

Headquarters U. S. Air Force

Integrity - Service - Excellence

The Semantic Web Imagine the Possibilities



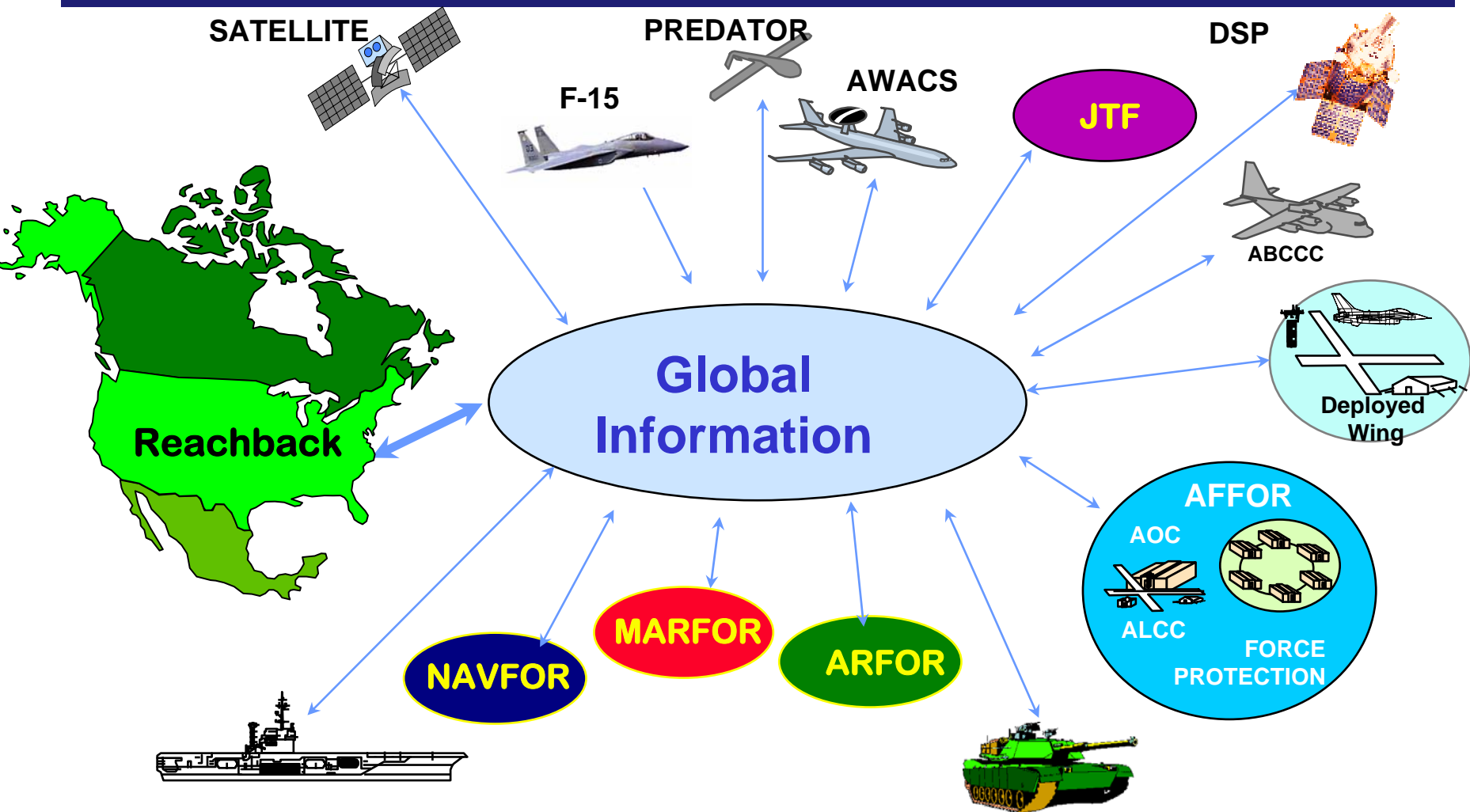
**Mr. John Gilligan
Chief Information Officer
7 April 2005**

U.S. AIR FORCE



U.S. AIR FORCE

Goal: Assured decision-ready information at the right time & place

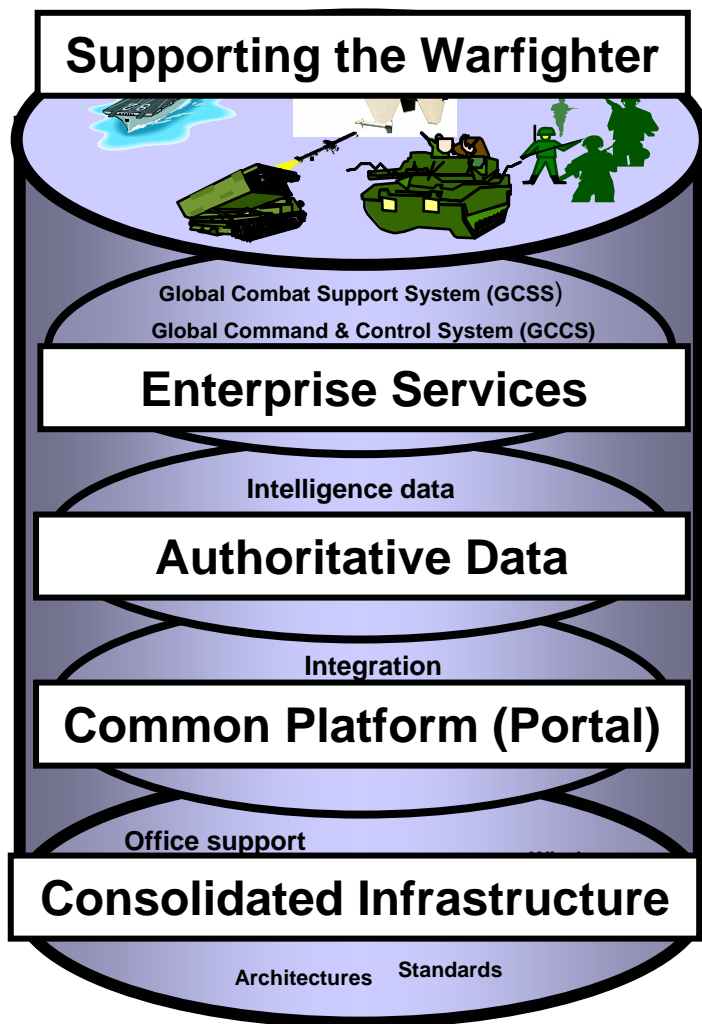


Integrity - Service - Excellence



Global Information Vision

U.S. AIR FORCE

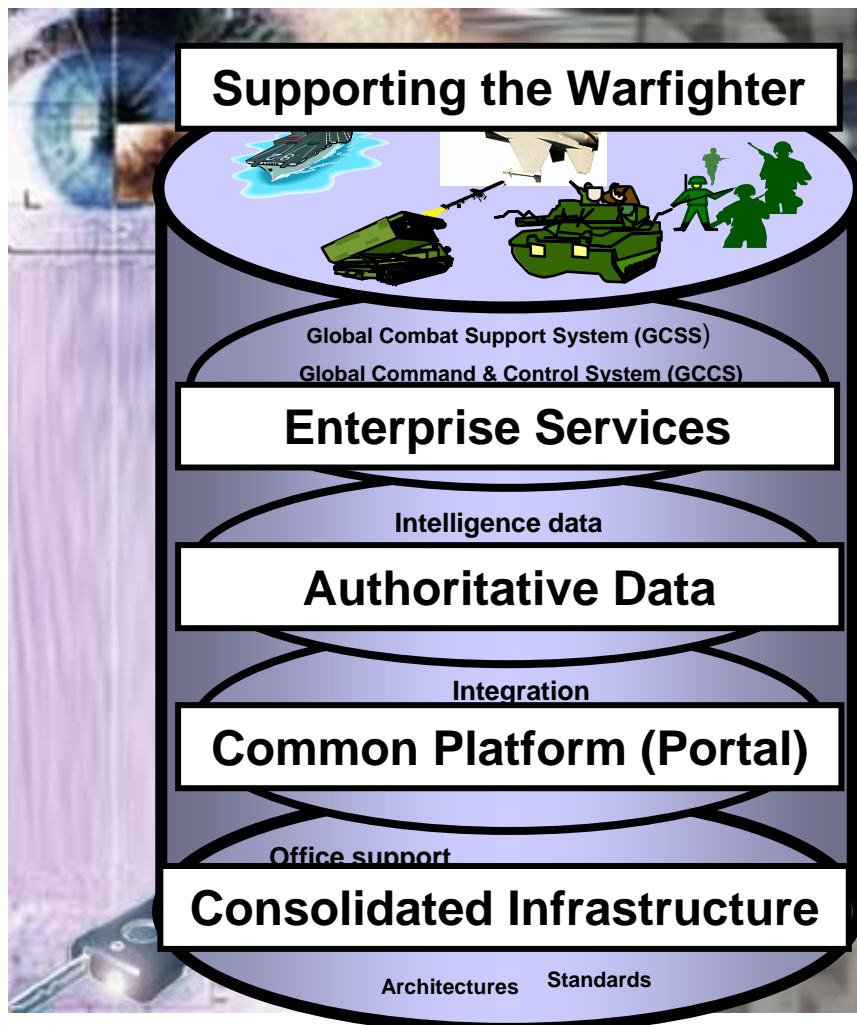


A single global network, populated with authoritative, relevant, and sufficient information ...capable of delivering assured decision-ready information across the spectrum of military operations enabling rapid and predictive response through situationally aware commanders



Future: Information Management

U.S. AIR FORCE



- Past emphasis on the integration of systems and networks to achieve **Net-centricity**
- How do we manage information to ensure the **right information** to the **right person** at the **right time**
- How do we ensure **assured decision-ready information**



Information as a Capability

U.S. AIR FORCE

- **Information Capability**
 - “Authoritative”
 - Tied to Decisions
 - Computer-to-Computer (machine- to-machine)
 - Link Sensors/Weapon Systems
- **Provide Warfighters and Decision Makers unparalleled Situational Awareness**

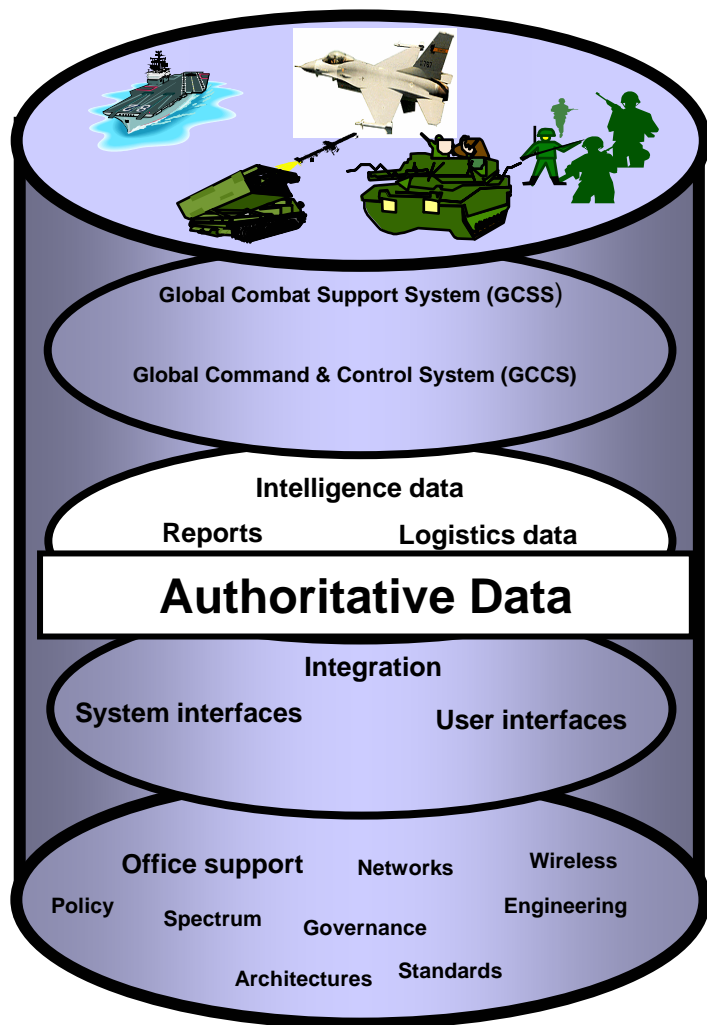
**Dramatic Improvement in
Decision Quality and Timeliness**



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Authoritative & Exchangeable Data

- Single Authoritative data source (*data owners / stewards*)
- Common data representation (*XML*)
- Established Data Repositories (*data warehouse*)
- Access anytime-- anywhere (*web access*)





U.S. AIR FORCE

Authoritative Data AF Info/Data Strategy



THE SECRETARY OF THE AIR FORCE
CHIEF OF STAFF, UNITED STATES AIR FORCE
WASHINGTON, DC

03 MAR 2004

MEMORANDUM FOR ALMAJCOM/FO/DRU
DISTRIBUTION C

SUBJECT: Air Force Information and Data Management Strategy Policy

References: (a) Air Force Information Strategy, CSAF/SECACF, August 2002
(b) DoD Net-Centric Data Strategy, ASD/NIH, May 2003
(c) Air Force Policy on Enterprise Architecting, CSAF/SECACF, August 2002

The Air Force Information Strategy (ref. a) describes the Air Force vision for managing and leveraging information. Its first goal is to provide all Air Force personnel with on-demand access to authoritative, relevant and sufficient information to perform their duties efficiently and effectively.

This memorandum establishes the responsibilities of information owners in the Air Force. It directs Air Force data producers, the MAJCOMs and Functional Community leads, to execute these responsibilities, coordinating through Air Force Communities of Interest (COIs).

In accordance with the DoD's Net-Centric Data Strategy (ref. b), we are moving away from attempts to standardize data across the entire DoD, and are instead establishing a COI structure for data and information management. COIs are collaborative groups who exchange information in pursuit of their shared goals, interests, missions, or business processes, and who require a shared vocabulary to be successful. Reference (c) establishes enterprise architectures as the common foundation for integrating combat operations, combat support, and business elements within the Air Force. Air Force COIs will be directly related to the mission/business area architectures.

The Air Force Chief Information Officer (AF CIO) is responsible for establishing AF information and data management policies. Establishment of Air Force COIs is delegated to the Enterprise Architecture Integration Council (EAIC). The implementing roles and responsibilities of information owners and COIs are included in the attachment to this memorandum, together with an initial list of AF COIs. Information owners will be designated separately. Air Force MAJCOMS and Functional Community leads will execute their data producer responsibilities, coordinating through COIs as described in that attachment.

John F. Zimpher
John F. Zimpher
General, USAF
Chief of Staff

James G. Roche
James G. Roche
Secretary of the Air Force

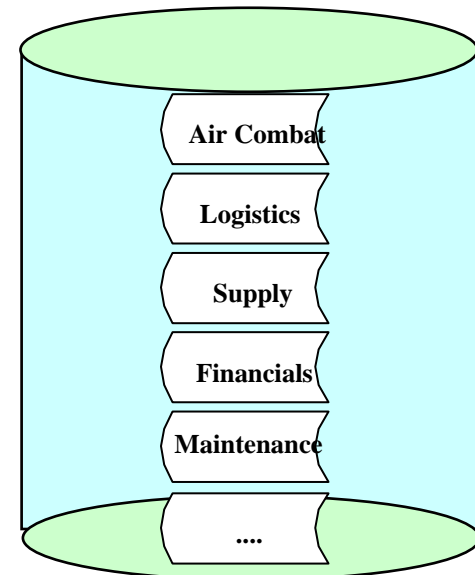
Attachment:
Roles and Responsibilities

COI
COP



Enterprise
Information
Management
Tools

Enterprise
Data Warehouse





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Where we need to go - Mission-Specific Services

Route Planner

Units Tasked

Click on a unit name (sorted by alphanumeric order) to see its tasks:

[425 SQUADRON] [601 ACS] [601 ARS] [602 COMBAT SQDN] [603 COMBAT SQN] [137 CSQ] [206 RES] [211 AFS] [212 AFS] [121 CSO] [122 CSO] [123 CSO] [11 TATW] [101 SON] [102 SON] [103 SQUADRON] [108 FIGHTER SQN] [11 RS] [12 RS] [169 FIGHTER SQN] [335 FIGHTER SQN] [343 RS] [355 FIGHTER SQN] [54 FIGHTER SQN] [60 FIGHTER SQN] [66] [92 ACS] [96 ARS] [96 BOMB SQN] [263 AOCSS] [99 RS] [111]

Air Tasking Order (ATO)

REGID/ATO/REQ PRACH/ATOJC/JUL/CBG//
 AREFID/NO//
 TIMEFRM/FROM:120600ZJUL00/TO:130559ZJUL00//
 HEADTRG/TASKING//
 TACTICRY/CA//
 SVCTASK/F//

Aircraft Scheduler

Aircraft Refueling Information

Click on a unit name of an air refueler mission number (sorted by alphanumeric order) to see its tasks:

[1451] [1452] [1453] [1454] [1455] [1457] [1460] [1462] [1622] [1624] [1625] [1626] [1630] [1631] [1634] [1641] [1645] [1645] [1647] [1650] [1651] [1652] [1653] [1654] [1654] [1701] [1702] [1704] [1705] [1707] [1711] [1712] [1713] [1716] [2001] [2003] [2004] [2005] [2006] [2010] [2011] [2014] [2015] [2017] [2021] [2021A] [2022] [2021] [2021] [2041] [2043] [2044] [2050] [2051] [2054] [2060] [2061] [2062] [2063] [2064] [2065] [2066] [2270] [2271] [5326] [5327] [5330]

1451

Refueler

Tasked Unit Designator: SARS
 Mission Number: 1451
 Number of Aircraft: 1
 Type of Aircraft: EC10A
 Aircraft Call Sign: ALDORNE51
 Primary Configuration Code: BEST
 Mission Location Name: REEDS
 Altitude (100s of ft): 240

Receiver

Call Sign	Number of Aircraft	Type of Aircraft	Mission Number	Offloaded Fuel	Fuel Type
ELDER35 (2)	1	F16CJ	0335	00026	
ELDER35 (2)	1	F16CJ	0335	00018	
ELDER35 (2)	1	F16CJ	0335	00018	
ELDER35 (2)	1	F16CJ	0335	00018	
CARL35 (2)	1	F16CJ	1035	00018	

• Machine-to-machine (M2M)

• Auto-discovery

• Web-based

• “Internet-flexible”

• Global footprint



Imagine the Possibilities Cross Cueing

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- U-2 (Line of Sight and Extended Tether Program)
- RC-135 Rivet Joint
- E-8C JSTARS (C2 roles)
- MQ-1 Predator (shooter)
- RQ-4 Global Hawk
- RC-12 Guardrail
- P-3, AP-3, EP-3
- Etc.



40+ Assets, all services...exchanging information!



U.S. AIR FORCE

Imagine the Possibilities: Enhanced, Timely Targeting



**Decision quality information...
target quality data**

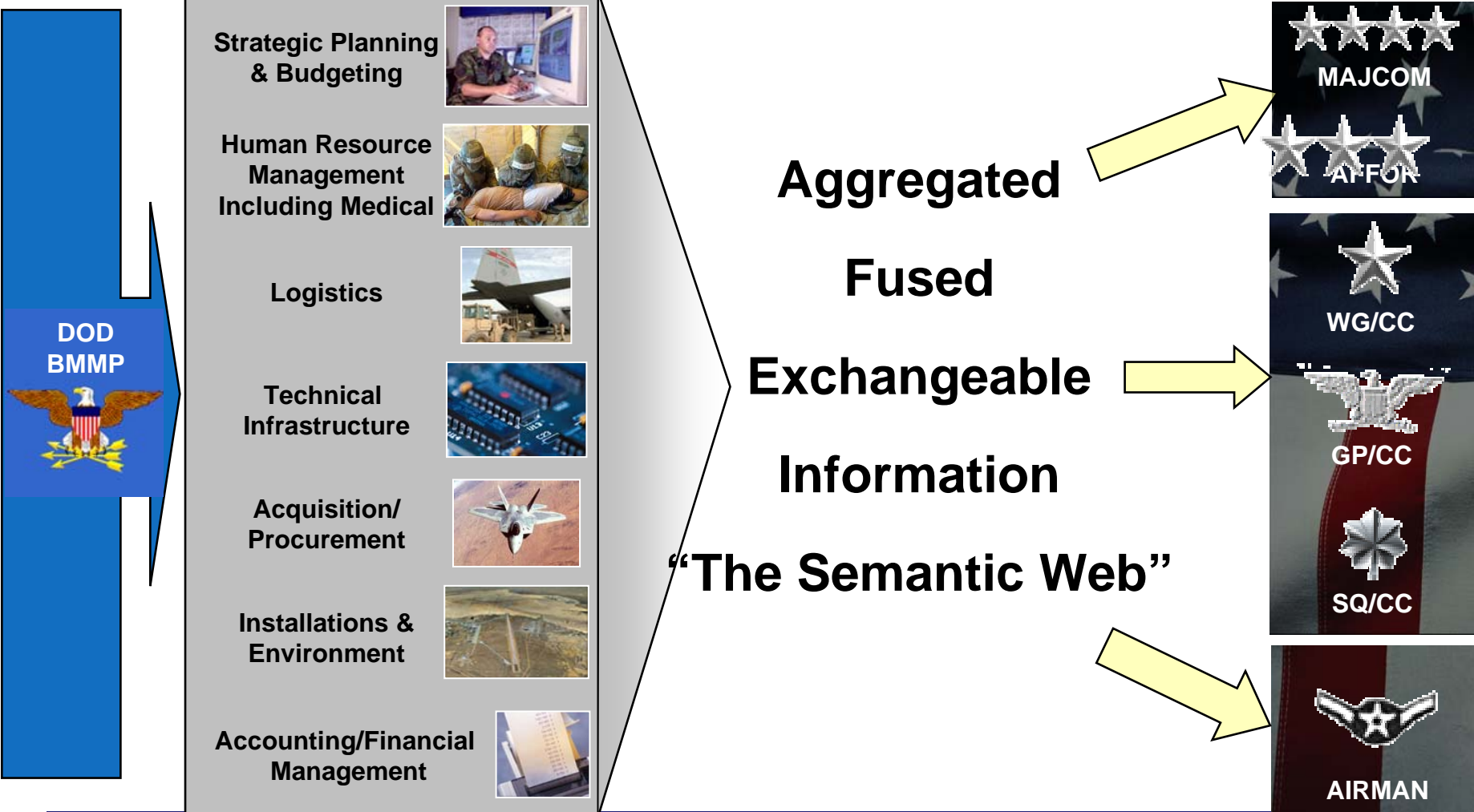


“The sum of the wisdom of this horizontal integration will result in a cursor over the target. We will do this with machine-to-machine digital interfaces.”



Imagine the Possibilities: Operational Support Modernization

U.S. AIR FORCE *Sharing Information is More Powerful Than Controlling It*





Information Challenges

U.S. AIR FORCE



- **Information is a Strategic Asset**
- **Manage the Information**
- **Share Information across boundaries (The Semantic Web)**
- **Actions to bring this capability to the AF Enterprise level**
 - **Go beyond pilots**

**Partnership achieves success
Leverage Industry's Advances**



Meeting Our Future Vision

U.S. AIR FORCE



- Infrastructure Foundation well along
- Clear strategy to improve decision-ready information to the warfighter
- The Semantic Web Can help us so that...

All individuals and decision-makers have the *right* information to do the *right* things at the *right* time in the *right* way



Our Vision can be reached

U.S. AIR FORCE

**Supporting our Air Force
Vision requires
integrated
Information/Knowledge
available to the decision-
maker at all levels**



“The Air Force needs machine-to-machine interfaces delivering decision-quality data, culled from various sensors on various systems, directly to decision makers.”

-- General John Jumper