



# Operationally Responsive Space Office

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

*- ORS OFFICE*

## ORS GSE Overview

**Presented to:**  
**Ground System Architecture Workshop**  
**Torrance, CA**  
**23-26 March 2009**

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Operationally Responsive Space Office



# ORS Mission

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The Operationally Responsive Space Office leads the community in the development of *enabling capabilities* providing ***assured*** space power focused on the timely satisfaction of **Joint Force Commanders' needs** by employing current systems and deploying or developing new systems to ***augment*** and ***replenish*** capabilities.



# ORS Office

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- Established 21 May 2007
- OSD Jointly manned organization
- Director of the ORS Office reports directly to the DoD EA for Space
- ~ 45 Military, Gov't civilian, FFRDC and SETA staff
- Location: Kirtland AFB, New Mexico
- Liaisons with key stakeholder organizations
- Emphasis on unity of effort across community

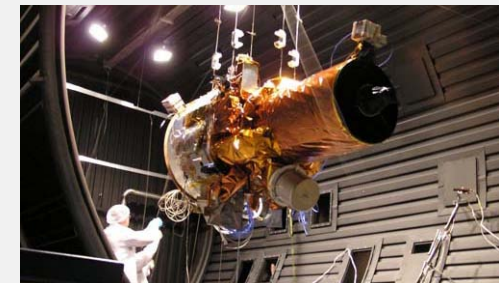
**ORS Office – at the hub of a national initiative for  
Operationally Responsive Space**



# ORS Tiered Approach

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- Tier-1 (adapt / employ it)
  - On-demand with existing space and ground assets
    - Commercial, National, DoD, and International
  - Minutes to hours
- Tier-2 (launch / deploy it)
  - On-call with ready-to-field DoD assets
  - Days to weeks
- Tier-3 (develop it)
  - Rapid transition from development to delivery of new or modified capabilities
  - Months (not years)



**The Desired End-State - 2015 and beyond**



# ORS Ground Segment

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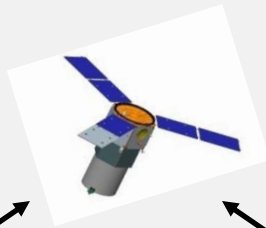
- ORS Office will leverage to the extent possible existing and planned Command and Control (C2), Tasking, Planning, Exploitation, and Dissemination (TPED) architectures
  - Affords rapid integration into JFCs
  - Baseline architecture for Intelligence, Surveillance, and Reconnaissance (ISR) mission area



# ORS GSE Service Layer View

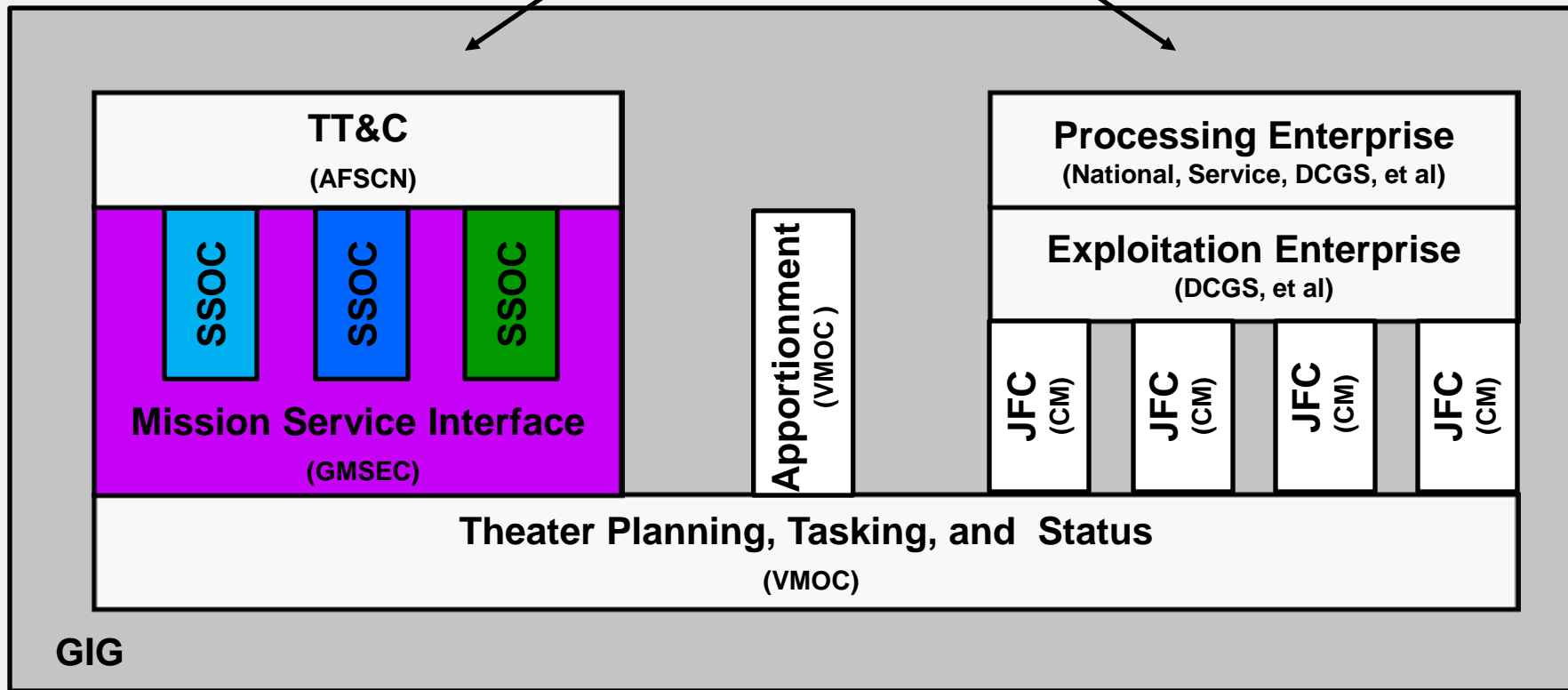
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C2 and Alternate  
Payload Data

Payload Data



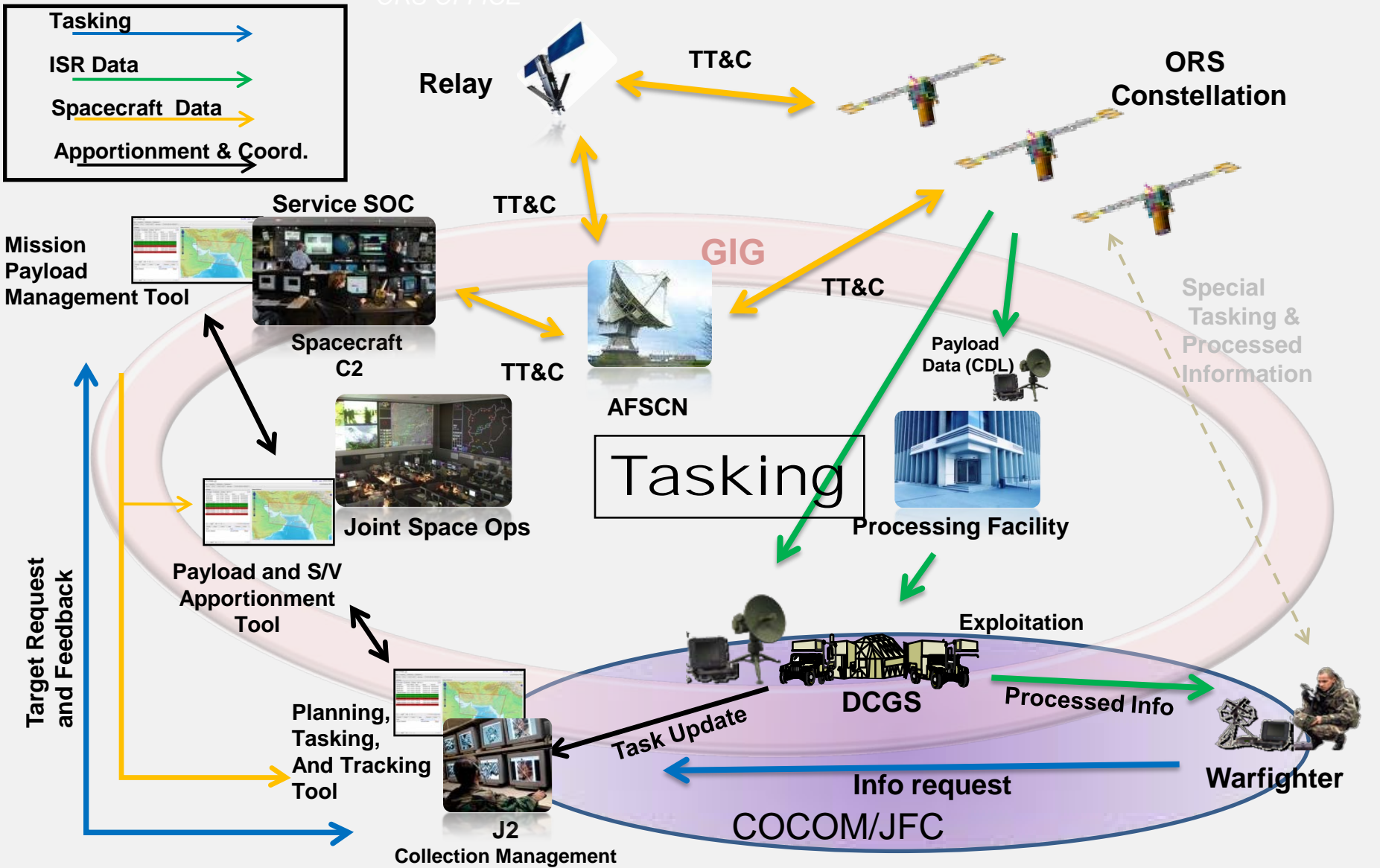
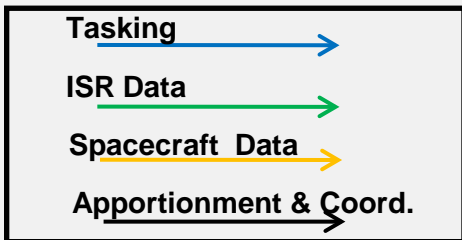




# ORS Ground System Enterprise (ISR) – 2015

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# Tasking the Payload

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- ORS payloads will be directly tasked by a JFC
  - Intend to task in the same manner as any other JFC ISR asset (U2, GRCS, RJ etc,)
  - Provide **Virtual Mission Operation Center (VMOC)**, a Multi-Int “Planning, Tasking, and Tracking” tool to the Collection/Asset Manager to support use of ORS assets
    - Effects based user tasking; can be automated
    - Scalable to accommodate multiple assets
    - “Fed-Ex” style tracking; from request to data available
- Special tasking direct from the Warfighter to the ORS asset

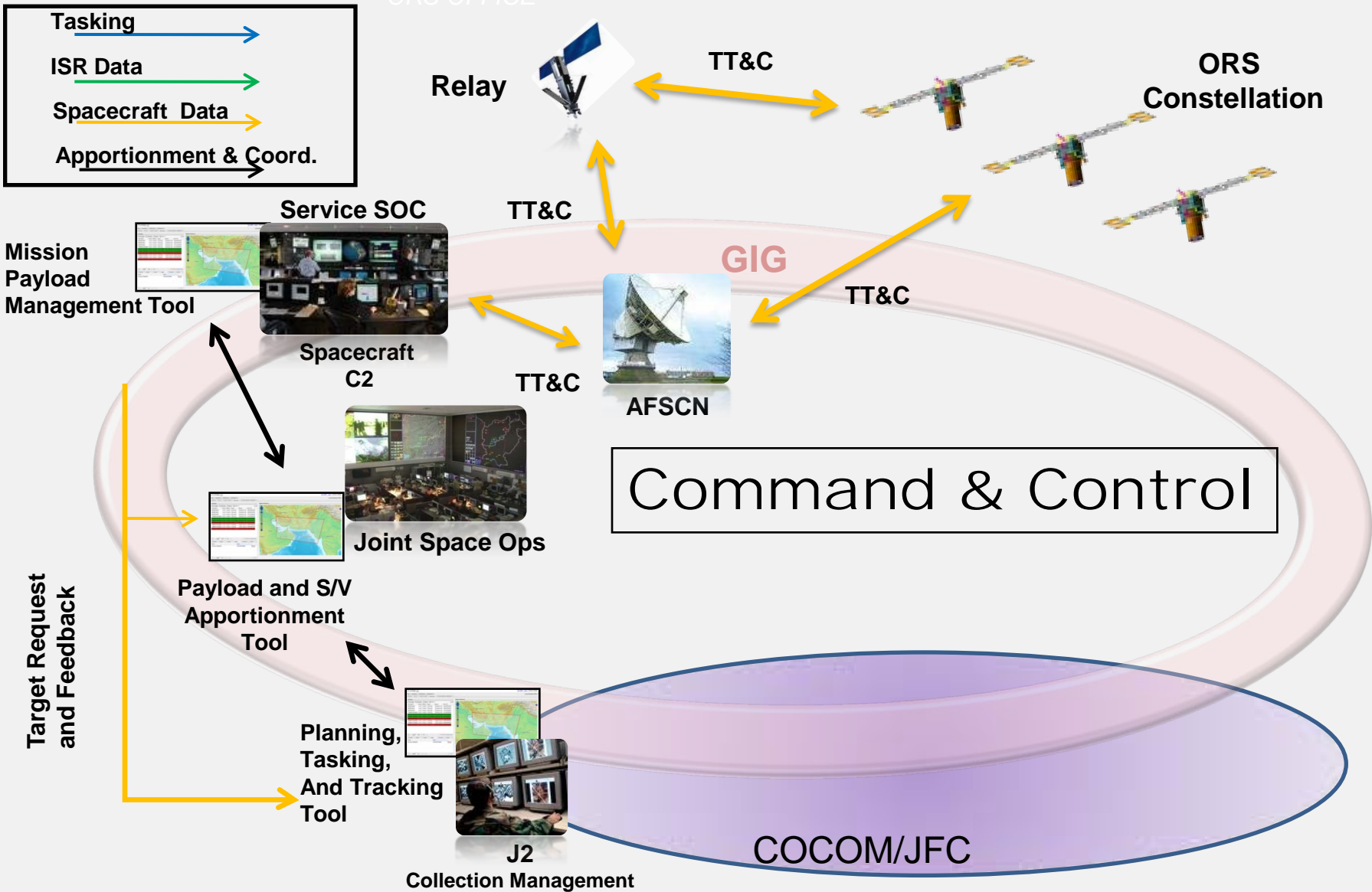
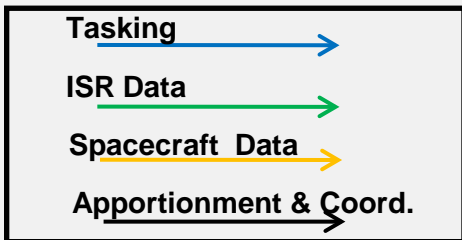




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# Command and Control

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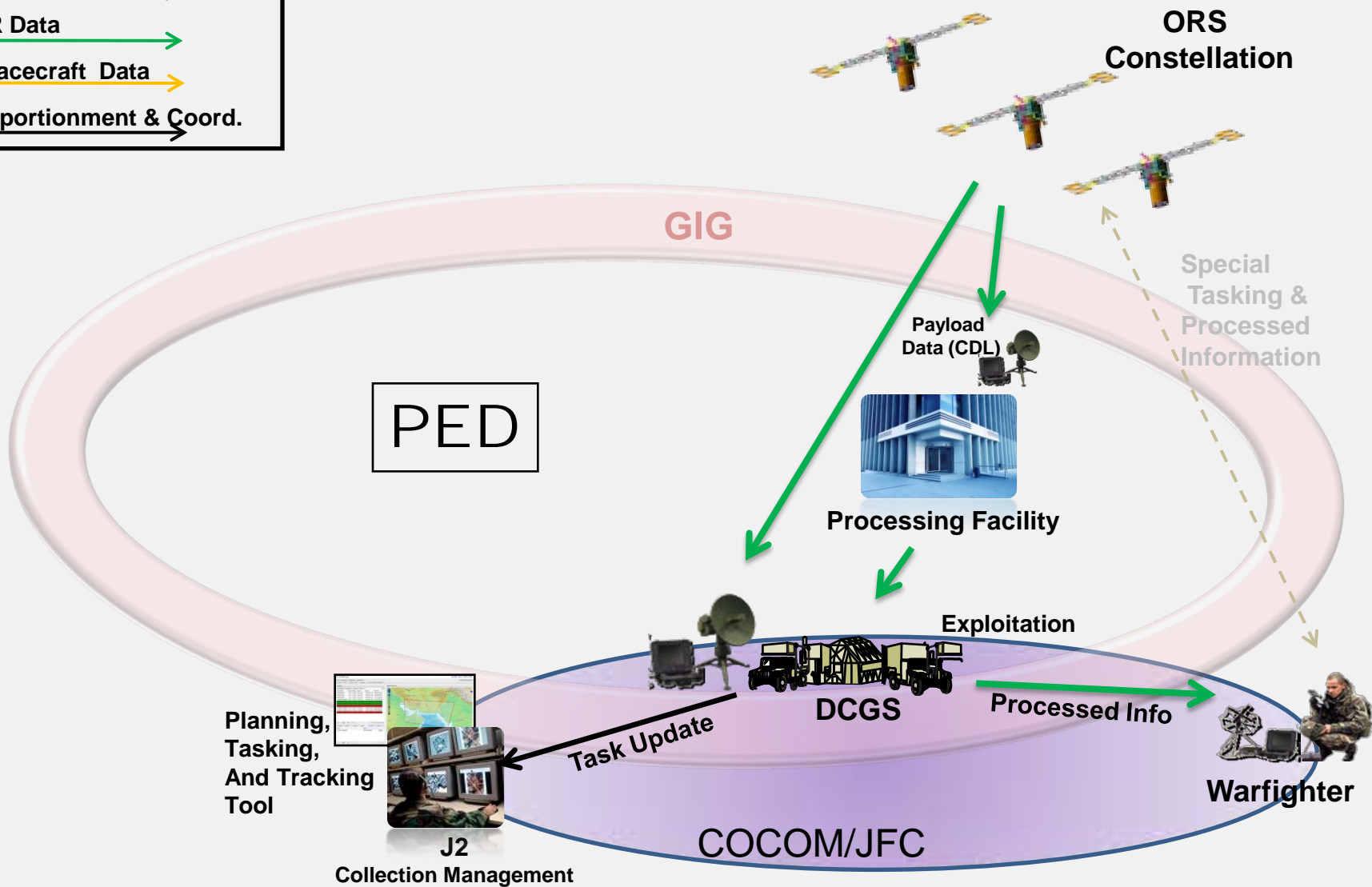
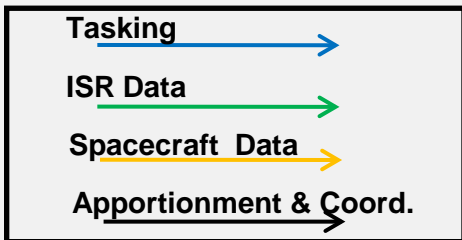
- ORS assets apportioned by JFCC Space/ISR
- JFCs have payload tasking authority
- ORS will link Service/Organization Space Operations Centers
  - GMSEC message bus middleware provides a mission service interface
- Provide JFCs with relay capability for over the horizon tasking
- Service Oriented Architecture and standardization



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# Processing, Exploitation & Dissemination

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- Payload / Sensor data will be down-linked via **Common Data Link** to a Processing site(s) selected by the JFC:
  - Payload / Sensor data to follow DCGS standards and protocols
  - Currently working to develop a space qualified **CDL**
  - Processing sites examples: National, Service or JFC
  - Processed data to placed on appropriate databases for TPPU like access
- Exploitation to be focused at the JFC's Service DCGS's
  - No unique exploitation tools required for ORS payload/senor
- Dissemination will be through JFC dissemination nodes and the GIG



# Way Ahead

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- Evolve the ORS Ground System Enterprise (ISR) to 2015
  - Crawl – now thru 2010
  - Walk – 2011 thru 2013
  - Run – 2014 thru 2015
  
- Expand ORS Ground System Enterprise to include:
  - Communication
  - Space Situation Awareness
  - Situational Awareness mission areas



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**QUESTIONS?**