



Welcome to the Johnson Space Center Contract for Organizing Spaceflight Mission Operations and Systems (COSMOS) Industry Day

February 27, 2024
Gilruth: Destiny Conference Center
9:00 am

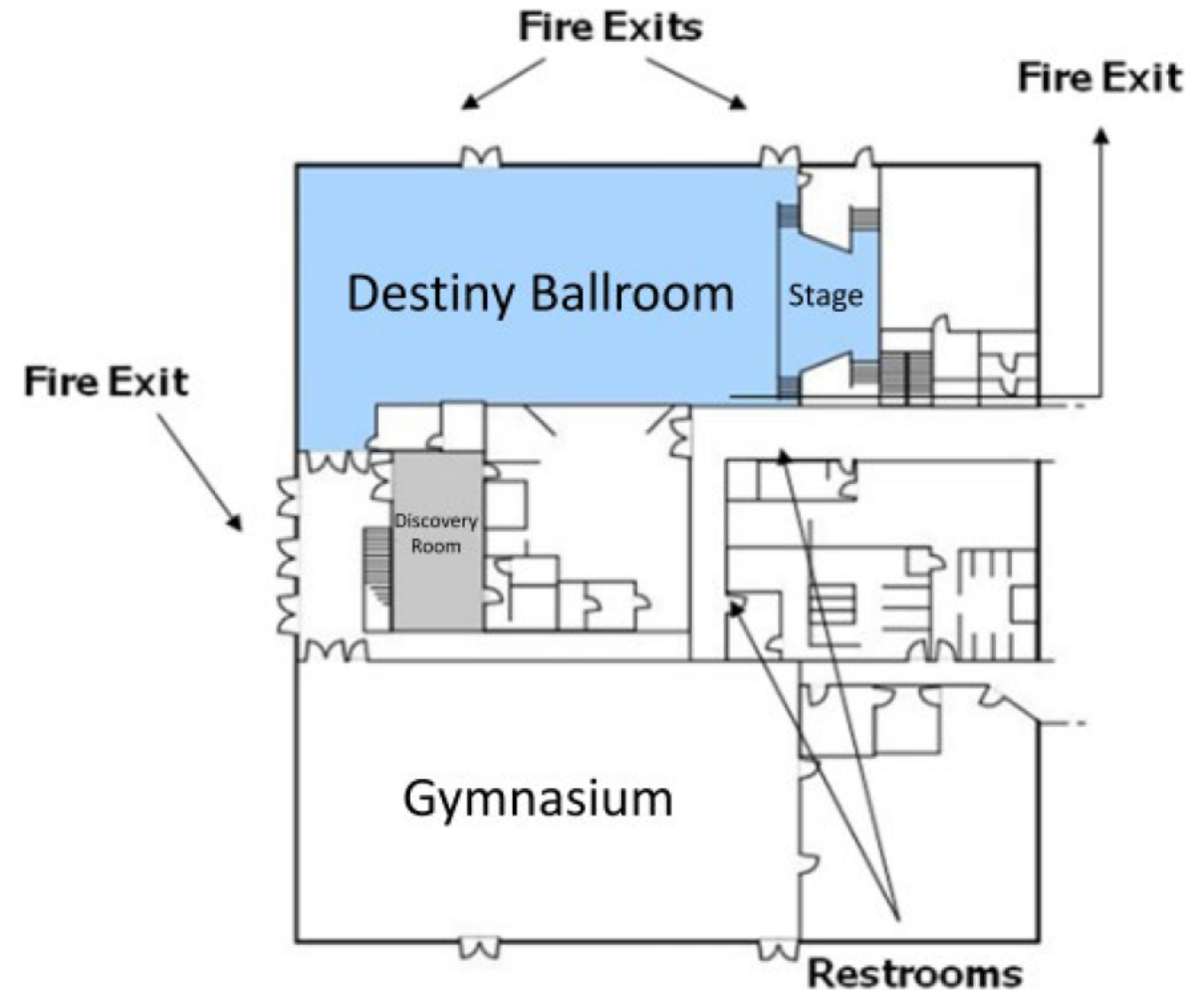
This document has been reviewed for Proprietary, SBU, and Export Control (ITAR/EAR) and has been determined to be non-sensitive.
It has been released to the public via the NASA Scientific and Technical Information (STI) Process DAA 20240001410



Safety Briefing



- Dial 281-483-3333 to report an emergency
- Restrooms can be found in the hallway outside this ballroom
- Fire exits are at the front entrance and side exit doors. In the event of a fire, please move at least 75 feet away from the building





Welcome to the COSMOS Industry Day

Andrea De Paz
Contracting Officer



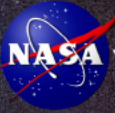
Agenda



Speaker	Subject
Andrea De Paz, Contracting Officer	Welcome to Industry Day, Introductions
Charles Bell, Office of Procurement	Welcome
Robert Watts, Small Business Specialist	Welcome
Dr. Kjell Lindgren, Deputy Director Flight Operations Directorate	Organization Vision and Objectives
Andrea De Paz, Contracting Officer	Current Contract Overview
Bob Schwank, RDT Chair	Technical Overview
Jimmy Spivey, Mission Systems Division Chief	Mission System Overview
Andrea De Paz, Contracting Officer	Procurement Schedule, Question/Answer, and Tour Logistics



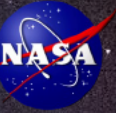
Disclaimer



- These slides are for information and planning purposes only. No solicitation exists at this time
- This presentation shall not be construed as a commitment by the Government or as a comprehensive description of any future requirements
- If a solicitation is released, it will be synopsisized on the Government wide point of entry (GPE), as defined by FAR 2.101



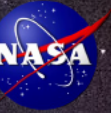
Goals of Industry Day



- Promote competition on the proposed acquisition
- Develop Industry's understanding of the Government's current vision and objectives
- Provide Industry with the opportunity to meet with the Government early enough in the procurement process to provide input into the COSMOS procurement strategy
- Encourage offerors to submit questions and comments electronically via an email to the Contracting Officer, or in person during Industry Day
 - Live Q&A towards the end of the presentation
 - Submitting index cards with questions at the end of the presentation
 - Emailing the Contracting Officer
- The Government will respond officially to all questions submitted by posting them to the Government wide point of entry (GPE) and COSMOS websites



Industry Day Logistics



- A copy of this presentation has been posted on the Contract for Organizing Spaceflight Mission Operations and Systems (COSMOS) website at:
 - <https://www.nasa.gov/johnson/jsc-procurement/cosmos/>
- One-on-Ones from the SAM.gov RSVP registration will be held after the tour starting at 2:00pm Central Time



Responses to Questions



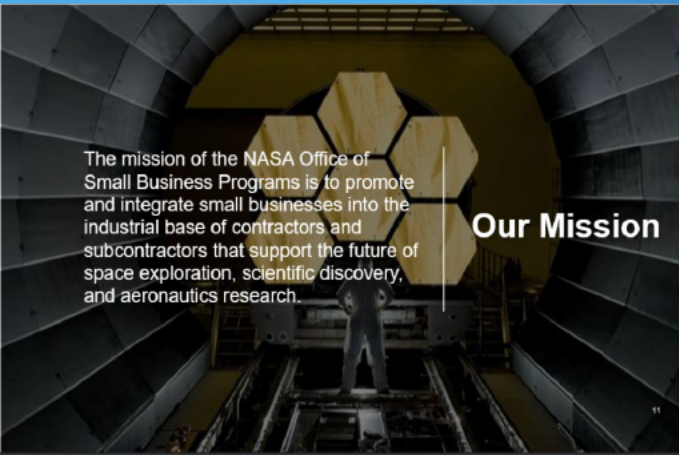
- Questions must be submitted by 5:00 pm Central Time on Friday, March 1, 2024
 - Questions are encouraged; however, if a difference exists between any verbal communication and written responses to questions, the written responses shall govern
 - Teams attendees are encouraged to type their questions in the chat
- Questions submitted electronically and in writing will be answered and posted to GPE (SAM.gov) and will be considered official responses
 - Clarifications concerning the way in which NASA conducts business today will be answered on SAM.gov
 - jsc-cosmos@mail.nasa.gov



Welcome



**Charles Bell, Manager of Operations Support Office
Office of Procurement**



The mission of the NASA Office of Small Business Programs is to promote and integrate small businesses into the industrial base of contractors and subcontractors that support the future of space exploration, scientific discovery, and aeronautics research.

Our Mission

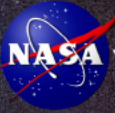
Welcome

**Robert Watts, Small Business Specialist
Office of Procurement**





Industry Assistance Office Contact Information



- Main phone number: (281) 483-4512
- Robert Watts, Senior Small Business Specialist
- Monica Craft, Small Business Specialist
- Tumarrow Romaine, Small Business Specialist
- All emails should be sent to: jsc-smallbusiness@mail.nasa.gov
- Location: Building 1, Suite 453
- Address:
NASA Johnson Space Center,
Industry Assistance Office
Mail Code: BA
2101 NASA Parkway
Houston, TX 77058-3696

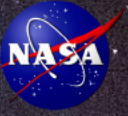


Vision & Objectives

**Dr. Kjell Lindgren, Deputy Director
Flight Operations Directorate**



VISION
MISSION
NORTHSTAR



EXPLORE PROCUREMENT

The cornerstone of NASA's current and future missions



- People** Develop, train, inspire, and motivate the acquisition workforce.
- Procure** Deliver exceptional, timely acquisition business solutions and results to enable NASA Missions.
- Process** Develop sound and flexible procurement processes that integrate the acquisition workforce.
- Policies** Deliver procurement policy that is required, clear, and easily implemented.

Current Contract Overview



Andrea De Paz, Contracting Officer





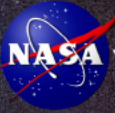
Current Contract Overview, MSOC



- Contract Number: 80JSC017C0006
- Prime Contractor: KBR Wyle Services, LLC
- Contract Type: Cost-Plus-Award-Fee with option to transition to Cost-Plus-Fixed-Fee
- Period of Performance: March 1, 2018- Sep 30, 2025
- Skills currently provided on contract include:
 - Software and hardware systems engineering, sustaining engineering, systems development/modification and maintenance for Mission Control Center Systems (MCCS), Training Systems (TS), and mockups (SVMF) and Information Technology support systems
 - Ground Controller real-time mission execution “Fly” activities
 - Spaceflight Mission support for ground systems operations
 - Spaceflight training and mission support operations
 - Mission Systems and event support scheduling



Proposed Contract, COSMOS



- Solicitation Number: TBD
- NAICS Code and Size Standard
 - The NAICS Code is 541715 (Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology))
 - The size standard is 1,000 employees
- Period of Performance Contemplated is from October 1, 2025 – September 30, 2030.
 - The Government is seeking Industry's input for the period of performance through the Request of Information posted in [SAM.gov](https://sam.gov).
- Contract Types Contemplated: Cost-Plus-Award Fee with option to transition to Cost-Plus-Fixed Fee
 - In accordance with FAR 16.301-3(a)(3), a cost-reimbursable contract may only be used when the contractor's accounting system is adequate for determining costs applicable to the contract or order. This requirement also extends to subcontractors performing under a cost-reimbursable subcontract.
 - Offerors should review Chapter 8 of the DCAA Audit Manual to determine if they are subject to full or modified Cost Accounting Standards (CAS) coverage and if they require an adequate Disclosure Statement prior to award. The link is: <https://www.dcaa.mil/Content/Documents/cam/Chapter 08 - Cost Accounting Standards.pdf>.
- Competition Basis
 - Full and Open



Special Consideration



- **NOTE TO PROSPECTIVE OFFERORS**
- Prospective offerors are reminded not to contact incumbent personnel (either directly or through electronic means) during duty hours or at their place of employment, as such contacts are disruptive to the performance of the current contract



Technical Overview (Current Contract)

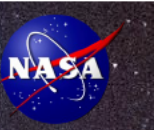


Bob Schwank, RDT Chair





Overview



- This will be a high-level overview of:
 - Current MSOC Services and Program Support
 - Cover Changes the Government has planned for the COSMOS follow on contract so far



MSOC provides services for:

- Mission Control Center Systems (MCCS)
- Training Systems (TS)
- Space Vehicle Mockup Facility (SVMF)
- Mission Systems Cybersecurity and FOD IT Support
- Other support elements in multiple FOD mission systems environments

MSOC supports the following Programs and Missions:

- International Space Station (ISS)
- Moon to Mars Program
- Commercial Crew Program (CCP) and ISS Resupply Programs (CRS)
- Any other Future Programs and Missions that become the responsibility of FOD to support

Operations

- Ensures the configuration, integrity and availability of our ground systems supporting:
 - Spaceflight training and real-time mission activities for Plan, Train, Fly, and Crew
 - Post flight debriefs and analysis



Development/Modification

- Is about changes to the Mission System (MS) elements for FOD mission and training needs
 - New or changed capabilities, services, and system obsolescence
 - Formulated through the Systems Engineering processes supporting design and development
- Development/Modifications also covers system reconfiguration to support:
 - Pre-mission planning, integration, analysis, and operations product development to prepare for mission execution

Sustaining Engineering

- Sustaining Engineering is about restoration and corrective actions of lost support capabilities to their as-built fit, form, function, service, and performance

Maintenance

- Preventative care actions to ensure continued functionality and reliability



IT/Cyber security

- Ensures the protection of MS networks, computers, programs and data from attack, damage, and unauthorized access
- This requires both Secret and Top-Secret Sensitive Compartmented Information (SCI) level clearances

Communications Security (COMSEC)

- This service is about providing secure communications
- This also requires Secret and Top-Secret SCI level clearances



Planned changes from MSOC to COSMOS



- COSMOS (Contract for Organizing Spaceflight Mission Operations and Systems) will be a follow-on competitive procurement to MSOC (Mission Systems Operations Contract)
- **High Level Changes from MSOC**
 - Added Moon To Mars Program
 - Updated to current operations
 - Updated to latest software standards
 - Updated to latest training standards
 - Goal to continually improve efficiency and efficacy to better support Crew Safety, Vehicle Safety, current and future Mission Success



FOD Mission Systems Overview

Jimmy Spivey, Mission Systems Division Chief





The Mission Systems Overview will cover:

- Mission Control Center Systems
- Training Systems
- Space Vehicle Mockup Facility



- **Mission Control Center Systems (MCCS)**

- Mission Control Center – Houston (MCC-H)**

- Primary system for data processing, communications, command, telemetry monitoring, trajectory, and control used by the flight control team to monitor and control space vehicles
 - Supports mission and training activities
 - Can be linked to spacecrafts, avionics integration facilities, and training simulators to integrated vehicle testing, training and operations
 - Consists of multiple support areas for the teams and customers we support

- Back-up Control Center (BCC)**

- Located at Marshall Space Flight Center (MSFC) for ISS and Moon to Mars Operations in case of an outage of the MCC-H



Training Systems

- Support Flight Controller and Crew Training
- These include the:
 - Space Station Training Facility (SSTF)
 - Orion Mission Simulator (OMS)
 - Flight Controller Part Task Trainers (FCPTTs) supporting multiple programs/spacecrafts
 - Boeing CST-100 Starliner Mission Simulator (BMS)



- **Training Systems (TS)**
 - **Space Station Training Facility (SSTF)**
 - Full Task Trainer (FTTs)
 - High-fidelity simulators for training and procedure verification
 - Support simultaneous simulation sessions
 - Training sessions can be integrated for mission training and coordination between crews and flight controllers
 - Part Task Trainers (PTTs)
 - Used to train on individual ISS onboard systems such as activation/deactivation and off-nominal situations
 - Dynamic Skills Trainer (DSTs)
 - Used for training ISS robotics and rendezvous operations



- **Training System (cont.)**

- Flight Controller Part Task Trainers (FCPTTs)**

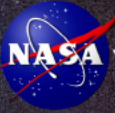
- FCPTTs are used for standalone or mini-sim training of operation of onboard systems
 - Plan, train, fly, and ground operations
 - This is a multi-program capability

- Orion Simulator**

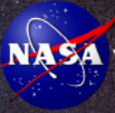
- Multiple simulators/trainers of varying fidelity and complexity used for vehicle system operations and procedure development/verification
 - Support standalone and integrated training



FOD Mission Systems Overview



- **Space Vehicle Mockup Facility (SVMF)**
 - Has a variety of uses from **full-scale vehicle mockups** to **environmental simulators** to closely emulate the physical characteristics of spacecraft
 - Supports a variety of needs from **training** to **developmental engineering analysis** and provides support to external users
 - Supports news media, other special events, and formal/informal tours of the facility

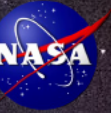


Procurement Schedule and One-on-One Communication Logistics

Andrea De Paz, Contracting Officer



Procurement Schedule



- The Government does intend to issue a Draft Request For Proposal (DRFP).
- Following the release of the Draft RFP, Industry will have an opportunity to submit anonymous questions in writing so that the Government may officially respond.
- A detailed procurement schedule will be posted to the procurement website as soon as it is available.



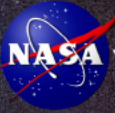
One-on-One Communication with Industry



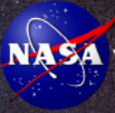
- Dates/Times:
 - Tuesday, February 27, 2024 from 2:00p.m. – 5:00p.m.
 - Wednesday, February 28, 2024 from 9:00a.m. – 5:00p.m.
- Location: Discovery Conference Room on the 1st floor of the Gilruth Conference Center
- No more than 4 individuals may represent any party or team of parties.
- Only one meeting will be allowed per company.
- Meetings will not exceed 25 minutes in length.



How to Get Connected



- COSMOS Public Websites
 - <https://www.nasa.gov/johnson/jsc-procurement/cosmos/>
- NASA/JSC Contract Opportunities
 - <https://sam.gov/content/home>
- JSC Procurement Website
 - <https://www.nasa.gov/jsc/procurement>
- Industry Assistance Office, JSC Bldg. 1
 - jsc-industry-assistance@mail.nasa.gov
- Send an E-mail
 - jsc-cosmos@mail.nasa.gov



Questions & Answers

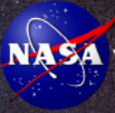
Andrea De Paz, Contracting Officer

Reminder: If a difference exists between any verbal communication and written responses to questions, the written responses shall govern



Tour Logistics

Andrea De Paz, Contracting Officer



- Meet your bus in the Gilruth Parking lot **promptly at 11:45 a.m. to start the tour promptly at 12:00p.m. (noon) Central Time.** Those who are late will miss the opportunity to take tour.
- The Mission Control Center, Mission Training Center, and Space Vehicle Mockup Facility are operational facilities with live hazards – Please listen and follow safety instructions provided by your tour lead
- No backpacks/purses are permitted
- In the event of an emergency requiring evacuation of the facility or a shelter in place, your tour leader will identify and lead the group to the nearest exit or shelter
- Restrooms will NOT be available during the tour – plan accordingly
- Photography and video/audio recording is not permitted
- Entire tour takes approx. 2 hours, involves some stairs and covers between $\frac{1}{2}$ and $\frac{3}{4}$ of a mile



Thank you for attending!

Visit:

<https://www.nasa.gov/johnson/jsc-procurement/cosmos/>