

# Army SE Overview NDIA System Engineering Conference 25 October 2005

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## **Army Status**

- System Engineering Is Being Done in Army Programs; We Need to Ensure That It Is Consistent Across the PEOs.
- Training Is Widely Available but Standards Need to Be Established
  - One PEO/RDEC Has Established a Masters Program With a Local University. Is That the Right Benchmark?
- Metrics Are Widespread and Industry Focused; Need a Minimum Set of Common Metrics to Measure Overall Program Performance.
- Requirements Are Done Outside of the SE Process; Should SE Support the Requirements Generation Process?
- Army Needs to Establish an Easily Accessible Set of Best Practices
   That Can Be Shared Across PEOs.
- System Engineering Is Not Formally Integrated Into S&T Programs
   How Should It Be Integrated Into S&T? At What Level



# Sec. Bolton's Challenges

- Systems Engineering:
  - Does Not Help Us Politically
  - Does Not Stabilize Funding
  - Does Not Belong in the Requirements Process
  - Does Not Clearly Address System of Systems



## **Army System Engineering Policy**

The Army System
Engineering program
and policy approved
(13 June 2005)

- •Requires a SEP for each program
- Establishes a System Engineer within each program and PEO.
  - Establishes Peer review at all major technical reviews
    - Establishes the PEO as the SEP approval authority



### DEPARTMENT OF THE ARMY

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MEMORANDUM FOR PROGRAM EXECUTIVE OFFICERS
DIRECT REPORTING PROJECT MANAGERS

SUBJECT: Army Systems Engineering Policy

The Under Secretary of Defense for Acquisition, Technology and Logistics issued policy to reinvigorate systems engineering within the Department of Defense. Guidance for implementing systems engineering across Army Acquisition, Logistics and Technology is enclosed.

The Assistant Deputy for Acquisition and Systems Management, Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology, will chair an Army Systems Engineering Forum (ASEF) that is chartered to institutionalize effective systems engineering practices across our workforce and programs, and to promote collaboration across our requirements, acquisition, logistics, and testing communities. Each Program Executive Officer and Direct Reporting Program Manager is to designate a Chief System Engineer to participate on the ASEF. I expect the ASEF to plan, coordinate, manage, and execute initiatives for the resurgence of effective systems engineering, balancing programmatic cost, schedule, and supportability with technical reality. Within two weeks, please provide the name of your Chief System Engineer to Dr. James Linnehan, SAAL-SSI, (703) 604-7430, or e-mail: James Linnehan@saalt.army.mil.

Systems engineering excellence can integrate all elements of our U.S. Army community into a process driven disciplined team, producing timely, affordable, high quality products meeting the needs of our warfighters. I look forward to working with you to make this vision a reality and compelling success.

Claude M. Bolton, Jr. Assistant Secretary of the Army (Acquisition, Logistics and Technology

Enclosure

CF: USD(AT&L) CG, AMC CG, TRADOC



# **SE Proposed Initiatives**

- Develop Army policy & SEP Implementation Instructions
- Training/ certification
  - Review institutional training for NDU, DAU, USMA.
- System Of Systems engineering
  - Determine strategy for maintaining SoS interdependencies
    - PEO technical lead for System Architecture
    - TRADOC Oper. Architecture lead w/JFCOM



# **Capability Based Acquisition**

Army is transitioning to more and more Capability Based acquisition

- Software blocking Ensures end to end operability for all current and future battle command
- Future Combat System- 1st Army System of Systems capability based acquisition focused on developing and procuring a brigade level set of equipment
- Army Air and Missile Defense Develops the requirements and products to provide AMD capability



### **Future Initiatives**

- Contract language How do we write templates that capture real value and discriminate between offerors?
- The Requirements Development process How do we integrate SE to take advantage of the first level of Trade space?
- Joint Strategic Level System of Systems How do we work SE across the involved service programs?