

# Exploiting the DoD Success in SOA/Net Centric Solutions

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# Net Centric Principals

## DoD

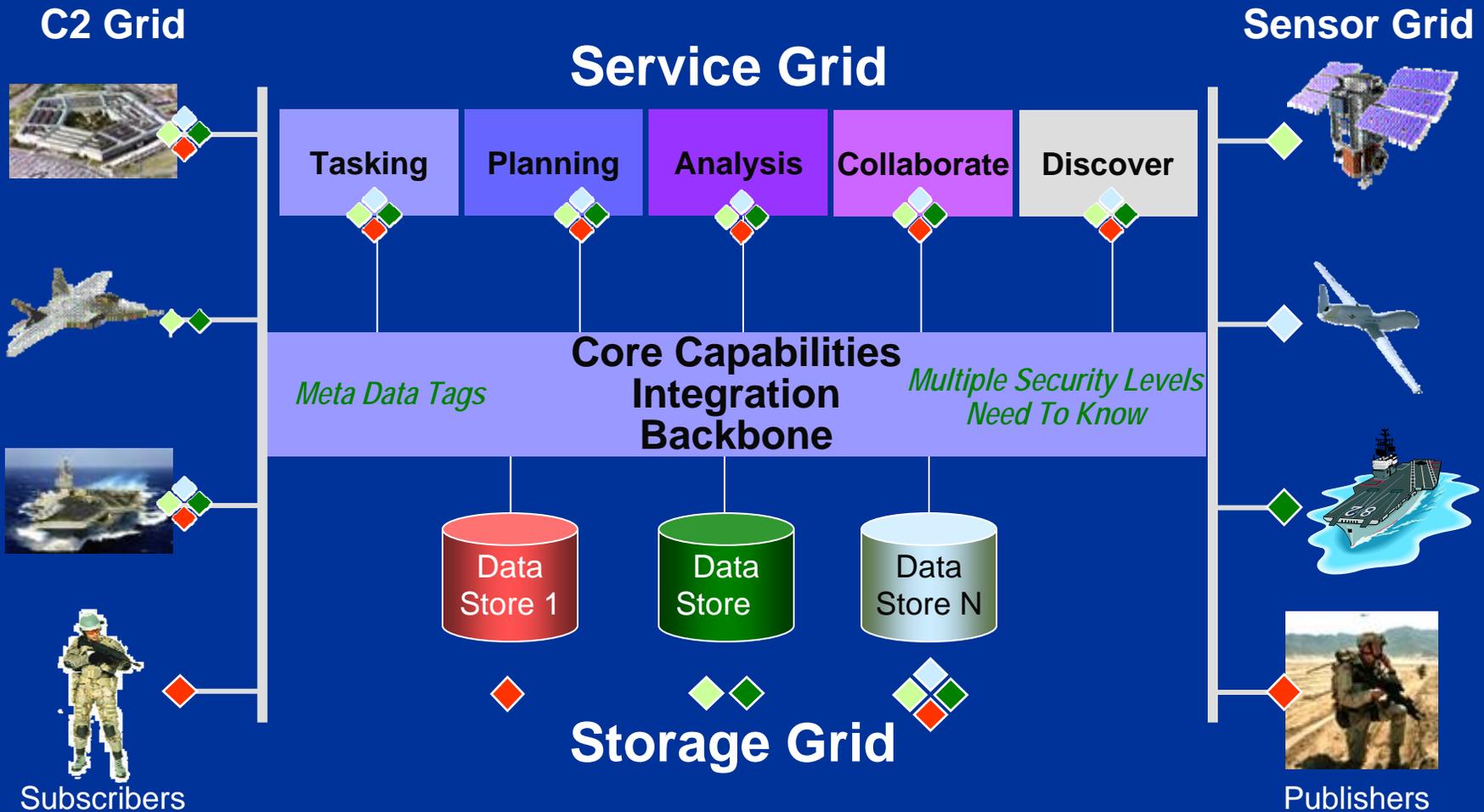
- Effectively improve information sharing.
- Greatly enhance the quality of information and shared situational awareness (Shared situational awareness enables collaboration, self-synchronization, and enhances sustainability and speed of command).
- Dramatically increase mission effectiveness.

## FAA

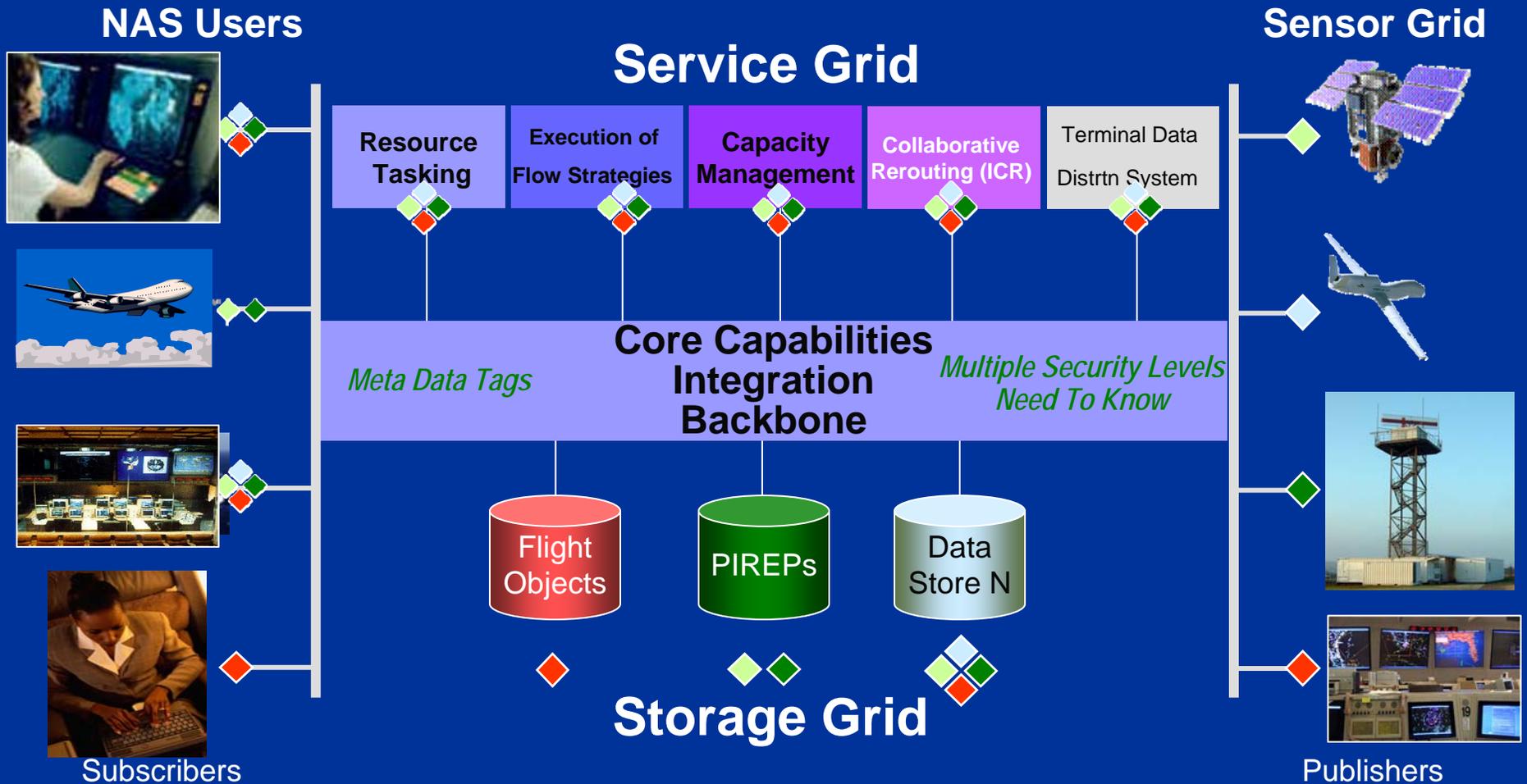
- Ensure information is available to modern applications as needed
- Allow more distributed decision-making and to improve the speed, efficiency, and quality of that decision-making.
- Information can be quickly and efficiently provided to users with a known need and without extra effort to new users as needs arise – with far less expense and complexity than current methods.

***a net-centric enterprise must be implemented using open standards, non-proprietary APIs, loose coupling between data and applications, and agile (i.e., not fragile) interfaces.***

# DoD Net Centric Vision



# FAA Net Centric Vision



# Distributed Common Ground System

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**Network-Centric System  
of Systems**

**Open Enterprise Service-  
based Architecture**

**Web-based and Client-  
based tools supporting  
Worldwide-Distributed  
Operations**

**Joint Interoperability  
through Data, Service and  
Task level integration**

**Common NCES Compliant  
Backbone -- DCGS  
Integration Backbone  
(DIB)**

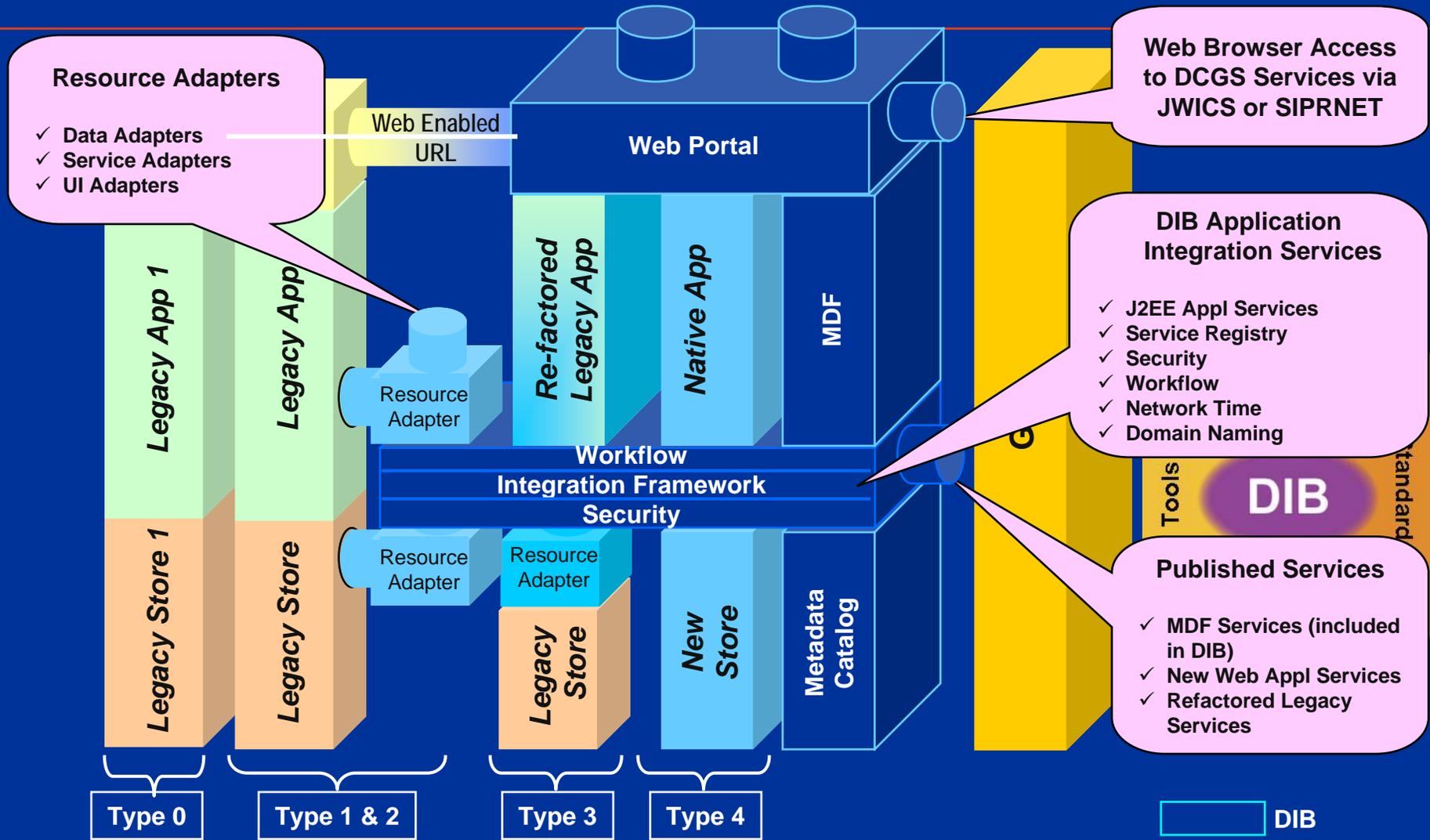


## SOA Implementations Lessoned Learned

- The government identified required net-centric standards within the technical requirements document (TRD).
- The government limited the architecture to implementing those capabilities required within a 3-year period.
- The government provided the existing operational architecture views to the contractor.
- The government specified that the contractor present DoDAF architecture views at the initial and final design reviews.
- Finally, the contractor team was highly experienced with Air Force ISR environments.

***Focused on solving a specified problem set vs perfect implementation for the next 20 years***

# DIB Interoperability Node Implementation

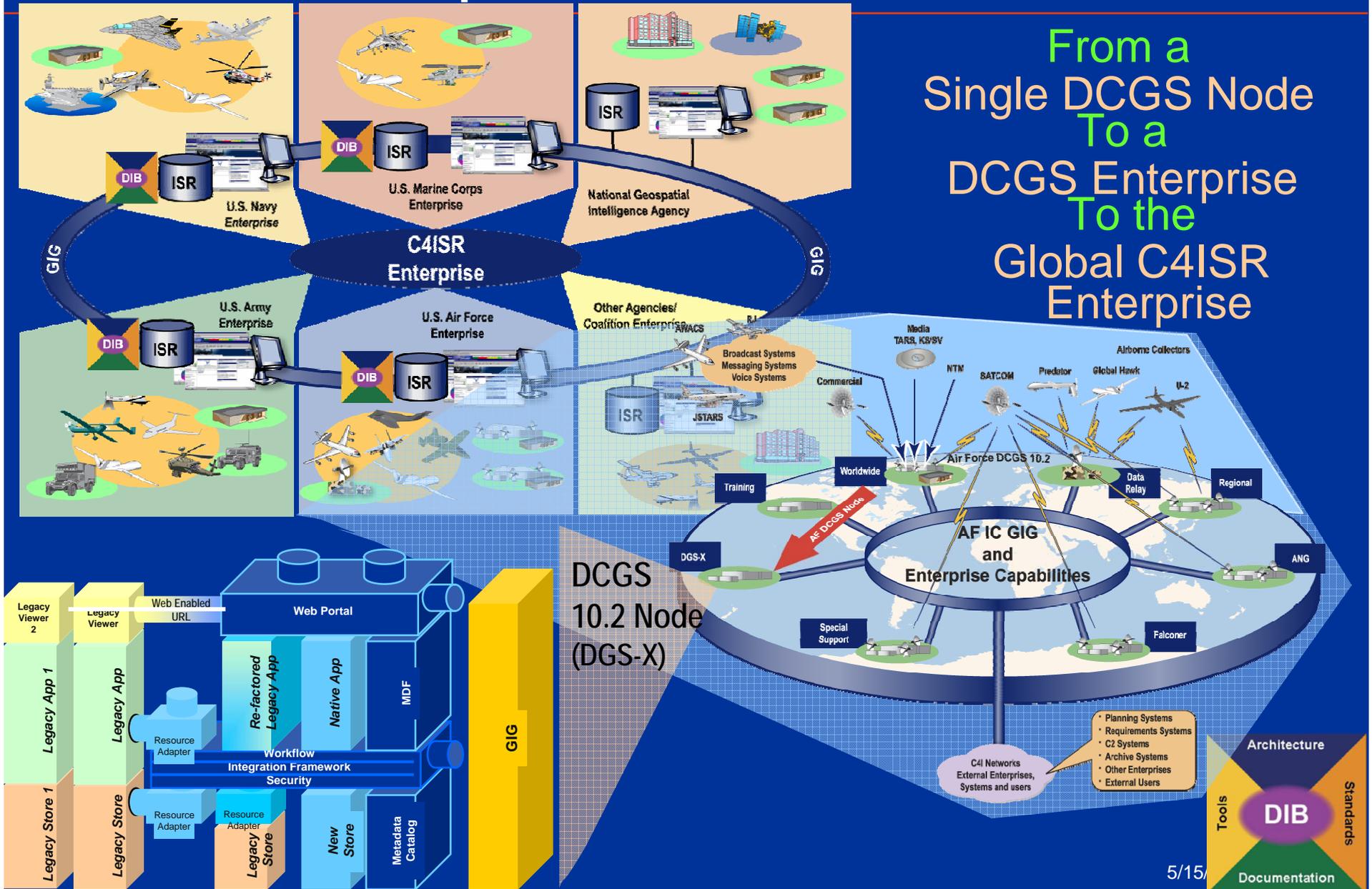


The DIB together with the GIG provides a complete integration framework

# DCGS-AF Interoperability Supports Global C4ISR Enterprise Vision

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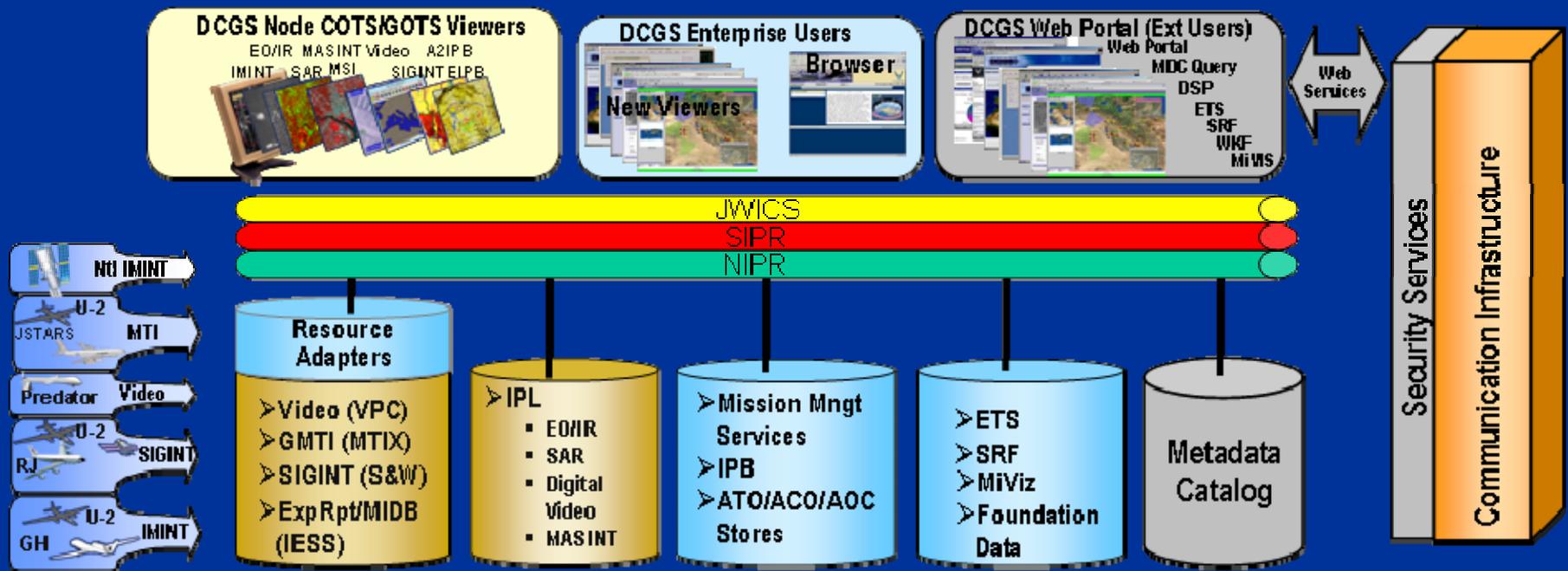
From a  
Single DCGS Node  
To a  
DCGS Enterprise  
To the  
Global C4ISR  
Enterprise



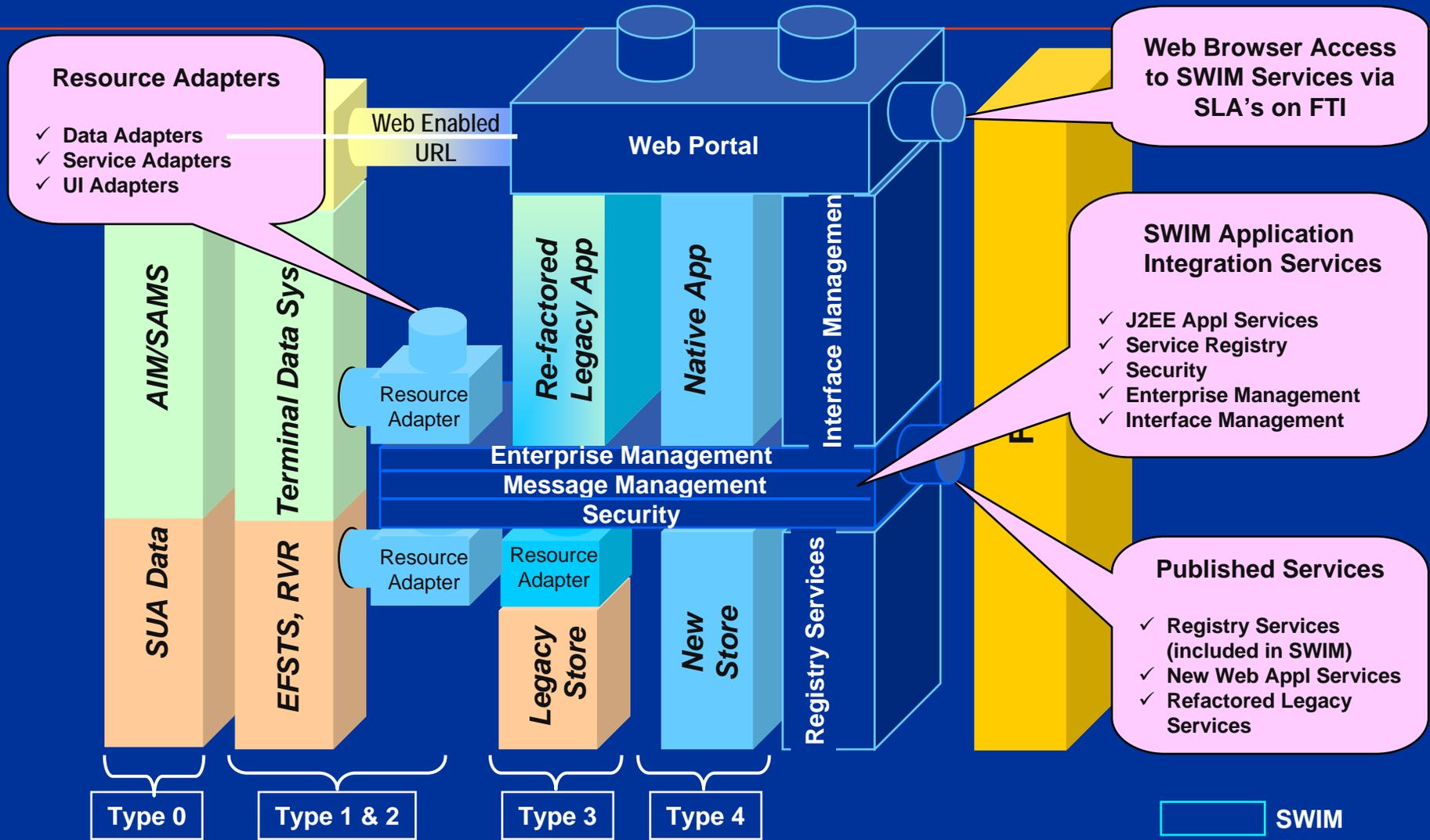
# Counter IED Operations Integration Center Architecture - Built on the DIB

## Joint HLS/DoD Enterprise

- COIC stands up a Distributed Service Oriented Architecture (DCGS-Integration Backbone)
  - Interoperable information management capability
  - Leverages web based technologies and the mandated DoD architecture
- Connects intelligence data feeds and databases into the architecture for access
  - Rapid data access and information discovery addressing IED defeat
  - Enables federation with foundation partner facilities and data
- Supports integration, test, and transition of new applications

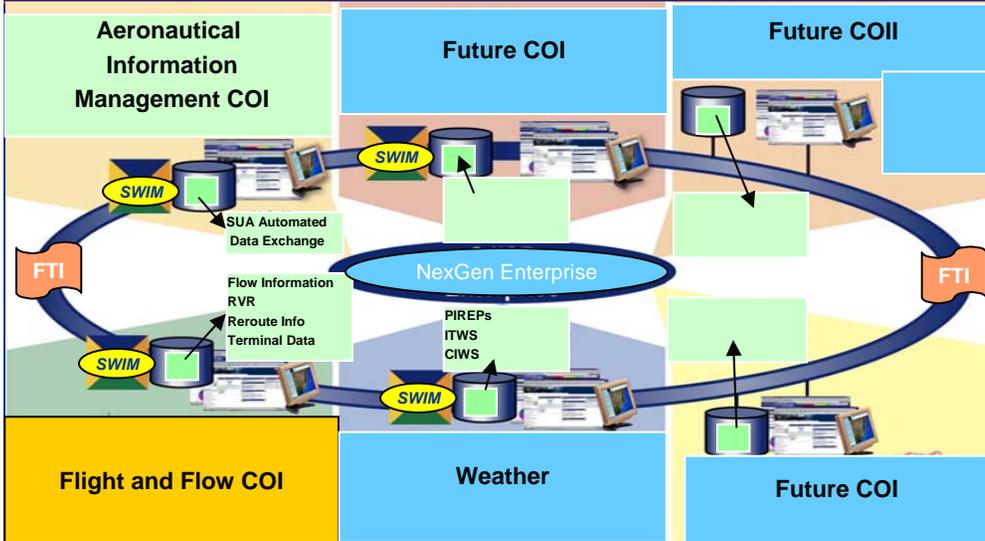


# SWIM Interoperability Node Implementation

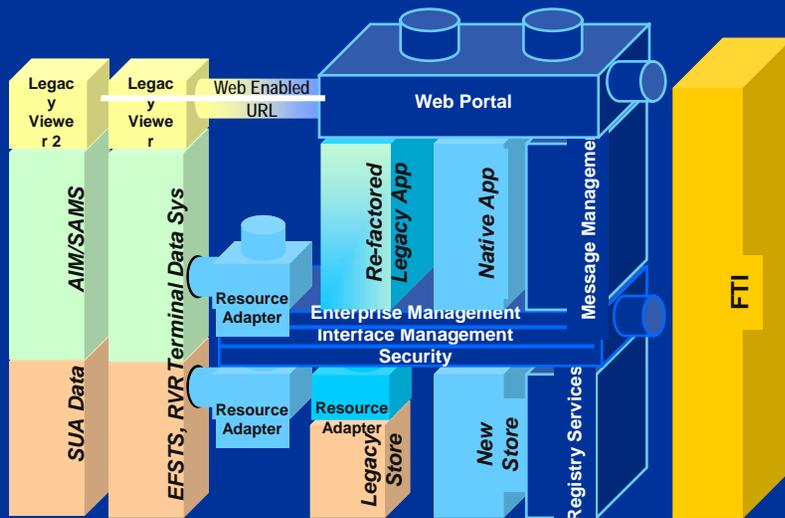


SWIM together with the FTI provides a complete integration framework

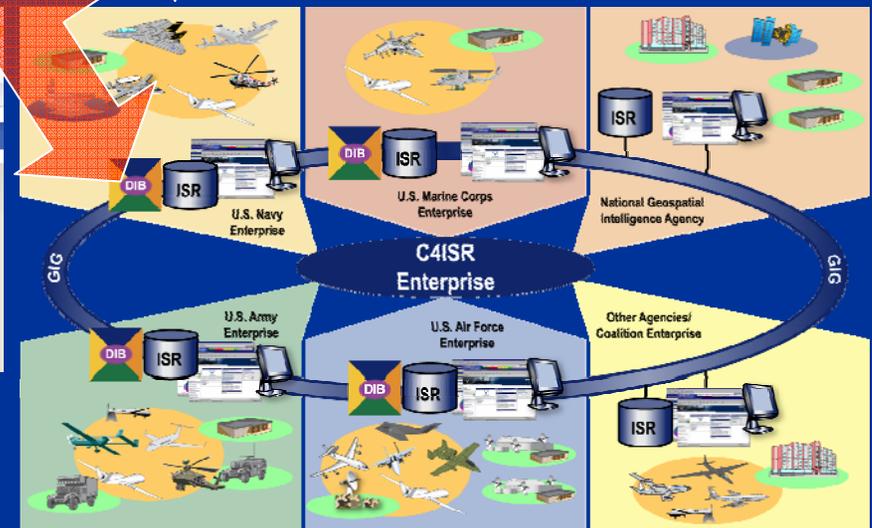
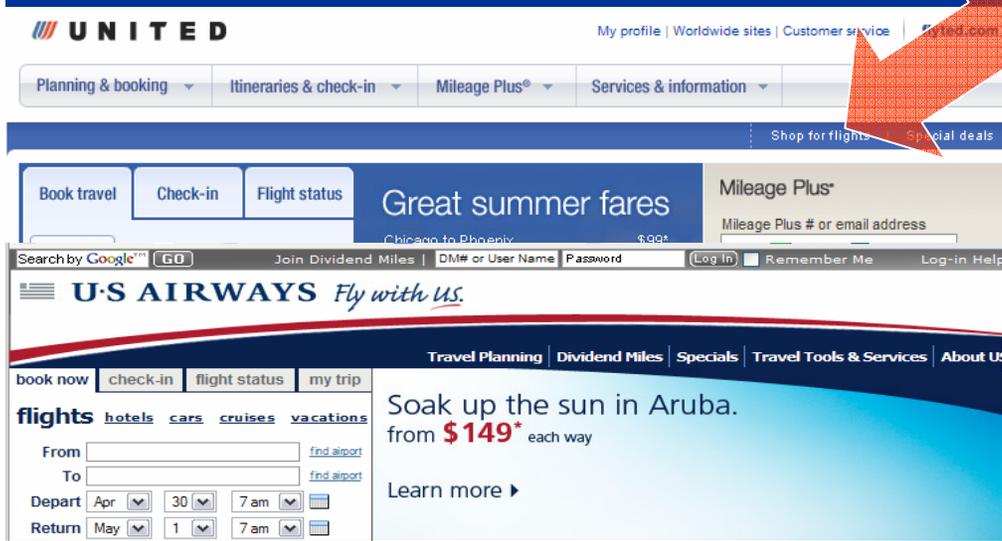
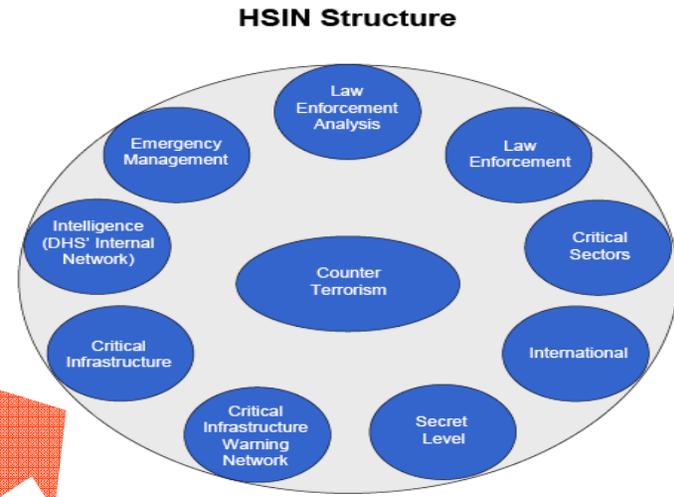
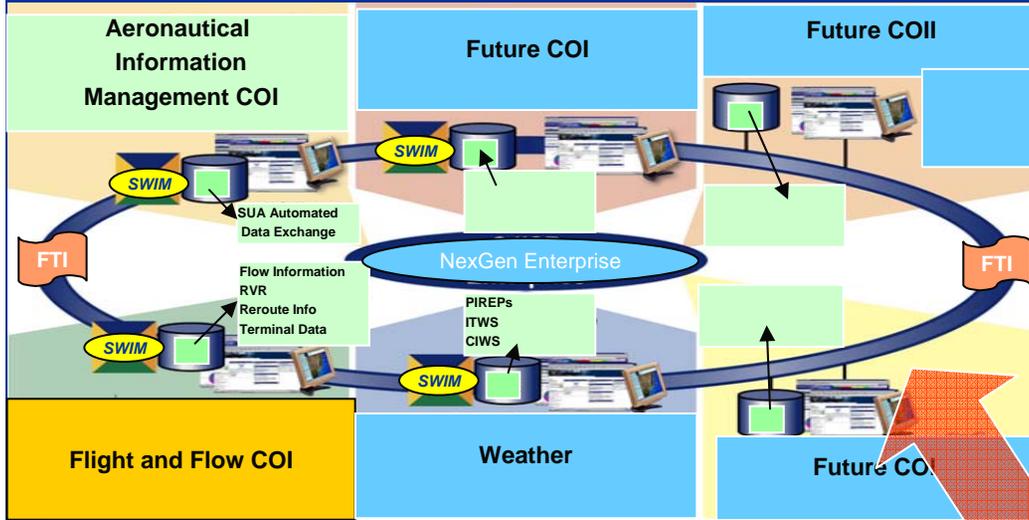
# NextGen Enterprise Enabled by SWIM



From a  
Single SWIM Node  
To a  
COI Enterprise  
To a  
NextGen Enterprise



# SWIM Inter-Agency Global Interoperability



**The SWIM will be the Enabler for NextGen Enterprise Interoperability**

## SWIM Integration Backbone 1.0 Content

- BEA Weblogic Platform (v8.1 sp3)
- Oracle 9i Enterprise RDBMS (v9.2.0\_5)
- Metadata Framework (MDF) Software Development Kit (SDK)
  - Programming Guide
  - XSD Files
  - Javadoc
  - Reference DDA/DAO Implementation - File System Prototype (FSP)
- COE Message Process (CMP v4.7.0.1) for USMTF to XML translation
- Domain Name System (DNS) - Berkley Internet Name Daemon (BIND v9.2.3)
- LDAP – SunOne Java System Directory Server (v5.2)
- SourceFire/SNORT Network Intrusion Detection (v3.2)\*
- Praecis Gntp Network Time Server (NTP v3)\*
- GFE\*
  - JEDI v1.3
  - Symantec Intruder Alert (SIA v3.6) and SIA Event Management (v3.5)
  - McAfee Host based Virus Scan Alert Manager (v4.7.1)

\* not included on the DIB CD set



# DCGS 10.2 Global Enterprise

- Major Upgrade to the US Air Force DCGS 10.1
- Provides the DCGS Integration Backbone (DIB) for the Joint Service and Coalition ISR Net Centric Enterprise

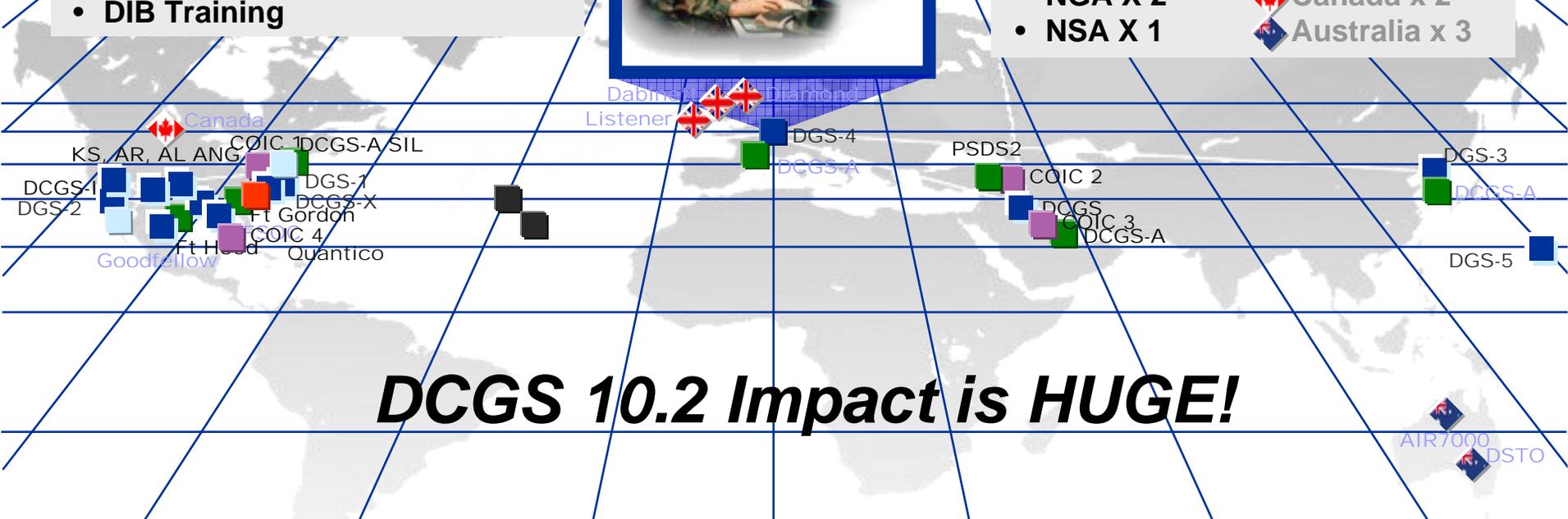
### USAF DCGS 10.2/DIB

- 5 Core Sites – 60+ Analysts
- 5 Falconer Sites - 9 Analysts
- 6 ANG Sites - 18 Analysts
- 22 DIBs Delivered to USAF
- DIB Training



### Other Users

- DCGS Army
- DCGS Navy
- Marine Corps
- OGAs
- NGA X 2
- NSA X 1
- DIA JIOC x 16
- COIC X 4
- Army Logistics
- UK x 2
- Canada x 2
- Australia x 3



***DCGS 10.2 Impact is HUGE!***

# Summary

- DoD enterprise-wide ISR implementation is well on its way
- Success is based on solving near term requirements with low cost COTS solutions first.
- SWIM can leverage lessons learned and existing infrastructure products and processes
- SWIM 1.0 can be off the shelf