SE View from Army
23 October 2007

Douglas K. Wiltsie
Assistant Deputy
Acquisition and Systems Management
Office of the Assistant Secretary of the Army
Acquisition Logistics and Technology

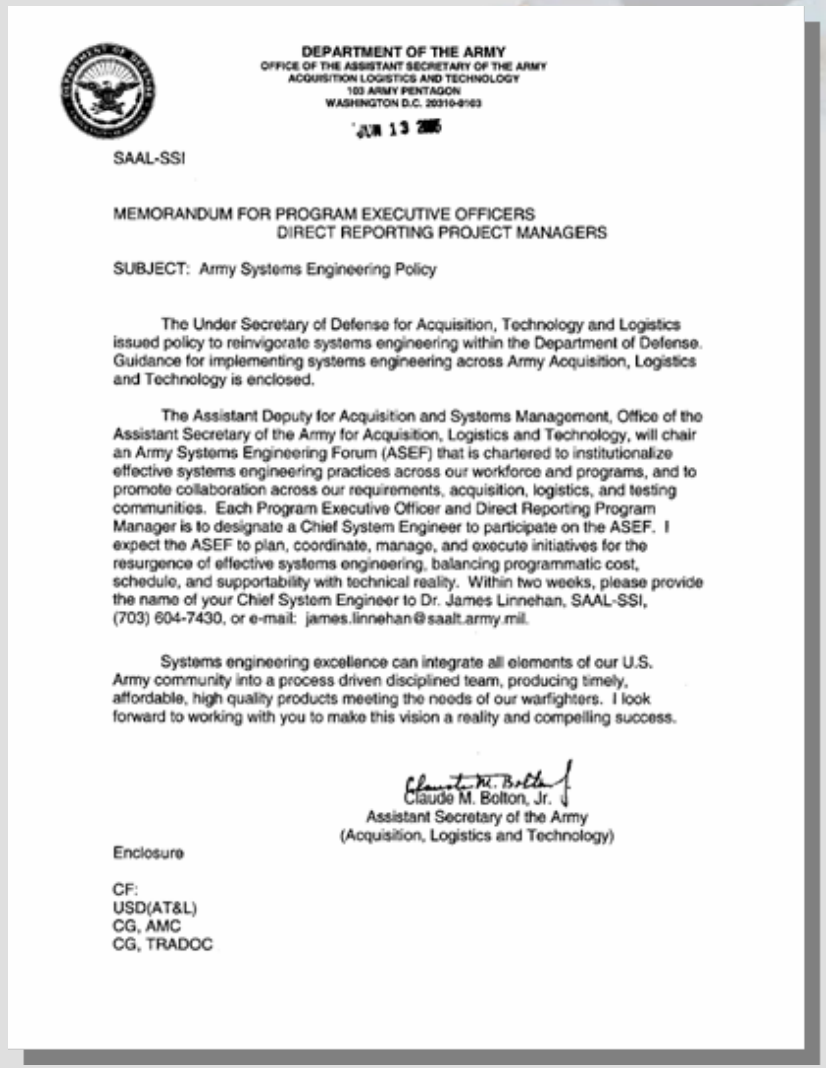
Sec. Bolton's Challenges

- 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 Army System Engineering Forum (ASEF)
- Establishes peer review at all major technical reviews
- Establishes the PEO as the SEP approval authority



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
ACQUISITION LOGISTICS AND TECHNOLOGY
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JUN 13 2005

SAAL-SSI

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

Current Focus

- System Engineering is being done in Army programs; we need to ensure that it is consistent and **consistently followed** across the PEOs
- Training is widely available but standards need to be established; we need to identify what's available and tailor to PEO/PM needs
- Requirements are done outside of the SE process; engage TRADOC on C4ISR and BC migration and identify new processes for SoS development
- Integrate Science and Technology into Systems Engineering revitalization
- Investigate establishment of a SoS Eng and Architecture Organization

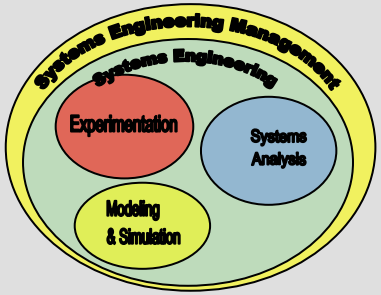
Capability Based Acquisition

Army is transitioning to more and more Capability Based acquisition.

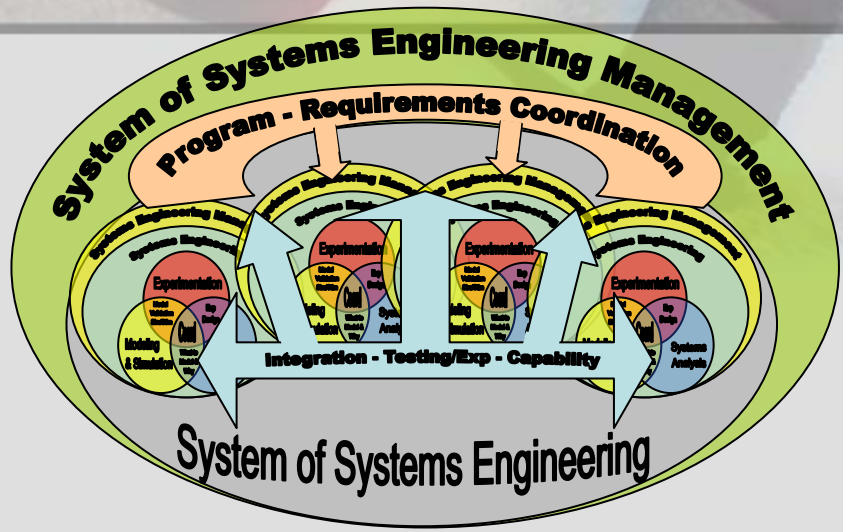
- Software blocking – Ensures end to end operability for all current and future battle command
- Future Combat System- 1st Army System of Systems capability based acquisition focused on developing and procuring a brigade level set of equipment
- Army Missile and Space – Develops the requirements and products to provide Air and Missile Defense capability
- Joint Network Node (JNN) to Warfighter Information Network-Tactical (WIN-T) – Current AOR network interoperability with future network.
- **Counter rocket and mortar – continual evolution of requirements**
- **Counter Improvised Explosive Devices – evolving/changing requirements and environments.**
- **Force Protection - continual evolution of requirements**
- **Battle Command – transition from current to future battle command capabilities**

Introduction: The Paradigm Shift

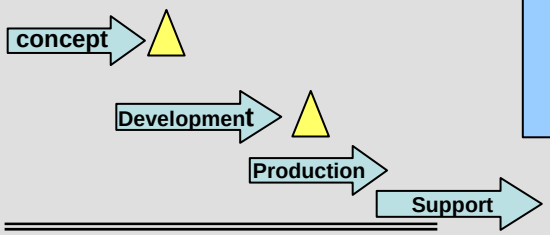
Well Bounded System



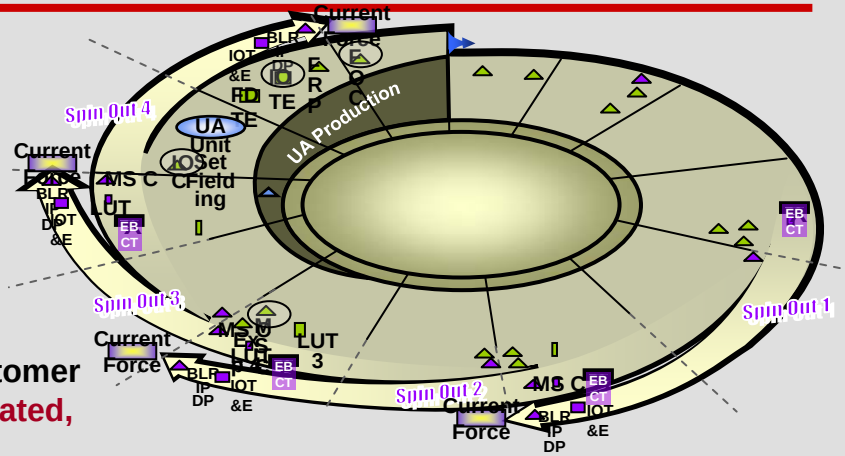
"MEGA SYSTEM"



Must Change
Perspective
Boundaries
Process
People (KSAs)
Tools



Year 1 **Year 8**



Transform to provide multiple innovative overmatching capability options to the customer Evolve supporting processes into an integrated, cross commodity, cross community SOS environment.

Delivery of Right Capabilities on Schedule on Budget

Requirements Generation

Goal: To Integrate SE into the Requirements Development Process, Especially for Complex Interdependent Programs

- Establish methods to support requirements generation at the System of Systems or Enterprise Level and help define the trade space
  - ASA(ALT)/TRADOC Capability Engineering Framework (CEF) Initiative for engineering the requirements/acquisition interface
  - Program Execution Working Group for cross PEO/TRADOC SE for C4ISR migration
  - Software Blocking
  - Ground Soldier System minimum essential capability
- Stepping stone to Joint System of Systems requirements
  - Generation Process (e.g. SIAP, SIGP, JBMC2, NCOE)
  - Without Joint Level overarching requirements, System Level requirements could be met and still not meet Joint Requirements

Army Strategic S/W Improvement Program

Goal: To dramatically improve the acquisition of software intensive systems

Objectives:

- Foster migration to a model-based system and software acquisition process improvement
- Institutionalize broad-based oversight, management, and technical expertise
- Apply an integrated system and software engineering approach to programs and improvement
- Systematically incorporate lessons learned, best practices, and new technology into policies, practices and processes