

# A NEW STRATEGIC DIRECTION FOR NTIS

---

**U.S. Department of Commerce**

**December 7, 2015**

***Refocusing NTIS to meet a 21st Century National Need***

# Overview

- **The Commerce Department has made data a strategic priority.**
  - The Department has committed to making it easier for businesses, government, taxpayers, and communities to access, analyze, and use data, strengthen economic growth, and create new jobs.
  - Numerous recent studies predict that data from different sectors of the economy, including the rapidly growing Internet-of-Things, could generate trillions of dollars in benefits to the United States alone.
- **Following a rigorous review of NTIS mission and operations, the Commerce Secretary Penny Pritzker set a new strategic focus for NTIS in June 2015:**
  - to expand access to the Commerce Department's and the broader federal government's data resources, with an emphasis on data concerning the nation's economy, population, and environment.

# Challenges to Releasing Data

- Determining which specific data subsets would be most useful to end users.
- How best to make the data available to end users.
- How best to build and expand partnerships with the private sector:
  - to leverage the private sector's knowledge and expertise in delivering data to end users with our knowledge and expertise of the diverse data sets we collect;
  - to enable the private sector to create new suites of data products, platforms, and services that meet the needs of businesses, innovators, government, and others.

# NTIS as Solution

- **NTIS has been in the business of information and data dissemination since its inception and has a history of partnering with industry to find data solutions.**
- **NTIS is being refocused to support the Commerce Department's and Federal government's data priorities, including Open Access and Open Data.**
- **In its new role, NTIS will deliver exceptional value by meeting a 21st Century National Need and serving as a Center of Excellence to execute the Commerce Department's Data Mission.**

# NTIS Data Mission and Vision

## Mission

- To promote the Commerce Department's and Federal data priorities, including open access and open data, by providing information and data services to the public, industry, and other federal agencies in ways that enable U.S. innovation and economic growth.

## Vision

- NTIS will be a center of excellence that delivers trusted data networks through agile partnerships with the private sector and enables the private sector to develop and/or use new and improved data products and services.

## Scope

- NTIS will support the entire data delivery pipeline for:
  - creating unique platforms to access, analyze, and use data;
  - combining and using data in new ways to enable innovative products and services; and
  - delivering better data services to businesses, communities, and citizens.

# Criteria to Assess Mission Alignment

- Promote the *Commerce Department's data priorities* to maximize the positive impacts of Commerce data on society.
  - Fuel economic growth by unleashing Commerce data and making it easier for businesses, communities, and citizens to access, analyze, and use the data.
  - Create data-driven government by combining and using data in new ways to increase the efficiency, effectiveness, and security of Commerce programs.
  - Deliver data services by leveraging advances in data science, software development, and standards to accelerate product innovations.
- Promote *Federal open data priorities* to make information accessible, discoverable, and usable by the public to help fuel entrepreneurship, innovation, and scientific discovery.
- Promote *transformation in the way government works* for the American people by simplifying and streamlining the delivery of critical government data services.
- Promote *Federal open access priorities* for scientific publications and scientific data in digital formats.

# Criteria to Assess Vision Alignment

- Promote NTIS vision to be a center of excellence that delivers trusted data networks through agile<sup>1</sup> partnerships with the private sector.
- Promote NTIS vision to be a center of excellence that enables the private sector to develop and/or use new and improved data products and services.
- Promote NTIS vision to be center of excellence that delivers substantial added value through in-house NTIS leadership in modern data science, engineering, and best practices.

---

<sup>1</sup>The term “agile” is used to mean quick or nimble.

# Key NTIS Data Service Elements

- **Data Discovery and Usability** (e.g., design and development of data portals and distributed data systems, interface design and development, Extract-Transform-Load (ETL), search engine optimization, interactive and static visualization, interactive query management, customer analytics, usability testing, user analytics)
- **Data Interoperability and Standards** (e.g., user interfaces for data portals, data cleansing and standards, metadata practices, Application Programming Interface (API) construction, developer platforms with suite of API tools)
- **Data Analytics and Forecasting** (e.g., comparative/predictive/cognitive analytics, forecasting, machine learning/statistical/computer science methods, geospatial analysis, data visualization)
- **Data Infrastructure and Security** (e.g., data cataloging and inventories, data capture and storage, cloud-based data solutions, cybersecurity services, anytime/anywhere data delivery services, enterprise data management, data delivery business models, assistive technologies)

# NTIS Data Service Approach

- NTIS will provide data services using *modern data science, engineering, and best practices*<sup>1</sup> essential to rapidly executing projects requiring *high levels of innovation and creativity*.
- Criteria for assessing “high levels of innovation and creativity” required for use of JV authority:
  - Contract is not more appropriate for program/project execution.
  - First or early use of emerging technology.
  - High degree of technical complexity involving the solution architecture, interoperability, and/or security.
  - Adaptive scoping required for program/project execution.
  - Substantial custom solution development required for unique requirements that cannot be met through a combination of commercial-off-the-shelf solutions and systems integration.

---

<sup>1</sup>Modern data science, engineering, and best practices are value-added services need to augment IT infrastructure services and commodity IT services.

# NTIS Data Service Approach (2)

- NTIS has unique capabilities and authorities to partner with the private sector to execute projects requiring the use of *modern data science, engineering, and best practices*, including:
  - Agile and collaborative development process to support frequent software releases and risk reduction
  - DevOps process to tightly integrate software development with quality assurance, deployment, and operations while also supporting frequent releases and risk reduction
  - Life cycle approach to software development (plan, code, build, test, release, deploy, and operate)

# Leverage Unique NTIS Capabilities

- **NTIS will leverage its unique core competencies**—*information and data delivery, program and project management, and public-private partnerships*—**to rapidly plan and deliver tailored solutions to meet critical data mission needs.**
  - NTIS delivers exceptional value for projects that require high levels of **innovation, creativity and trust**, address **complex/intricate challenges**, **push the technology envelope**, and need **collaboration and iteration** to be successful.
  - NTIS provides **controlled access to critical federal datasets with stringent privacy and security requirements**, for which there is no other viable alternative.
  - NTIS has unique partnering capabilities through its joint venture authority to **build truly agile, collaborative public-private partnerships** required to execute the data mission.
  - NTIS has made thoughtful investments in both infrastructure and staff capabilities at no cost to taxpayers that are unique and essential to build modern data products (**e.g., trusted data networks, metadata, APIs, data standards, data center operations**).
  - NTIS solutions are highly efficient due to its **agile and collaborative approach, scale of operations**, and use of **advanced automation tools**.

# Examples of NTIS Work

- In response to a White House initiative, NTIS partnered with DHS and the private sector to deliver the new myUSCIS.gov website:
  - This website ranks among the most popular in government and is used by all those seeking citizenship and immigration services.
  - NTIS completed this project within just 90 days of initiation and for just a fraction (10 percent) of the typical development cost.
- NTIS has demonstrated very well that it is capable of providing controlled access to critical federal datasets with stringent privacy and security requirements (e.g., DEA Controlled Substance Database and Federal Wage Determination Database).
- NTIS plans to partner with NIST for private sector delivery of Internet time and custom services.

# Next Steps

- Department of Commerce—through the Under Secretary for Standards and Technology to whom NTIS reports—is taking action to:
  - **Evolve NTIS as an organization—consistent with its existing authorities—toward a focus on the DOC data mission and transition away from services not aligned with DOC and/or National data priorities.** This effort includes:
    - Assessing/realigning project portfolio to focus on data mission
    - Assessing/strengthening joint venture process and criteria
  - **Ensure effective communications with Congress and NTIS customers and partners.**

# Stewardship of JV Authority

## Innovation and Creativity

- A joint venture is an activity in which NTIS and a private sector partner work together to achieve a common goal, the accomplishment of which requires (1) a high level of innovation and creativity based on established criteria, and (2) using advances in data science, engineering, and best practices, with a formal agreement for investing and sharing resources associated with the venture.

## Equal Access

- NTIS shall afford equal opportunities for private sector access to the joint venture program.
  - NTIS shall select joint venture partners on a competitive basis to provide data services in specified mission areas by publishing a notice in the Federal Register soliciting private sector proposals. Selected proposers will be invited to enter into a joint venture partnership agreement with NTIS and will be eligible to compete against other NTIS joint venture partners to work with NTIS to provide services in the specified mission area to federal agencies.
  - NTIS may separately solicit non-proprietary summary descriptions from private sector organizations for provision of unique, narrowly-defined data services by publishing a notice in the Federal Register. If the proposed unique, narrowly-defined data service is of interest to one or more federal agencies, NTIS joint venture partners in relevant mission areas will be invited to provide the data service on a competitive basis by entering into teaming arrangements with the proposing private sector organization.

## Statutory Restrictions

- NTIS shall enter into agreements in accordance with all relevant provisions of applicable Federal laws. NTIS shall scrupulously avoid any joint venture proposal that has the appearance of circumventing Federal Acquisition Regulation (FAR) or agency acquisition requirements.
- NTIS is required to provide Congress with advance notice of “any joint venture or cooperative agreement which involves a financial incentive to the joint venture or contractor.” Under rigorous guidelines, NTIS does not allow (and has never offered) financial incentives (such as up-front payments or guarantees) in entering into joint ventures.

# NTIS Oversight Board

*To guide evolution of NTIS toward a focus on DOC data mission and transition away from services not aligned with DOC and/or National data priorities, including open access and open data.*

**Shyam Sunder, Chair**

**Senior Science Advisor** to the Deputy Secretary of Commerce & NIST Director

Mary Saunders

**NIST** Associate Director, Management Resources

Henry Wixon

**NIST** Chief Counsel for Standards and Technology

Ian Kalin

**DoC** Chief Data Officer

John Ratliff

**DoC** Director, Office of Policy and Strategic Planning

Jim Stowers

**DoC** Acting Assistant Secretary for Legislative and Intergovernmental Affairs

Ellen Herbst

**DoC** Chief Financial Officer and Assistant Secretary for Administration

# Assessment of NTIS Project Portfolio

- Ongoing projects with signed agreements in place are expected to continue in FY 2016 until they are completed.
- New project proposals and requests to extend existing project agreements are reviewed annually to assess their degree of fit to the Department's and federal data priorities.
- NTIS expects to pursue extension requests and new proposals for those projects aligned with the Department's and federal data priorities.
- NTIS will work with agencies/partners to smoothly transition those projects found not to be well aligned with the Department's and federal data priorities.

# Assessment of NTIS Project Portfolio

- The NTIS Oversight Board has completed its assessment of the NTIS project portfolio.
  - A total of 124 projects were assessed, including 114 new or continuing projects for FY 2016 and 10 other possible project opportunities.
  - The assessment did not include projects terminating at the end of FY 2015.
- NTIS is implementing a plan to provide project-specific results of the assessment to agencies and partners.

Finding	Required Action
Aligned with data mission	No required action
	Strengthen in-house data-specific value add
Weakly aligned with data mission	Strengthen alignment with data mission
	Consider discontinuing project
Not aligned with data mission	Discontinue project or do not pursue possible project opportunity
Not enough information	Provide more information to judge alignment with data mission

# Summary

- Following a rigorous review of NTIS operations, the Commerce Secretary set a new strategic focus for NTIS to support the Department's and Federal government's data priorities, including open access and open data.
- Department of Commerce is implementing an action plan to evolve NTIS—consistent with its existing authorities—toward a focus on the DOC data mission and transition away from services not aligned with DOC and/or National data priorities.
- NTIS has unique capabilities and authorities to partner with the private sector which are essential to execute projects requiring the use of modern data science, engineering, and best practices.
- NTIS is planning to build a joint venture partnership program that is aligned with the Department's and Federal data priorities during FY 2016.