



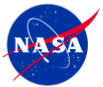
NASA Open Data Plan

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Purpose

This plan satisfies requirements in the Office of Management and Budget (OMB) Memorandum M-25-05 regarding public data asset dissemination¹ and §3506(b)(2)(B) of the Federal Information Policy (44 U.S.C. § 3506) which specifies the requirements for an Agency's Open Data Plan.

Pursuant to the Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act)², NASA is committed to improving the breadth and depth of the NASA Open Data Portal (also known as data.nasa.gov) to make NASA data findable, accessible, interoperable, and reusable.

Background

NASA has long been committed to making its data openly accessible and user-friendly. By adopting robust open data standards and practices and actively engaging with the public in using this data, NASA promotes transparency and fosters a deeper understanding of its mission and activities. Accordingly, NASA works proactively and collaboratively to advance open data objectives, including those codified in the OPEN Government Data Act (OGDA)³.

In recognition of the principles and affordances of open data, the Agency frequently publishes to [Data.gov](https://data.gov) and data.nasa.gov. As of July 2025, more than 26,000+ datasets can be publicly downloaded there.

Pursuant to the Act, NASA is publishing this Open Data Plan to describe its goals, ongoing initiatives, and completed projects regarding data management and publication.

NASA Data Strategy

This Open Data Plan not only addresses key components of the OGDA but also meets the requirements of the goals in the NASA Data Strategy⁴:

- Improving Data Management (Goal 1 – Process)
- Improving Data Culture (Goal 2 – People)
- Improving Data Capabilities (Goal 3 – Technology)

¹ OMB M-25-05 provided guidance on the contents of agency Open Data Plans. See Office of Management and Budget, Executive Office of the President, OMB M-25-05 *Phase 2 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Open Government Data Access and Management Guidance* (2025).

² Public Law No. 115-435 (2019), Foundations for Evidence-Based Policymaking Act of 2018, is also referred to as the Evidence Act.

³ Public Law. No. 115-435 § 201 et seq. (2019). Title II of the Evidence Act is also referred to as the Open, Public, electronic, and Necessary (OPEN) Government Data Act ("OPEN Government Data Act" "OGDA").

⁴ NASA Data Strategy accessed <nasa.gov/data>.



Agency Data Requirements

This plan follows the structure of OMB M-25-05 section 6, Agency Data Requirements: OPEN Data Plan.

- A. Data Collection Processes for Open Formats
- B. Data Usage Information
- C. Collaboration with Data Users
- D. Open Data Point of Contact
- E. Improvement Processes
- F. Open Data Goal Requirements
- G. Prioritizing Public Data Asset Review
- H. Compliance Status
- I. Updating the Strategic Information Resources Management Plan

The ongoing activities and Out-Year Goals described below also address requirements listed in section 4, Agency Requirements that Apply to All Data Assets, and section 5, Requirements that Apply to All Public Data Assets of OMB M-25-05.

A. Data Collection Processes for Open Formats

NASA has processes and procedures to ensure data is collected and maintained in open, machine-readable formats.

On-Going Activities

- Digitizing legacy data and embedding open format standards in data collection activities, aligning with FAIRUST principles.
- Integrating digitization efforts to convert existing datasets into open formats aligned with public access needs.
- Embedding requirements for open formats and metadata into data collection procedures across NASA programs.
- Released data.nasa.gov NASA's publicly available metadata repository, hosting diverse datasets related to science, space exploration, aeronautics, and more. During this reporting period, the platform was enhanced with improved data accessibility and management, powered by the Comprehensive Knowledge Archive Network (CKAN) open-source data management solution. Currently compliant with DCAT 1.1 and updating our metadata standard to ensure DCAT 3.0 US adoption as directed by M-25-05.
- Continued development and operational support of Code.nasa.gov, NASA's authoritative inventory of source code released to the public.
- Continuing to enhance api.nasa.gov, NASA's authoritative inventory of existing NASA APIs.



Out-Year Goals:

- Assess current collection mechanisms for compliance with OGDA and NASA-specific open format standards.
 - Review all public data assets for machine-readability and license compliance.
 - Continue to enhance integration and implementation of other data sources into the NASA Data Management Hub to support the Federal OPEN Data Act's requirements by enabling standardized data management and enhanced visibility into agency data assets.
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B. Data Usage Information

NASA'S evaluation of public data asset usage is based on monitoring and tracking activities on its websites, including page views and downloads.

On-Going Activities

- Collect, use, and analyze metrics on Data.gov.
- Collect information from users on Data.nasa.gov. Users can be associated with datasets by either following directly or being part of a group which is associated with that dataset.

Out-Year Goals:

- Develop the NASA Open Data Portal on the data.nasa.gov URL to have the functionality to display the number of views and downloads for each data asset, providing users with insights into the popularity and usage of specific datasets, without disclosing individual user information.
 - Plan to publish aggregate non-government user data asset usage & access statistics (§ 6(b)).
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C. Collaboration with Data Users

NASA enables transparency and fosters public input through accessible platforms, open data portals, and public-facing tools, and encourages transparency and active public involvement in shaping data priorities and tools through training initiatives, outreach, and engagement activities with the public.

On-Going Activities

- Advancing open data initiatives through platforms such as data.nasa.gov, code.nasa.gov, api.nasa.gov, and the Science Discovery Engine (SDE), ensuring public accessibility to diverse datasets, supporting transparency, fostering interdisciplinary collaboration, and enabling AI-powered data discovery, all in compliance with the OGDA.



- Facilitating public access to scientific data through platforms such as data.nasa.gov and <https://www.nasa.gov/nasa-data-by-subject/>, thus enabling open collaboration, interdisciplinary research, and seamless data accessibility across scientific domains.
- Continue to support public engagement via our open feedback channel where users can suggest datasets for publication, submit feedback on existing datasets, and participate in prioritization processes. These insights will be used to guide future dataset releases and metadata enhancements.

Out-Year Goal

- Explore the development of new mechanisms to engage the public in identifying and prioritizing data for release.
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D. Open Data Point of Contact

NASA's Chief Data Officer (CDO) is the point of contact. Email support requests go to "HQ-Open-Innovation" <hq-open-innovation@mail.nasa.gov>.

Out-Year Goals

- Monitor engagement with the public and refine internal points of contact to improve answering inquiries regarding a public data asset.
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E. Open Data Improvement Processes

NASA ensures timeliness, completeness, consistency, accuracy, usefulness, and availability of open government data assets principally through the NASA Data Management Hub. By making NASA's metadata publicly accessible, in compliance with the OGDA, NASA continues to foster transparency, collaboration, and scientific advancement. Over 26,000 datasets are available for exploration by the public.

On-Going Activities

- Standardizing metadata tags and categories to enhance searchability of public data assets.
- Implementing the updated data strategy to mature data management practices by promoting consistent, repeatable processes.
- Aligning data catalog update cycles with feedback and usage trends across public portals, prioritizing Public Data Assets for Federal Catalog § 6(g)).
- Maintain the [API.nasa.gov](https://api.nasa.gov) platform which handled more than 70 million API requests, demonstrating strong and growing interest from developers, researchers, and the public in utilizing NASA's data and services.



Out-Year Goals

- Conduct an annual review of the NASA Open Data Portal requiring data owners to check their data assets for accuracy.
 - Mature metadata strategies, including quality, lineage, and classification guidance, aimed at improving the discovery, access, and use of data.
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F. Open Data Goal Requirements

NASA invests in workforce development, governance frameworks, and cross-agency data infrastructure to meet open data mandates.

On-Going Activities

- Clearly defining the data roles and responsibilities.
- Complying with current Data.gov reporting requirements through managing the NASA Agency Data Catalog, an internal application that serves as the Agency's comprehensive data inventory, and data.nasa.gov, the external application serving open data needs.
- Maintaining the Data Steward and Data Management Communities of Practice for employee training and support.
- Examining NASA's current data maturity and various data talent management programs across NASA while developing ideas to expand upskilling opportunities for data professionals at NASA.
- Sourcing professional services talent and IT products in support of open data objectives.
- Outlining processes for acquiring data, technology, training, staffing, and procurement.

Out-Year Goals

- Identify new data sharing opportunities to increase open data access.
 - Evolve the strategy for technology acquisition and workforce development (§ 6(f)).
 - Develop additional staff training on open data practices 202e OGDA (§ 202(e)).
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G. Prioritizing Public Data Asset Review

NASA'S evaluation of public data asset value is based on monitoring and tracking activities on its websites, including page views and downloads. NASA continually evaluates and enhances its open data through public input, usage analytics, and internal review processes. These efforts contribute to a more trustworthy and mission-aligned data ecosystem.



On-Going Activities

- Developing a formalized framework to guide data asset evaluation and prioritization based on demand, impact, and quality.
- Developing Key Performance Indicators to analyze and measure against that will provide insight into data usage from the Open Data Portal.

Out-Year Goals

- Develop processes and procedures to respond to public inquiries about quality issues, usability issues, recommendations for improvements, and complaints related to open data within a reasonable timeframe.
 - Mature processes for compiling NASA contributions and updating the Federal Data Catalog to ensure that updates are made when necessary.
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H. Compliance Status

NASA will comply with all requirements of OMB M-25-05 and the requirements of 44 U.S.C. § 3511 when disseminating a public data asset pursuant to the Evidence Act.⁵

On-Going Activities

- Managing NASA's publicly available metadata repository (data.nasa.gov), hosting diverse datasets related to science, space exploration, aeronautics, and more.
- Enhancing the Comprehensive Knowledge Archive Network (CKAN) data management platform with improved data accessibility. Establishing processes to ensure the internal NASA Data Management Hub and the external Open Data Portal both conform with the most recent Data Catalog Vocabulary Version metadata schema to improve the discoverability and interoperability of NASA data. Actively updating our agency metadata schema to align with M-25-05 DCAT 3.0 US requirements.

⁵ 44 U.S.C. § 3511: Data inventory and Federal data catalogue.



Out-Year Goals

- Coordinate with relevant Agency officials, such as other members of their Data Governance Body, to ensure that any public release of data assets is lawful, appropriate, and adheres to data privacy requirements.
 - Integrate open data processes and technology with the internal NASA Data Management Hub (NDMH) to account for all NASA public data assets. The data designated as “Public” in the NDMH should be pushed for publishing on the public-facing Open Data Portal, thus reflecting a more accurate comprehensive data inventory while streamlining the publication process.
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I. Updating the Strategic Information Resources Management Plan

NASA’s Strategic Information Resources Management Plan is incorporated within the [NASA IT Strategy Plan](#) and publicly posted. The Open Data Plan will be updated on the same review cycle.

Appendix A: Definitions

- **Data** — Recorded information, regardless of form or the media on which the data is recorded. (44 U.S.C. § 3502)⁶
- **Data asset** — A collection of data elements or data sets that may be grouped together. (44 U.S.C. § 3502)
- **FAIRUST** – Findable, Accessible, Interoperable, Reusable, Understandable, Secure, and Trustworthy
- **Federal Data Catalog** — A centralized public online interface dedicated to sharing U.S. government data assets with the public; maintained by GSA and available through Data.gov. (OMB M-25-05)
- **Machine-readable** — Data in a format that can be easily processed by a computer without human intervention while ensuring no semantic meaning is lost. (44 U.S.C. § 3502)
- **Metadata** — Structural or descriptive information about data such as content, format, source, rights, accuracy, provenance, frequency, periodicity, granularity, publisher or responsible party, contact information, method of collection, and other descriptions. (44 U.S.C. § 3502)

⁶ 44 U.S.C. § 3502: Definitions.



- **Open Data** — Publicly available data structured in a way that enables the data to be fully discoverable and usable by end users. (OMB M-13-13)⁷
- **Open format** — A file format for storing digital data where the format is platform independent and machine-readable and is maintained (A) at no cost to the public; and (B) with no restrictions on copying, publishing, distributing, transmitting, citing, or adapting such a format. (OMB M-25-05)
- **Open Government data asset** — A public data asset that is—
 - machine-readable;
 - available (or could be made available) in an open format;
 - not encumbered by restrictions, other than intellectual property rights, including under titles 17 and 35, that would impede the use or reuse of such asset; and
 - based on an underlying open standard that is maintained by a standards organization. (44 U.S.C. § 3502)
- **Open license** — A legal guarantee that a data asset is made available—
 - at no cost to the public; and
 - with no restrictions on copying, publishing, distributing, transmitting, citing, or adapting such asset. (44 U.S.C. § 3502)
- **Public data asset** — A data asset, or part thereof, maintained by the Federal Government that has been, or may be, released to the public, including any data asset, or part thereof, subject to disclosure under section 552 of title 5. (44 U.S.C. § 3502)

⁷ “Open data” was last defined in OMB Memorandum M-13-13, which was replaced by M-25-05. See Office of Management and Budget, Executive Office of the President, OMB M-13-13 *Open Data Policy – Managing Information as an Asset* (2013).