Mission Command Network Modernization

AFCEA
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CSA's Principles, Characteristics and Requirements

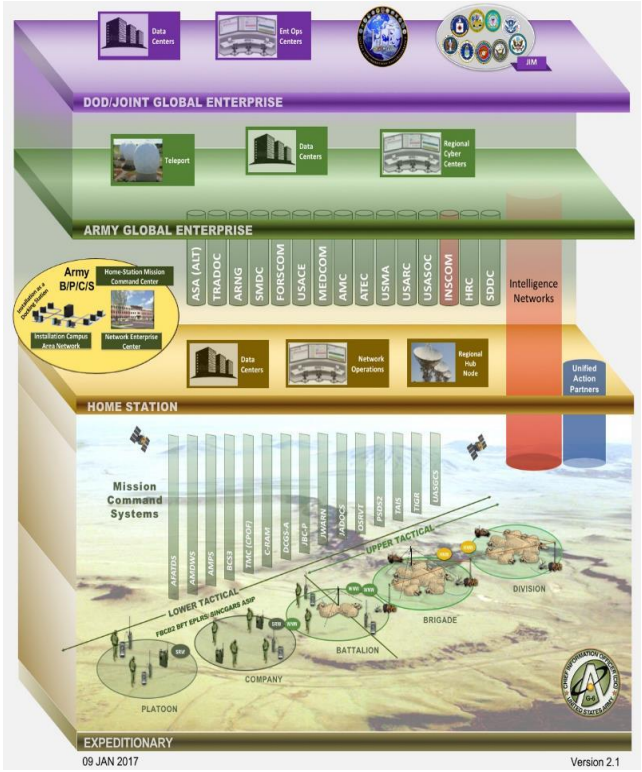
Principles (Why)	Warfighting Requirements	Characteristics of the Network	Technical Network Requirements
Mission: The Army must fight and win wars against adversaries… 1st Principles: The Army network must enable: 1. Conduct of War: Execution of expeditionary, world-wide, Unified Land Operations (ULO) to shape, prevent, and win as a part of Unified Action in all domains and all environments (Note 1/2/3/4) 2. Preparation for War: Execution of Title 10 responsibilities to man, train, and equip the force, and to build and sustain readiness.	❑ Able to fight, shoot, move, communicate, protect, and sustain ❑ Reliably communicate anywhere, anytime, in all domains, in all environments, against any foe	❑ Simple and Intuitive, single mission command suite (Single COP), installed, operated and maintained by Soldiers ❑ Available, Reliable and Resilient with the ability to operate in all operational environments against any enemy ❑ Expeditionary and Mobile, voice, data, and video on the move ❑ Standards-based, protected, and dynamic network that is upgradeable over time ❑ Enables the Warfighter to Observe, orient, decide, and act faster than the enemy in the conduct of ULO (Note 4) ❑ Enables use of the network as a weapon system ❑ Enables leaders to lead and fight their formations from anywhere they choose	❑ Must be capable of adequate secure communications, provides voice, data, video in all environments ❑ Capable of providing situational awareness down to Platoon level ❑ Device works anywhere in the world; installed, operated and maintained by Soldiers ❑ Standardized: Runs on a COE, common graphics, applications, and integrated data ❑ Ensures continuous Joint interoperability enabling agile and adaptable operational flexibility ❖ i.e., Enables Rapid Task Organization and employment of joint capabilities ❑ Mitigates electronic signature ❑ Accessible to allies and coalition partners

Note 1: Unified Actions Partners – Consisting of Joint, Interagency, Intergovernmental, and Multi-National (JIIM) partners
Note 2: Domains – Land, maritime, air, space, cyber
Note 3: Environments – Permissive, non- permissive, contested, denied

Note 4: ULO – Simultaneous offense, defense, and stability or defense support of civil authorities tasks to seize, retain, and exploit the initiative and consolidate gains to prevent conflict, shape the operational environment and win our nations wars as part of unified action

Modernization Path

Current State



- Doesn't enable mission command
- Lacks end-to-end interoperability
- Complex and Fragile
- EMS Vulnerable
- Multiple identities
- Crypto mod challenges
- Software baselines = interoperability challenges

Network Modernization Plan

<u>Four Lines of Effort</u>:

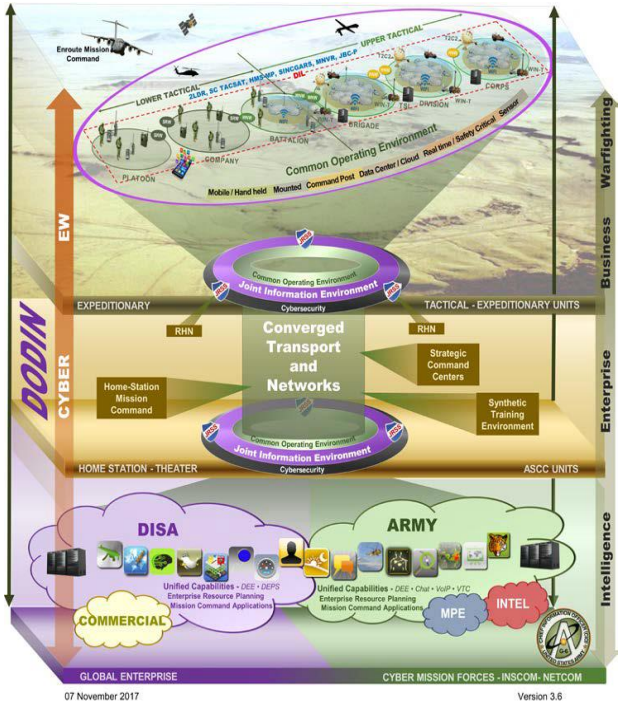
- Unified Network
- Common Operating Environment
- Interoperability
- Command Post

<u>Supporting Efforts</u>

- Institutional Reform
- Policies and Governance
- Research and Development
- Science and Technology

Future State

- Seamless end-to-end connection and pace plan
- Self-generating, self-healing, multilayered integrated network
- Unified Transport Layer →End User Device
- Unified Mission Command Suite
- Simple and Intuitive
- Available, Reliable and Resilient
- Expeditionary and Mobile
- Standards-based, protected, upgradeable
- OODA Faster than the enemy
- Network is a weapon system



Network Modernization Strategy

What is the Army's Network Modernization Strategy?

Vision: An integrated/unified, end-to-end, warfighting network that is flat, fast, mobile and protected which enables leaders to lead and fight their formations from anywhere they choose

Ends: A cascading set of successive future states achieved through four lines of effort:

- Unified Network - Supporting all theater of operations
- Common Operating Environment – Unified suite of mission command applications
- Interoperability – Among all Army elements, Joint and Coalition partners
- Command Posts – Deployable, mobile and survivable

Ways: Implement the pillars of "halt", "fix" and "pivot" across the four lines of effort. Objectives established over time allowing the Army to develop and apply the means to achieve successive future states.

Means: Reinvest the funding from the programs halted in FY18 to fix our fight tonight capability (improve readiness) and then shift to focused investments in RDT&E and proven industry, Joint and SOF solutions to pivot to the next generation network.

New Path Forward

1. **Halt** programs that cannot be sufficiently remedied

2. **Fix** programs required to "fight tonight"
   - ❑ Command posts → Improve survivability and mobility
   - ❑ Transport → Integrate the upper and lower tactical internet into a unified transport layer; increase survivability to Electronic Warfare/Cyber threats
   - ❑ Mission Command Application Suite → Common Operating Environment
   - ❑ Interoperability → Joint and Coalition gateways and Tactical Data Links

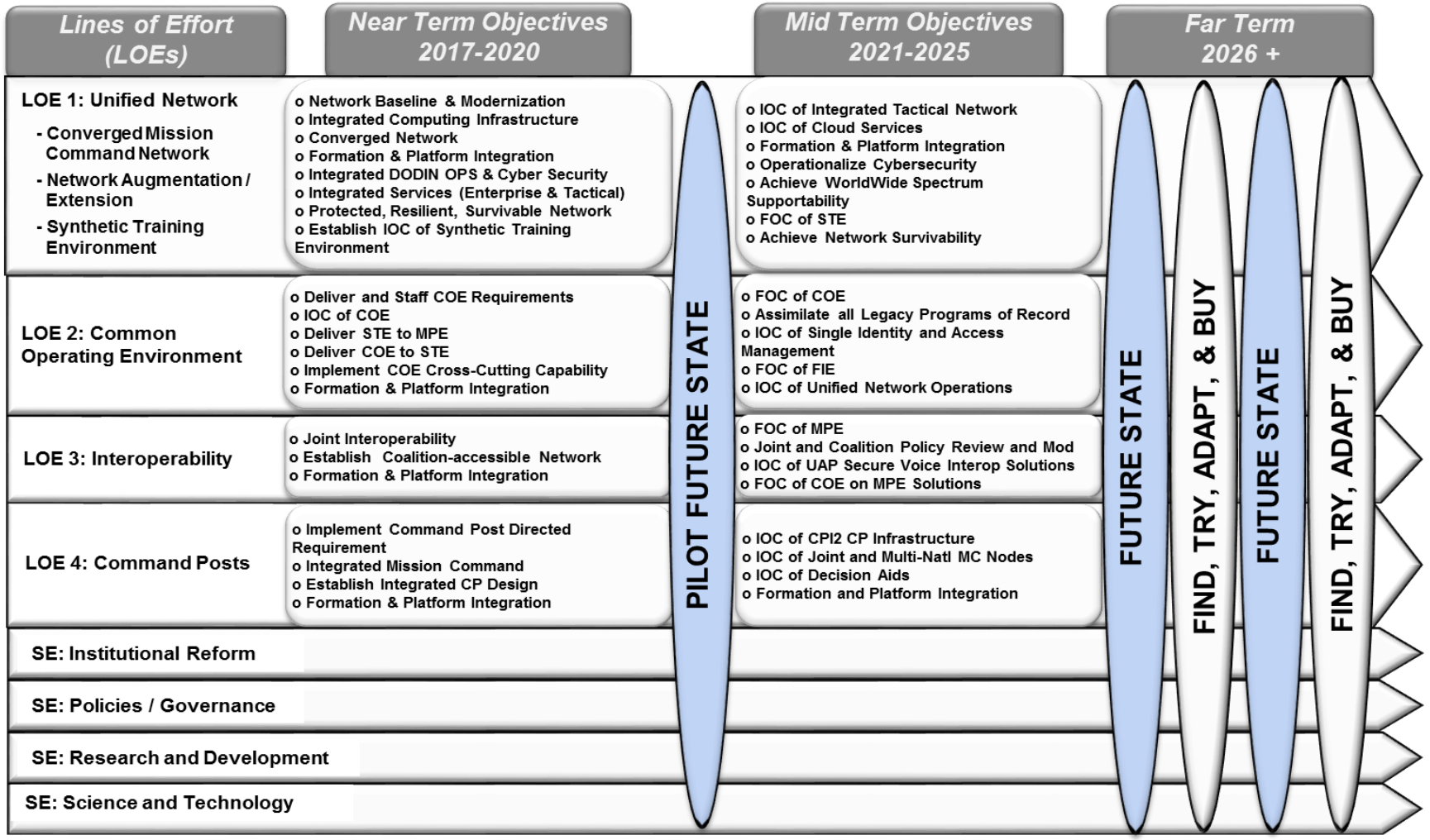
3. **Pivot** to a new adapt and buy approach
   - ❑ Design "future state" network to address shortfalls, counter the threat, and keep pace with technology
   - ❑ Through experimentation and demonstration, adapt and buy current available Joint/SOF and industry solutions where possible
   - ❑ Develop future solutions through RDT&E and S&T; develop new Programs of Record only to meet a unique warfighter requirements

Requires significant change in current acquisition approach; unity of command, effective governance, an integrated body of requirements, and standards based architecture

Implementation Plan Framework

Three Phases: to 2020, to 2025, to 2026+

3 – 5 Year Sprints Between Future States



A cascading set of successive future states achieved through four lines of effort