



# NTSB Data Strategy

Fiscal Years 2023-2026

# Contents

<b>Contents</b> .....	<b>1</b>
<b>NTSB at a Glance</b> .....	<b>2</b>
<b>About this Plan</b> .....	<b>4</b>
<b>Summary of Goals and Objectives</b> .....	<b>5</b>
<b>1. Manage Data as a Strategic Asset</b> .....	<b>6</b>
1.1 Empower stakeholders with trustworthy and secure data for strategic and mission value.....	6
1.2 Seek internal and external stakeholder feedback .....	6
1.3 Develop an enterprise data management investment strategy .....	7
<b>2. Foster a Data-Informed Culture</b> .....	<b>8</b>
2.1 Incorporate data skills as a core competency in an agency human capital strategy .....	8
2.2 Provide data skills training for managers and staff.....	8
2.3 Hire staff to support future data needs .....	9
<b>3. Enhance Agency Decision-making with Data Analytics</b> .....	<b>10</b>
3.1 Establish operational and mission performance metrics.....	10
3.2 Develop analytic tools and visualization capabilities .....	10
3.3 Expand availability, breadth, and use of analytics products to report analysis results and support decision-making.....	10
<b>4. Strengthen Agency Data Governance</b> .....	<b>11</b>
4.1 Implement an enterprise data analytics platform .....	11
4.2 Establish an agencywide data stewardship, quality, and protection program .....	11
4.3 Develop data policy and guidance.....	11

# The NTSB at a Glance

## About the NTSB

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation— railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable cause of the accidents and events we investigate and issue safety recommendations aimed at preventing future occurrences. We also conduct safety research studies and offer information and other assistance to family members and survivors for any accident investigated by the agency. Additionally, we serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

## Our Mission

Making transportation safer by conducting independent accident investigations and studies, advocating safety improvements, and deciding pilots' and mariners' certification appeals.

## Our Legislative Mandate

Maintaining our congressionally mandated independence and objectivity

Conducting objective accident investigations and safety studies

Performing fair and objective pilot and mariner certification appeals

Assisting victims of transportation accidents and their families

## Our Core Values

Integrity

Transparency

Independence

Excellence

Diversity and Inclusion

## About this Plan

In accordance with the Federal Data Strategy and Foundations for Evidence-Based Policymaking Act of 2018, this plan establishes goals and objectives to improve our use of agency data for decision-making, manage data as a strategic asset, and maximize usability of NTSB data for other agencies, external stakeholders, and the public.<sup>1,2</sup> This Data Strategy Plan supports the strategic goals and objectives of our 2022-2026 Strategic Plan by enabling us to more effectively use data to improve agency processes and products, optimize organizational effectiveness and efficiency, and monitor progress toward those goals.<sup>3</sup>

---

<sup>1</sup> Pub. L. No. 115-435, 132 Stat. 5529

<sup>2</sup> Title II of the Evidence Act defines data as “recorded information, regardless of form or the media on which the data is recorded.” Data asset is defined as, “a collection of data elements or data sets that may be grouped together.” For the purposes of this document, “data” and “information” are equivalent and interchangeable.

<sup>3</sup> This Data Strategy Plan will enable the agency to more effectively use data to support current and future agency strategic goals and objectives, but specifically supports *Strategic Goal 2: Improve Processes and Products* and *Strategic Goal 3: Optimize Organizational Effectiveness and Efficiency* of the current NTSB *Strategic Plan Fiscal Year 2022-2026*.

## Summary of Goals and Objectives

Goals	Objectives
<p><b>1</b> Manage data as a strategic asset</p>	<p>Objective 1.1: Empower stakeholders with trustworthy and secure data for strategic and mission value</p> <p>Objective 1.2: Seek internal and external stakeholder feedback on the NTSB data program</p> <p>Objective 1.3: Develop an enterprise data management investment strategy</p>
<p><b>2</b> Foster a data-informed culture</p>	<p>Objective 2.1: Incorporate data skills as a core competency in an agency human capital strategy</p> <p>Objective 2.2: Provide data skills training for managers and staff</p> <p>Objective 2.3: Hire staff to support future data needs</p>
<p><b>3</b> Enhance agency decision-making with data analytics</p>	<p>Objective 3.1: Establish operational and mission performance metrics</p> <p>Objective 3.2: Develop analytic tools and data visualization capabilities</p> <p>Objective 3.3: Expand availability, breadth, and use of analytics products to report analysis results and support decision-making</p>

**4** Strengthen  
agency data  
governance

Objective 4.1: Implement an enterprise data analytics platform

Objective 4.2: Establish an agencywide data stewardship, quality, and protection program

Objective 4.3: Develop data policy and guidance

# **1. Manage Data as a Strategic Asset**

The NTSB is committed to effectively managing and using its data assets to enhance agency capabilities and to maximize use of our data by other agencies, external stakeholders, and the public. The NTSB will continuously seek to improve data management, access, and protection through data governance best practices.

## **1.1 Empower stakeholders with trustworthy and secure data for strategic and mission value**

As the official repository for US aviation accident data, the NTSB has for decades provided publicly available datasets of our aviation investigations and safety recommendations. In the agency's 2018 budget reauthorization, Congress directed the NTSB to create a multimodal accident database to capture and provide the public broader access to our investigation data across all modes of transportation. Recognizing our diverse data customers and the ever-increasing demand for accurate, timely, and secure information, the NTSB is committed to providing convenient and secure access to authoritative datasets for internal and external users of agency data, along with presentation methods and tools to visualize and interpret those data. We will survey government and industry best practices to identify and expand our methods for securely sharing agency datasets.

## **1.2 Seek internal and external stakeholder feedback**

As the demand for transportation safety data and the availability of data analytics tools continues to grow, it is important that the NTSB keep pace with the needs of internal and external stakeholders to ensure that the data program effectively and efficiently supports their needs and fulfills the agency's mission and strategic objectives. Consistent with Paperwork Reduction Act requirements, the agency will seek internal and external customer feedback about its datasets and analytic tools to improve the access, usability, and value of NTSB data, analytic products, and tools for decision-making.

## **1.3 Develop an enterprise data management investment strategy**

The NTSB's information technology (IT) infrastructure is essential to the agency's ability to meet mission and business needs and fulfill our obligations for data transparency and public access. We must review and select IT expenditures and project plans associated with data management and analytics tools to ensure alignment with the agency's mission and strategic objectives. We will solicit input from office directors, managers, and staff across the agency that will be used to evaluate technology and data management investments to support agency mission and strategic decision-making. Data management products and analytic tools will be made

readily available to NTSB data analysts, managers, and staff based on the identified needs. This will facilitate agencywide data access and encourage self-service analytics that can be used for process improvement and transportation safety initiatives.



## **2. Foster a Data-Informed Culture**

The NTSB is committed to a learning culture that promotes data management, stewardship, and sharing to support the agency mission and business processes, improve government effectiveness and efficiency, and provide transparency to the public. Agency leadership and the NTSB Data Governance Body will foster a data-informed organizational culture that uses data management and stewardship practices as a critical requirement to achieving the agency's goals.<sup>4</sup>

### **2.1 Incorporate data skills as a core competency in an agency human capital strategy**

As technological advances rapidly transform transportation products and services, it is critical that the NTSB continues to maintain a workforce with the knowledge, skills, and experience to keep pace with changing trends in the transportation sectors we investigate. This not only includes transportation technology, but the data that the transportation sectors rely on and collect. As part of the agency human capital planning processes, we will consider the expected future data skills and staffing needed to carry out our mission. The NTSB will conduct agencywide data skills assessments and incorporate the needs identified in our human capital strategy.

### **2.2 Provide data skills training for managers and staff**

The NTSB is committed to a strategic talent management approach to enhance our current highly skilled, knowledge-based organization and to strengthen knowledge sharing and growth opportunities to increase our workforce's skills and competencies, including using and interpreting data to support decision-making. This strategic talent management will include training managers and staff to enhance and maintain their knowledge and skills in data management, analysis, and sharing to support the agency's mission, strategic goals, and performance outcomes. We will use the results of agencywide skills assessments to provide a range of training opportunities to maintain staff data skills and address developing needs. We will seek information from other government agencies and transportation industry stakeholders to assess the future skills and training needed to maintain a highly qualified workforce.

---

<sup>4</sup> The NTSB has established a Data Governance Body to provide enterprise guidance and direction for achieving data management objectives as defined by the Federal Data Strategy and the Foundations for Evidence-Based Policymaking Act of 2018. The [Data Governance Body Charter](https://www.nts.gov/data) is available on the NTSB website at [www.nts.gov/data](https://www.nts.gov/data).

## **2.3 Hire staff to support future data needs**

The NTSB is committed to providing an equitable, inclusive, and accessible work environment for a highly skilled workforce. As the NTSB plans for future staffing needs, we must ensure our recruitment and hiring practices attract a diverse staff with knowledge and appreciation of the tools and techniques for data management and analytics across agency offices and positions. In our recruitment and hiring for targeted positions, we will seek employees with appropriate knowledge and skills in data management and analytics to support the agency's mission and future strategic goals.

### **3. Enhance Agency Decision-making with Data Analytics**

Enhanced decision-making for the agency and for the safety of the American public will depend on how effectively we manage and use our data to support the agency mission and strategic goals. Therefore, the NTSB will define data-supported metrics and monitor performance against those metrics. In support of the NTSB core values of integrity and transparency, the agency will also expand its library of tools, capabilities, and products for data analysis and visualization to extract and share analysis results.

#### **3.1 Establish operational and mission performance metrics**

The NTSB's mission, to conduct independent investigations and studies, issue safety recommendations, assist victims and families affected by transportation disasters, and decide pilots' and mariners' certification appeals, is clearly defined in legislation. The agency strategic plan establishes goals and criteria to continuously improve our performance in accomplishing those mission elements. Effective performance indicators must be clearly defined and should include quantifiable benchmarks and timelines. The NTSB will define criteria for objective data metrics to track agency performance in meeting our mission and strategic plan goals.

#### **3.2 Develop analytic tools and data visualization capabilities**

The agency must provide appropriate analytic tools and applications to support the diverse range of agency users, including skilled data scientists, analysts, and engineers, as well as support self-service capabilities for internal and external users of agency information resources. The NTSB will expand the use of modern analytic tools for collecting, reporting, analyzing, and visualizing data to derive insights and support effective decision-making to improve efficiency and productivity internally and to identify emerging safety issues both internally and externally.

#### **3.3 Expand availability, breadth, and use of analytics products to report analysis results and support decision-making**

The NTSB will seek opportunities to expand the value and use of its data resources—internally and externally—by promoting and improving access to existing datasets, analysis reports, dashboards, and other data products. Consistent with Paperwork Reduction Act requirements, we will also solicit user feedback to continuously improve existing data resources and identify potential new products to support evidence-based decision-making.

## **4. Strengthen Agency Data Governance**

Data governance is the process of setting and enforcing priorities for managing and using data as a strategic asset.<sup>5</sup> An effective data governance strategy includes three critical components: people, processes, and technology. The NTSB will develop and implement a simple, streamlined, and secure technology platform; establish and staff an agencywide data stewardship program; and develop data policy and guidance as needed to strengthen and maintain effective data governance for the agency.

### **4.1 Implement an enterprise data analytics platform**

The NTSB will develop and implement a secure and governed enterprise data analytics infrastructure to support analysis of investigative and operational data. This will provide a common platform for consolidating and sharing agency datasets with integrated records management, transparent data source information and documentation, and appropriate user and security controls to maintain the quality, availability, and integrity of agency data.

### **4.2 Establish an agencywide data stewardship, quality, and protection program**

Decision-making must be based on reliable, complete, and timely data, and without sufficient guidance on data entry, associated review processes, and sufficient staffing to support those processes, the agency's data quality will be inconsistent. The NTSB will develop and staff an agencywide data stewardship, quality, and protection program to ensure the quality and integrity of data generated, reported, and shared internally or externally. The agency's data stewardship program will include systematically measuring and evaluating data quality, accuracy, completeness, and timeliness to continually seek opportunities for enhancing the value of agency data.

### **4.3 Develop data policy and guidance**

As federal data strategy guidance and policy continues to evolve, the NTSB must regularly review and refine its data policies to ensure that they continue to reflect regulatory requirements and industry best practices for data management, protection, and sharing. The NTSB will establish a methodology to regularly review and update its policies, not only to ensure continuous compliance with applicable requirements, but also to maximize the security, accessibility, and value of the agency's data for internal and external users.

---

<sup>5</sup> Federal Data Strategy: Data Governance Playbook. July, 2020 Washington, DC. <https://resources.data.gov/assets/documents/fds-data-governance-playbook.pdf>.