



# OPERATIONALLY RESPONSIVE SPACE **ORS**



## Overview

### **Assured Space Power Focused on Timely Satisfaction of Joint Force Commanders' Needs**

The Joint ORS Office is taking a new approach to risk and mission assurance to rapidly deploy capabilities that are good enough to satisfy warfighter needs across the entire spectrum of operations, from peacetime through conflict.

## Background

On May 21, 2007 the Deputy Secretary of Defense and Executive Agent for Space established the Operationally Responsive Space (ORS) Office as a proactive step to adapt space capabilities to changing national security requirements and to be an agent for change across the community.

## Approach

The Joint ORS Office is working with the broader space community to provide “assured space power focused on timely satisfaction of Joint Force Commanders’ needs.” The end state of the ORS concept is the ability to address emerging, persistent, and/or unanticipated needs through timely augmentation, reconstitution, and exploitation of space force enhancement, space control, and space support capabilities.

The ORS Office is implementing a rapid innovation process using a Modular Open Systems Architecture (MOSA) to facilitate rapid assembly, integration, and test (AI&T), deployment, and operations of space assets into the current space architecture in operationally relevant timelines. The ORS Office focuses on material (spacecraft, launch, range, payloads) and non-material solutions (business model, acquisition, policy, industrial base, training, command and control, tasking, exploitation, processing, & dissemination, concept of operations), and collaborates with national and international agencies to leverage existing investments and develop long-term partnerships.

## Results

- Delivers capabilities to the warfighter in operationally relevant time frames.
- Provides the nation with a mix of simple one mission satellites that complement strategic assets.
- Drives down overall costs and development timelines.
- Capitalizes on emerging and innovative capabilities.
- Introduces new operational concepts for increased flexibility.
- Engages the entire space community through collaboration and coalition opportunities.
- Invigorates the science and engineering skill base.



OPERATIONALLY  
**ORS**  
RESPONSIVE SPACE

**Employ. Deploy. Develop.**  
**Assured Space Power Focused on Timely Satisfaction of Joint Force Commanders' Needs**

The Joint ORS Office is working with a global military, civil, and commercial space community to provide assured space power focused on the timely satisfaction of Joint Force Commanders' needs by developing end-to-end enablers for highly responsive and cost efficient space capabilities. The approach is based on three tiers to ensure a range of possibilities are available for consideration when responsive space capabilities are required.

**Employ.** **Current On-Orbit Assets Leveraged and Prioritized for the Warfighter**

Tier-1 uses existing or on-station capabilities to provide highly responsive space effects through the employment/modification of existing, fielded space capabilities. The targeted time period for Tier-1 solutions is minutes to hours from the time at which the need is established. These solutions focus on existing ground and space systems, operations and processes. Although mission or system utilization analyses may be needed, Tier-1 solutions will not typically involve the design, engineering, or fabrication of new material items.

**Deploy.** **ORS Assets in Ready Reserve; Ready for Launch or Deployment**

A Tier-2 solution will be considered when a Tier-1 solution cannot respond to the need. Tier-2 solutions will utilize field-ready capabilities or deploy new or additional capabilities that are field ready. The targeted timeframe for delivering usable Tier-2 solutions is days to weeks from the time at which the JFC need is established. The focus of activities in Tier-2 solutions is on achieving responsive exploitation, augmentation, or reconstitution of space force enhancement or space control capabilities through rapid assembly, integration, testing, and deployment of a small, low cost satellite.

**Develop.** **New Assets Rapidly Acquired to Meet Specific Combatant Commander/User Need**

In some cases, an expressed need may not be addressable through Tier-1 or Tier-2 capabilities. In such cases, ORS will focus on the rapid development and deployment of a new capability. Once developed, Tier-3 capabilities will be responsively deployed and employed in the same way as Tier-2 assets. The goal of executing Tier-3 is months to one year from established need to presentation of operational capability. Achieving such a timeline will be very challenging and cannot be accomplished unless the amount of new development involved is limited. Consequently, much of the work will be anticipatory in nature—identifying the most probable emergent space needs and preparing the elements required to ensure highly responsive delivery of needed capabilities. This anticipatory foundation is critical for realizing the one year goal for providing space capabilities in response to urgent needs.

