

KOREA LANDWARNET

*Transforming
LandWarNet
to an Enterprise
for the Warfighter*



2010-05-19T01:00:00Z

LTG Jeff Sorenson

Chief Information Officer/G-6, HQDA

**AMERICA'S ARMY: THE STRENGTH OF THE NATION
ARMY STRONG**



Agenda



- ④ **Warfighter Needs**
- ④ **Army Enterprise Architecture**
- ④ **Transforming Using GNEC Strategy**
- ④ **Army Network Transformation**
 - ◆ CSA “Unity of Effort” Tasking
 - ◆ “Big 4” & Lines of Effort
- ④ **Current Topics**
 - ◆ ARFORCYBER
 - ◆ POM 12-16 Priorities
- ④ **Conclusions**

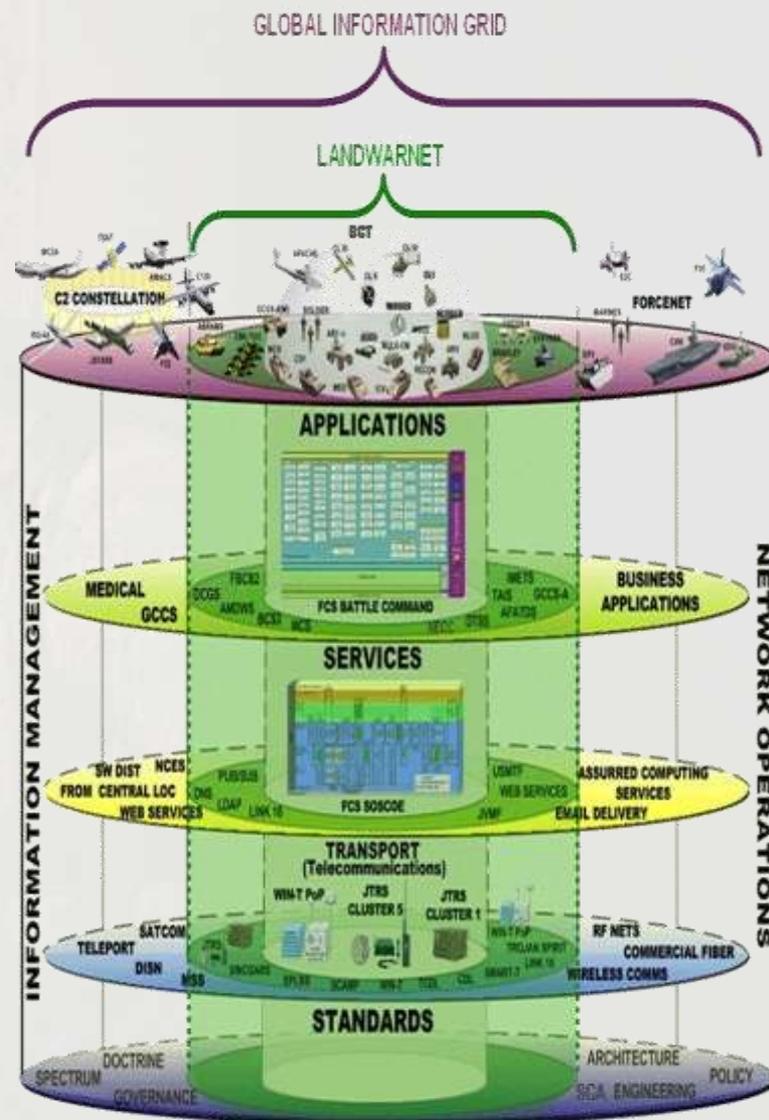




Warfighter Needs

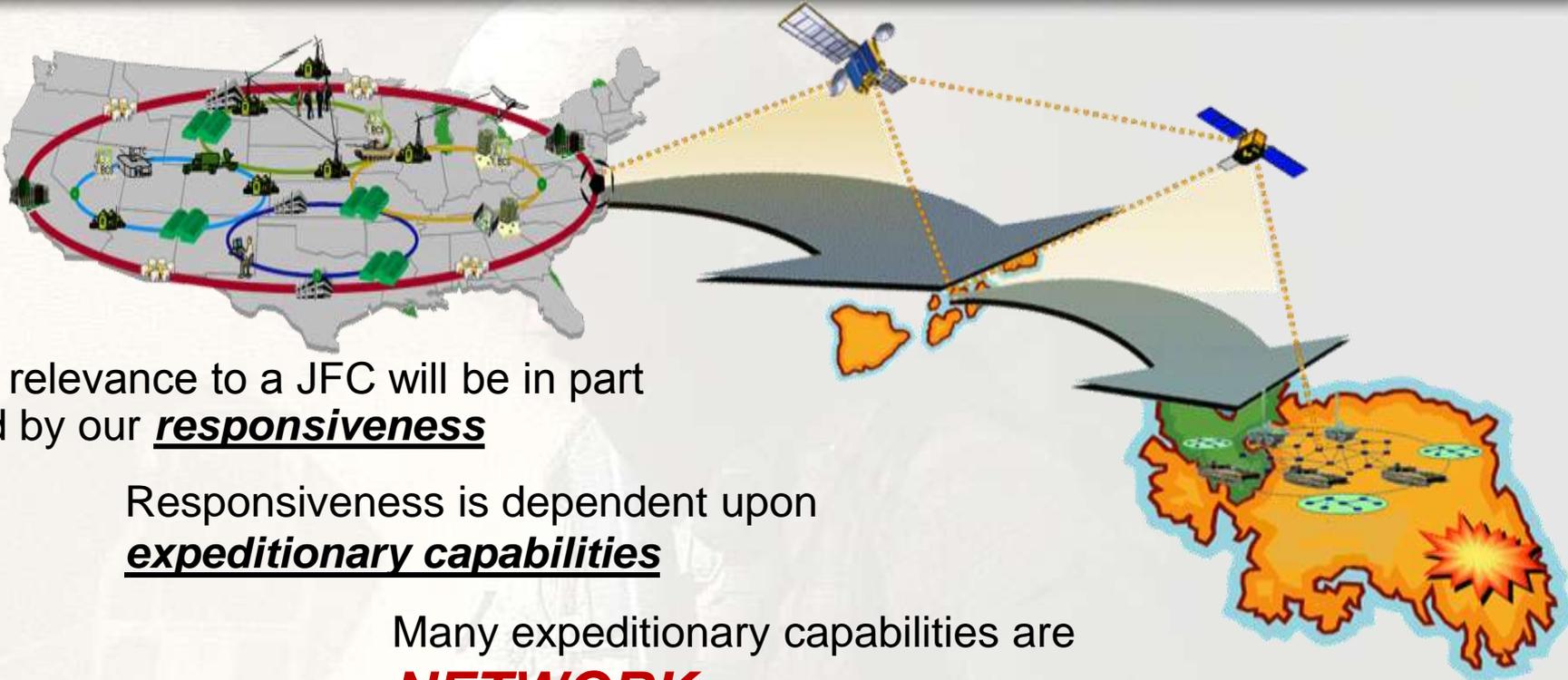


- Data Access & Discovery
- Global Access to the Network
- Single Network Infrastructure
- Common Network Policy & Standards
- Web 2.0 Tools





CONUS Based & Expeditionary



Army's relevance to a JFC will be in part defined by our **responsiveness**

Responsiveness is dependent upon **expeditionary capabilities**

Many expeditionary capabilities are **NETWORK** dependent

“We’re building an Army that is a versatile mix of tailorable and networked organizations operating on a rotational basis ... to provide a sustained flow of trained and ready forces for full spectrum operations ... and to hedge against unexpected contingencies ... at a tempo that is predictable and sustainable for our all-volunteer force.” – Chief of Staff Army, 6 Apr 2010



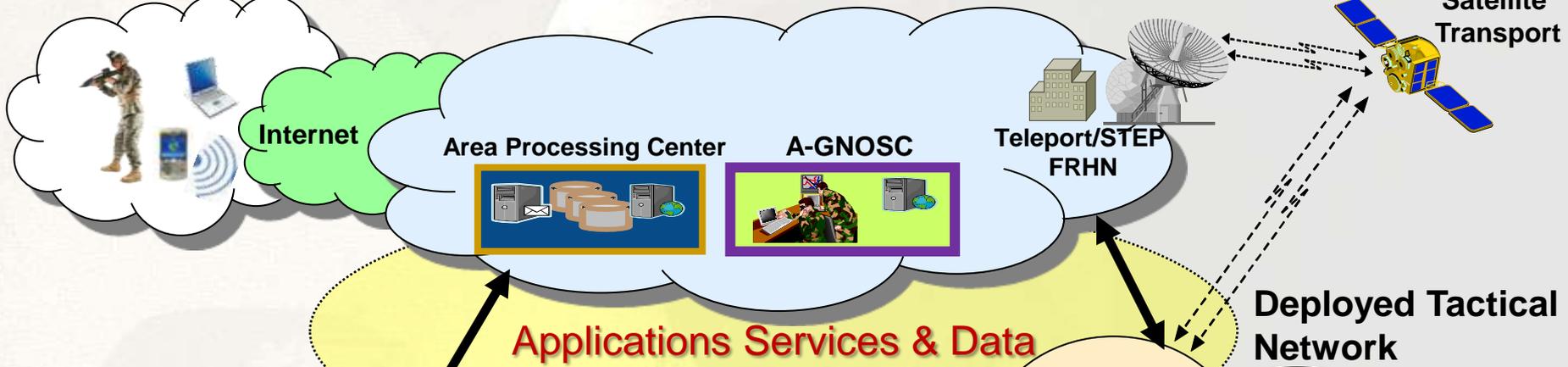
Army Enterprise Architecture



At Home/TDY

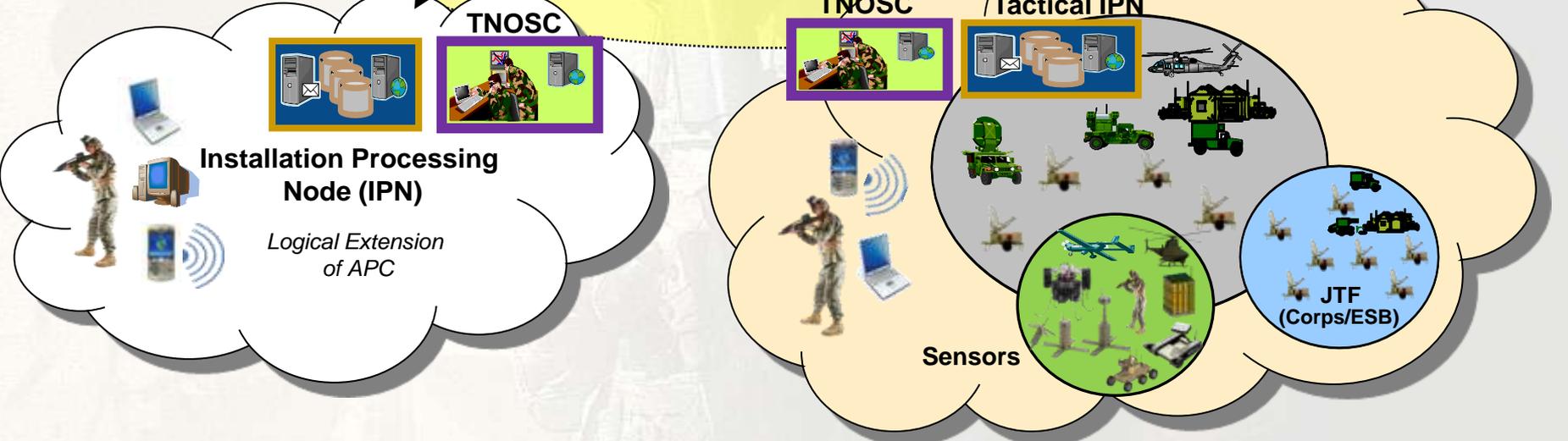
Global Defense Network

Satellite Transport



At Post/Camp/Station

Deployed Tactical Network



Reset (Phases 0-1)

Transition

Deploy (Phases 2-5)

Always Accessible by the Soldier



Transformation Using GNEC Strategy

CSA Memorandum: LandWarNet – Global Network Enterprise Construct Strategy Implementation, 2 March 2009

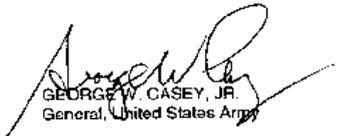


UNITED STATES ARMY
THE CHIEF OF STAFF

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: LandWarNet – Global Network Enterprise Construct

1. We are transforming to become a fundamentally different Army expeditionary force capable of full-spectrum operations. To support this transformation, we will fundamentally change and adapt our institutions, including LandWarNet to a centralized, more secure, operationalized, and sustainable network capable of supporting an expeditionary Army in this era of persistent conflict. To lay the foundation for further network expansion in the future, we will synchronize this transformation with other Army activities including the Army Force Generation model, Base Realignment and Closure, and Global Defense Posture Realignment. In FY09, we will set the foundation for the global network by achieving an initial operating capability of a network service center (NSC) in Europe; expanding these NSCs throughout all other Theaters by FY11.
2. We will use the Global Network Enterprise Construct (GNEC) as the network enterprise strategy. The CIO/G6 will establish new procedures to operationalize the network and improve the overall security of network services and capabilities. We will modify purchasing procedures to achieve better efficiencies in the procurement of our IT systems, and we will pursue joint interoperability with our other Service partners as we construct our network enterprise.
3. In the end, all Army generating force networks will be managed by a single command (Network Enterprise Technology Command (NETCOM)) organizing Army information to make it globally accessible, useful and secure for Soldiers deployed anywhere in the world.
4. The establishment of the Army global network enterprise requires dramatic changes to our current processes and network operations. Our combat-seasoned force is the best in the world, and transforming our network enterprise is central to a land force capable of conducting full-spectrum operations in the 21st Century. Your support is essential for our success.


 GEORGE W. CASEY, JR.
 General, United States Army

“Over the next three years, the Army will transform LandWarNet to a centralized, more secure, operationalized, and sustainable network capable of supporting an expeditionary Army in this era of persistent conflict.” – Chief of Staff, Army

A Soldier's Story



- Ideal End-State**
- Universal E-Mail Address
 - Universal File Storage
 - One Telephone Number
 - Standard Collaboration Tool Set





GNEC Objectives



Operationalize LandWarNet to enable global warfighting capability



Dramatically improve Network Defense posture



Realize Economies and Efficiencies while improving Effectiveness



Enable Army Interoperability and Collaboration with mission partners



Network Service Center – Construct



Fixed Regional Hub Node (FRHN)

- Provides Global Transport
- Intra-Theater Connectivity
- Up to 3 Div per Hub Node
- Connect to each other & DISN services in garrison

Area Processing Center (APC)

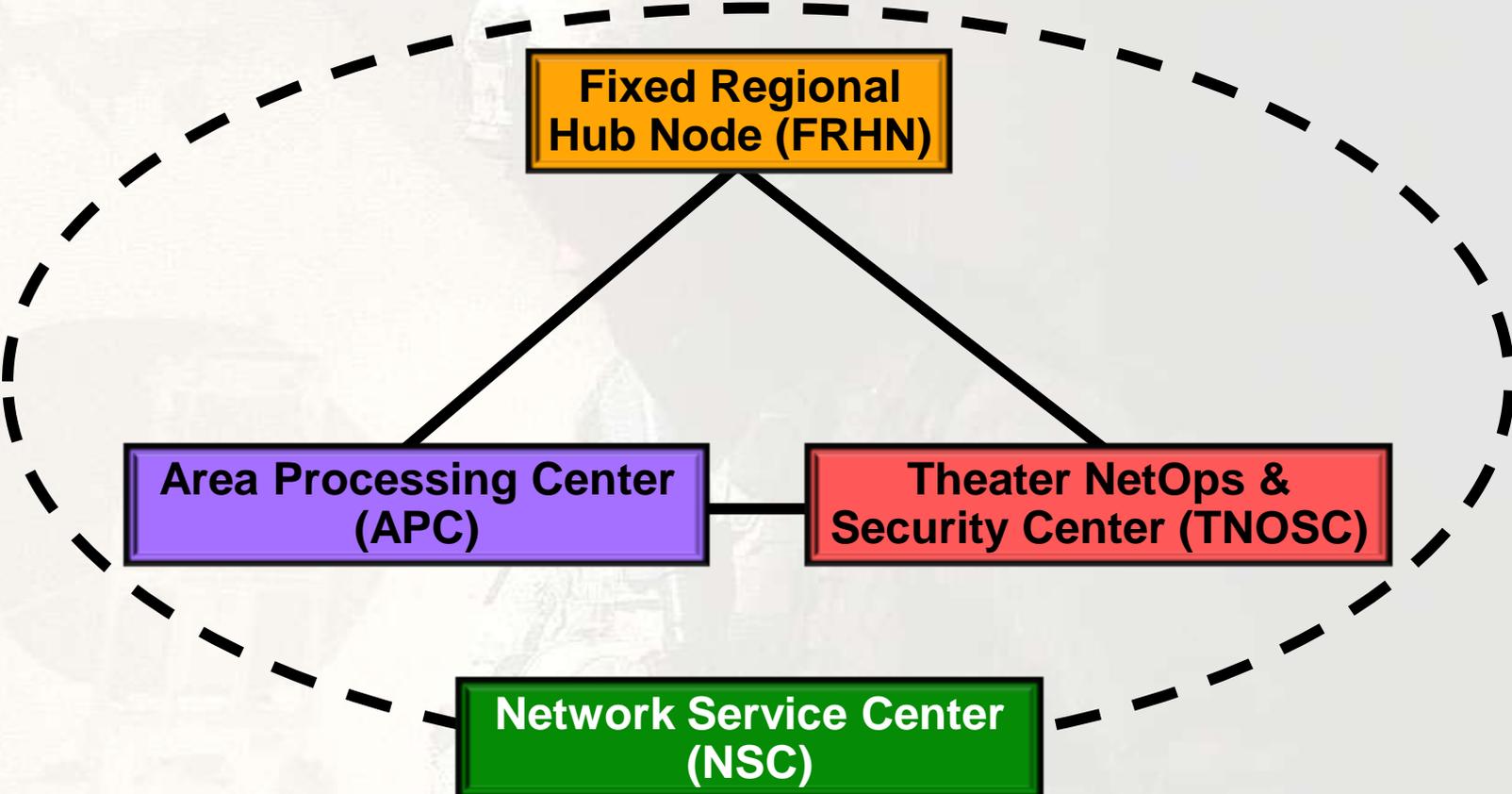
- Data & Applications
- Consolidated IT hardware
- Projection & forward staging of info & services

Theater NetOps & Security Center (TNOSC)

- Technical oversight, enterprise, content, spectrum & Help Desk
- NetOps SA & optimize GIG avail
- Information Assurance & Security



Network Service Center – Construct



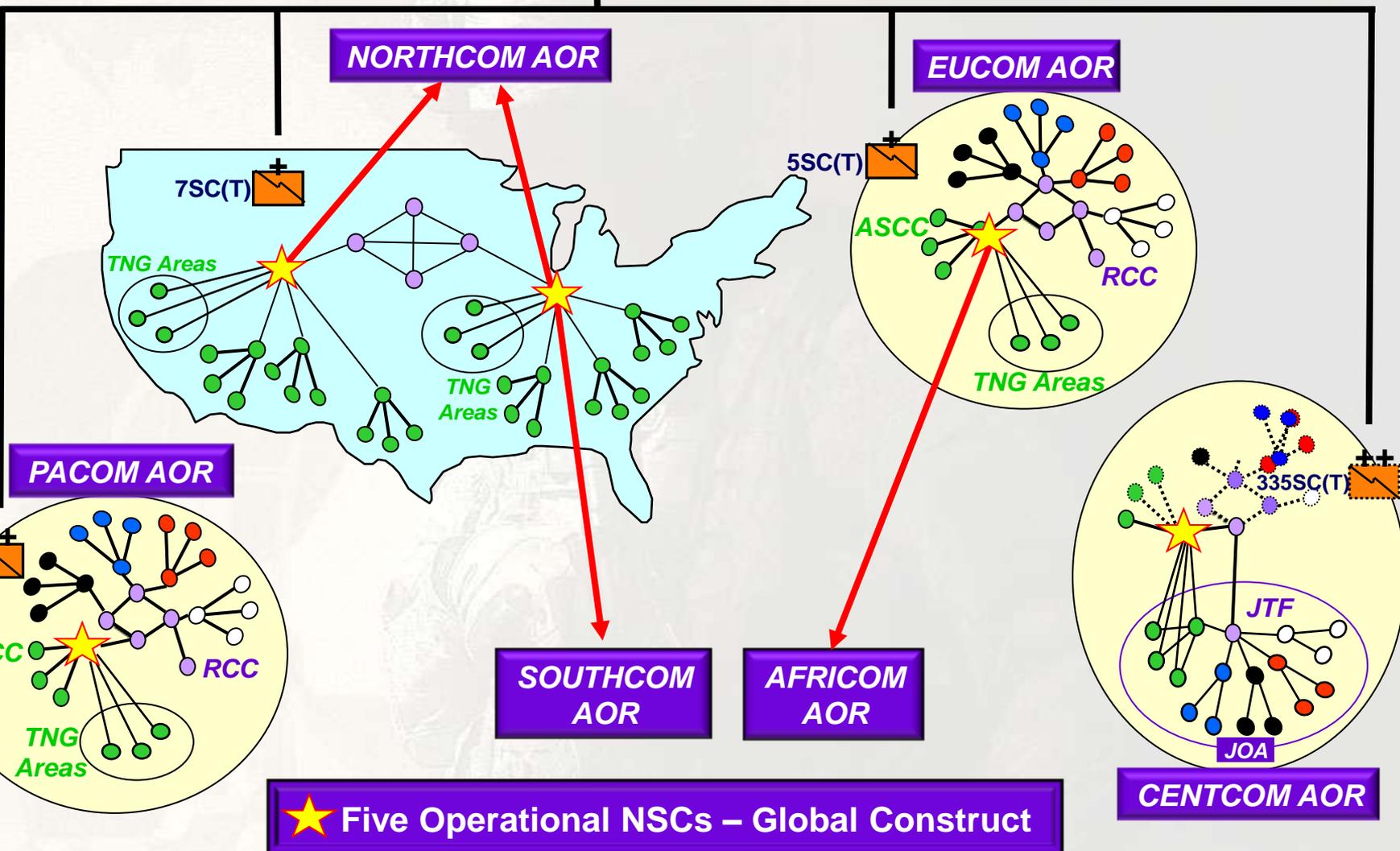
The "Always On" Network



Network Service Center – Construct



9SC(A) NETCOM



Five Operational NSCs – Global Construct

- UNITY OF EFFORT

- ① "BIG 5" OF 21st Cent

- ② WHAT TRYING TO ACCOMP W/
NETWORK? CONCEPT OF BC/EMPOWER
LEADS

- LOWER EXPECTATIONS

- "TO CREATE CONTEXT"

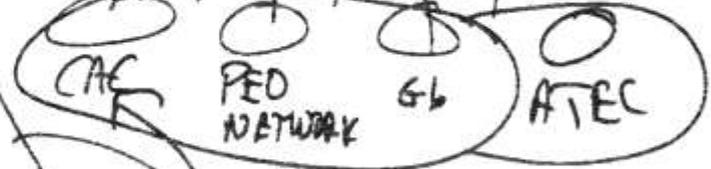
- SIMULATIONS FOR TESTING / NETWORK + BC APPS

- FLEXIBLE / ITERATIVE

- BASELINE ASSESSMENT

- CYBER

GUIDANCE / DIRECTION
REQS / ACN / TECH / TESTING





Transforming Our Army & Our Signal Regiment

Supporting Efforts to Attack the Processes that Slow C4/IT Innovation





Enterprise E-Mail



- Enterprise E-Mail provides functional capabilities:
 - ◆ Synchronize with Active Directory consolidation
 - ◆ Single Global Identity for all users – Soldier's Story
 - ◆ Single Enterprise Service Desk

- Phase 1 Priority will be BRAC Users
 - ◆ Focus on AMC, FORSCOM & TRANSCOM HQs
 - ◆ Expand to Ft Riley, Ft Huachuca & Redstone Arsenal

- Will evaluate performance and potential, then move to Phase 2 for remainder of Army and then DoD



NSC/APC Strategy



- NSC/APC Spiral 1 contract status:
 - ◆ RFP Prep: 2nd-3rd QTR / FY10
 - ◆ Industry Day: 3rd QTR / FY10
 - ◆ SSEB: 3rd QTR / FY10
 - ◆ Contract Award: End 3rd QTR / FY10

- Outcomes of the NSC/APC strategy include:
 - ◆ Migration & Hosting Services for Applications & Data
 - ◆ Infrastructure as a Service
 - ◆ Containerized Services
 - ◆ Disaster Recovery & Business Continuity Services



NetOps '6+1' Toolset



- Active Directory (AD)
 - ◆ Single Forest within CONUS – 12 Feb 2010
 - ◆ Global AD Forest, July 2012
- Remedy ITSM/Enterprise Service Desk (ESD)
 - ◆ Tobyhanna Army Depot ESD IOC – 29 Jan 2010
 - ◆ Toll Free number – available within 90 days
- Systems Center Configuration Manager (SCCM)
 - ◆ NIPRNet CONUS Automated Reporting, TNOSC view NEC Status & Inventory
 - ◆ Federated Reporting Capability, SMS Legacy/CA – 31 Mar 2010
 - ◆ IT Asset Management (ITAM) Automated Aggregation OPORD – 31 Mar 2010
- Host Based Security System (HBSS)
 - ◆ ABCS Synchronization Test – 2 Feb 2010
 - ◆ Deployment Status, 1 May 2010: NIPRNet – 85%, SIPRNet – 41%
- REM/Retina Network Vulnerability Management
 - ◆ NIPRNet – 100%
 - ◆ SIPRNet: CONUS – 30%, OCONUS – 60%, Functional – 0%, Total – 36%

Allows Retirement of 27 Tools & Global Tool Standardization

Proving the Concept: OPVAL-II

Demonstrate Operational Capabilities

- **Early collaboration.** Maintain continuous access to data resources across space & time utilizing a single, persistent tactical identity
- **Fight upon arrival.** Rapidly deploy to an austere environment, fight upon arrival, seize & maintain the initiative without loss of operational tempo or situational awareness
- **Enterprise Battle Command.** Command & control widely-dispersed forces through NSC-provisioned warfighting services



75th Fires Brigade

- *Deploy a BCT-sized unit leveraging the range of global network enterprise capabilities through all phases of its deployment in FY11*
- *Deploy all BCT-sized units relying on the range of global network enterprise capabilities through all operational phases NLT FY12*

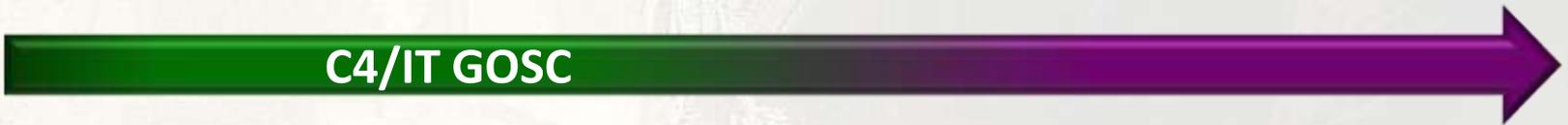
– GEN George Casey, Chief of Staff Army



Transforming Our Army & Our Signal Regiment

Supporting Efforts to Attack the Processes that Slow C4/IT Innovation

CSA Tasker – Unify the Network

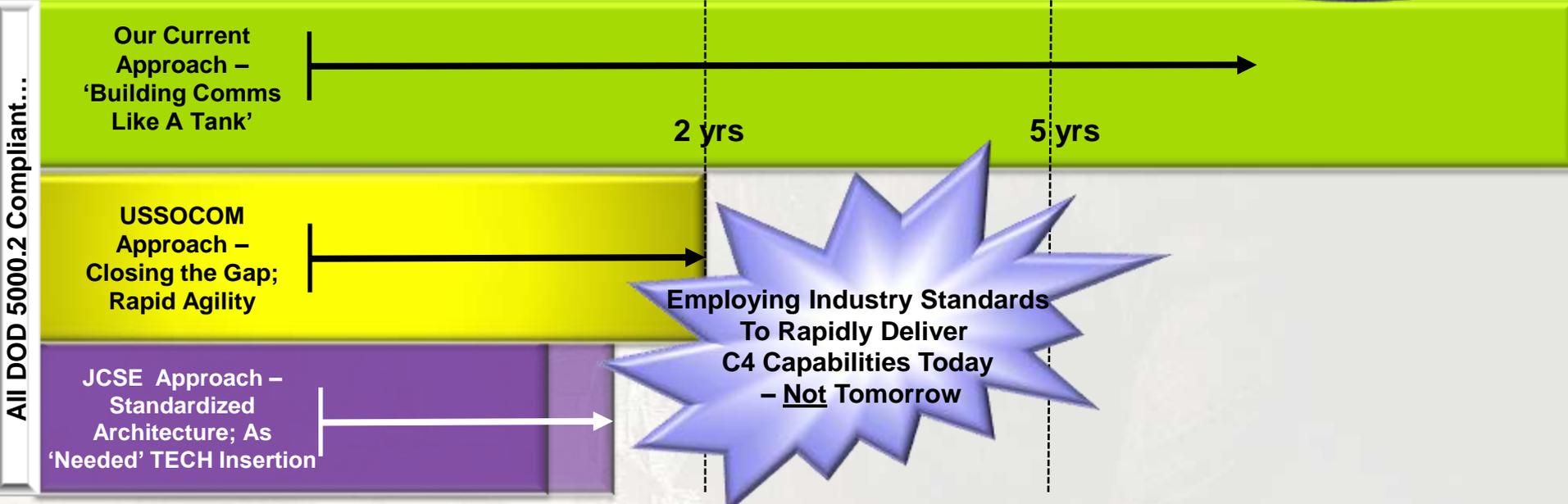
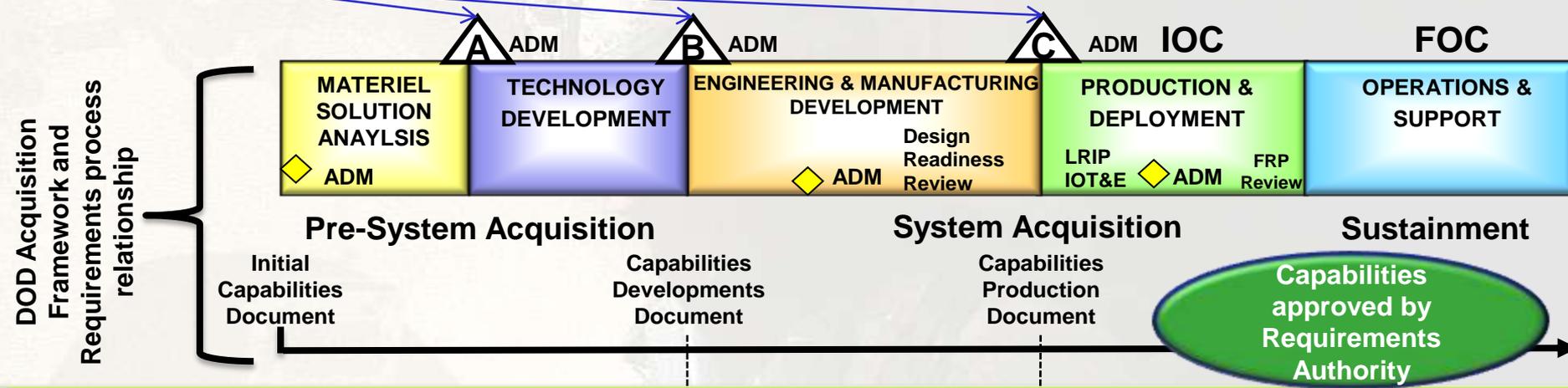




Evaluating Other Processes to Close the Capability 'Gap'

Leveraging Industry Standards ... Remaining DOD 5000.2 Compliant

JCIDS: User needs & Technology Opportunities

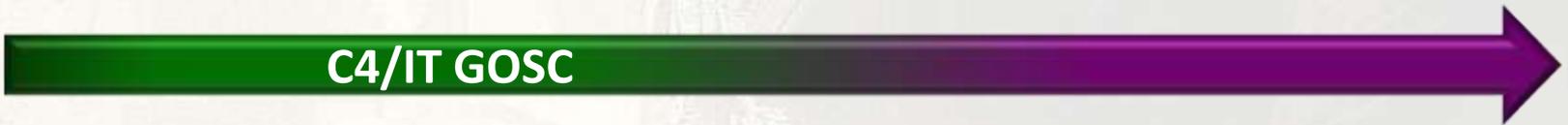




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CSA Tasker – Unify the Network





Current Battle Command Environment

Current



- Hardware Redundancy
- “Bolt-on” Electronics Systems
- Complex Cabling
- Large System Reset & Lifecycle Costs



- Software Redundancy
- “Work-around” Integration
- Complex Knowledge Management
- Large Training & Upgrade Costs

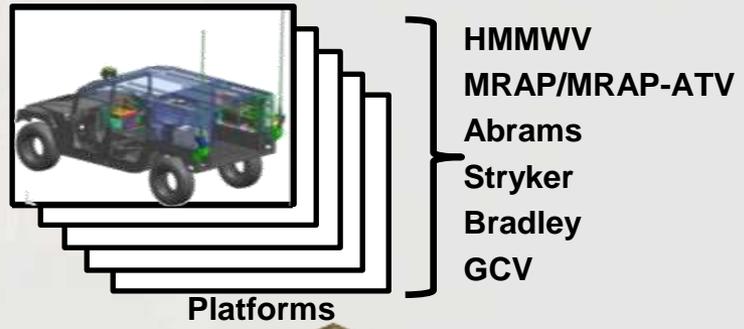


Current Battle Command Environment

Current



Future



Common Network Integration Kits (NIK)



Common Hardware with Integrated Apps





End User Environment & Process

End User Environment

Standardize

| | LINUX | WIN |
|--|-------|-----|
| | ✓ | ✓ |
| | | ✓ |
| | ✓ | |
| | ✓ | |
| | ✓ | |

OS
Security
Development
...

Process

Define Business Process

Select Environment

Develop Application

Submit to App Store

Pilots: PEO IEWS – DCGS C&A; PEO C3T – BC Web SDK; TRADOC & PEO EIS – Mobile Apps, JPM Guardian & ADCF-E2E Process; Apps 4 the Army (non-POR)

Software/Apps Development





Association of the United States Army
Voice for the Army—Support for the Soldier February 2010

Army Software Transformation: Delivering Applications to the Warfighter

[How we integrate information technology into our operations and structure its acquisition is among the most important determinants of our military power.]
Deputy Secretary of Defense William F. Lynn III

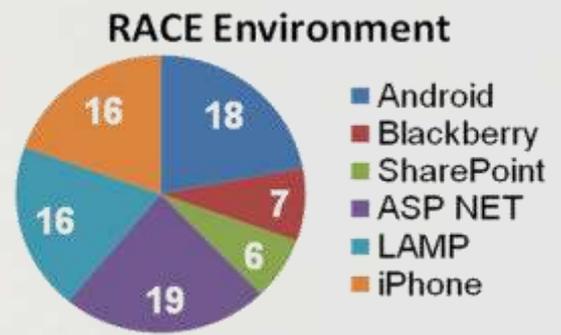
Introduction
During nine years of conflict, facing agile and adaptable enemies, the U.S. Army has continued its transformation using lessons learned on the battlefield. Information technology—including that available to opponents—continues to advance rapidly, but the Army's technology applications are not keeping pace. To address this problem, the Army has developed a strategy to transform the way it acquires and implements computer software solutions.

Speeding up the Army's software acquisition process will require fundamental changes. With that in mind, the Army's senior leadership has launched Army Software Transformation,¹ an effort to radically decrease the time it takes to deliver relevant applications across the force. This will be accomplished using an enterprise approach that makes better use of the Army's limited resources and aligns all institutional assets to respond to dynamic operational requirements.

Success in this effort will require radical re-orientation of business models and processes,² and the Army is looking to private industry for lessons learned and best practices that it can adopt. Innovative approaches such as those in use at Apple's App Store, agile development processes employed by competitors like eBay and platform standardization are key to increasing the pace of technology innovation. The evolution of smartphones in recent years illustrates the effect the Army is trying to achieve: each generation takes only months to develop and delivers more capabilities (both superior built-in functionality and increased access to inexpensive applications) for less money.

Limitations of the Current Environment
Today, the warfighter's information environment (e.g., e-mail address, phone number, network connectivity) changes when moving among home-station, training and deployment locations, interrupting work and degrading productivity. The Army's goal is for Soldiers to have a smartphone-like experience when applications, services and data are accessible globally without requiring end-user

¹ From remarks at the Defense Information Technology Acquisition Summit, Washington, D.C., 12 November 2009, http://www.defense.gov/press/releases/defense/091112_AUSA_ILW_Broadcast.pdf
² For further information, see Lieutenant Colonel Jeffrey A. Soehren, Chief Information Officer-G-6, November 2009 presentation to the AUSA Institute of Land Warfare, http://www.army.mil/ago/inf/inf/091112_AUSA_ILW_Broadcast.pdf
³ For greater discussion of this point, see General Peter W. Chiswell, Vice Chief of Staff, United States Army, interview with "National Defense," October 2009, http://www.nationaldefensemagazine.org/article/2009/October/Pages/Army's_ViceChief_of_Staff_Hosts_Special_Press_Wire_Presentation.aspx



- Web Application Development Challenge
- 114 Projects Registered & 42 Submitted

| | Civilian | Enlisted | WO | Officer | Totals |
|-----------------|-----------|-----------|----------|-----------|------------|
| Active Military | | 22 | 1 | 15 | 38 |
| National Guard | | 1 | | 1 | 2 |
| Reserves | | 7 | | 5 | 12 |
| Civilians | 66 | | | | 66 |
| Totals | 66 | 30 | 1 | 21 | 118 |

- Employee Cash Awards up to \$30,000
- Details, info & registration on AKO at:

<http://www.army.mil/ciog6/armyapps>

- AUSA Torchbearer brochure available on AUSA site at:

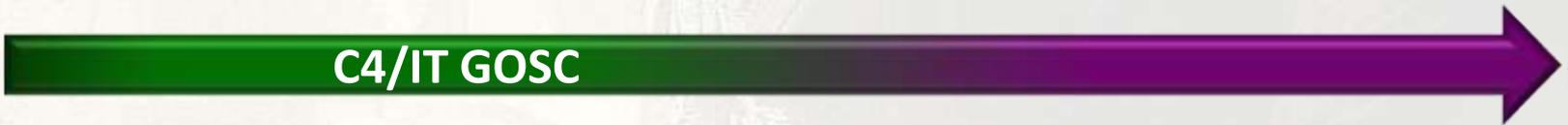
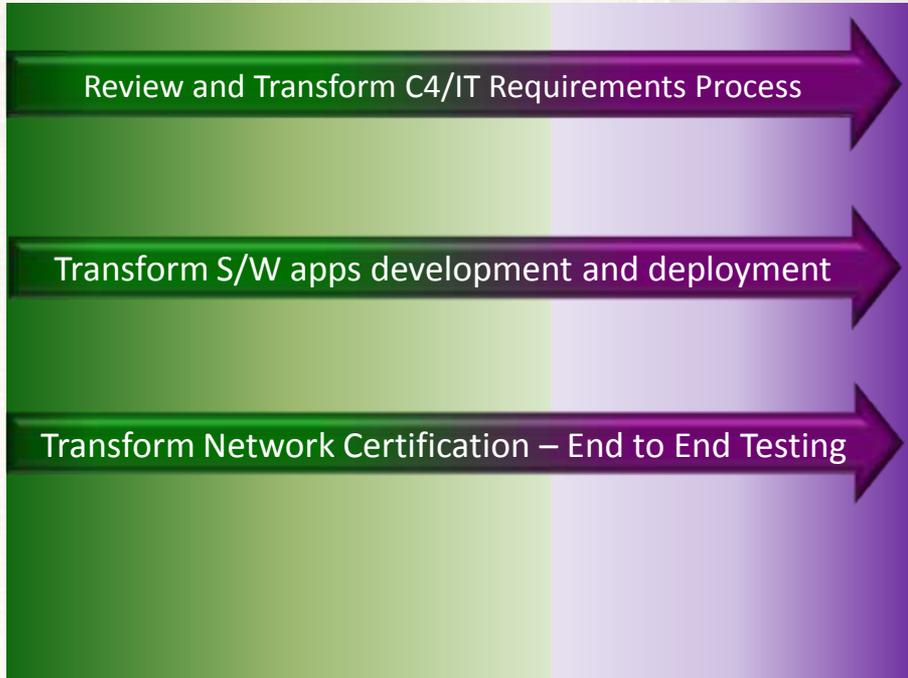
<http://www.ausa.org/publications/ilw/pages/default.aspx>



Transforming Our Army & Our Signal Regiment

Supporting Efforts to Attack the Processes that Slow C4/IT Innovation

CSA Tasker – Unify the Network

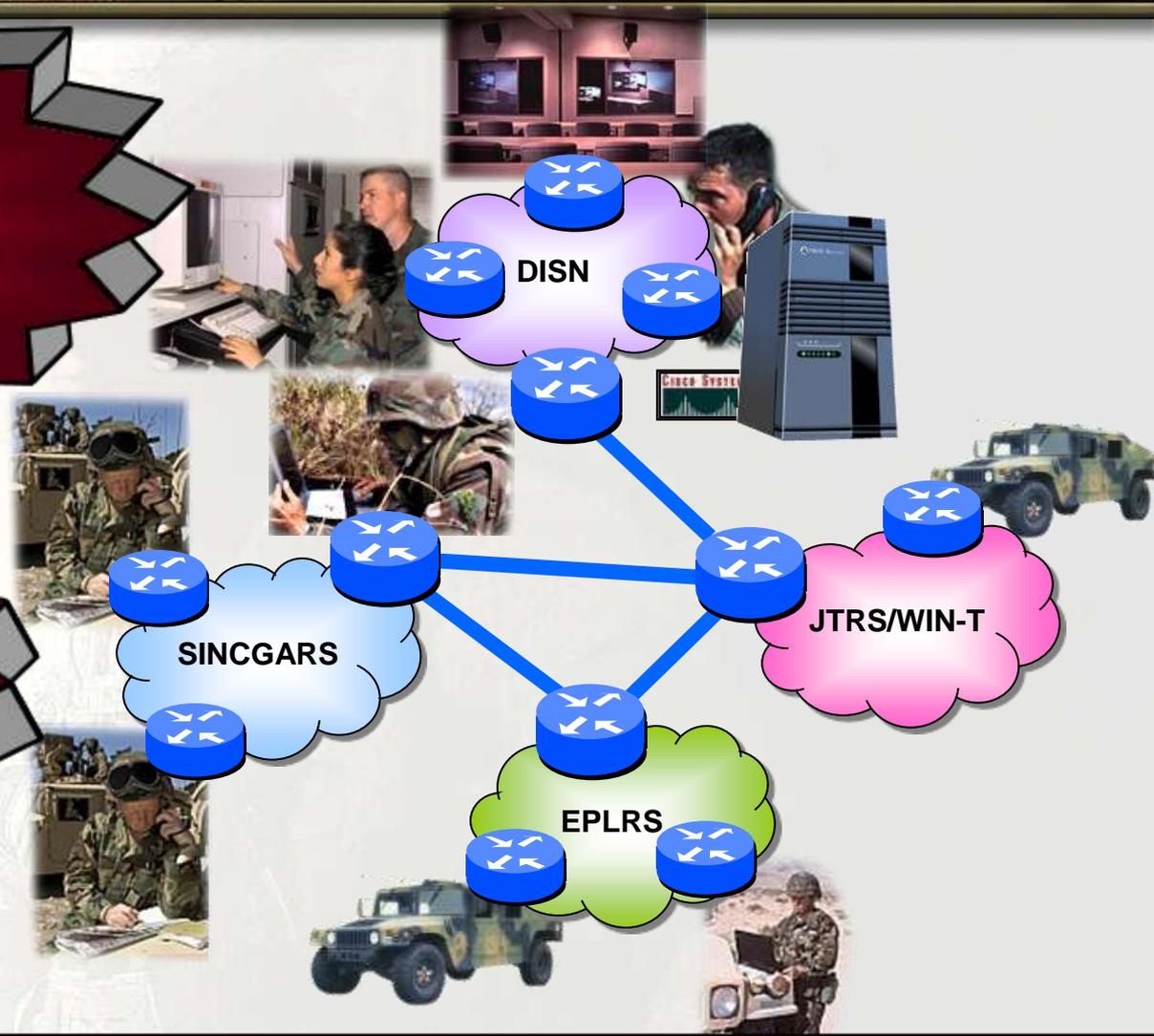




Moving to "Everything Over IP" (EoIP)

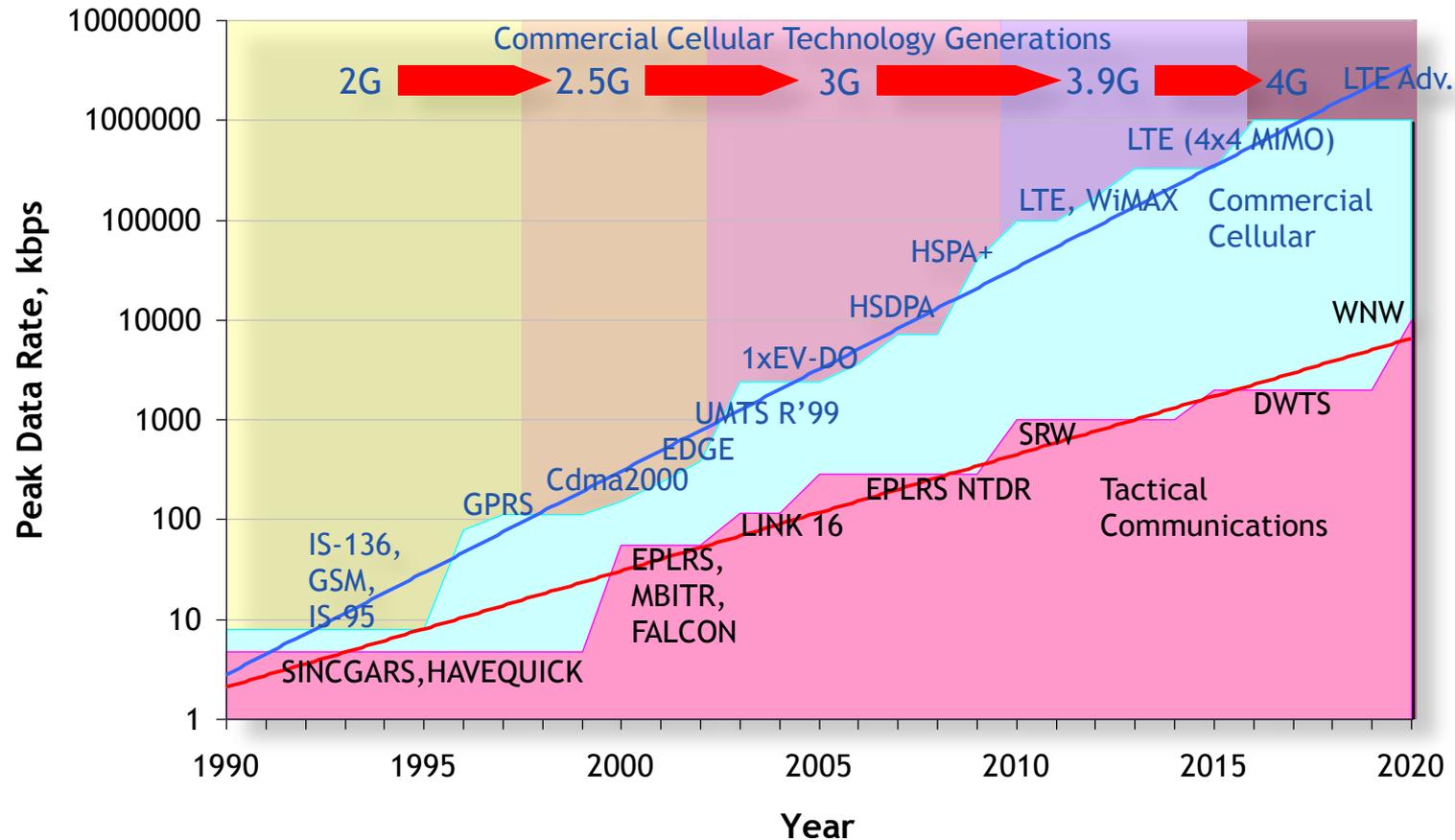
IP routers connect dissimilar networks

end-to-end interoperability



Internet Protocol networking provides a *seamless convergence layer* for all applications and networks ... and Sensors, Fire & Maneuver

Commercial Cellular & Tactical Communications Data Rate Evolution

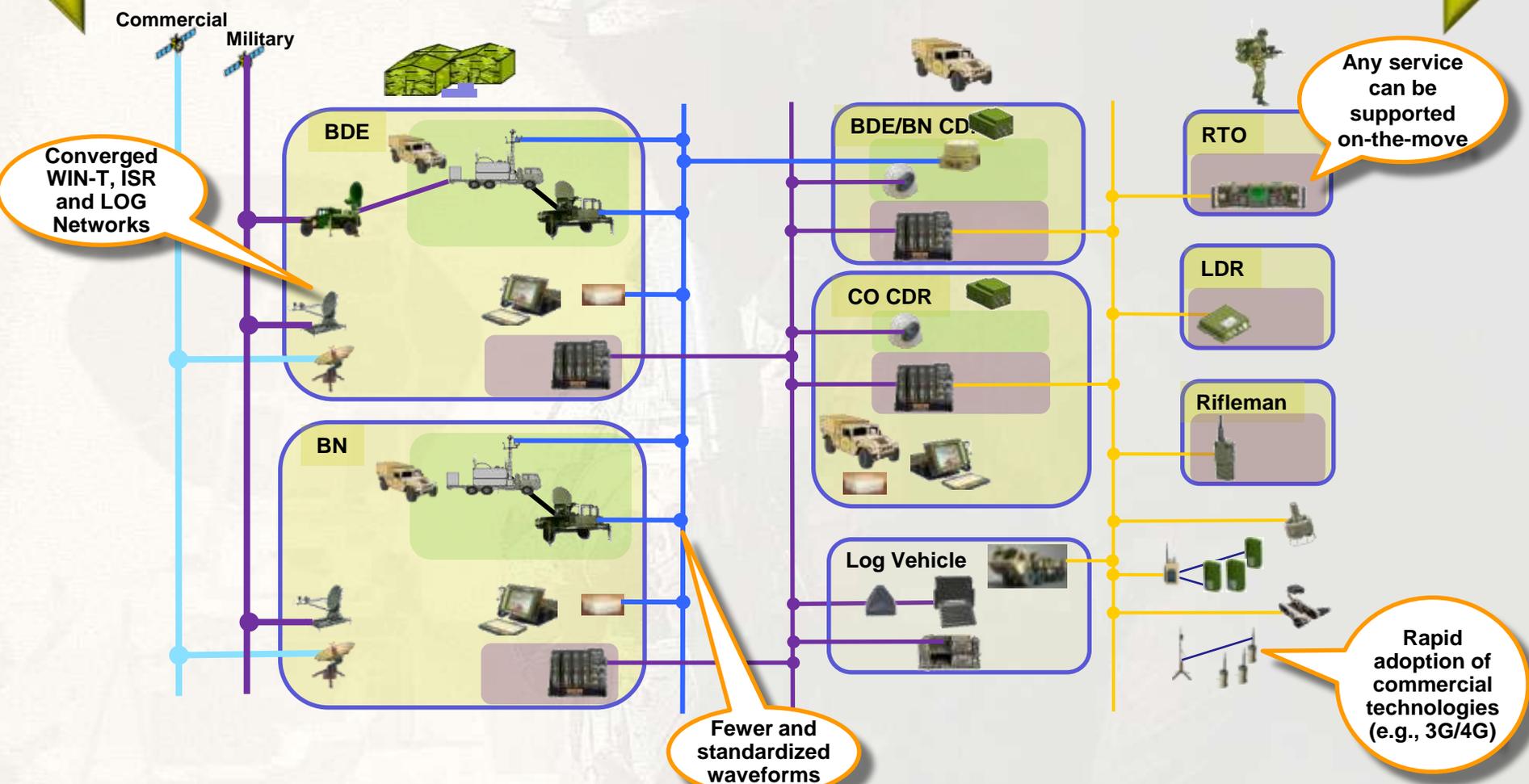


The Commercial Marketplace is Driving Innovation at an Accelerated Pace vs. the DoD market – DoD should Leverage this Innovation More Effectively



Example 'To-Be' Network Architecture Eliminating the Stovepipes

*All systems riding a common, interoperable EoIP Backbone
Establishing a 'plug and play' environment*





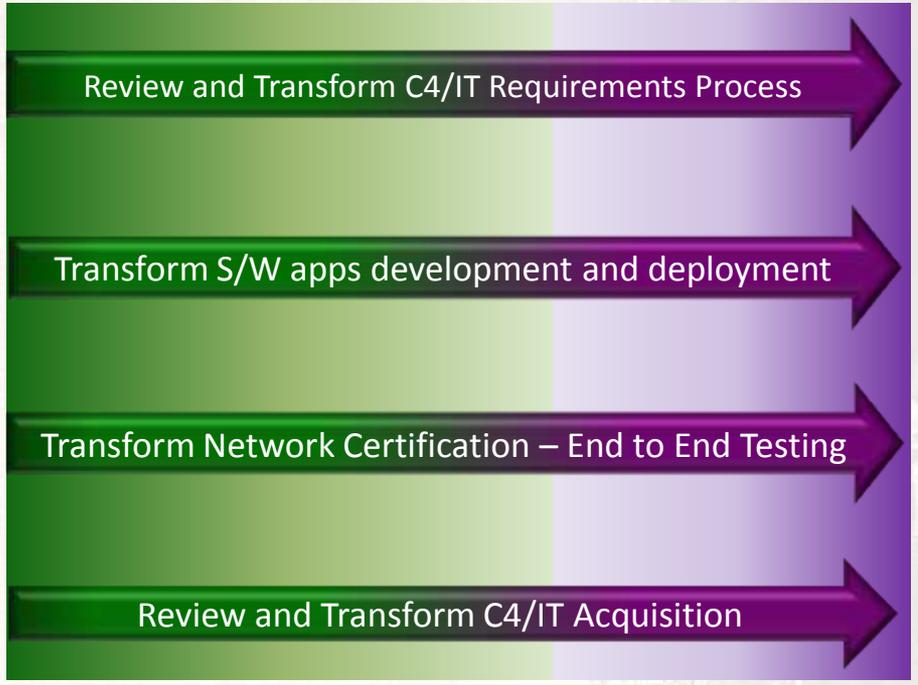
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VCSA Memo

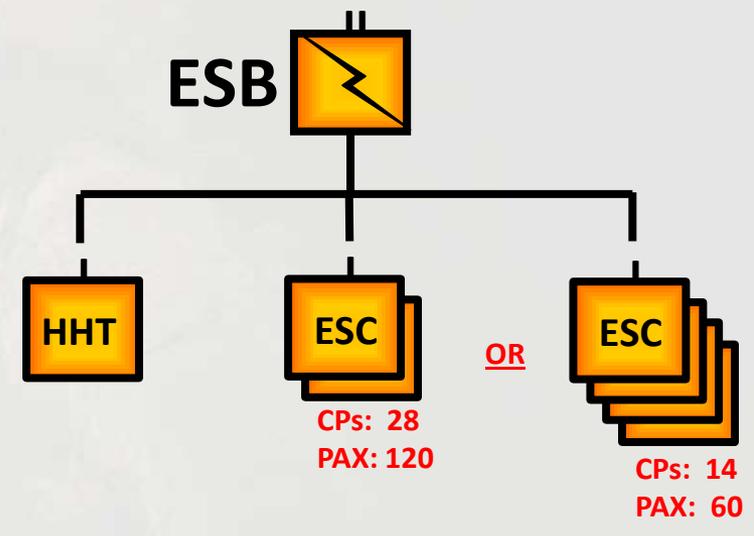
Establish Governance Over The Deployment of the Network

CSA Tasker – Unify the Network



‘End State’ Architecture to Guide Investment

Our End State
Influence POM 12-17....



...and Re-Balance Signal Forces thru the FAA



Mission Statements



USCYBERCOM Mission:

USCYBERCOM plans, coordinates, integrates, synchronizes and conducts activities to: direct the operations and defense of specified DoD networks; prepare to, and when directed, conduct full spectrum operations in and through cyberspace IOT enable actions in all domains, ensure US/Allied freedom of action in cyberspace and deny the same to our adversaries.

Recommended ARFORCYBER Mission:

ARFORCYBER plans, coordinates, integrates, synchronizes, directs and conducts network operations and defense of All Army networks; when directed, conducts cyberspace operations in support of full spectrum operations to ensure US/Allied freedom of action in cyberspace, and to deny the same to our adversaries.

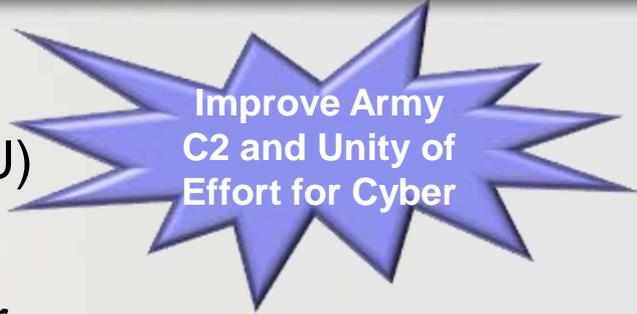


Recommended COA



■ Stakeholder Agreements:

- ◆ Assign NETCOM to ARFORCYBER (vs. DRU)
- ◆ OPCON INSCOM for Cyber Operations
- ◆ Establish integrated Cyber Operations Center



Improve Army
C2 and Unity of
Effort for Cyber

■ 3 Star Commander for ARFORCYBER: On par with other Service Component Leadership; provides one point of contact for Army Senior Leadership

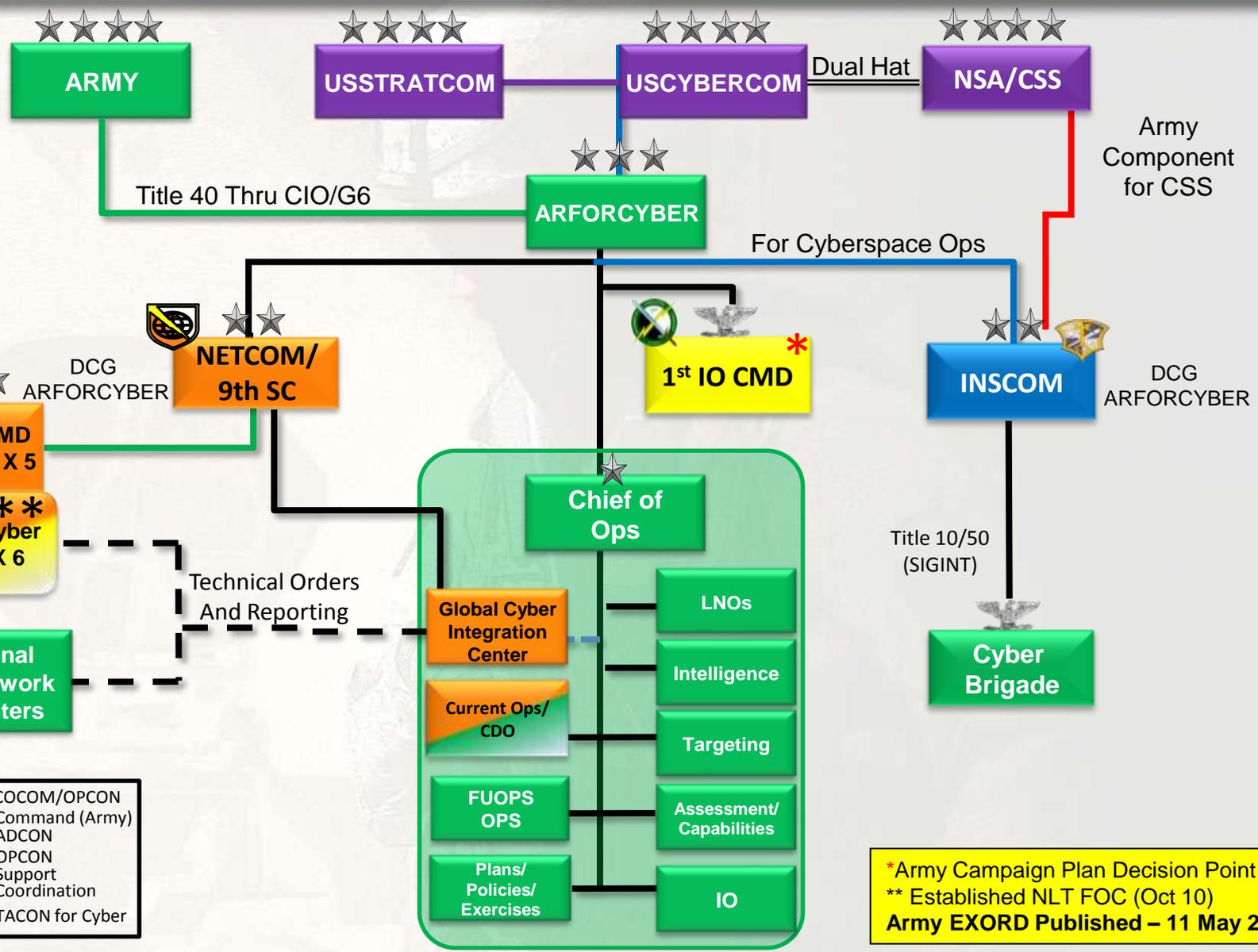
- ◆ New Command with single mission – focused on Cyber
- ◆ Entire command and staff in the National Capital Region – Center of Gravity for DoD Cyber Operations, proximity to USCYBERCOM

■ Efficiency and/or Affordability:

- ◆ Establishment of New Command achieves improved unity of command and effort in the near and long term



COA: Hybrid (New Org)



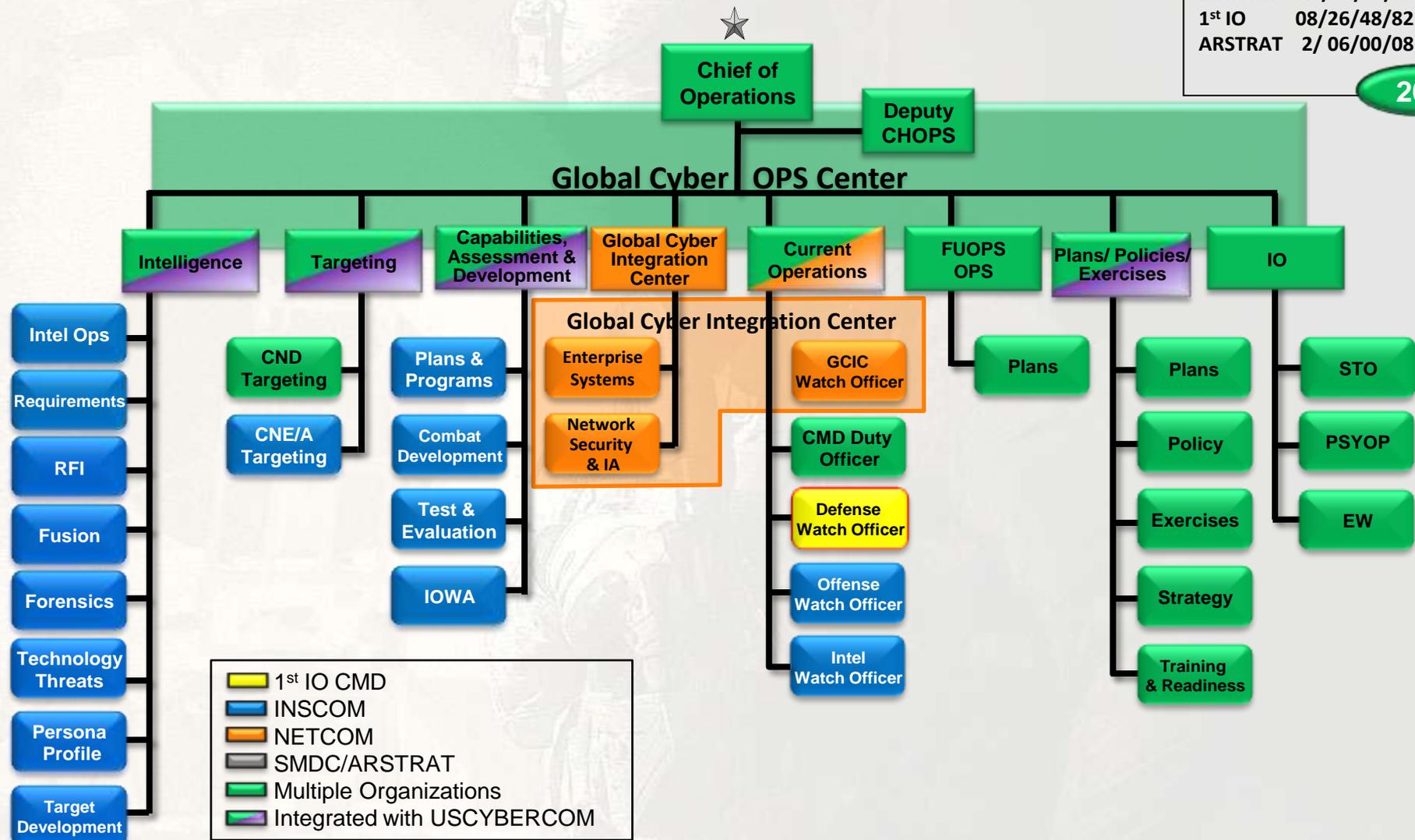


Global Cyber Operations Center



| | M / D / C / TOT |
|--------------------|-----------------|
| NETCOM | 13/09/28/50 |
| INSCOM | 39/30/0/69 |
| 1 st IO | 08/26/48/82 |
| ARSTRAT | 2/06/00/08 |

203



- 1st IO CMD
- INSCOM
- NETCOM
- SMDC/ARSTRAT
- Multiple Organizations
- Integrated with USCYBERCOM



POM 12-16 Key Initiatives



- Provide baseline C4IM Services and enable the transition to more efficient and effective service delivery
- Identify and resource C4/IT “Other Procurement Army” (OPA) for SRM and minor construction consistent with OPA tails identified and resourced for MILCON requirements
- WIN-T and JTRS full funding
- Establish enhanced oversight of Commercial SATCOM
- Modernizing IT Infrastructure
 - ◆ Network Modernization
 - ◆ Tactical & CONUS-based Server Implementation
- Area Processing Center Stand-Up and Sustainment
 - ◆ (Columbus, OK City, Redstone, Bragg)
 - ◆ Establish and promote federated data centers



Conclusions



- ① Global Network Enterprise Strategy
...transforming to an Expeditionary Army
- ① Global Network Enterprise Construct
...Operationalize, Defend, Efficiencies & Effectiveness, Joint
- ① Unity of Effort – Warfighter Support
...transforming Our Army & the Signal Regiment
- ① Shared Situational Awareness
...Bottom Line for the Joint Warfighter





Celebrating 150 Years of Signal Corps Support to the Warfighter



ARMY STRONG!



QUESTIONS + THOUGHTS



LTG Jeff Sorenson

Chief Information Officer/G-6, HQDA

**AMERICA'S ARMY: THE STRENGTH OF THE NATION
ARMY STRONG**