



Systems Engineering Revitalization

Mark D. Schaeffer

**Principal Deputy Director, Defense
Systems**

Director, Systems Engineering

Office of the Under Secretary of Defense



USD(AT&L) Imperatives

- “Provide a context within which I can make decisions about individual programs.”
- “Achieve credibility and effectiveness in the acquisition and logistics support processes.”
- “Help drive good systems engineering practice back into the way we do business.”



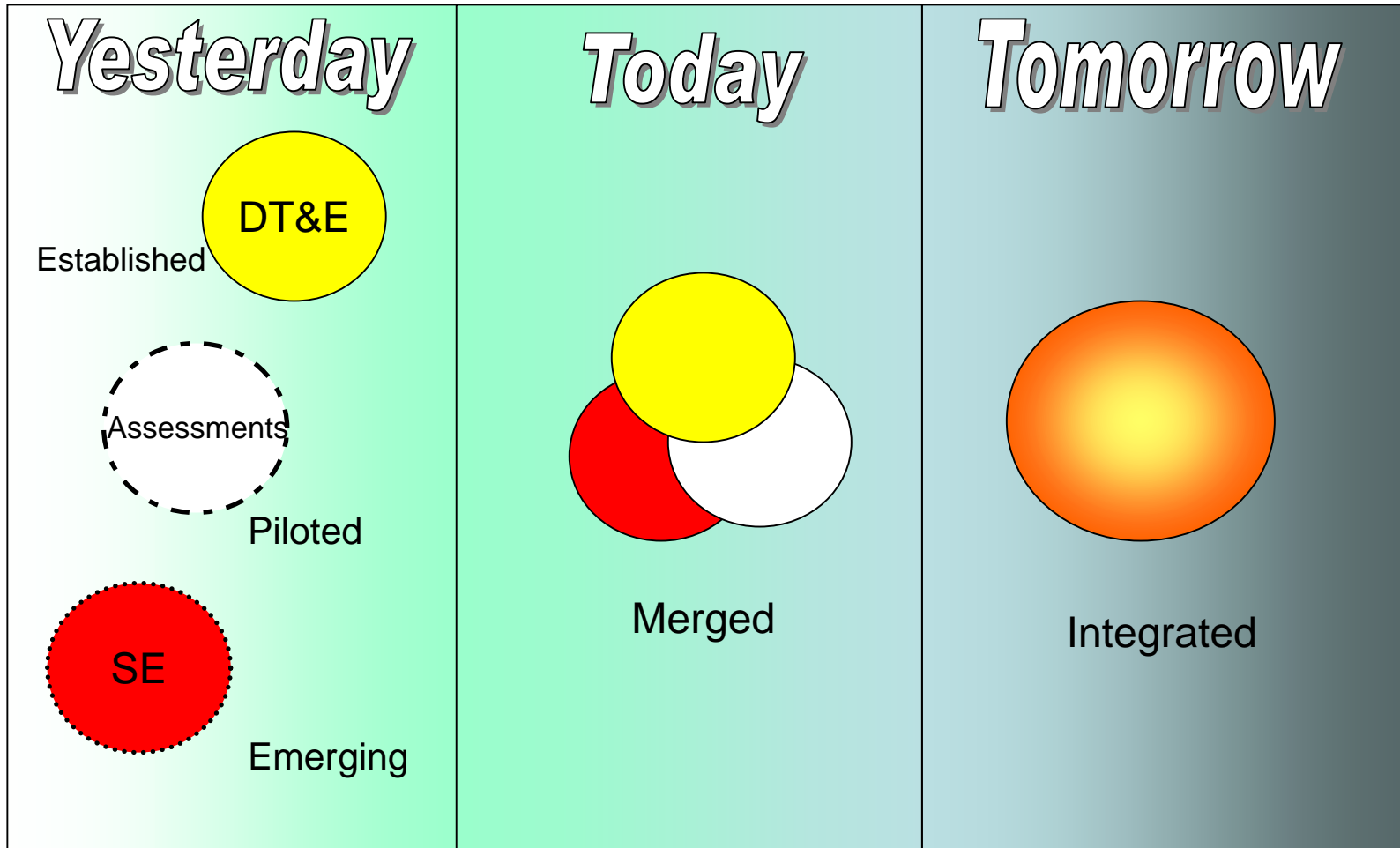
Support AT&L Imperatives

- Defense Systems, Systems Engineering will...
 - Assist program offices in implementing disciplined Systems Engineering.
 - Provide senior leadership with needed information to support the decision making process.
 - Continue to support and provide oversight of developmental T&E.
 - Provide expert advice to help identify and mitigate cost-schedule-performance risks and achieve program success.

To fully achieve all these activities, SE has realigned.



Why Realign?



Director Systems Engineering

Mark Schaeffer (SE)

Modeling & Simulation

G. Tillery, M. Truelove

Deputy Director, Systems Engineering (Enterprise Development)

Bob Skalamera (ED)

Core Competencies

- SE Policy
- SE Education and Training
 - Manage SE Career fields
 - DAU SE Curriculum Review
- SE Best Practices
 - SE Process improvement
 - SEP Development Process (SE Guidebook)

Functions

- RTOC/VE
- Corrosion
- Unique ID Code
- DS Website
- Strategic Planning
- SE Forum
- SE Outreach
 - NATO
 - Industry
 - Academia
 - NDIA SE Division
- SE Web Development
- Contract Management
- Coordinate Commercial Standards
- Handbooks/Guidebooks
 - Data management
 - Configuration Policy
 - Risk Management
 - RAM Assessment
- Systemic Analysis
- DISR

Deputy Director, Systems Engineering (Assessments and Support)

Dave Castellano (AS)

Core Competencies

- Program Support and Assessments (DAB/OIPT/As requested)
- Software Engineering Policy/Practice
- DAES Assessments
- T&E Oversight List
- IOTE Readiness Assessments

Functions

- SE & T&E support to PMs
- SEP and TEMP staffing for OSD review/approval
- Program Support Reviews
- Software Acquisition Steering Group
- TAI
- SEI-JAC
- CMMI-AM Pilot
- Aircraft Survivability
- Section 804

Deputy Director, Systems Engineering (Developmental Test & Evaluation)

Rick Lockhart (DTE)

Core Competencies

- DT&E Policy
- DT&E Education and Training
 - Manage T&E Career fields
 - DAU T&E Curriculum Review
 - Defense Test & Training Steering Grp
 - T&E 301 Course VTC
- DT&E Best Practices
 - TEMP development Guidance (T&E Guide Book)

Functions

- Test Ranges/Facilities
- Range & Resource Investment Planning
- Range Commander's Council
- DTRMC Interface
- Targets Oversight and Coordination
- BIC T&E IPT
- Ranges Strategic Planning Working Group
- JDEP
- DOT&E SPG
- ITEA Support
- DSOC
- M&S EXCIMS
- M&S Working Groups
- IO Exec Wrkg Grp
- JT&E

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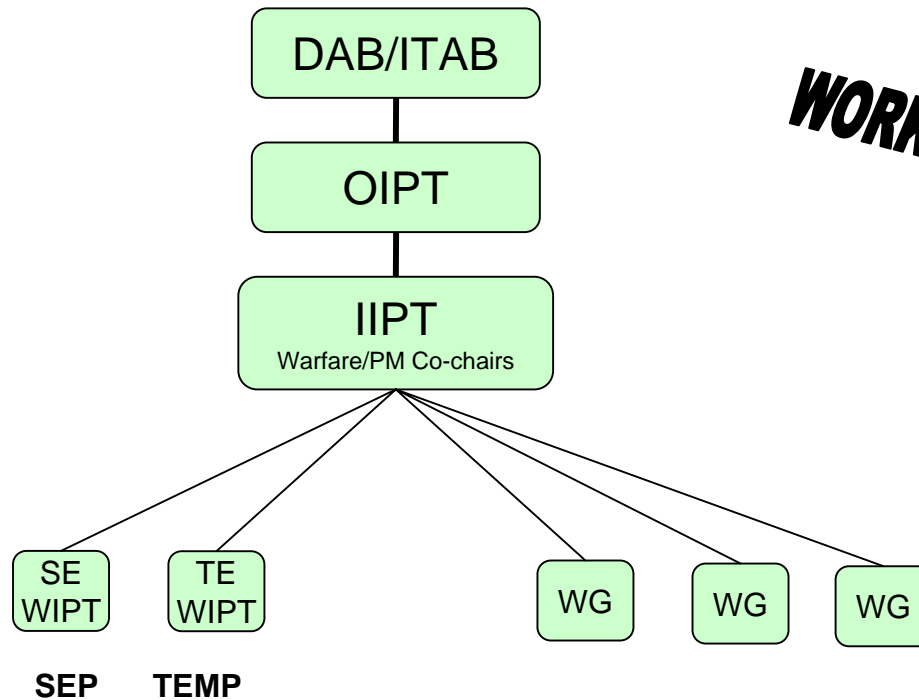
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Acquisition Oversight and Integrated Program Support Team Approach



WORK IN PROGRESS

**ITAB – Information Technology Acquisition Board
TEMP – Test & Evaluation Master Plan
SEP – Systems Engineering Plan**



Systems Engineering Policy in DoD

Signed by the Honorable Mike Wynne, USD(AT&L) (Acting) Feb 20, 2004

- All programs, regardless of ACAT shall
 - Apply an SE approach that balances system performance and total ownership cost within the family of systems, systems of systems context
 - Develop a Systems Engineering Plan (SEP) for MDA approval in conjunction with each Milestone review and integrated with the Acquisition Strategy
 - The Plan shall:
 - Describe technical approach to include processes, resources, and metric¹⁰



SEP Implementation Guidance

Per OUSD(AT&L) Defense Systems Memo signed Mar 30, 2004

- SEP Interim Guidance: Submitted to the MDA at each Milestone, the SEP describes a program's/system's:
 - Systems engineering approach
 - Specific processes and their tailoring by phase
 - Both PMO and Contractor processes
 - Systems technical baseline approach
 - Use as a control mechanism, including TPMs and metrics
 - Technical review criteria and results
 - Event driven
 - Mechanism for assessing technical maturity and risk
 - Integration of SE with IPTs
 - Organization, SE tools, resources, staffing, management metrics, integration mechanisms
 - Integration of SE activities with integrated schedules (e.g., IMP, IMS)

Systems Engineering Plan: Prescribed Contents not Format