



National Aeronautics and
Space Administration

C E S A S

NASA's Earth Action Element & the Space-Enabled Economy

Dr. Thomas Wagner

Associate Director for Earth Action

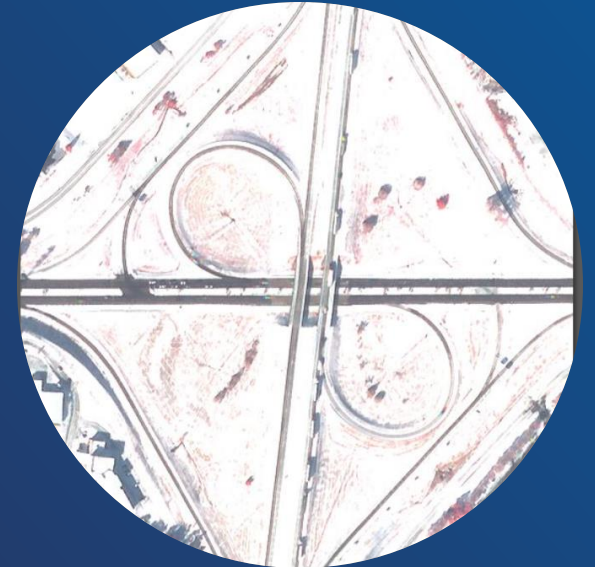
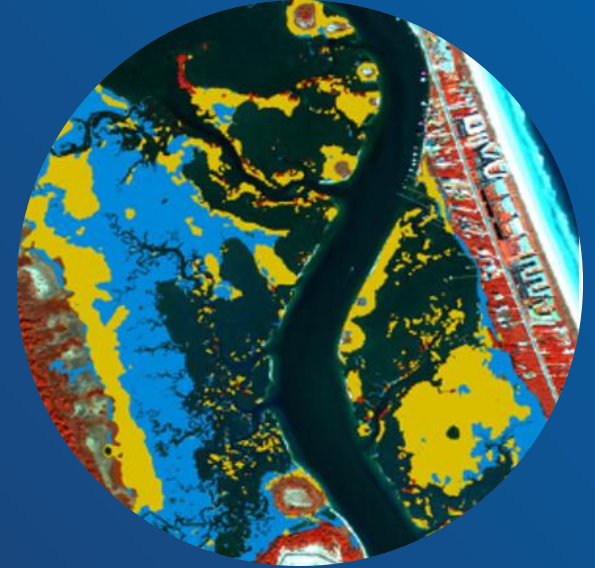
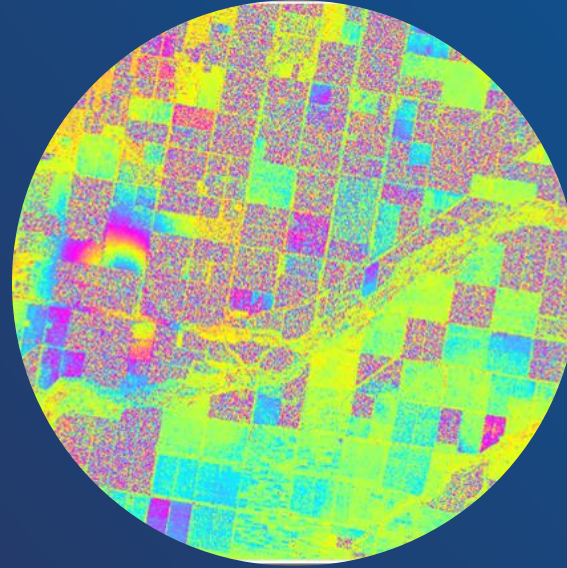
March 25, 2026

NASA Earth

Earth Action & The Space-Enabled Economy

Outline

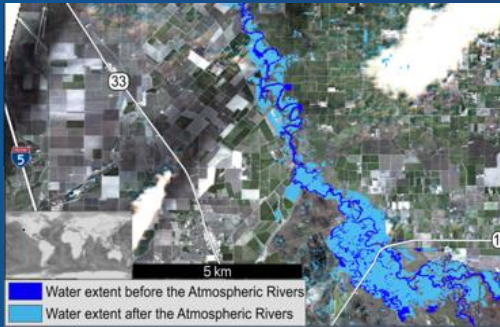
- Portfolio Overview
- Private Sector Engagement
- Commercial Satellite Data Acquisition (CSDA)
- Connections
- Opportunities for the Community





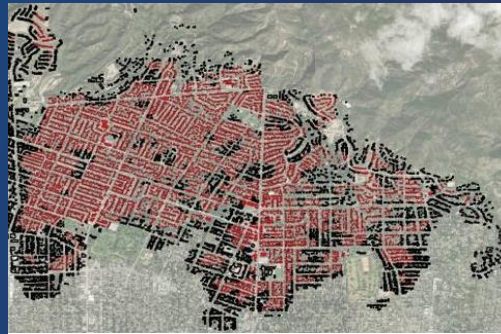
Earth Action Portfolio

Core Competed Programs



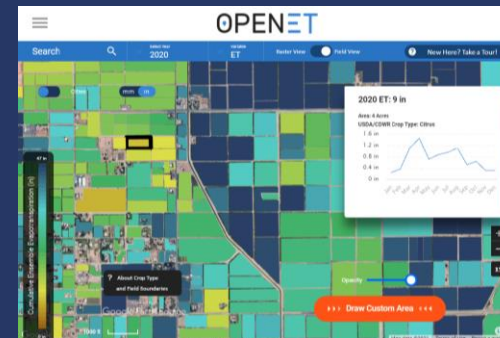
Application Innovation

- Core competed programs
- Water Resources, Health and Air Quality, Ecological Conservation
- Energy and Infrastructure



Disasters

- Disaster Response
- Competed Disaster program



Agriculture

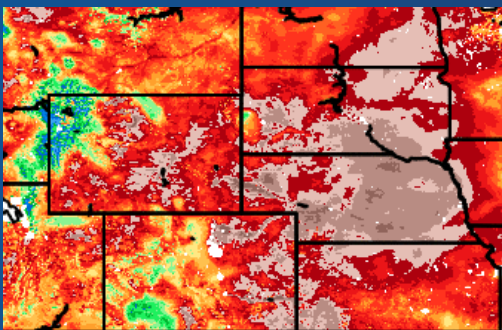
- Large consortia awards
- Domestic productivity
- International food security



Wildland Fires

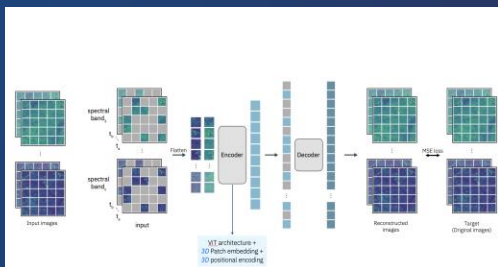
- Competed programs
- Field campaigns
- New technologies

Earth Action Portfolio Tools and Services



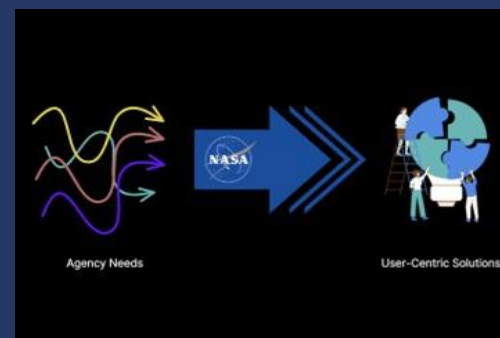
RSI Crosscutting

- ARSET, EarthRISE
- Earth Information Center
- Private Sector Engagement
- And more!



AI and Advanced Modeling Applications

- GeoAI to improve decision-making
- Other advanced modeling



Interagency Satellite Observation Needs

- Assesses and fulfills needs identified by federal agencies
- Develops some of NASA's most used data products



Commercial Satellite Data Acquisition

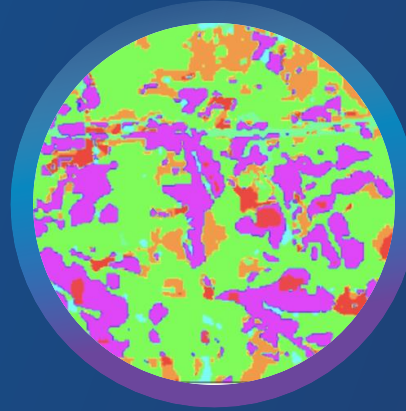
- Data purchases to support ESD needs
- Sector support through product evals, cal-val, etc.

Earth Action Connects



Drive U.S. Economic Growth

Help American businesses use Earth data to grow and compete, training workers, decision-makers, and turning data into real-world solutions.



Accelerate AI Use

Widen access to Earth information and scale-up the impact of using AI for Earth applications.



Equip Local Leaders to Act

Deliver trusted data and tools to state, local, tribal, and federal partners to increase resilience, security, and prosperity.



Strengthen American Resilience

Strengthen American resilience to hazards such as fires, floods, drought, heat, and health threats.

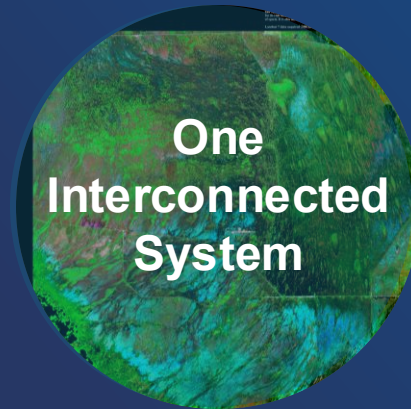
Thriving on Our Changing Planet

Decadal Survey recognized importance of partnerships for benefit of humanity and nation:

Recommendation 4.5: ...NASA should consider enhancing existing partnerships and seeking new partnerships when implementing the observation priorities of this decadal survey.

ESD's *Earth Science to Action Strategy* affirms this direction:

We will use this multivariate partnership approach to achieve both depth and breadth in our impact and support to humanity while being cost effective.

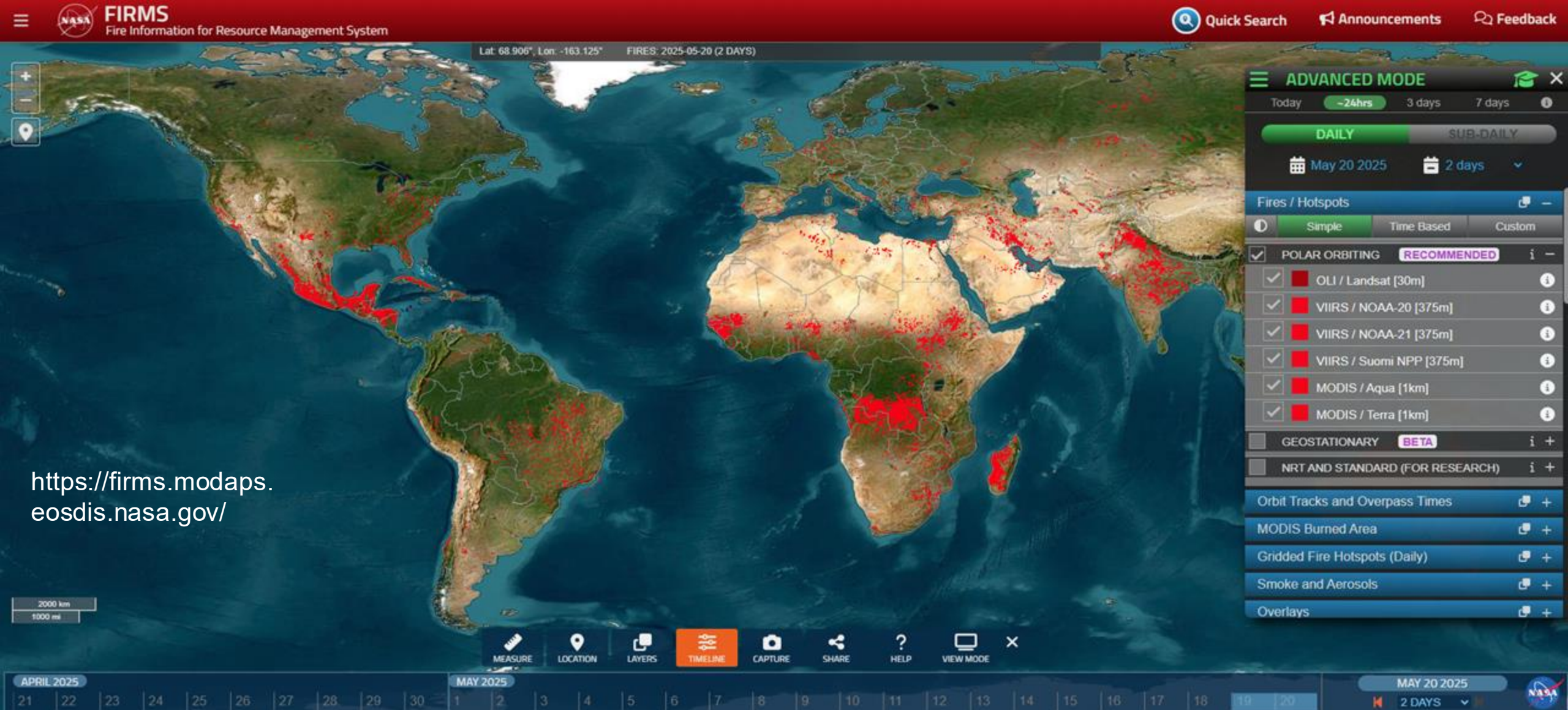


Our partnership strategy expands our reach and impact across sectors, advancing the space-enabled economy and providing benefits to humanity.



Growing the Space-Enabled Economy: Earth Observations & the Private Sector

Key message: NASA and the science community have many opportunities to contribute to the broader economy.



FIRMS provides satellite-based **near real-time fire detections** and **burned area** within 3 hours of satellite overpasses globally, and less than 60 seconds for the continental US

Used by electrical utilities, paper companies, communications infrastructure, and other industries.

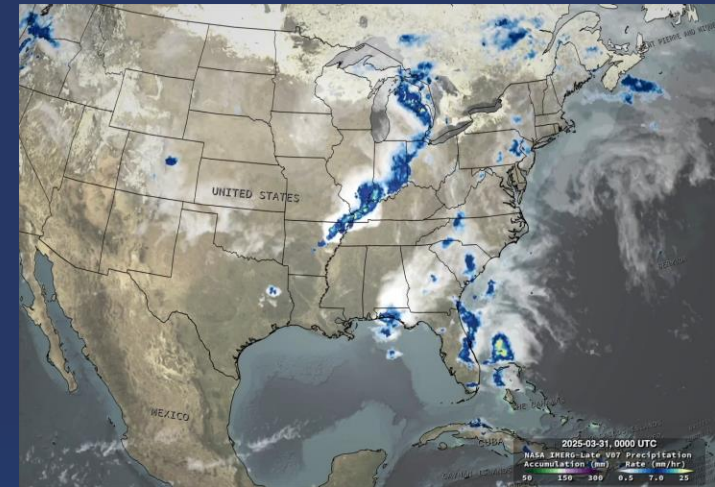
IMERG

IMERG provides global surface precipitation at ~10km (0.1°) resolution every half-hour (1998–Present), balancing speed and accuracy through three distinct Runs.

Run	Latency
Early	~4 hours
Late	~12 hours
Final	~3.5 months

As a general rule, the longer the latency, the more accurate the product.

Currently in V07!: See [IMERG documentation](#)



Example: Immediate risks for logistics planning



Example: Long term risks for insurance

Private Sector is a growing and enthusiastic stakeholder

2025 Engagement Process

Comprehensive Outreach

- 80+ companies engaged in focused conversations
- 30+ companies engaged in roundtables focused industry conversations including insurance, finance, supply chain, multi-sectoral, venture capital, investments, and consultancies
- Presented at multiple industry events

Incredible response!

- Companies want partnerships
- Interested in products, training, and measurement details
- The more they learn, the more they want!



NASA Earth Science and Industry Summit attracted ~130 industry leaders to discuss needs, challenges, and collaboration opportunities

Overview

- Hosted by US Chamber of Commerce (Feb 2, 2026)
- Gathered leaders interested in using Earth observation to solve problems, drive economic development, and benefit society.
- Discussed challenges of integrating satellite data—including commercial—into products, services, and risk management.

Industry Representation

- 130 participants: agriculture, insurance, finance, energy & utilities.
- Fortune 500 well-represented.

Approach

- Full-day event with panels and sector-specific breakouts.
- Open dialogue on needs, trends, challenges, decision making, training, and opportunities for increased collaboration.



Insurance

Use Cases

Hazard and exposure intelligence for underwriting and pricing

Parametric trigger design

Rapid event impact assessment for response and claims (wind, flood, wildfire/smoke)

Portfolio accumulation risk monitoring across time horizons.

What they need from NASA

High-confidence, validated hazard layers and benchmarks that are analysis-ready and easy to operationalize, with clear continuity signals and sustained engagement in insurance and reinsurance venues to co-design fit-for-purpose products.



Agriculture

Use Cases

Irrigation and water risk decisions

Drought and heat stress early warning

Rapid post-event impact assessment (flood, wildfire smoke, storms)

Defensible sustainability indicators for sourcing and supply chain risk management.

What they need from NASA

Decision-ready, trusted products that fit real farm and supply chain workflows, delivered through trusted intermediaries, with low-friction access and training to scale adoption.

Trusted, simple, field-relevant insights with a clear ROI delivered through channels farmers already trust, not more data.



Finance

Use Cases

Climate and nature risk screening at asset and portfolio scale

Stress testing and scenario analysis, corporate and financial disclosure support (e.g., Taskforce for Financial Disclosure)

Integration of geospatial indicators into platforms and analytics workflows used by analysts and risk teams.



What they need from NASA

A clear, curated set of decision-grade datasets and indicators with strong provenance and validation that is packaged for easy ingestion (analysis-ready, cloud-ready, standard interfaces) and supported by targeted workforce training to move from pilots to institutional use.



Energy & Utilities

Use Cases

Siting and resilience planning for assets and infrastructure

Operational monitoring of hazards and disruptions (heat, drought, wildfire/smoke, storms)

High-resolution data for water management

Flashflood forecasting and validation

What they need from NASA

Reliable, always-on data products that are simple to discover and integrate, plus guidance that helps them navigate public plus commercial data options without costly trial-and-error.

Decision-ready, reliable Earth science data with continuity over time; NASA-funded pilots and early-adopter pathways to de-risk adoption; partnerships with trusted public intermediaries (NASA/NOAA/USGS) to bridge research to operations.



The utilities industry's conservative risk postures, long budget cycles, and procurement timelines drive a preference for high technology readiness and production-ready capabilities, slowing adoption of emerging products.

Private Sector Engagement: Lessons Learned

What's working:

- Open data, open science
- Reliability, continuity, and coverage
- NASA's work overcoming hard, technical challenges to data use
- Industry wants public sector to use EO to reduce vulnerability
- Workflows worth >\$100Ms are being built on this data

Challenges/Needs:

- Data too hard to find, use, and access
- Industry wants relevant, verified use-cases and validated datasets
- Latency, AI-ready datasets, and reducing barrier to use
- New datasets are needed
- Big awareness gap, only ~20% of NASA offerings known at recent event

NASA is building a sustainable and robust Private Sector Engagement engine to address unmet needs



Awareness building

- Industry-focused web portal
- Embedded presence in industry forums
- Sector roundtables + working groups
- Targeted executive conversations
- Sector-specific use-case catalog



Capability advancement

- Integrated Products
- Last Mile translation / solutions
- Technology and data transfer pathways



Capacity building for broader adoption

- Trainings (in-person and virtual)
- Tutorials (how-to and use-case focused)
- Webinars (sector-focused learning series)



Co-develop and collaborate

- Formal partnerships
- Matchmaking initiatives
- Competed awards to catalyze innovation
- Pilot projects/testbed with anchor partners
- Pre-competitive industry collaboration (e.g., NSF-IUCRC Industry Advisory Boards)

A satellite view of Earth from space, showing a vast expanse of blue oceans and white, swirling clouds. The perspective is from a high altitude, looking down at the planet's surface. The text is overlaid on the upper portion of the image.

Growing the Space-Enabled Economy: Commercial Satellite Data

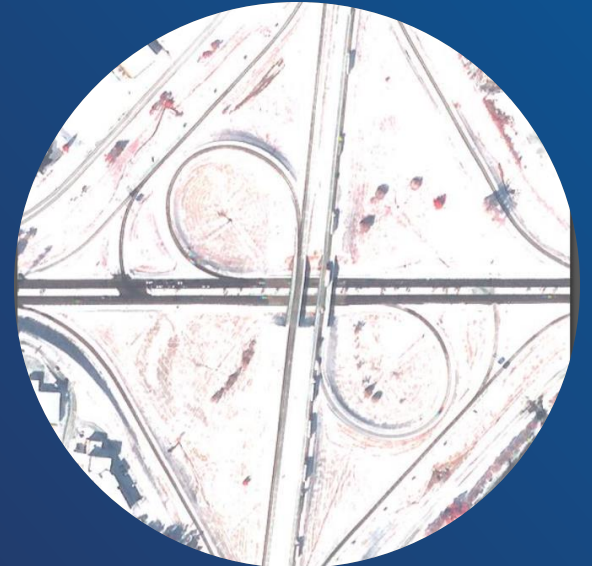
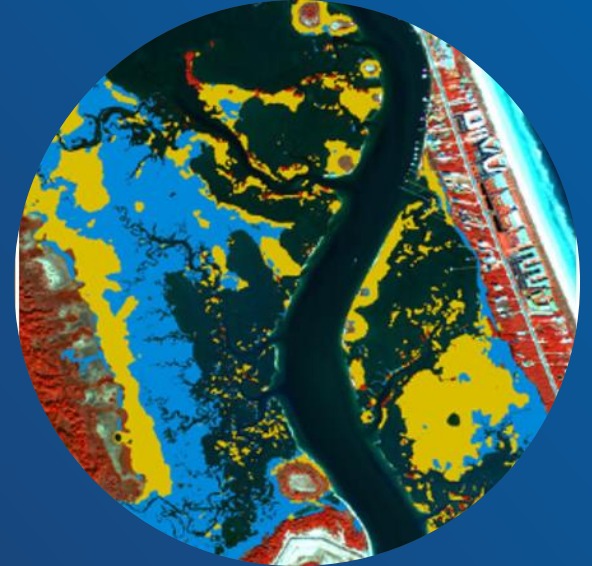
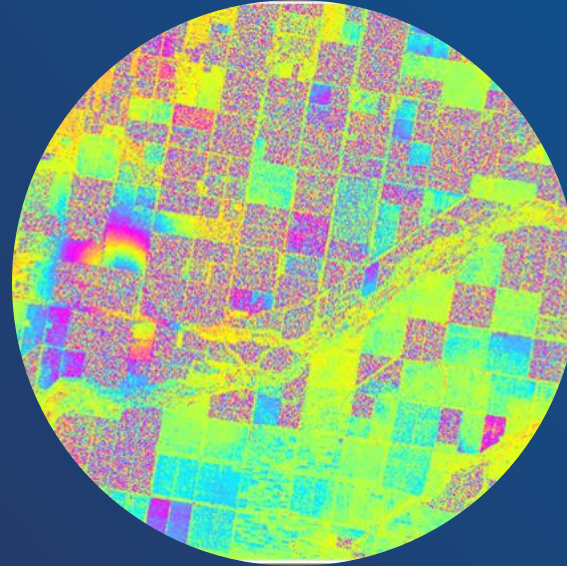
Key message: In addition to being a consumer, NASA and the science & applications communities have important roles in developing this aspect of the economy.

Why NASA Buys Commercial Data

NASA's missions provide the trusted, open foundation for understanding Earth.

Commercial satellite data extends that foundation by adding:

- Greater resolution
- Higher-frequency revisits
- Taskable observations
- Flexible, real-time, niche data services
- Unique and innovative instruments
- Cost-effective options to meet specific user needs





NASA CSDA Vendors

Multispectral



BLACK|SKY



SATELLOGIC

AIRBUS

CH₄ Emissions



GHGSAT

GNSS-R & RO

PLANETiQ

spire

MDA

UMBRA

ICEYE



Capella Space



TELEDYNE
BROWN ENGINEERING

pixxel

Hyperspectral

Precipitation Radar



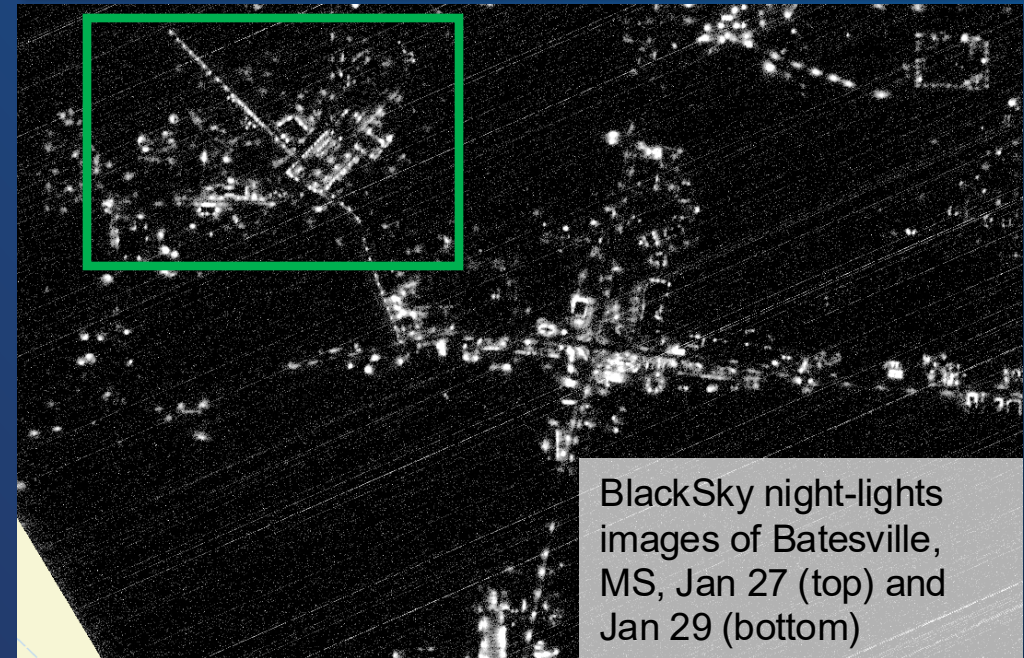
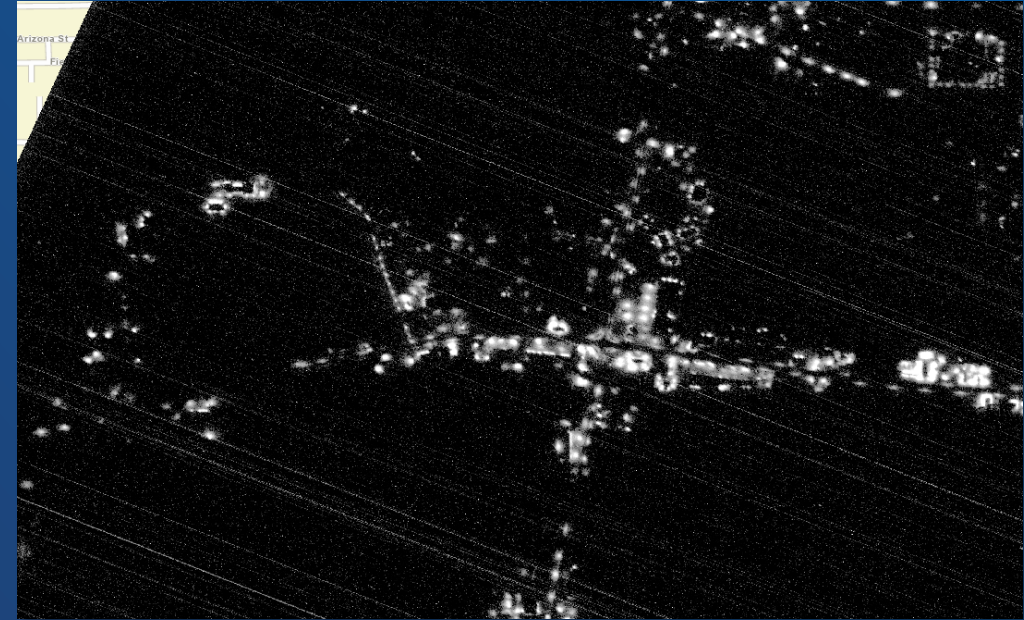
tomorrow.io

DEMs

Vantor
AIRBUS

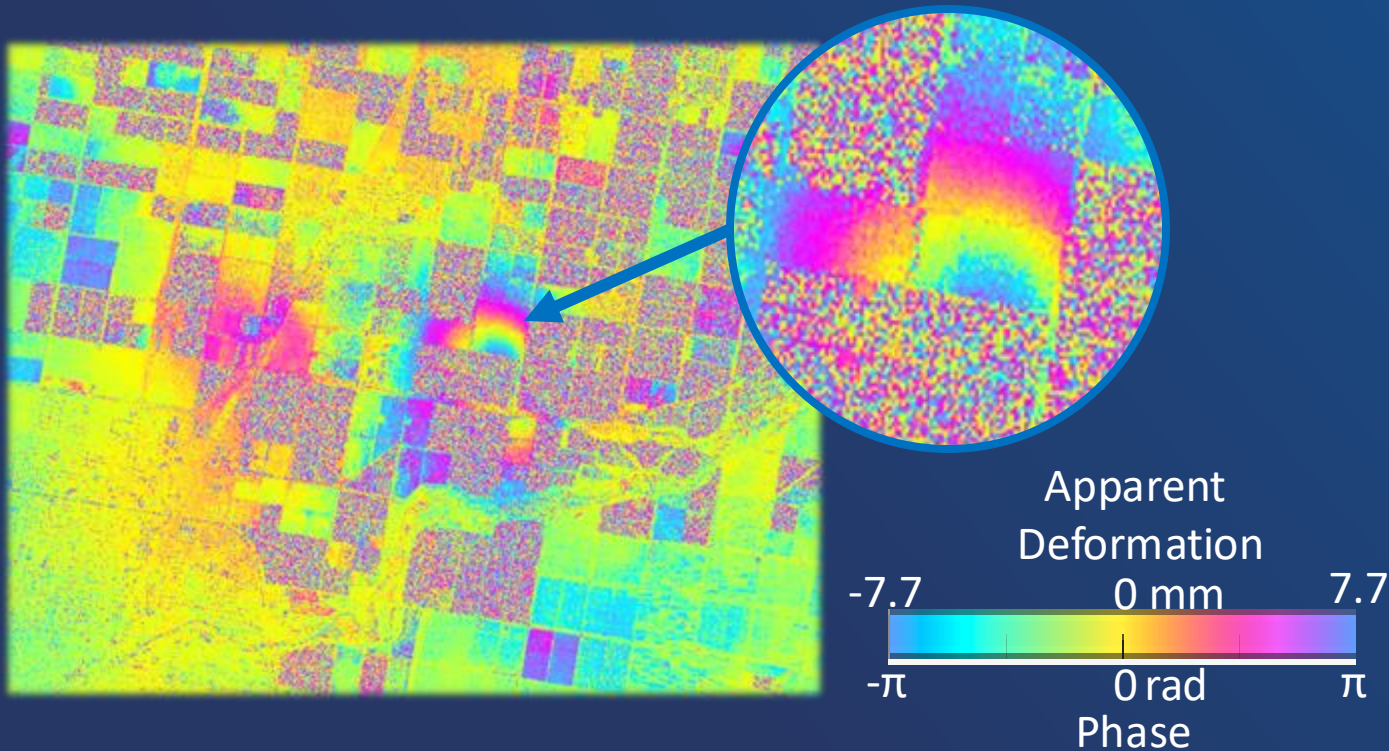
During Disaster Response

Even as snow fell, NASA DRCS activated, supporting requests from four States, FEMA, and CMS, using CSDA data to inform critical response needs.



BlackSky night-lights
images of Batesville,
MS, Jan 27 (top) and
Jan 29 (bottom)

Synthetic Aperture Radar Data From Airbus U.S. Helps Monitoring



Detection of Surface Elevation Changes and Soil Moisture

- 22-day interferogram over farmland.
- Subsiding/rising surface from extraction/injection of fluid into geothermal reservoirs.
- Soil moisture changes within agricultural fields.
- Useful in monitoring drought and agricultural practices, as well as identifying areas of subsidence that can damage infrastructure.

Research led by Rowena Lohman and Matt Pritchard from Cornell University
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But there are many more vendors out there.

Attendees at Commercial Satellite Data Acquisition (CSDA) Program Workshop: March 3-4, 2026



Commercial Satellite Data and the Private Sector

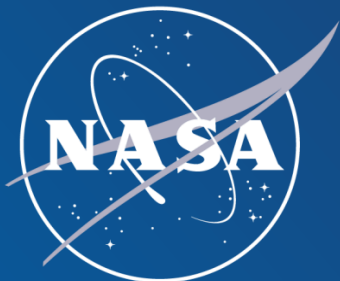
Outcomes from NASA Earth Science and Industry Summit (Feb 2, 2026)

- Commercial Satellite Data Providers offer incredible capabilities that are useful to business.
- Continuity is a business requirement and providers are responding.
- Alignment with public reference missions is a trust signal.
- Collaboration between commercial providers and NASA is wanted.
- Use-case development is critical and limits uptake...



Commercial Data Panel NASA Earth Science Industry Summit

- **Some commercial data providers estimate that private sector is <15% of their sales, restricting growth.**
- Lack of trust and verified use-cases are oft-cited as reasons commercial data is not used.
- Similar concerns are raised about NASA's and other open EO datasets and products.
- These concerns are compounded by an awareness gap; just ~20% of NASA offerings were known to attendees at a recent industry event.



**NASA and
other open EO**



**Commercial Satellite
Data Providers**

A satellite image of a coastal region, showing a mix of green land and blue water. The land is on the left, with a mix of dark green and brownish-green patches. The water is on the right, with a mix of dark blue and lighter green patches. The image is tilted diagonally, with the land on the left and the water on the right.

Key message: Increasing use of NASA or commercial EO data will increase use of all EO data, helping us *thrive on our changing planet.*

- Both private and public sectors want verified use-cases and trusted products to expand their use of EO.
- NASA and its **science and applications communities** have tremendous capability to:
 - Develop use-cases
 - Calibrate and validate products and tools
 - Connect commercial and open data
 - Provide training
 - Serve as a neutral convener

Much work is already baked into our programs and solicitations, but **we are our expanding opportunities to do so...**

New Opportunities for the Community

INNOVATE (ROSES 2025)

An open solicitation to solve private sector challenges

- Solve complex challenges by codeveloping solutions with users
- Accelerate transition from research to operations
- De-risk, validate, and integrate into real-world workflows



Accelerating Earth Solutions (ROSES 2025, release TBD)

Commercial Data Cal/Val (ROSES 2026)

Energy and Infrastructure (ROSES 2026)

Private Sector Engagement Office (based at GSFC)

A new office to serve as doorway to NASA and sustain engagement

- Connecting private sector to NASA tools and products
- Collecting needs and articulating to relevant NASA groups
- Will be looking to connect SMEs to private sector needs



We are a part of an ecosystem



“

Science changes the
world and we go farther
when we go together.

NASA ADMINISTRATOR
JARED ISAACMAN





NASA Earth

Your Home.

Our Mission.

science.nasa.gov/earth