Sources Sought Notice (SSN) / Request For Information (RFI)

National Oceanic and Atmospheric Administration (NOAA)

National Environmental Satellite, Data, and Information Service (NESDIS)

Data, Infrastructure, Science, C2, and Operations Services (DISCOS)

SUMMARY

This is a combined Sources Sought Notice (SSN) and Request for Information (RFI). The National Environmental Satellite, Data, and Information Service (NESDIS) under the National Oceanic and Atmospheric Administration (NOAA) seeks information from interested parties on capabilities to provide operations, maintenance, sustainment, and new development for NOAA's Data, Infrastructure, Science, C2, and Operations Services (DISCOS). These include both on-premises and cloud-based infrastructure supporting NOAA's on-orbit satellite mission operations, science data processing, and mission support systems. NOAA also requests information on approaches to optimize NOAA's enterprise data operations architecture.

This SSN/RFI consists of two parts. Part One (SSN) requests a statement of capabilities for the identified functional areas to conduct market research for a potential future NESDIS Multi-Award, Indefinite Delivery/Indefinite Quantity (MA-IDIQ) contract vehicle to provide DISCOS. Part Two (RFI) requests additional information from vendors interested in providing enterprise data operations services to NESDIS. Additional details are provided in the submission instructions section of this notice.

DISCLAIMER AND IMPORTANT NOTES

This SSN/RFI is issued solely for information and planning purposes. It does not constitute a Request for Proposal (RFP) or a commitment for an RFP in the future. The Government does not intend to award a contract on the basis of the SSN/RFI or otherwise pay for the information requested or administrative cost incurred in response to this announcement. Responses will be treated as market research and information only and not as a proposal. No basis for claim against the Government shall arise as a result from a response to this SSN/RFI or Government use of any information provided.

NOAA is not at this time seeking proposals and will not accept unsolicited proposals. The information is requested for planning purposes only in accordance with Revolutionary Federal Acquisition Regulation (FAR) Overhaul (RFO) 15.101(c), entitled "Requests for Information." Only material suitable for internal government distribution shall be submitted. Any proprietary information should be marked accordingly. The U.S. Government will protect all proprietary information received from respondents, and distribution of any material will be based on a strict need-to-know basis. No classified, confidential, or sensitive information should be included in your response to this SSN/RFI. The Government reserves the right to use any information provided by respondents for any purpose deemed necessary and legally appropriate, including using technical information provided by respondents in any resultant solicitation. However,

note that the submissions may be subject to review by experts outside of the civil service such as NOAA support services contractors, each of whom will sign non-disclosure agreements as required. This exchange of information must be consistent with procurement integrity requirements (See RFO 3.104).

Not responding to this SSN/RFI does not preclude participation in any future solicitation.

The information provided in this SSN/RFI is subject to change and does not bind the Government to any future obligations. All submissions become the property of the Government and will not be returned.

DISCOS BACKGROUND

Currently, NESDIS operates a diverse set of services that provide satellite operations, data processing and delivery, and enterprise ground operations for the Geostationary (GEO) Operational Environmental Satellites – R (GOES-R) Series, Low Earth Orbiting (LEO) Joint Polar Satellite System (JPSS), and Space Weather Observations (SWO) satellite observation systems, along with NESDIS' Office of Common Services (OCS), Office of Satellite and Product Operations (OSPO), National Centers for Environmental Information (NCEI), and the Center for Satellite Applications and Research (STAR). Data from these observational systems, along with other partner data sources, is received, processed, disseminated, and archived through a set of mission unique and enterprise systems and services, both cloud-based and on-premises.

A set of mission support services enables the DISCOS, including administrative Information Technology (IT) systems and services that provide NESDIS with the resources to conduct day-to-day business operations and execute process workflows and tools, and maintain NESDIS's cybersecurity posture across mission and mission support systems and services. While not part of the NGE operational systems and services, these support services are critical to executing NESDIS's core functions.

Previously, NESDIS acquired systems and services in distinct contracts that aligned with office requirements. As NESDIS transitions to a comprehensive enterprise set of common services, these requirements will be addressed through a NESDIS-wide multi-award indefinite delivery/indefinite quantity (MA-IDIQ) set of contracts and task orders that enable rapid delivery of required services and products while retaining competition from a qualified pool of vendors in a set of defined functional areas.

FUNCTIONAL AREAS

For the purposes of this SSN/RFI, NOAA has identified the following functional areas:

1. **Architecture and Systems Engineering (A&SE):** This functional area encompasses the definition, architectural design, and functional decomposition of the NESDIS Ground Enterprise (NGE) and its constituent systems and services. A&SE provides the cross-cutting framework required to design, develop, and integrate enterprise services, interfaces, and systems, ensuring strict traceability to and alignment with NESDIS requirements. Key areas include:

a. **Enterprise Architecture & Decomposition:** Establishing and maintaining the NGE target architecture, interface controls, and system-of-systems engineering baselines.

b. **Requirements Engineering:** Decomposing high-level NESDIS mission requirements into verifiable system- and service-level specifications.

c. **Capability Integration:** Evaluating, architecting, and incorporating new mission capabilities into the NGE ecosystem in response to evolving operational and strategic requirements.

2. **Cybersecurity:** This functional area encompasses cybersecurity governance, risk management, policy enforcement, security engineering and operations, and regulatory compliance for NESDIS information technology systems. Activities include establishing enterprise cybersecurity policies, executing annual Assessment and Authorization (A&A) cycles, incident response, managing vulnerability remediation and Plan of Action and Milestones (POA&M) lifecycles, and executing annual property inventory.
   To maintain strict separation of duties, task orders for this functional area that focus on cybersecurity compliance and oversight will be distinct from those that focus on cybersecurity architecture, engineering, or operations. Direct system administration, technical control implementation, and operational remediation tasks are expressly excluded from this scope and are managed under the Enterprise Infrastructure functional area.

3. **Command and Control (C2):** Command and control systems are responsible for the operations of NOAA's satellite systems. This functional area may include pre-launch activities; launch, early orbit and activation (LEO&A); on-orbit routine and contingency operations; and satellite decommissioning and disposal. Functions may include telemetry receipt; satellite commanding; mission planning; long-term trending; and orbit determination/satellite navigation. Satellite ground station (antenna) development, operations, maintenance, and sustainment are <u>not</u> considered a part of the C2 functional area for the purposes of this SSN.

   The C2 functional area includes four categories of support:

   a. ***Development*** - The development of new C2 capabilities in support of NOAA-owned satellite ground systems.

   b. ***Maintenance & Sustainment*** - Maintenance and sustainment of existing NOAA-owned and NOAA-operated C2 capabilities. These may include mission- or application-specific C2 software, both custom developed and commercial off the shelf (COTS).

   c. ***C2 Operations*** - Conducting satellite operations using NOAA-owned systems. C2 Operations may include routine activities, special operations such as launch or decommissioning, and anomaly resolution.

   d. ***Commercial Services*** - The use of commercial mission operations services to augment or replace current and future satellite constellations. Opportunities to provide such services may be included within the scope of this functional area.

4. **Data Operations:** Data operations systems and services ingest science data from observing systems, generate diverse meteorological data products, and make these products available to forecasters, domestic and international partners, and the general public via data repositories and distribution systems. These systems may reside on-premises at NOAA facilities and within cloud-based platforms hosted on Hyperscaler Cloud Service Providers (CSP), such as Amazon Web Services (AWS). The scope of this functional area may also encompass broadcast or other payload services such as GEONETCast and GOES Rebroadcast (GRB).

   The Data Operations functional area includes four categories of support:

   a. ***Development*** - Designing and implementing new data operations capabilities, development processes, processing frameworks, ingest and distribution pipelines, and modern data retention and stewardship methodologies.

   b. ***Maintenance & Sustainment*** - Maintenance and sustainment of existing NOAA-owned and operated data processing systems, including the NESDIS Common Cloud Framework (NCCF) and mission-unique data processing applications such as the LEO and GEO Cloud Compute Subsystems (LCCS and GCCS).

   c. ***Data Operations*** - Executing day-to-day operations for NESDIS data processing systems to ensure the seamless ingest, production, dissemination, and long-term archiving of NESDIS and partner data.

   d. ***Commercial Services*** - Utilizing commercial service providers for distinct, mission-unique product generation. Unlike NOAA-operated infrastructure, these commercial capabilities are managed independently and deliver products to NESDIS under strict Service Level Agreements (SLAs). Future opportunities to deliver these commercial services may fall within the scope of this functional area.

5. **Enterprise Infrastructure:** The Enterprise Infrastructure functional area provides the underlying IT systems and services necessary to execute NESDIS's C2 and Data Operations efforts. These may include both on-premises and cloud-based systems and services.

   The Enterprise Infrastructure functional area includes four categories of support:

   a. ***Development*** - The development of infrastructure services, including both on-premises and cloud-based IT functions such as ground system operations, status and accounting, security services, and networking. This may also include the development of broader platform solutions intended to host mission unique or enterprise application software and services.

   b. ***Maintenance & Sustainment*** - The maintenance and sustainment of NESDIS IT infrastructure and services. This may include system administration, account management, networking, security patching, property management support, and cloud configuration. It may also include the optimization of on-premises and cloud-based services to reduce operational costs.

i. *HW/SW Acquisition* - Currently NESDIS requires a wide variety of commercial hardware and software to execute its mission requirements. Procurement of this material has been accomplished via a variety of enterprise and mission-unique solutions. NESDIS expects that consolidation of such procurements in support of system development, sustainment, and refresh may occur under this functional area in future system sustainment activities.

c. ***Enterprise Operations*** - The operation of NESDIS' IT systems, including help desk services, IT system monitoring, and ground system infrastructure operations.

d. ***Commercial Services*** - Currently NESDIS develops and configures its mission and mission support IT systems individually, with organically developed configurations and profiles established over time in response to mission unique requirements. NESDIS is considering alternative approaches to the current paradigm, in which a pre-configured framework or platform would be delivered as a service for application development and operations. Opportunities to provide such services may be included within the scope of this functional area.

6. **Spectrum Management:** This functional area encompasses the regulatory oversight, engineering analysis, and operational protection of NOAA's Radio Frequency (RF) spectrum allocations. Key responsibilities include:

- **Regulatory Compliance & Filings:** Managing, preparing, and submitting official regulatory filings for RF spectrum utilization in compliance with domestic and international governing bodies (e.g., NTIA, FCC, ITU).
- **Technical Risk Assessments:** Conducting rigorous technical risk assessments, electromagnetic compatibility (EMC) analyses, and engineering reviews to protect mission-critical satellite and terrestrial frequencies.
- **Interference Mitigation & Tracking:** Real-time tracking, logging, analyzing, and mitigating RF interference incidents to safeguard operational continuity and minimize data degradation.

7. **Science Operations:** Science operations encompasses the scientific research, algorithm development, instrument calibration/validation, research to operations (R2O) necessary to process and exploit the data from NESDIS and partner observational platforms. This may include algorithm development and enhancement, software development, instrument validation assessment, and related support. Includes science operations to perform satellite lifecycle instrument calibration, instrument performance monitoring, anomaly resolution, intersatellite (cross) calibration, and vicarious calibration to ensure accuracy, stability and consistency of observations from satellite and other platforms/sensors as appropriate. Compares products to independent datasets to assess performance, including reliability and stability. Conducts, leverages, and facilitates field data preparation, acquisition, and processing to support validation efforts. Develops, maintains, and sustains satellite and in-situ algorithms that support NOAA's mission across the full lifecycle, including enhancement and long-term sustainment. This work spans work from L0 to L2 algorithms and more complex applications. Transitions satellite data products into operational environments for routine use across the full system lifecycle. Facilitates

interpretive environmental analysis for high-impact tactical decision support focusing on hazard management. Transforms imagery into specialized products for priority partner missions and works collaboratively to develop and deploy new solutions. Develops solutions in complex multi-mission, multi-instrument observations schemas.

8. **Spacecraft and Instrument Reachback:** Following handover of an operational mission, NESDIS receives specialized reachback support from spacecraft and instrument developers for the life of its operational missions. These vendors provide subject matter expertise, help resolve satellite and instrument anomalies, and support special events such as satellite decommissioning. They also provide expertise in spacecraft simulator and instrument emulator operations, maintenance, and sustainment. NESDIS expects that over time such reachback support services will be migrated to this functional area.

PART ONE: SSN INSTRUCTIONS

A. Google Interest Form Submission

Sources intending to respond to this SSN must submit a response to the Google Interest Form by August 14, 2026 at 1:00 PM Eastern Time (ET). The Google Form can be accessed via link: https://forms.gle/Ky7M7GfKuktLBoRo8

The Government is conducting market research on potential technical solutions to provide services across the functional areas identified above. Sources intending to respond to this SSN should thoroughly review the aforementioned and submit the following information via the Google Interest Form:

- Respondent's name, address, point of contact, phone number and email address.
- If a business, the firm's Unique Entity Identifier (UEI) as provided under SAM.gov and CAGE code.
- If a business, the firm's SBA-certified small business concern status or other socioeconomic status. Specifically identify if your firm is HUBZone-certified, Service Disabled Veteran Owned, Woman Owned, or in the SBA's 8(a) program. If the Vendor is not a small business, please state the type of business or institution.
    - Note: The anticipated NAICS Code for this requirement is 541330 – Engineering Services, with a size standard of $15 million.
    - Please identify any alternative PSCs and NAICS codes this work may fall under based on the services to be performed.
- In order to support a Government request for proposal, what additional technical information would industry benefit from in satisfying assumptions?
- What evaluation factors or criteria would you recommend the Government consider when assessing vendor responses to a future solicitation for these requirements? What factors would most effectively distinguish between competing offers and support of best value determination?

B. Statement of Capabilities

In addition, sources are requested to provide a Statement of Capabilities for Government review. Responses are limited to a total of 6 pages, inclusive of cover pages, preface material, and appendices.

Responses shall be submitted on 8 ½ x 11 inch paper with a minimum font of 12 point Times New Roman. This should address:

- Capability and/or experience in providing the types of services associated with the selected functional areas for NOAA, other Government agencies, and commercial or non-Government entities.
- Any potential recommendations for Government acquisition approaches, including but not limited to
    - The use of commercial contracting practices under RFO part 12.
    - Any considerations associated with the use of Firm Fixed Price contract type for task orders under this acquisition as prescribed in Executive Order 14402 "Promoting Efficiency, Accountability, and Performance in Federal Contracting."

PART TWO: DATA OPERATIONS RFI INSTRUCTIONS

A. RFI Background

NESDIS is considering issuing one or more task orders to transform its data operations services and enterprise infrastructure. This RFI solicits industry insights, frameworks, and capabilities to inform a comprehensive data modernization strategy.

To simplify sustainment and reduce lifecycle costs, NESDIS is shifting away from legacy, mission-unique ground systems. The target architecture must ingest, secure, and manage unprecedented data volumes, supporting a current archive of over 50 PB that expands by at least 5 PB annually. Meeting this demand requires modern architectures and emerging technologies - such as cloud-native automation, advanced analytics, and scalable discovery frameworks - to ensure rapid, secure access to environmental data assets.

The Government is seeking information on system development and integration capabilities to mature existing data operations into robust, enterprise-class common services for NESDIS and its partner missions. This market research will help the Government develop an engineering roadmap, analyze cost trade-offs, and identify transition risks from legacy systems to an operational enterprise baseline. The Government does not intend to prescribe or preclude any specific technical solution.

B. RFI Content Requirements

Part Two RFI responses are limited to 30 pages, inclusive of cover pages, preface material, and appendices. Responses shall be submitted on 8 ½ x 11 inch paper with a minimum font of 12 point Times New Roman. Responses shall be submitted in a separate document from the SSN described in Part One above.

NESDIS is seeking actionable information from industry to help:

- Formulate an **engineering and operational roadmap** that transitions current baseline services into modern and contemporary enterprise data operations.
- Identify innovative **business and commercial frameworks** that align contractor incentives with NOAA mission success.
- Uncover real-world **trade-off points** regarding risk, cost, and implementation timelines to choose the optimal path forward.

1. Acquisition and Operational Pathway Options

This RFI requests that vendors provide recommendations on models such as Data-Operations-as-a-Service (DOaaS), managed cloud services, or hybrid multi-vendor arrangements. Additionally, NESDIS specifically requests industry recommendations regarding an operational business model that discerns and informs NOAA's analysis of the efficiencies and effectiveness associated with Government-Owned, Contractor-Operated (GOCO) approaches versus Contractor-Owned, Contractor-Operated (COCO) capabilities.

NESDIS is looking for innovative approaches that support multiple missions and constellations, as well as managing a consolidated enterprise. Respondents should detail how their technical capabilities address the following target areas:

Enterprise & Multi-Constellation Management

- **Consolidated Ingest & Processing:** Unified approaches to handle varied data formats, ingestion methods (e.g. - cloud-to-cloud, third-party cloud, streaming), and data cadences across GEO, LEO, SWO, and the NESDIS science portfolios.
- **Cross-Mission Portability:** Ability to onboard new NOAA, US Government, US non-Government, and international partner missions over time with minimal architectural disruption, cost, schedule, or security impacts.

Software and Data Management

- **Massive Data Stewardship:** Methods for managing and processing vast environmental observation data pools (scaling past 50 PB) without performance degradation. Approaches to address data quality, cost effective preservation strategies, and innovative data discovery, exploitation, and dissemination strategies - including use of artificial intelligence techniques.
- **Modern Software Delivery:** Modern software delivery frameworks (e.g. DevSecOps and CI/CD Pipelines) that allow secure, continuous deployment of science software applications and algorithm updates with zero downtime to 24x7 mission operations.

Contemporary Access, Discovery, and Evolution

- **FAIR Principles:** Architectural approaches that ensure NOAA data public access strictly conforms to Findable, Accessible, Interoperable, and Reusable (FAIR) data standards.
- **Innovative Discovery Features:** AI-ready data facilitating the utilization of contemporary search, discovery, metadata tagging, and user access layers (e.g., AI-driven data catalogs, low-latency API access) to maximize data utility for academic, federal, and commercial users.

The Government has outlined four potential acquisition and operational pathway options. Respondents may address any or all options, or propose alternative hybrid models advantageous to the Government. Submissions must indicate a specific recommendation on the most viable option(s).

Option 1 - Fully Commercial Solution: The vendor delivers and maintains a fully managed, end-to-end commercial service governed strictly by Service Level Agreements (SLAs). The vendor holds sole operational responsibility, requiring zero Government infrastructure or operational footprint.

Option 2 - Managed Commercial Solution: The vendor delivers and manages the end-to-end solution (infrastructure, platform, and/or functional services), but the Government retains ownership of the underlying architecture and codebase to mitigate vendor lock-in. Government and third-party personnel develop services natively within this vendor-managed environment.

Option 3 - Collaborative Co-Development Services: The vendor provides technical talent to work within a unified Government-led team. Vendor and Government teams collaboratively design, code-develop, and operate a Government-owned and managed data operations stack.

Option 4 - Vendor Proposed Alternative: The vendor proposes alternative conceptual frameworks, hybrid structures, or operational variations that optimize cost, schedule, or performance for the Government.

2. Desired Characteristics

RFI responses should describe how the proposed architecture, managed services, and operational models address the following criteria:

Scalability & Mission Adaptability: Describe how the framework dynamically onboards, processes, and distributes new data sources and generated science products without disrupting ongoing 24/7 operations. Explicitly address capabilities to accomodate:

- Diverse data sources (commercial, NOAA, Government partner, international partner) while maintaining satellite data standards;
- Varied data formats, cadences (streaming, file based, continuous, periodic), and ingest methods (cloud-to-cloud, third-party clouds, external servers, ground station cloud ingest);
- DevSecOps and agile methodologies to secure deployment deployments and reduce operational impacts;
- Unified environments supporting science development, testing, validation, operational data processing, archiving, and stewardship.

Intellectual Property (IP) Approaches: Detail your approach to software baseline ownership, proprietary commercial IP, and data rights (unlimited or restricted). Explain how NOAA can maintain full ownership, governance, and unrestricted access to its environmental data assets

while using commercial components. Address specific strategies to mitigate vendor or Cloud Service Provider (CSP) lock-in, ensuring migration feasibility if required.

Transition Approach: Detail the technical methodology, tools, and core assumptions needed to transition all legacy on-premises and cloud-based applications to the enterprise within 12 months of contract award. Address how migrations will minimize mission downtime via code refactoring, redevelopment, or containerization.

Pricing Structure: Assuming a 10 year lifecycle (FY28-38) under a Firm-Fixed-Price (FFP) or Firm-Fixed-Unit-Price (FFUP) approach, provide a framework that covers all development, deployment, and operational costs. Address cost trade-offs between non-recurring vs. recurring expenses, technical performance variables, and legacy consolidation vs. comprehensive re-architecting. For each operational pathway addressed in their submission, clearly identify major cost drivers, lifecycle cost trade-offs (e.g., automated development costs vs. long-term human resource savings), and opportunities for cost optimization.

Compliance Thresholds: Confirm that the proposed architecture strictly adheres to federal cybersecurity mandates, including National Institute of Standards and Technology (NIST) guidelines and Federal Information Security Modernization Act (FISMA) high/moderate baselines.

To ensure comparable market research inputs, all responses should assume the following:

- **Period of Performance:** Assume a 10-year period of performance beginning **January 1, 2028**, and ending **December 31, 2038**.
- **Cloud Infrastructure Fees:** Incorporate all forecasted underlying cloud computing infrastructure costs, storage fees, and egress charges.
- **System Onboarding Scope:** Assume a phased onboarding of all active and forecasted NESDIS cloud and on-premises data processing systems, with a targeted completion within 12 months of task order award.

SSN/RFI SUBMISSION REQUIREMENTS

A. Questions

Comments and questions regarding this SSN/RFI must be submitted electronically to Maryann.Orellana@noaa.gov AND Anthony.Eubanks@noaa.gov by August 14, 2026 at 1:00 PM Eastern Time (ET) with the email Subject Line: "SSN/RFI Questions – DISCOS". Questions received after this date may not be answered. Questions should be concise and avoid proprietary information. Respondents are advised that questions submitted and Government responses may be posted publicly on SAM.gov, although the identity of the requesting organization will be withheld.

B. Responses

Responses should be submitted via email by August 20, 2026, at 11:00 AM ET to the point of contact listed below. The subject line of the submission should start with "SSN/RFI Response - Data Operations" and attachments should be submitted in PDF format. Separate attachments should be provided for the SSN and (if applicable) RFI. Responses must include:

- Google Interest Form Submission
- Statement of Capabilities
- RFI Response, including ROM (if applicable)

Responses must be sent via electronic mail to: Maryann Orellana, Contracting Officer, Maryann.Orellana@noaa.gov AND Anthony Eubanks, Contracting Officer, Anthony.Eubanks@noaa.gov.

C. One-on-One Interest Instructions

If your organization is interested in a potential opportunity to provide additional information via virtual one-on-one meetings in the September/October 2026 timeframe, please indicate your intent in your Google Form submission response and provide your availability for a one-hour meeting. The Government intends to review the provided responses and reach out to respondents, as needed, to schedule one-on-one meetings.

Please note that the Government may determine that the responses to the SSN/RFI are sufficient for the purpose of market research and one-on-one meetings are not needed. The Government retains the right to not hold such interchange meetings or to meet with only some of the respondents in the process.