Goal 5 – Deliver Customer-Centric Service Excellence

### Performance Indicator Results and Targets

SO 5.1 – Engage Commerce Employees Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
OS - Employee Engagement Index-Viewpoint Survey	Target	N/A	67%	67%	69%	71%	Met	71%	73%
	Actual	70%	68%	69%	71%	71%			

OS - Inclusion Quotient-Viewpoint Survey	Target	N/A	66%	64%	64%	66%	Met	66%	68%
	Actual	64%	63%	63%	66%	66%			

OS - % of high-volume processes with feedback tools	Target	N/A	N/A	100%	100%	100%	Met	100%	100%
	Actual	N/A	N/A	100%	100%	100%			

OS - % of DOC Indicator Targes met or exceeded	Target	N/A	N/A	N/A	N/A	75%	Exceeded	75%	75%
	Actual	N/A	N/A	85%	88%	83%			

<span style="color: blue;">■</span> Exceeded (over 100% of target)	<span style="color: green;">■</span> Met (90-100% of target)	<span style="color: red;">■</span> Not met (below 90% of target)
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### Other Evidence and Evaluation

Several analyses and reports have been prepared by the National Academy of Science, National Academy of Public Administration, and private sector consulting firms to identify opportunities to make the NWS workforce more efficient.

### Strategic Conclusions and Recommendations

Critical hiring and workforce planning are included in the FY 2018 Risk Profile. Focus will be implementing the DOC Human Capital Operating Plan to mitigate the risk.

Move more and better citizen service tools to the web is a priority.

### Actions to Advance Progress through FY 2020

Develop a Department approach to assess workforce schematics, particularly considering new technology supporting operations, and execute the approach in all bureaus.

Continue to identify and fill skill gaps in mission occupations.

Establish a web-enabled capability for bureaus to use in planning and supporting talent management requirements.

Identify and employ technology that tracks workforce engagement and helps identify impediments to job satisfaction.

Leverage the on-line Commerce Learning Center to improve knowledge management, communicate with staff, and capture additional data to assess human capital needs and performance.

Establish real-time supervisor support for performance management.

### STRATEGIC OBJECTIVE 5.2 – Accelerate Information Technology Modernization

Contributing Bureaus: OS, All bureaus

Key Strategies:

- Reduce the Percentage of Legacy IT Across DOC
- Achieve 100% Email in the Cloud Across DOC
- Increase Technology Business Management (TBM) Use Across All Bureaus
- *Employ Best Practices in Data Security*

#### Executive Summary of Progress

**On-Track**

DOC OCIO is the primary IT authority with fiduciary and operational responsibility for the management of IT assets and services across the DOC organization as stipulated by FITARA and Presidential Executive Order.

The primary challenge inhibiting progress is establishing an agile methodology to address new IT business requirements and technologies. Additionally, there is a need to sustain technical expertise and governance tools to support integration and operation of Department-wide services.

#### **Reduce Legacy IT Across DOC**

The OCIO continues to work with the Office of the Chief Financial Officer to develop a funding strategy to replace legacy systems. Several bureaus have used their working capital funds to begin comprehensive efforts.

#### **Statistical Production Modernization Program**

The Bureau of Economic Analysis statistical production modernization program enables economists to spend fewer hours performing table checking and verification of data transfers between systems. Because of this initiative, BEA retired over 600 legacy programs.



### **Email in The Cloud**

Almost 100% migration to cloud email has been achieved. Only the Bureau of Industry and Security has not completed their migration. They will be on the cloud by Q4 FY 2019.

### **Technology Business Management (TBM)**

The Department continues to make progress within our TBM, Capital Planning and Investment Control (CPIC) reporting framework. Commerce is ahead of schedule for CPIC TBM reporting as established by OMB and has reported out in additional cost pools for FY 2018. The Census Bureau is utilizing the TBM services framework to consolidate mission and enterprise requirements, plan, budget and govern IT services, and improve service and security.

### **Controlled Unclassified Information (CUI)**

Executive Order 13556 establishes a uniform program for managing and securing information. In response, the Commerce CIO was designated as the Senior Agency Official for CUI; a Department-wide working group developed policies and procedures; awareness and end-user training was conducted for all Commerce employees and contractors; and self-inspection and guidance procedures were established for owner/operators of IT systems that process, store, and transmit CUI information.

### **Continuous Diagnostics and Mitigation Program**

In 2012, the Department of Commerce funded and began initial deployment of the Enterprise Cybersecurity Monitoring and Operations program, also known as ECMO. In conjunction with the Department of Homeland Security (DHS), the Department is now enhancing its program by leveraging DHS's Continuous Diagnostics and Mitigation program.

### **Trusted Internet Connections Access Provider (TICAP)**

The goal of TIC is to document existing public Internet connections on government networks and to limit the number of public Internet access points. This effort is being made so that data coming in and out can be monitored and analyzed more effectively. DOC Bureaus have begun negotiations with NOAA to move their TIC to the NOAA TICAP.

## Management Analysis of Strategic Goal 5 – Deliver Customer-Centric Service Excellence

### Performance Indicator Results and Targets

SO 5.2 – Accelerate Information Technology Modernization Performance Indicator		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
OS - Trusted Internet Connection Capabilities - ensure NOAA TIC service meets TIC 2.0 requirements	Target	100%	100%	100%	100%	100%	Met	100%	100%
	Actual	88%	83%	85%	98%	98%			

OS - Continuous Monitoring - Ongoing near real-time awareness and assessment of information security risks to support risk management decisions	Target	N/A	N/A	95%	95%	95%	Met	95%	95%
	Actual	N/A	N/A	79%	96%	93%			

<span style="color: blue;">■</span> Exceeded (over 100% of target)	<span style="color: green;">■</span> Met (90-100% of target)	<span style="color: red;">■</span> Not met (below 90% of target)
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### Other Evidence and Evaluation

Beta Testing a New DOC Website: in FY 2018, the OCIO partnered with the Office of Public Affairs to kick off the total redesign of the Commerce.gov website. In August 2018 the team successfully launched the beta version to employees within the Office of the Secretary. The customer feedback on usability and data analytics will provide OCIO and Office of Public Affairs with the final proposed changes prior to launch.

The vision for the new, expanded Commerce.gov includes a modern, easy-to-use content management system that will allow OS offices to collaborate on content with bureau colleagues.

### Strategic Conclusions and Recommendations

DOC will develop a long-range funding strategy for IT Modernization. Technology Business Management best practices will be used to maximize the benefits of investments in modernization and security.

### Actions to Advance Progress through FY 2020

Refine the new Commerce.gov website to make it more user friendly, visually engaging, and rich in information. Effect a new Business Applications Solutions system that modernizes and integrates financial management activities. Complete Bureau of Industry and Security migration to cloud base e-mail.

### STRATEGIC OBJECTIVE 5.3 – Consolidate Functions for Cost Savings

Contributing Bureaus: OS, All bureaus

Key Strategies:

- Continue deploying enterprise service models for purchasing and human resources functions when cost savings exist

#### Executive Summary of Progress

**On-Track**

The Department has created an Enterprise Services (ES) organization reporting to the Deputy Secretary. Over several years, mission support services are incrementally being moved from bureaus to ES when the migration can improve service and reduce costs. A principal objective is to free bureaus from transactional duties and allow them to focus on their mission. To date, ES has:

- Fully transitioned payroll, benefits, and personnel action processing services into ES for NOAA, Census, Census-serviced bureaus and those bureaus serviced by the DOC HR Operations Center;
- Assumed oversight for the HR processing system, HRConnect, used by every bureau;
- Took ownership of DOC's Learning Management System;
- Developed rigorous performance metrics for all the HR services assumed;
- Transitioned every DOC bureau without procurement authority into the ES procurement line of business, which sped up acquisition of goods and services and resulted in nearly \$50 million in cost avoidance through strategic sourcing in FY18;
- Processed nearly 2,500 contract transactions in FY 2018 with an average requisition-to-order time of 19.5 days or less—an unprecedented requisition-to-order schedule at DOC;
- Received high satisfaction ratings with 98% of customers rating their experience with ES Acquisition as Superior or Good in FY18.

Many features of ES make the organization unique and innovative. These features include:

- Dedicated resources to work in conjunction with the bureaus to provide change management and prepare customers to receive service;
- Constant and diverse modes of communications to all DOC employees;

## Management Analysis of Strategic Goal 5 – Deliver Customer-Centric Service Excellence

- An unprecedented customer experience management function; ES provides customer experience managers to work directly with our bureau customers to assure that they are receiving the highest quality services;
- Rigorous service management performance measures; ES vigilantly measures the performance of its services and acts if performance does not meet expectations;
- First-ever DOC-wide on-line electronic portal for tracking HR actions, such as a change in pay or benefits, the status of an employee promotion, or bonus, and acquisitions;
- A new Contact Center function where ES representatives work directly with our customers to answer questions and resolve issues;
- Nearly doubling the size of DOC-wide strategic sourcing initiatives over the past two years, including laptop and desktop computers, software products, and furniture; and
- Achieving nearly \$50 million in cost avoidance in FY 2018 through strategic sourcing.

Risks associated with ES implementation are addressed during bi-weekly status reports to the Department Management Council, which serves as the ES Governance Board. These discussions keep all bureaus informed of the progress of ES and encourage the support of the council in problem solving.

# Management Analysis of Strategic Goal 5 – Deliver Customer-Centric Service Excellence

## Performance Indicator Results and Targets

SO 5.3 – Consolidate Functions for Cost Savings Performance Indicators		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Status as of FY 2018	FY 2019	FY 2020
OS - Reduced Operating Costs <i>(new)</i> <sup>1</sup>	Target	<i>New performance indicator for FY 2020. Baseline values not established, but targets are set</i>					N/A	N/A	-15%
	Actual								
OS - Acquisition Cost Avoidance <sup>2</sup>	Target	N/A	N/A	N/A	\$22.1M	\$22.1M	Exceeded	\$50M	\$50M
	Actual	N/A	N/A	N/A	\$45.2M	\$48.9M			
OS - Acquisition Customer Satisfaction <sup>3</sup>	Target	N/A	N/A	N/A	90%	90%	Exceeded	95%	95%
	Actual	N/A	N/A	N/A	100%	100%			
OS - Personnel Action Requests ES Accuracy <sup>4</sup>	Target	N/A	N/A	N/A	N/A	98%	Met	100%	100%
	Actual	N/A	N/A	N/A	N/A	91%			

<sup>1</sup> Source: Enterprise Services Business Case February 2018; Operating cost reduction target is dependent on implementing the scope (services and participation levels) in the planned timeline as outlined in the ES Business Case

<sup>2</sup> Cost avoidance is cost not incurred due to improved business processes that reduce redundancy and eliminate unnecessary waste. It is cost that would have been incurred under previous business processes that have been improved to use funds for other efforts including directly supporting the mission. You can acquire more per dollar than you could prior. Source: Executive Dashboard

<sup>3</sup> Source: Acquisition Customer Satisfaction Surveys

<sup>4</sup> Measures the accuracy of processing ES personnel action requests. Mistakes found during the Quality Assurance Audit can include some of the following: incorrect job code provided, incorrect veterans' info provided, and incorrect NOA code used. Source: Executive Dashboard

Exceeded (over 100% of target)	Met (90-100% of target)	Not met (below 90% of target)
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### Other Evidence and Evaluation

ES utilizes post transaction customer service surveys and quarterly customer surveys to guide continuous process improvement.

### Strategic Conclusions and Recommendations

Continue transitioning services when performance and cost savings result. Actions on Strategic Objective 5.3 support three Cross-Agency Priority Goals in the President's Management Agenda: Improving Customer Experience, Sharing Quality Services, and Shifting from Low-Value to High-Value Work.

### Actions to Advance Progress through FY 2020

Enterprise Services plans to continue transitioning more Human Resources, Acquisition, and Information Technology services, with a fully-supported enabling technology. Depending on funding levels and approval of the Department Management Council, these will include:

- Talent Acquisition Services;
- Enterprise-wide Identity Access Management;
- Continued execution and expansion of the Department's contracts and strategic sourcing portfolio, including SmartPay3, Enterprise Infrastructure Solutions, HR Managed Services, Enabling Technology, CyberSecurity Unity, and HCHB Guard/Security Services.



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