

Participating Agencies



U.S. Department of Commerce



National Oceanic and
Atmospheric Administration



National Weather Service



Federal Aviation Administration



Joint Program Development Office

The NOAA NextGen Weather
Program Office

1325 East West Highway
Silver Spring, MD 21910-3282

This information packet
contains your Industry Day
agenda, general data and
logistics for this event.

Industry Day RFI 20 July 2010



NOAA NextGen 4-D Weather Data Cube

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Industry Day Purpose and Goal

The National Oceanographic and Atmospheric Administration's (NOAA) National Weather Service (NWS) and the Federal Aviation Administration wish to welcome you to this Industry Day and Request for Information (RFI) event. We expect today to answer many of your questions about the Next Generation Air Transportation System (NextGen) program, as well as the subject of this RFI the NOAA NextGen 4-Dimensional (4-D) Weather Data Cube. The Federal Aviation Agency is the key partner in this effort and is also represented here today. We know your time is valuable and wish to maximize your experience. Therefore, we have assembled key speakers on this topic to provide you with concise information.

We consider the Federal Aviation Administration our customer as well as our partner, and intend to provide the best possible solution to them.

NOAA stands shoulder to shoulder with the FAA in this activity. You will hear from both agencies in this Industry Day forum. The NWS, a line office of NOAA, is leading the NOAA NextGen 4-D Weather Data Cube effort and considers the FAA to be our customer as well as our partner. We intend to provide them the best possible solution through this program, to maintain and enhance the safety and efficiency of air transportation in the United States.

The NextGen program was established by the White House and Congress to provide the means to improve air traffic management. The President, Congress and private industry are all supporting this program and participate in its implementation at many levels. The NextGen 4-D Weather Data Cube is a part of the proposed solution directed to providing a Single Authoritative Source (SAS) of accurate and timely weather data to the FAA.

The Joint Economic Development Committee in 2007 estimated that the United States experiences over \$41 Billion in lost economic benefit annually as a result of current air traffic constraints. Of all the reasons for air traffic issues, over 70% are attributed to weather related events. With the FAA estimating that air traffic will continue to grow an average 2.7% annually through 2025, the FAA and NOAA are taking action, through the Joint Project Development Office (JPDO) to address this increase. The 4-D Weather Data Cube will enable interoperable weather data services and enhance the availability of key weather information required for air traffic management.

The project presented today, the NextGen 4-D Weather Data Cube, squarely addresses the largest contributing issue to air traffic management concerns, and provides tools to assist the FAA in managing the growth of air traffic in the United States.

Agenda and Schedule

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|------|--|
| 0800 | Greetings, Introductions and Overview of Events |
| 0815 | Speaker - Dr. Jack Hayes, Director, National Weather Service |
| 0845 | Speaker - Mr. Steven Bradford, Chief Scientist, Architecture and NextGen Development, FAA |
| 0915 | Speaker—Mr. Donald Berchoff, Director, NWS Office of Science and Technology |
| 0945 | Speaker - Joint Presentation with NOAA's Mr. Mark B. Miller with FAA's Mr. Thomas E. Ryan and Mr. Vaughn Yates |
| 1015 | 30 Minute Break |
| 1045 | Speaker— Mr. Mark B. Miller, Program Manager, NOAA NextGen Weather |
| 1115 | Overview of NOAA NextGen 4-D Data Cube Procurement Process and Requirements |
| 1145 | General Questions and Answers |
| 1200 | Breakout into One-on-One Interviews for Registered Companies |

Schedule for 'One-on-One' session participants to be distributed separately.

Industry Announcement and Overview

Sources Sought and Request for Information (RFI), for the development and delivery of a full systems solution for the National Oceanic and Atmospheric Administration (NOAA) for the Next Generation Air Transportation System (NextGen) Weather Information Database, herein referred to as the 4-D Weather Data Cube. This is a collaborative effort among NWS, FAA, NASA, DHS and DoD. The FAA will participate with NWS on Industry Day and provide FAA planning information. The perspective contractor will be solely responsible for, but not limited to, all hardware, software, and systems development including, but not limited to, training, documentation and support in providing this solution sought. Requirements for bid will follow the specifications being developed by NOAA for its participation in the overall multiagency NextGen Program. The NAICS code is 541690. Please note, as part of this acquisition for the NextGen Program, NOAALink contract services may be required where feasible which will include but not limited to their monitoring of overall vendor efficiency using Program Portfolio Methodologies (PPM) technologies.

The successful contractor will be solely responsible for, but not limited to, all hardware, software, and systems development including, but not limited to, training, documentation and support in providing this solution sought.

This RFI is for planning purposes only and shall not be construed as a Request for Proposals (RFP), Invitation for Bid (IFB) or as an obligation on the part of the Government to acquire any services. The responder must clearly identify any information it considers sensitive or proprietary. All information received in response to this notice that is marked Proprietary will be handled accordingly. Responses will not be returned. Responders are solely responsible for all expenses associated and incurred by responding to this notice.

Industry Day event is today, July 20, 2010 starting at 8 AM in the NOAA Auditorium, 1305 East West Highway, SSMC-4 Silver Spring, MD. This program is designed to assist NOAA in identifying sources for this procurement as well as inform potential qualified vendors of this Program with the best available information intended for the forthcoming Request for Proposal (RFP). One-on-one information sessions are planned for this afternoon between key NOAA personnel and interested vendors who have properly registered. The FAA, as a partner of the 4-D Weather Data Cube, will be present to address questions. Interested contractor teams were required to register by e-mail, and forward any comments and questions on the materials noted below to the program Chief Engineer, Dr. Thomas Day by 4 pm, July 15, 2010 to participate in the one-on-one sessions as advertised in Fed-BizOps. Every team registered prior to the cutoff date was accommodated and scheduled. Pre-registration is not required to participate in the seminar portion of the Industry Day event but was encouraged and recommended. There is an information package located on the NOAA/NWS website at:

<http://www.weather.gov/nextgen/index.shtml>

Documents are located in the Industry Day tab of the website. This site contains all documents available for today's Industry Day and will include all data being made available prior to release of an RFP.

Introduction and Request for Information

Introduction

The following highlights represent the intent of the NOAA NextGen 4-D Weather Data Cube Acquisition. Some items may change as a result of the development of the Request for Proposals (RFP) based on the information received here today and from ongoing research and planning activities. Therefore, the information contained should be considered tentative but the best available data for your review and consideration.

It is the Government's intent to always provide the very best information on this program in a timely manner through this web site. Input from Industry partners were considered when developing this program and handout.

All questions concerning these points should be submitted to the moderator by the end of the formal presentations. Select questions will be answered at today's event. All responses to questions will be posted on the FedBizOps web site for general review. They will also be posted on the NOAA NextGen Website for reference.

After today, all inquiries must be channeled through NOAA Acquisitions and following FAR guidelines. Any subsequent meetings must be channeled through NOAA Acquisitions Contracts Office. Information and guidance provided will not be posted but considered in the development of the RFP.

Request for Information

The National Oceanic and Atmospheric Administration (NOAA) seeks sources for the development, installation and startup of its NextGen Weather 4-D Data Cube as part of the overall NextGen initiative. The successful vendor will be responsible, in its entirety, for developing, testing, and delivering a fully-functioning system that meets all the requirements of this project for the Initial Operating Capability (IOC) of the NOAA NextGen 4-D Weather Data Cube.

The information contained in this document is meant to provide the very best and most accurate data to any and all prospective bidding teams and solutions providers at the time of its release. This document is considered the best available information summary prior to any issuance of an RFP. Specific information on the Program can be found at <http://www.weather.gov/nextgen/index.shtml> and is updated regularly as new information becomes available. It is the Government's intent to always provide the very best information on this program in a timely manner through this web site.

Industry is encouraged to provide feedback on the documents provided, today's program and the upcoming acquisition in general. The Government seeks the very best advice from industry so the most proper details can be offered at time of RFP release. Specific information obtained today and through the subsequent questions and comments will be considered in the generation of the RFP at the discretion of the Government.

Introduction and Request for Information

The Government reserves the right to change any requirements presented, tasks needed, or scope intended prior to release of any RFP requiring a vendor response. The NextGen initiative in general is a dynamic undertaking. As a result, it is expected that there will be changes to the scope, deliverables, system stand-up locations, and/or terms prior to or at time of release of any RFP. Therefore, this document is for informational purposes only and cannot be considered a final source or be used in any legally binding manner. All solicitation documents will be issued by an authorized contracting officer of NOAA and only those documents will be considered official.

The Government reserves the right to change any requirements presented, tasks needed, or scope intended prior to release of any RFP.

The NOAA NextGen 4-D Weather Data Cube Vision

It is the intent for the successful contractor to provide a full solution to the Government. As such, it is important for the bidding partners to have a vision for the solution being outlined here today. A brief vision is provided.

This program envisions the development and delivery of a system to convey both legacy and proposed NOAA weather products and information to the FAA using direct connections. Interfaces from various NOAA locations where product generation occurs will be required along with the development of systems and solutions to accurately and timely convert and deliver weather products to the FAA for use in their systems. The vision is for the successful contractor to provide this system as a net-centric solution using a Service-Oriented Architecture (SOA) approach. Each connection will required to convert legacy data into net-capable and net-ready formats, conveying those data through a single connection to the FAA for their use.

This program will require substantial coordination with various NOAA and FAA offices as well as a thorough understanding of NextGen requirements. There is also a time line established for completion of this project in order to remain in concert with other participating agencies. Therefore, the ability to provide this solution timely as well as completely is critical to the success of this program.

Solution Must Match the Vision

The intent of the specifications and related documents is to provide the Government vision to the contractor.

Document Security

The participating bidding contractor, their subcontractors, and designees who will be directly involved in development, integration, and supporting activities will be required to sign non-disclosure and confidentiality agreements for the RFP and at time of award. Scope and limits of these documents will be determined at time of release of the RFP and will conform to all FAR requirements.

Security is required because of the sensitive nature of the data being managed. Because of this security concern, security requirements may change between release of the RFP and award of the contract. As these requirements are evolving, it cannot be said at this time the levels or types of security required by the program. We assure all bidders a clear understanding of these requirements at the time of release of the RFP.

Contract Vehicle and Requirements

It is the intent that this program be a best value contract, awarded under the Firm Fixed Price Level of Effort with Options, Section 16.202 of the FAR. Therefore, the lowest bidder may not be the selected vendor. Proposals will be weighed by best value balancing technical performance and price to find the best value for the Government. A scoring grid will be provided with the procurement document to reflect the intent of the scoring process. However, the Government may, at its discretion, amend this section at time of RFP release to the instrument of its choosing. Contractors will therefore bid fixed price and include all escalators and possible options as required in Section 16.202 of the FAR.

Solution Must Match the Vision

The Government will be providing specifications and documents for review including a full RFP to fulfill the FAR and OMB requirements. The intent of the specifications and related documents is to provide the Government vision to the contractor concerning the expectation of the Government and the NOAA NextGen Weather Program within the parameters spelled out by the Department of Commerce partners and governance. It is the intent that the contractor will provide solutions applicable to the vision rather than a checklist of specifications to accomplish a task. Therefore, one of the rating factors will be how the contractor addresses the Government vision within the framework of the procurement and its governance.

Location of Documents

The successful Contractor will become intimately familiar with the requirements as set forth in the information section of the NOAA NextGen 4-D Weather Data Cube containing all current data to the very best ability of the Government at:

<http://www.weather.gov/nextgen/index.shtml>

They will also become intimately familiar with the guidance as published by the Joint Planning and Development Office (JPDO) as found on <http://www.jpdo.gov/> as available for general distribution.

Pricing and Scope

Contractors are encouraged to provide alternative solutions that meet project requirements and provide added value to the Government by reducing costs (one time costs and/or recurring costs) or increasing efficiency.

Pricing

It is anticipated that the successful Contractor will price the task as a Firm Fixed Price Level of Effort with Options, bid per 16.202 FAR as part of the price evaluation. The Contractor is free and encouraged to propose alternative scope to their solution if the proposed solution reduces costs and/or increases efficiency of the overall package to the Government while meeting all other requirements. The Contractor will be solely responsible for the price justification of any alternative solution and shall communicate any such alternative programs to the NextGen Program Management review panel. Contractors are encouraged to provide alternative solutions that meet project requirements and provide added value to the Government by reducing costs (one time costs and/or recurring costs) or increasing efficiency. The Government intends to procure the most cost-effective and technically-savvy solution that addresses its needs and the overall requirements of the NextGen Program as outlined in an RFP package including any referenced documentation.

Contract Scope

The scope of this program is to provide NOAA / NWS with a complete solution for the IOC of the 4-D Weather Data Cube. The IOC is envisioned to be a fully operational system, available to connect the full range of data providers and data consumers that will be specified, and scalable (Net-Centric) to accommodate future as well as current data providers and consumers in the forthcoming RFP that will eventually be part of the Cube. These additional capabilities may be part of a separate follow-on effort to implement the 4-D Weather Data Cube Final Operating Capability (FOC). IOC is anticipated to be complete and operational by the fourth quarter of Fiscal Year 2013. FOC is anticipated several years later. The successful contractor is responsible for the IOC portion.

The successful Contractor will be required to perform the majority of work at one or more Contractor provided locations, which will be considered “off-site” from Government facilities. The Government highly desires that most if not all off-site work be performed within a 50 mile radius of Silver Spring, MD. The Government also desires for the Contractor to provide a work area for the NextGen Program Management Team at the primary location of off-site work located within this radius not to exceed two work stations. This is so the NextGen Program Management or their designees may reasonably and unobtrusively inspect and verify the work being undertaken at their discretion, provide technical guidance or make arrangements for the work to continue as unobstructed as possible. The NextGen Program Management Team will only be offering technical clarification and/or problem resolution within the bounds of the contract and intends not to interfere with the day-to-day program operations and development. Exception will be made if there is/are areas the Government believes fall(s) out of contract parameters, appears negligent, and/or appears to be not compliant with current Government or other applicable regulations.

Full System Deliverable

Full System Deliverable

The successful Contractor will be required to fully develop and deploy the system proposed based on the vision as provided by the governing documents as stated. This includes all customers and customer requirements not only as they currently are, but as intended under net-centric growth of the proposed solution. It is also necessary for the Contractor to fully understand all products that NWS currently provides and intends to provide through the 4-D Weather Data Cube. Although a listing of these data will be included in the RFP package, it is incumbent on the Contractor to develop a good working knowledge and understanding of the current and intended use for analysis regarding data formats, transport protocols, associated conversions, and product frequencies and data volumes including network loads and other operational characteristics. From this analysis, the Contractor will be required to provide all necessary development and related support including, but not limited to, hardware systems, software and software development, integration services, testing, program management services, documentation, training, licensing and transfer of all related deliverables from the Contractor's facilities to Government facilities to be identified in the RFP. This includes standing up the entire system for final transition to the Government as a deliverable package so it is fully functional.

The successful Contractor must provide a fully integrated solution for the NextGen 4 D Weather Cube. Proprietary solutions are prohibited unless they show significant economic value.

The successful Contractor will be required to procure and develop a hardware solution for the software noted in the previous section. All hardware must be fully compatible with the software solution proposed and developed, be net-centric in its design, and capable of being fully integrated with the NOAA NWS terrestrial communications backbone. Hardware must be fully licensed from the manufacturer where applicable. Any manufacturer's hardware warranties must be transferable to the Government at time of system acceptance.

The successful Contractor must provide a fully integrated solution for the NOAA NextGen 4-D Weather Data Cube to produce a fully functioning system both in their factory test environment and at the Government intended locations. The system must be net-centric in design, assembly, and delivery built on an SOA so it can grow and adapt to anticipated changes in technology, user communities, and user requirements. The delivered system must be fully compatible with any guidelines set forth by the JPDO as well as the RFP document requirements.

Use of Proprietary Software Discouraged

The successful contractor will be expected to use open source software solutions or provide to the Government the proper licenses as required. The use of any proprietary solution or software is discouraged, and open source solutions are encouraged. Any proposal that points to or provides a proprietary solution that does not have significant cost benefit to the Government, or does not lead to an open source interface preventing net-centric growth will not be accepted.

Net-Centric and Fully Integrated

Demonstration Requirement

The Contractor will be required to demonstrate the entire system to the Government at the Contractor's facility for Government approval. The Contractor will then integrate the entire system in the designated Government locations identified in the RFP, including full integration with the NOAA NWS terrestrial communications backbone, for a Government Operational Test and Evaluation with subsequent Government approval. Only a fully functional and performing system as described in the bid documents and available from the NextGen website will be considered as the baseline for performance parameters.

The successful Contractor will be required to procure and develop a fully functional, net-centric and integrated systems solution using service-oriented architecture (SOA), free of defects and other errors.

Net Centric and Fully Integrated

The successful Contractor will be required to procure and develop a fully functional, net-centric and integrated systems solution using SOA, free of defects and other errors that will take the data from current and proposed systems managed and operated by the NWS, as well as NOAA in general, make it available through a common, standardized interface for collection and use by other Federal agencies as specified in the bid documents. Currently, the Government sees the largest user of NOAA data under NextGen as the FAA. It needs to be considered that there are many other users who have to be considered in the system development especially those participating in management of the National Air Space. Discovery of these users is considered part of the analysis portion discussed previously. The Contractor-developed systems will utilize the current NOAA NWS terrestrial backbone as the main data transport channel between the numerous subsystems of the Cube and out to various external demarcation points to other agencies. The software solution must be seamless, licensed, and complete to meet all requirements contained in and referenced by the RFP documentation through the proposed solution of the Contractor. This includes all licenses and/or seats required if any. Software must also be compatible with any hardware and governance requirements of the JPDO as published at time of system verification and standup. The Contractor will be required to work with various NOAA agencies to obtain the proper protocols and data formats and must abide by all local policies of participating NOAA offices. The Government will assist with and intercede on matters of policy and access to accommodate the vendor and in areas that do not affect any production or systems development.

Ongoing Efforts

The Government will make available to the successful Contractor the results of previous and ongoing development efforts by a number of research and development laboratories in the area of the 4-D Weather Data Cube. In particular, the results to be made available are anticipated to include Reference Implementations of Open Geospatial Consortium (OGC) based Web Feature Services and Web Coverage Services capabilities. These Reference Implementations will be provided for informational purposes to support Contractor development at the Contractor's discretion and will be provided without obligation or warranty.

Training and Acceptance

Training Requirements

The successful Contractor must provide full staff training including, but not limited to, operations and maintenance of all software and hardware systems, user operations for data providers and data consumers, administrative operations including, but not limited to, administering a registry / repository and security services, obtaining and renewing any licenses or permits required, and for all support functions the system will require. The Government agrees that any staff will have proper credentials to be trained and qualified to perform the necessary tasks. The Contractor will provide needed qualifications for approval by the Government for training purposes to ensure the right individuals are available with the proper skill sets. All training must be completed prior to final sign-off at Government sites.

The Government expects all vendors to propose the best and brightest talent along with novel, innovative, and efficient solutions for consideration.

Acceptance Test

The successful Contractor will be required to perform two separate acceptance tests. One will be the acceptance at the Contractor's facility (Factory Acceptance Test) and the second will be acceptance after full integration and testing at the various intended Government sites (Site Acceptance Test). The Government will make all reasonable accommodations to ensure network access to the contractor at the desired Government locations.

As part of its bid, the successful Contractor will offer the Government any maintenance agreements available and priced by level of effort to maintain the system provided. Available maintenance plans will be provided in a menu-style manner for Government selection. The Government will then determine if these services are required and will contract, at its discretion, services they believe necessary, needed or desired.

All vendors who intend to bid should be aware that NextGen is a high profile, multi-agency undertaking with this program being a contributing but critical building block to this long-term endeavor. Therefore, the Government expects all vendors to propose the best and brightest talent along with novel, innovative, and efficient solutions for consideration.

Single Point of Responsibility

All vendors who intend to be potential bidders should be aware that NOAA requires that the successful Contractor act as the single point of contact and single responsible agent for all Contractor-provided goods and services. The Contractor will be responsible and liable for all subcontractors and subcontractor-provided goods and services, as the subcontractors will be viewed as direct employees of the Contractor.

Government Ownership and Maintenance

The Government expects to receive and own any solution at the end of the contract. The Government expects that the system delivered will have the ability to

Access to Locations

It is the Government's wish to expedite this work and the Government will reasonably accommodate any and all requests.

have maintenance contracts from a variety of third party sources. A solution that locks the Government into the contractor after IOC, or appears to lock the Government into long term maintenance will not be permitted. The successful contractor may offer for the Government consideration a maintenance contract after IOC which will be considered based on a best-value evaluation to other providers of these services.

Access to Locations

All contractors who intend to be potential bidders should be aware that the Government will make all reasonable accommodations to facilitate the project, and provide for contractor needs as applicable. Information requests, access and other accommodations will be provided as expediently as possible with proper notice and authorization. It is the Government's wish to expedite this work and the Government will reasonably accommodate any and all requests so long as they can be shown to facilitate the Program.

Comments on Program and Presentation

In order for the Government to make the best possible information available to the prospective bidders, comments on today's technical presentations will be accepted until 4 PM, 20 August 2010. We look forward to industry providing the Government with their ideas, concerns and feedback so the best possible solution can be procured for this effort.

Government Participants

National Oceanic and Atmospheric Administration

Dr. John Hayes	Director National Weather Service
Mr. Donald Berchoff	Director Office of Science and Technology National Weather Service
Ms. Deirdre Jones	Director, Systems Engineering Division Office of Science and Technology National Weather Service
Mr. Mark B. Miller	Program Manager NOAA NextGen Weather Program National Weather Service
Dr. Thomas J. Day	Chief Engineer NOAA NextGen 4-D Weather Cube Program National Weather Service
Mr. Peter Pickard	Project Manager, Analysis Branch Systems Engineering Division, OST National Weather Service

Federal Aviation Administration

Mr. Steven Bradford	Chief Scientist Architecture and NextGen Programs
Mr. Thomas E. Ryan	NNEW Program Manager Aviation Weather Group
Mr. Vaughn Yates	Acquisitions Manager Weather Products Aviation Weather Services Group
Ms. Jacqueline Hill	Manager Aviation Weather Services Group
Mr. Alfred Moosakhanian	Manager, Weather Observations Aviation Weather Services Group
Mr. Benn Deans	Manager, Weather Processes Aviation Weather Services Group

Format of Questions and Comments

Speaker Questions

Verbal questions will be permitted of the speakers limited to their presentations and visions only as time permits. In this case, time is the limiting factor as the Government wishes this event to be informative and fruitful to everyone. Therefore, the questions may be limited as a result of time. No follow-up questions will be permitted unless the speakers themselves offer otherwise.

All program questions will only be accepted in writing.

Program Questions During Presentations

All program questions will only be accepted in writing. No verbal questions about the program will be taken other than during the one-on-one sessions. Select questions with the responses may be answered depending on the time allocated. The reasoning is that all questions need to be responded in full and responses made available to any inquiring party. Posting the responses appears to be the only fair method to accommodate this situation for this particular event. In the event the Government sees multiple questions with simpler phrasing, only one response will be provided for brevity.

Program Comments

Program comments will not be shared or published. They will be used, along with the questions, to develop the RFP. Any comments received will be considered for inclusion into the RFP with the final decision being left to the Government.

Question Form

Question Form

Name: _____

Company: _____

Email: _____

Questions:

Question Form

Comment Form

Comment Form

Comment Form

Name: _____

Company: _____

Email: _____

Comment:

Note Page

Note Page

