National Aeronautics and Space Administration

NASA earth

Commercial Satellite Data Acquisition (CSDA) Program Update

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Overview: Why does NASA buy commercial satellite data?

Enhances our science and applications and makes unique contributions to our mission.

Combined approaches are powerful.

NASA's fleet provides innovative, first-in-kind observations; global coverage; open access to data, calibration, analytics; and robust validation that sets the world's measurement standards and forms the backbone of Earth-system science and applications.

Commercial data is an important complement to our fleet that increases the pace of discovery by offering higher spatial resolutions, more frequent observations, and other complementary measurements.

NASA partners with other federal agencies to maximize the value of commercial data purchases for all.

How does NASA help the commercial space sector?

Acquiring, evaluating, using, and archiving the data.

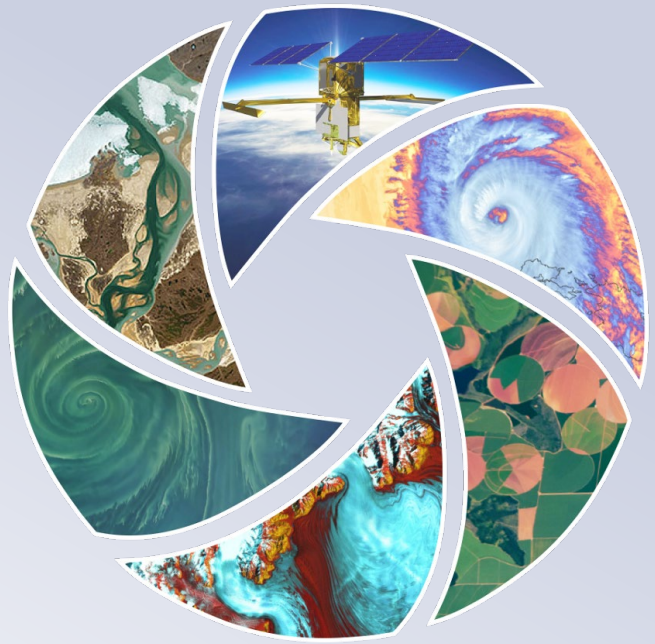
NASA's evaluations of commercial data are trusted by the data providers, private sector, and user community.

NASA's broad expertise in observations, instruments, and calibrations, as well as the research & application uses, help the providers understand their data.

NASA's purchases represent a critical revenue stream for some companies.

CSDA Program Mission

*Serves as the **central mechanism at NASA** for identifying, acquiring and evaluating commercial EO data that support NASA's Earth science research & application goals.*



CSDA Program Goals

- Establish a continuous and repeatable process to on-ramp new commercial data vendors.
- Enable sustained use of purchased data for broader use and dissemination by NASA scientific community.
- Ensure long-term data preservation, access and distribution of purchased data and long-term access for scientific reproducibility.
- Coordinate with other US Government agencies and international partners on the evaluation and scientific use of commercial data.
- Compliance with 2003 US Commercial Remote Sensing Policy

Program Timeline

PILOT

Initiated to evaluate data from commercial satellite companies to find a cost-effective means to augment and/or complement NASA Earth observations for research and applied science activities.

BPA ONRAMP 1

Pilot successfully ended and CSDA transitioned into a sustained program with on-ramping opportunities for new vendors.

BPA ONRAMP 2/3

2nd CSDA solicitation released (ROSES 2022 A.44) to promote scientific use of purchased data by the scientific and applied science communities.

22 proposals were selected.

BPA TO IDIQ

Move from BPAs to Multiple-Award Indefinite-Delivery, Indefinite Quantity (IDIQ) contract with Firm-Fixed-Price (FFP) task orders. Awarded 7 vendors October 2023.

IDIQ ONRAMP 1

CSDA name change from Commercial *SmallSat* Data Acquisition to Commercial *Satellite* Data Acquisition.

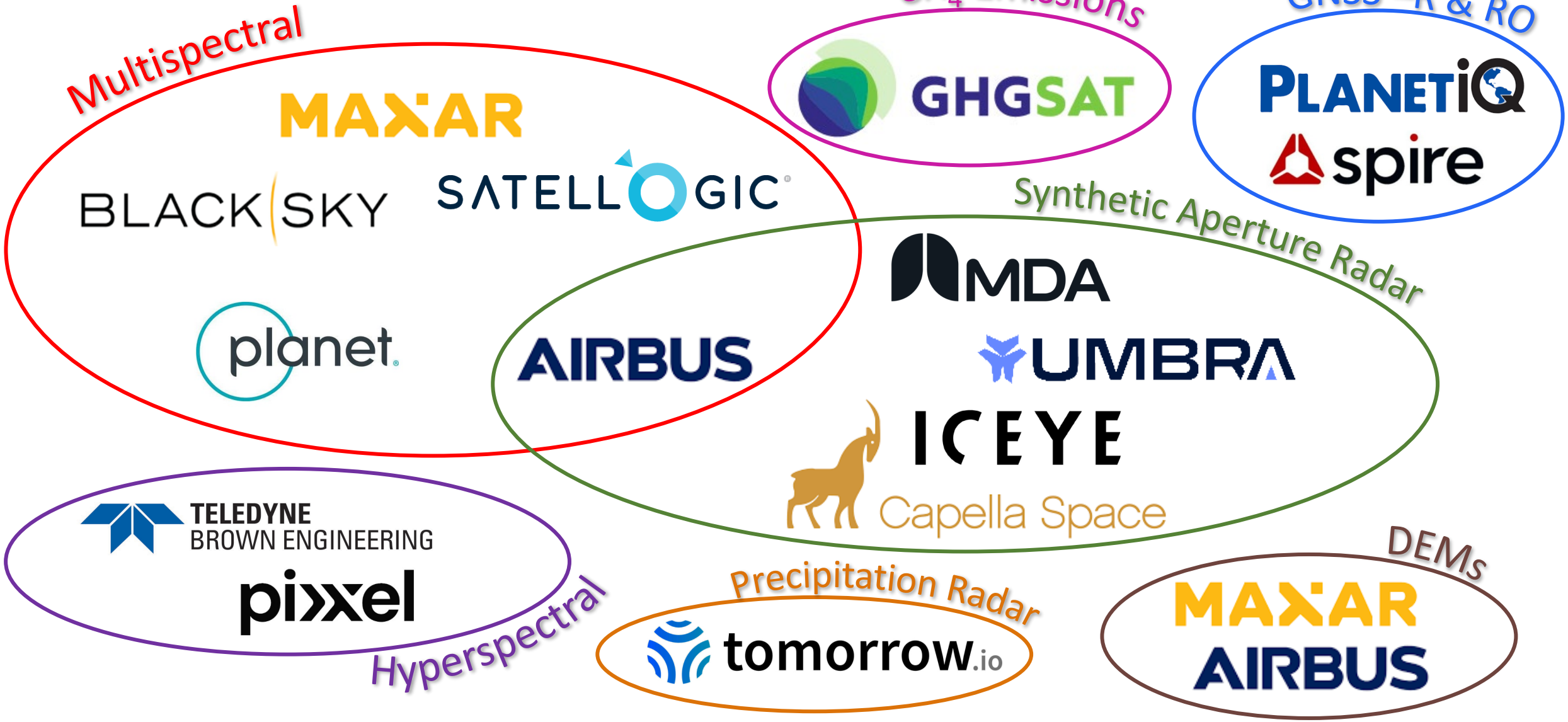
IDIQ Multiple award contract on-ramp 1: Awarded eight new vendors in Sept. 2024.

Release of CSDA solicitation (ROSES 2024 A.48) with focus on complementary use of commercial data with NASA data for science research and applications.

2017 — 2020 — 2022 — 2023 — 2024

CSDA's tiered End User License Agreement (EULA) approach is modeled after National Reconnaissance Office (NRO) Geospatial Intelligence Systems Acquisition Directorate Commercial Systems Program Office (CSPO) common, standardized family of EULAs.

NASA CSDA Vendors



NASA Evaluation of Data Provides Confidence in Commercial Data

- Enhanced recognition among the science research and applications communities
- Strengthened credibility and trust of customers and investors
- Access to NASA expertise in data quality
- Strengthen vendor capabilities, improve staff retention through increase in staff morale
- Increased brand awareness through CSDA communications
- Greater exposure to the full extent of data utility

Data Evaluation Criteria

1. Accessibility of vendor supplied imagery and data

   Ease and efficiency of search, discover, and download from vendor systems.

2. Accuracy and completeness of metadata

   Accuracy and completeness of metadata provided by vendor.

3. Quality of User Support Services

   Availability, responsiveness, and technical expertise required to answer PI inquiries.

4. Usefulness of data for advancing Earth system science research and applications

   Ability of data to support Earth system science research and applications activities.

5. Quality of vendor supplied imagery and/or data

   Data attributes such as geolocation accuracy, radiometric accuracy, and platform intercalibration. Data quality evaluation will use the ESA-NASA Evaluation Guidelines.

Three-Tiers of End User License Agreements (EULAs)

Authorized User Community	Type of EULA		
	Public Release	U.S. Gov Plus	U.S. Gov
U.S. Government defined under Title 5 U.S.C. 101-105	✓	✓	✓
The U.S. Gov Executive Office of the President (EOP), members of Congress, and Congressional staff	✓	✓	✓
State and Local Governments, Territories, and Tribal Authorities within the U.S.	✓	✓	✓
Non-Governmental Organizations and/or Non-Profit Organizations working for the purpose of U.S. Gov	✓	✓	✓
Contractors, subcontractors, partners, and/or grantees supporting the U.S. gov to execute their contracts	✓	✓	✓
Foreign Governments, intergovernmental entities, and International Defense and Coalition Partners for U.S. Gov purposes	✓	✓	
Public, Open Data	✓		

USG license is minimum level for CSDA
Scientific Non-Commercial Use License
Modeled after National Reconnaissance Office (NRO) Geospatial Intelligence Systems Acquisition Directorate Commercial Systems Program Office (CSPO) common, standardized family of EULAs.

Expanding the use of commercial data at NASA….

NASA will provide commercial data to agency partners under the agreed EULA by request. NASA will not prohibit agency usage of the data if it abides by the EULA requirements, as specified in Contract Attachment B. Use is not intended for the development of commercial products or services and does not include activities funded or sponsored by non-governmental organizations.

Current Active Task Orders (as of February 11, 2025)

Commercial Vendor	Type of Data	Period of Performance
Airbus	SAR, DEM	08/02/2024 – 08/01/2025
Airbus	Pléiades Neo, Pléiades, and SPOT 6/7, WorldDEM	04/08/2025 – 04/07/2026
Capella	SAR	09/28/2024 – 09/27/2025
Maxar	DSM, DTM	09/29/2024 – 09/28/2025
Pixxel	Hyperspectral (L1C and L2A)	09/27/2024 – 09/26/2025
Planet Labs	Electro-Optical	11/25/2024 – 11/24/2025
PlanetiQ	Neutral Atmosphere Radio Occultation products, Ionosphere Total Electron Content (TEC)	08/05/2024 – 08/04/2025
Satellogic	Electro-Optical (L1 Basic and L1 Orthorectified)	09/27/2024 – 09/26/2025
Spire Global, Inc	• GNSS-RO • GNSS-PRO • Conventional GNSS-R: bistatic radar • Grazing Angle GNSS-R: sea ice and altimetry • Space Weather: TEC, ionospheric profiles, scintillation, and magnetometer • Satellite Precise Orbit Determination (POD) • GNSS-R Soil Moisture • GNSS-R Ocean Surface Wind Speed • Raw intermediate frequency collections	08/12/2024 – 08/11/2025
Tomorrow.io	Precipitation Radar (L1C-geoprof and L2A-PRECIP)	09/27/2024 – 09/26/2025
Umbra	SAR	09/27/2024 – 09/26/2025
GHGSat	Greenhouse Gas Emission Rate	02/11/2025 – 02/10/2027

*Non-Evaluation Data

Partnerships

Building new partnerships and improving data sharing possibilities

- Working closely with U.S. Government agencies to align and share data acquisitions, share evaluation processes, share data requirements and needs.

JACIE
Joint Agency Commercial Imagery Evaluation
NASA • NGA • NOAA • NRO • USDA • USGS

- Continuing our collaboration with international partners in developing guidelines, data evaluations, and programmatic and technological processes.

esa

- Coordination of Commercial Data Purchase within the U.S. Government with other Federal Agencies

CIVIL APPLICATIONS COMMITTEE CAC

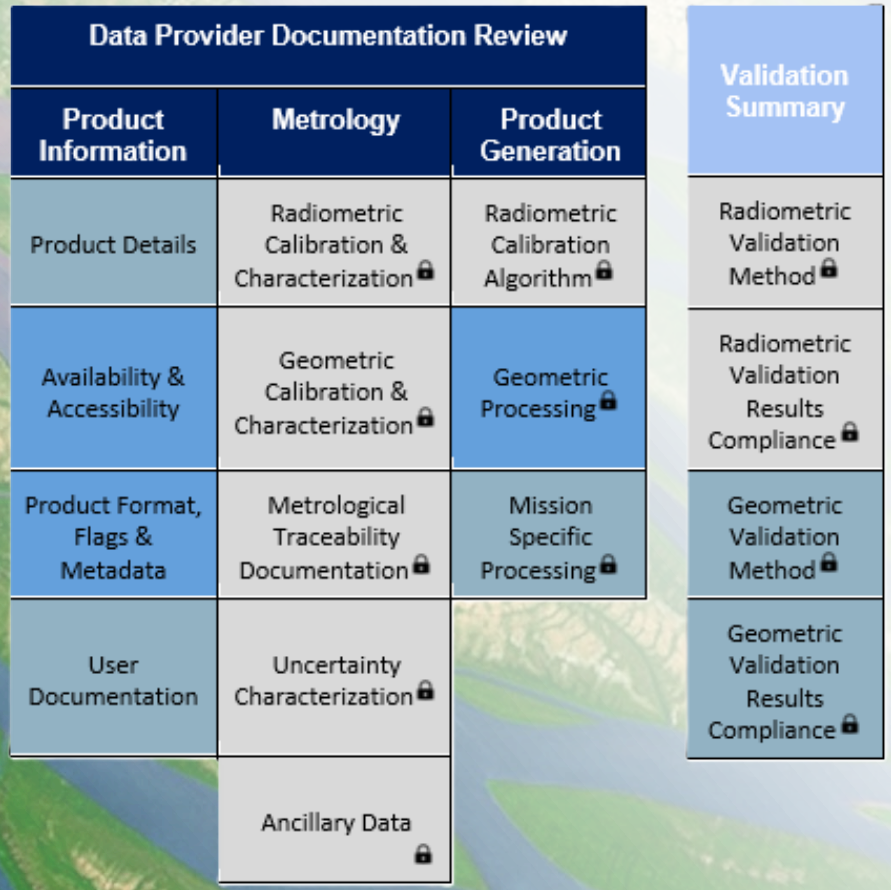
NATIONAL RECONNAISSANCE OFFICE UNITED STATES OF AMERICA

NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY UNITED STATES OF AMERICA

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NOAA U.S. DEPARTMENT OF COMMERCE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ESA-NASA Joint EO Mission Quality Assessment Framework



Separately,

- ESA's Earthnet Data Assessment Project (EDAP) established an EO mission quality assessment framework, which was also later customised for several different sensor domains.
- CSDA created an evaluation process to assess the quality and the integration into various research and applications supporting different thematic areas.

Together,

Developed the **Joint EO Mission Quality Assessment Framework** - To ensure that decisions on acquisition of commercial data can be made with confidence; the development of a set of guidelines to assess the data quality of these commercial sources; to strengthen the existing partnership between ESA and NASA

Data Access and Use

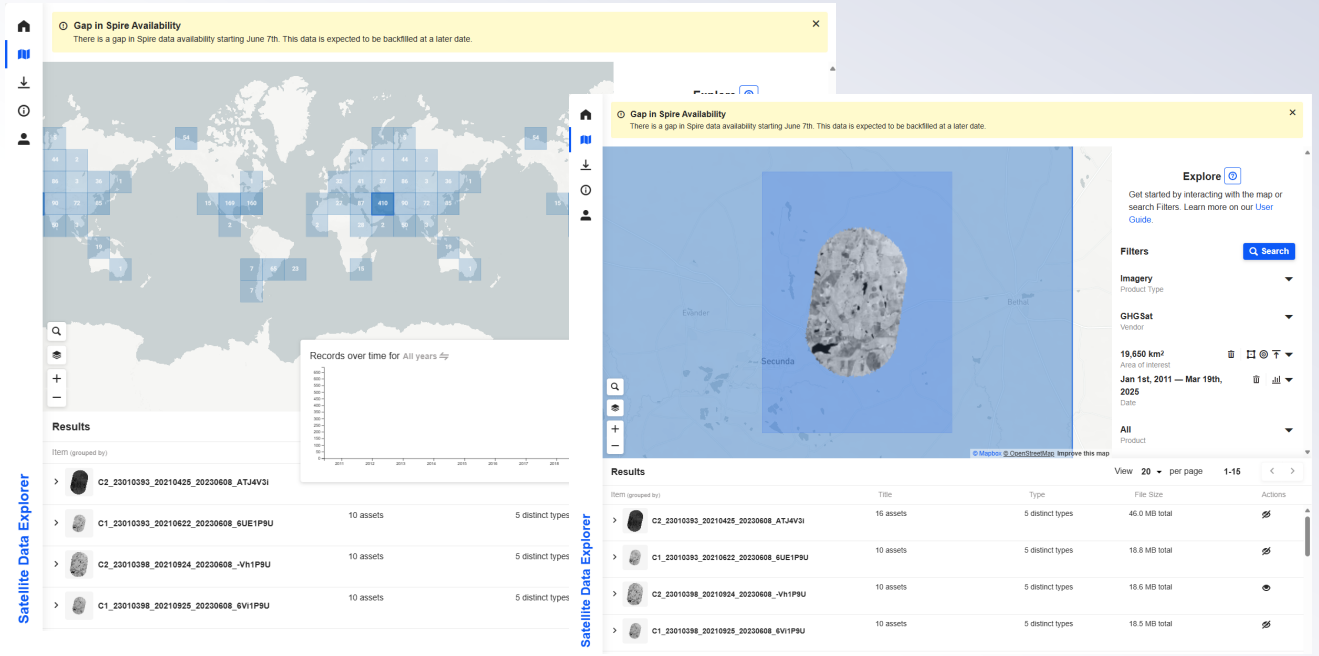
All commercial data access for NASA should occur through the NASA CSDA Program

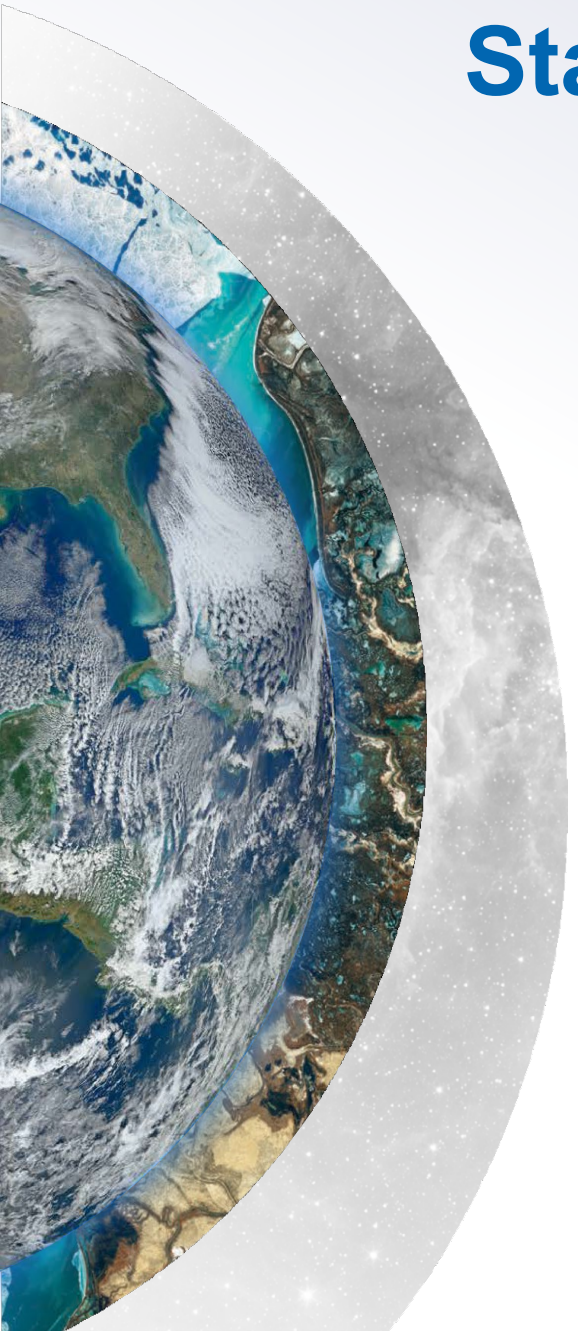
Access

- If you qualify for data access under our EULA, you can get authorization through the CSDA website: https://csdap.earthdata.nasa.gov/signup
  - Eligibility to download validated through USG grant license or NASA email – validation and additional download support by NASA CSDA MSFC team.
  - Tasking system in development, enable proposal and approval for acquisition.

Limits on data use based on licenses

Satellite Data Explorer (SDX):
Web interface for central search, discovery, and distribution of CSDA data
https://www.earthdata.nasa.gov/data/tools/satellite-data-explorer





Stakeholder Engagement and Support

1. CSDA Program monthly webinar series with focus on
   - ***Vendors***
     - Presenting on their current constellation
     - Instrumentation updates
     - Data Products
     - Science Uses and Applications
   - ***Researchers***
     - How the data is being used in scientific research and application
     - Challenges encountered when using the data

2. Provide access to commercial data tools to support science research and applications use of commercial data

3. Improve and update the CSDA website highlighting vendors and the applications of commercial data

4. Engagement with the community at conferences, workshops and science meetings

Learn more about CSDA

https://earthdata.nasa.gov/csda