



UNITED STATES ARMY TEST AND EVALUATION COMMAND

ATEC Overview and the AEC Logistics Mission

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Presentation to SOLE
Aberdeen Proving Ground MD





Agenda

- ATEC Mission & Roles in Acquisition
- Army Evaluation Center Organization
- Regulatory Requirements
- Traditional Test and Evaluation
- Supporting an Army at War
- AEC Logistics Evaluation Mission

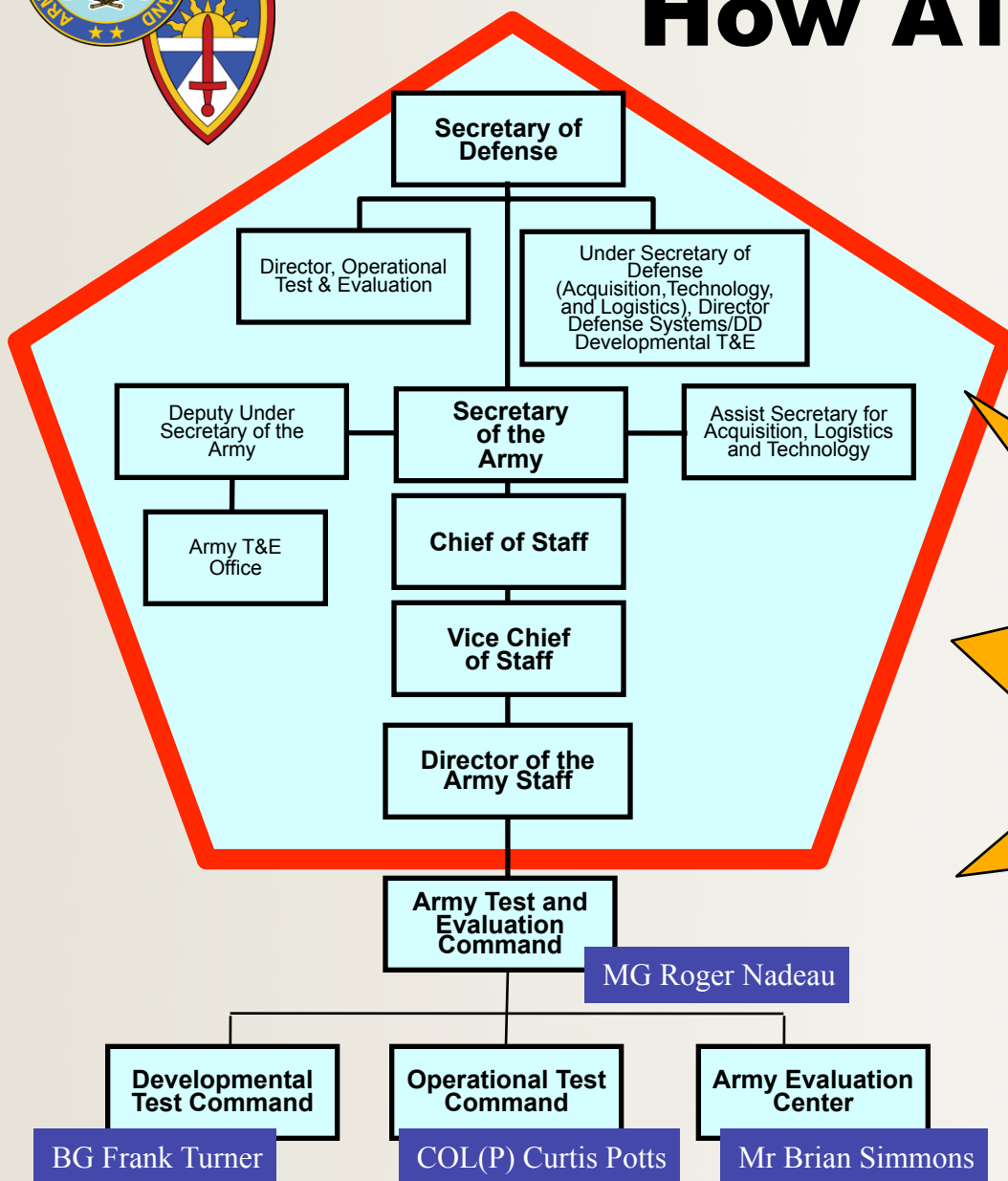


ATEC Mission

- Plan, conduct, and report the results of tests, simulations, experiments, and evaluations to Acquisition decision makers in order to ensure our Army's Warfighters have the right capabilities for success across the entire spectrum of operations.
- Conduct rapid testing in direct support of the GWOT warfighter in order to provide capabilities and limitations of untested weapon systems issued directly to Soldiers conducting combat operations (Iraq/Afghanistan).



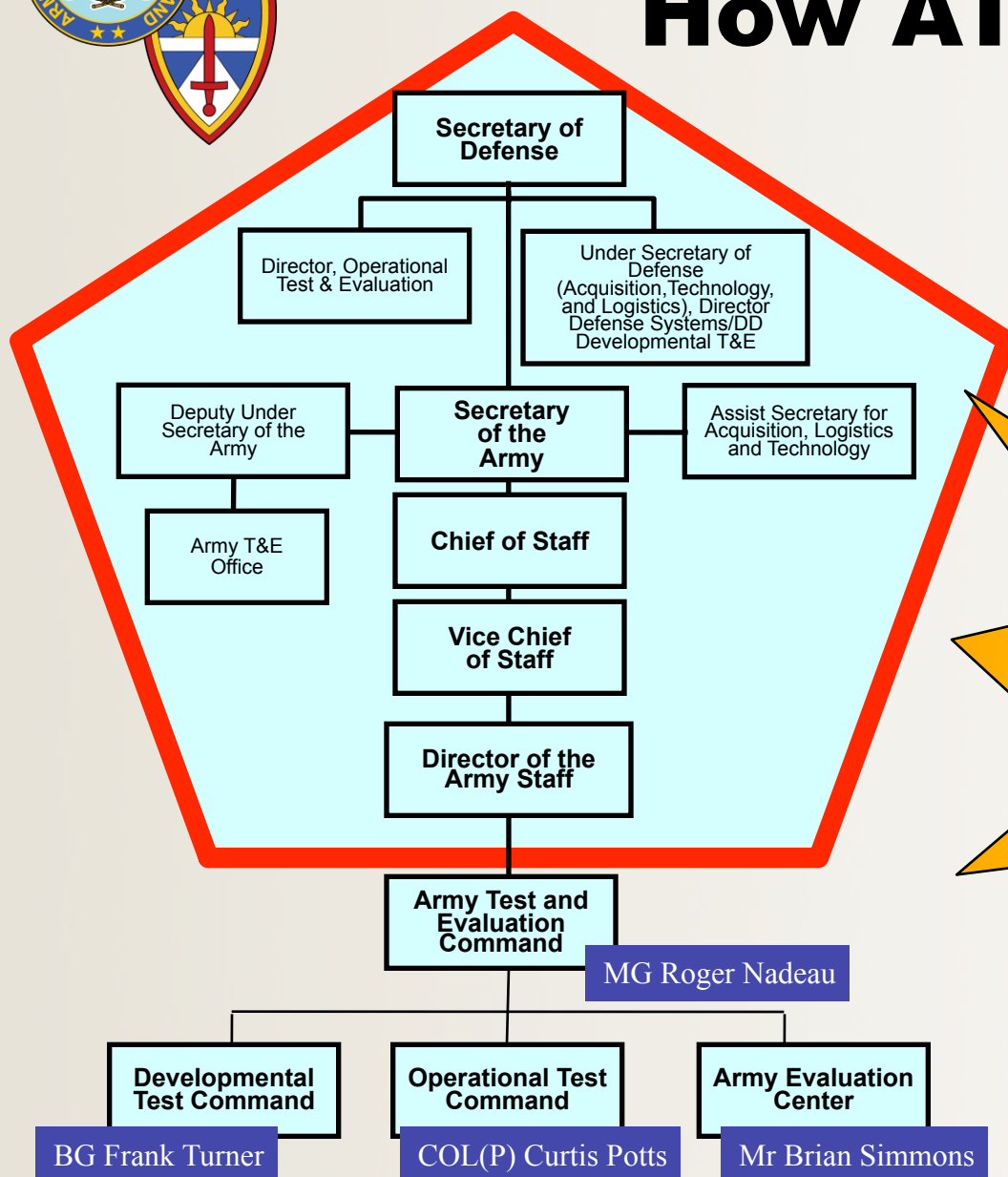
How ATEC Fits



**Independent
Reporting
Mandated by US
Code, OMB &
OSD**



How ATEC Fits



Mission: ATEC plans, conducts and integrates developmental testing, independent operational testing, independent evaluations, assessments and experiments *in order to provide essential information to decision makers and Warfighters.*

**Independent
Reporting
Mandated by US
Code, OMB &
OSD**



AEC Organization

COLOR KEY

ALEXANDRIA, VA

APG, MD

ALEX. VA & APG MD

HUNTSVILLE, AL

AEC Director
Mr. Brian M. Simmons

Technical Director
Mr. Apicella

Chief Of Staff
COL Burke

CG ATEC
(Chair JTB)
★MG Nadeau★

Lean Six Sigma Division
Ms. Meirose

Resource Management Division
Mr. Zacharczyk

Operations Division
Mr. Hubbell

Human Resources Division
Ms. Tredway

Aviation Evaluation Directorate
COL Kelly

Ballistic Missile Defense Evaluation Directorate
COL Lambert

Counter - IED Evaluation Directorate
Mr. Moosmann

Intelligence Evaluation Directorate
COL Stewart

Close Combat Evaluation Directorate
Mr. Martin

Net Fires Evaluation Directorate
Mr. Johnson

Joint Test Board (Director)
Mr. Hughes

Combat Support Evaluation Directorate
COL Wilhelm

Future Force Evaluation Directorate
COL Freelon

Tech Support Evaluation Directorate
Mr. Burrows

Integrated Log Support Evaluation Directorate
Mr. Amato

Reliability & Maintainability Evaluation Directorate
Mr. Yuhas

Command, Control & Communications Evaluation Directorate
COL Williams

Survivability Evaluation Directorate
Mr. Laughman



Where We Are

**ATEC manages
1/3 Army's Land**

Dugway
Proving Ground

Yuma
Proving Ground

Fort Huachuca

White Sands
Missile Range

Fort Bliss

Fort Hood

Fort Sill

Redstone
Arsenal

Fort Rucker

Fort Bragg

Alexandria

Aberdeen

ATEC

AEC

DTC

OTC

Forts
Wainwright
& Greely

Panama & Hawaii
Tropics Test Centers

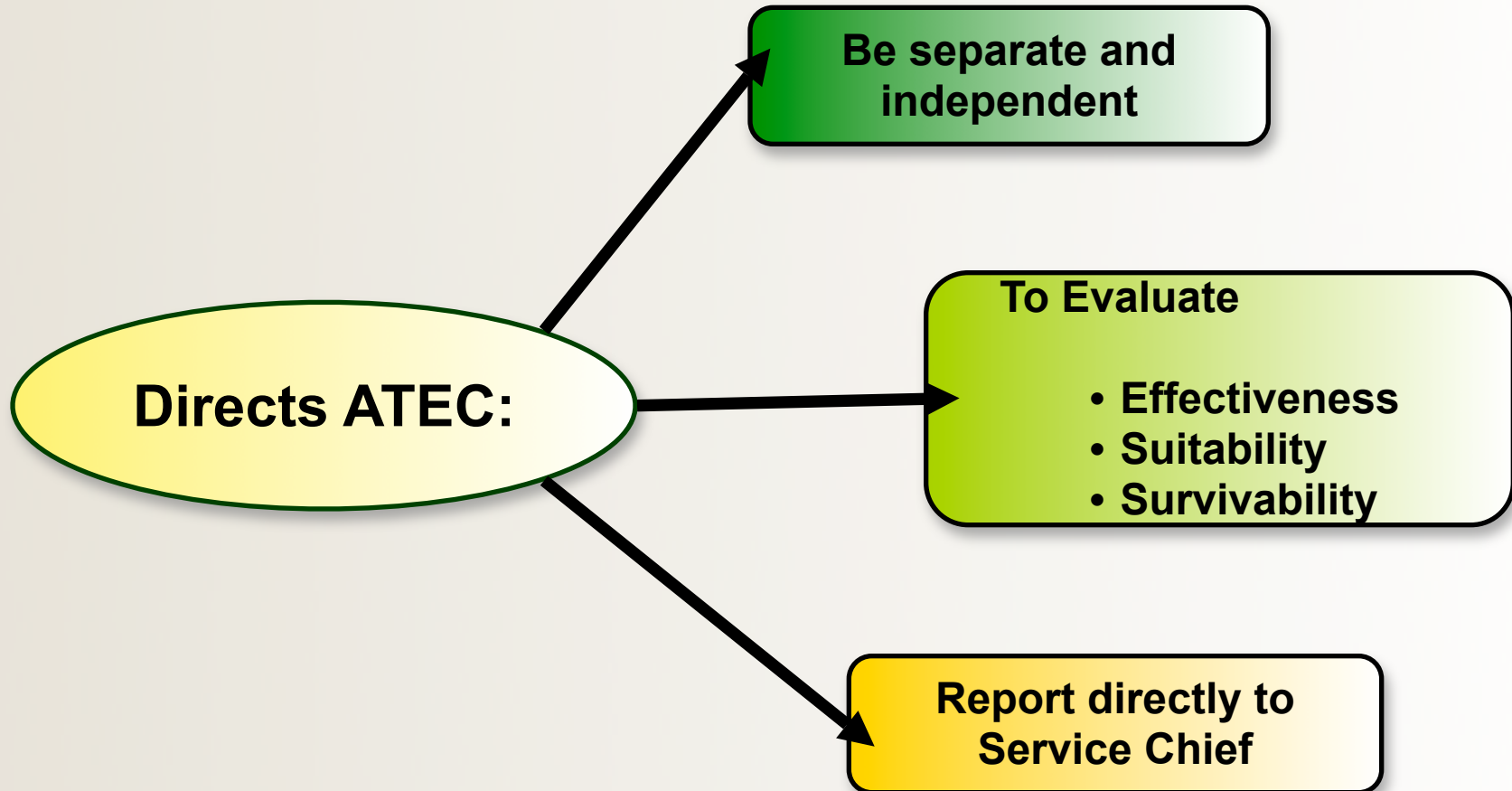
Legend

Headquarters
Major Test Facility
Operational Test Dir





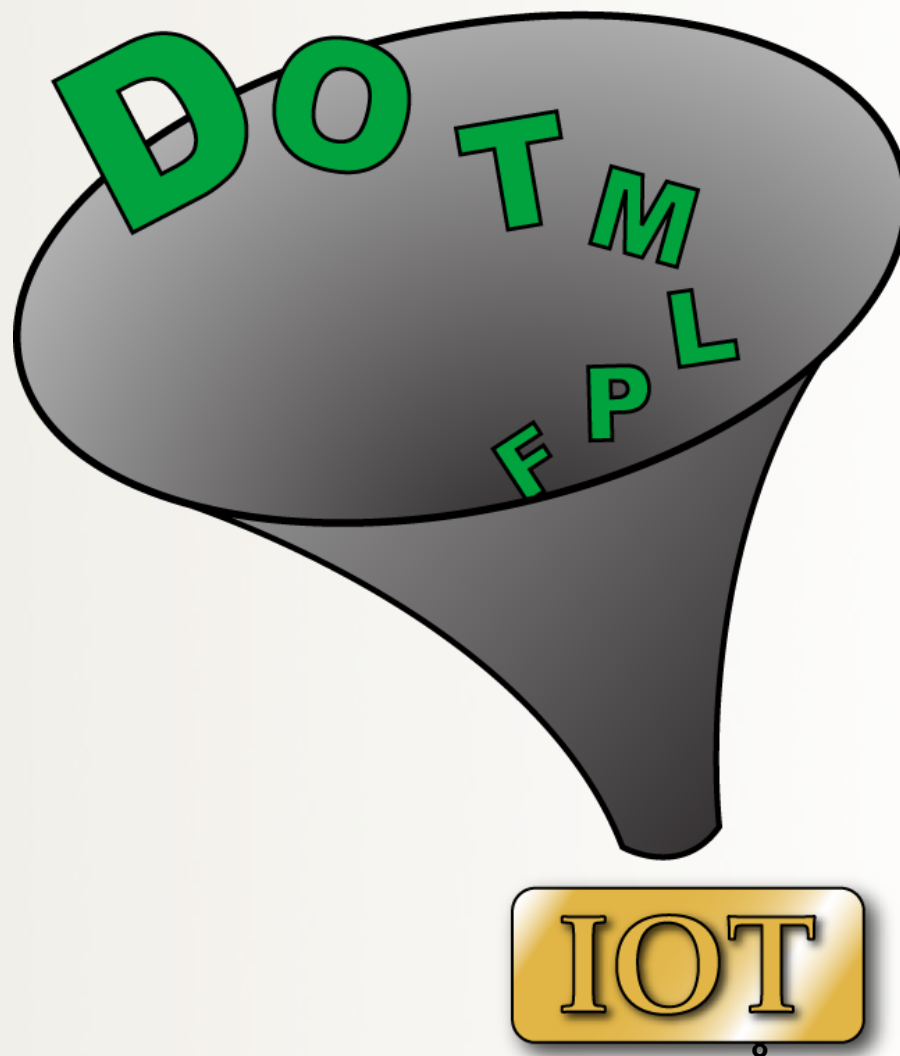
DoD 5000 Series / Army Regulations





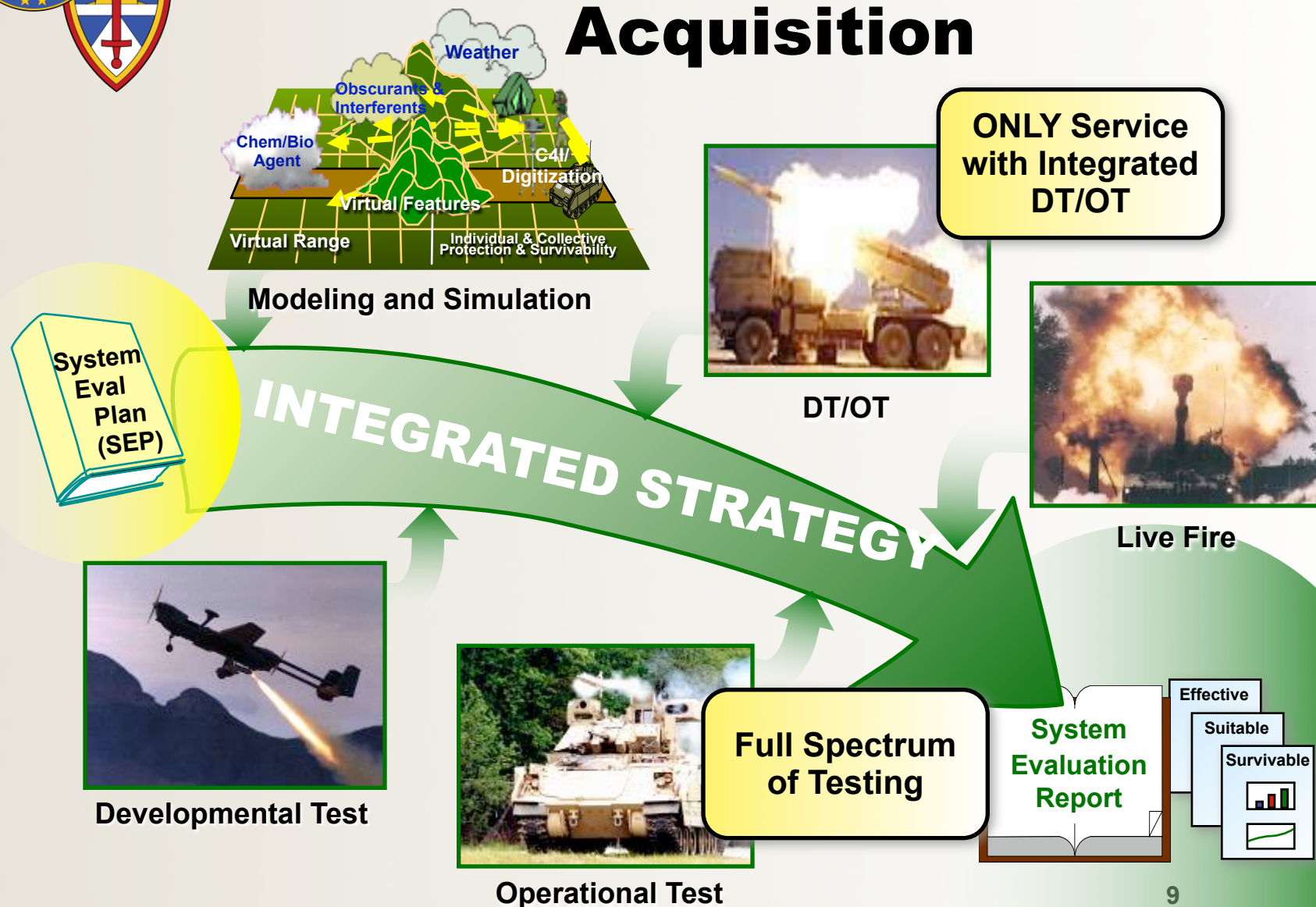
Operational Testing Synchs the Army

- ARMY STAFF
- ASAALT
- TRADOC
- AMC





Testing for Traditional Acquisition





T&E Supporting an Army at War

- Streamlined
- T&E Concept
- Testing
- Reporting
- Test-Fix-Test

JIEDDO
PM
RDEC's
REF
Users in Theater

Request for T&E

Fixes in
hours and
days!

T&E Concept

Safety
Confirmation

Field Use
FOA

Fix

Test

Update
Report
(CLR)

Update
Report
(CLR)

Capabilities &
Limitations
Report (CLR)



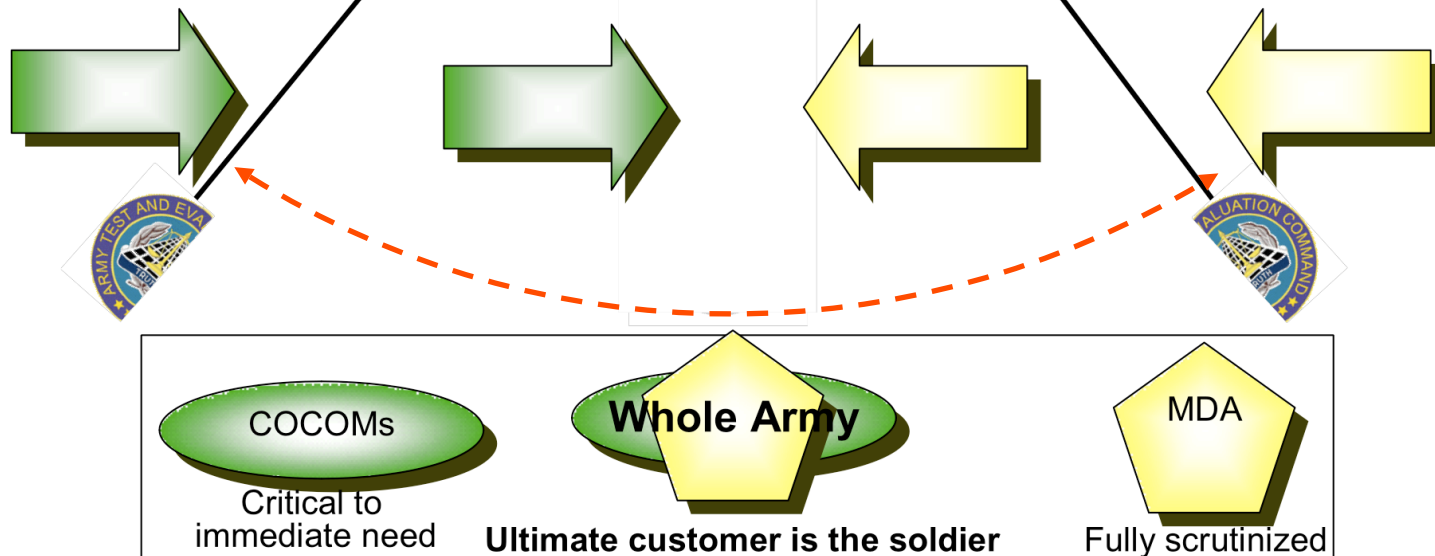
The T&E Pendulum

Rapid Equipping

- Quick, overlapping
- Higher Risk
- Opportunistic / Ad hoc
- Less bureaucratic & little oversight
- Incomplete Data
 - Constrained DT
 - Limited OT
 - C&L Report to User
- Cheap to Community –
Expensive to ATEC

Traditional Acquisition

- Title X, DoD 5000, etc.
- Deliberate
- Risks Mitigated
- Fully Synchronized
- Bureaucratic & oversight
- Full Community involvement
- All data
 - Robust DT
 - Full OT
 - SER to MDA
- Expensive to Community





Integrated Logistics Support

Evaluation Directorate: **2** Missions

1. Evaluate the supportability of a system and its impact on overall suitability

EFFECTIVENESS

SURVIVABILITY

SUITABILITY:

The degree to which a system can be satisfactorily placed in field use, with consideration to **transportability, interoperability, reliability**, wartime usage rates, **maintainability, safety, human factors, manpower supportability, logistics supportability**, documentation, and training requirements.

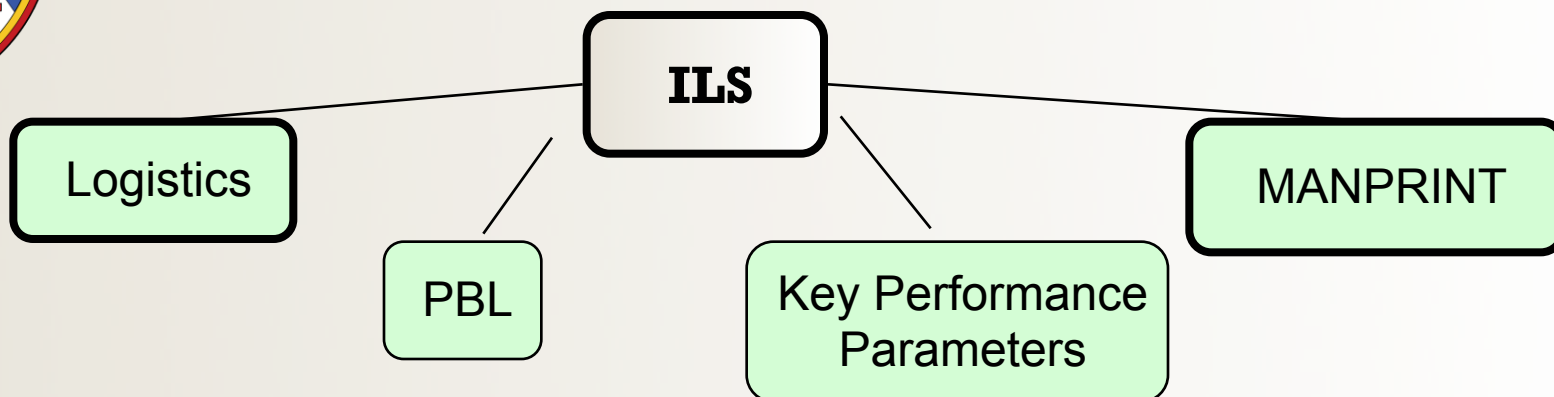
2. Perform independent logistics supportability assessments and report them to ASA(ALT)

“Logistics cannot win a war, but its absence or inadequacy can cause defeat.”

Operating and Support Costs account for over 2/3 of a weapon system's life cycle cost



Logistics & MANPRINT Principles



ILS

- 1 Design Influence
- 2 Maintenance Planning
- 3 Supply Support
- 4 Support and Test Equipment
- 5 Manpower and Personnel
- 6 Training
- 7 Technical Data
- 8 Facilities
- 9 Computer Resources Support
- 10 Packaging, Handling Storage,
& Transportability

MANPRINT

- 1 Human Factors Engineering
- 2 Manpower
- 3 Personnel
- 4 Training
- 5 Safety
- 6 Health Hazards
- 7 Soldier Survivability



ILS EVENTS & DATA SOURCES

Structured Test

DT/OT

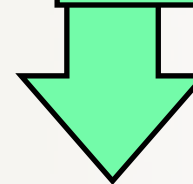
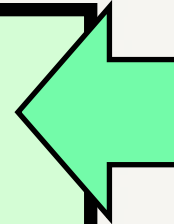
- Test Incident Reports
- Questionnaires
- Tester Observations
- MANPRINT Analysis Conferences



LOGISTICS/MANPRINT DEMONSTRATION

- Control % of tasks relative to the MAC
- Transportation & transportability
- Technical manuals
- Manpower and personnel
- Design influence (BIT/BITE, R&M, MANPRINT, transportability, safety, etc..)
- Support and test equipment
- Packing, handling and storage
- Human Factors/Safety/Training

Data Voids From DT/OT
Filled via
Log Demo & Modeling



MODELING

- Level-of-repair analysis (COMPASS)
 - Maintenance tasks
 - Cost comparison
- Provisioning Analysis (SESAME)
 - Supply support
 - Operational availability
 - Cost comparison



Rapid Fielding Support

ILSED: Focus Areas

- ✓ Training
- ✓ Tech Manuals for operation and maintenance
- ✓ Supportability concepts/ CLS plan
- ✓ Field Service Reps: locations & procedures
- ✓ Depot/FOB support for HW and SW
- ✓ Spares Management
- ✓ Security Considerations
- ✓ Packaging, Handling, Storage
- ✓ Safety
- ✓ HFE



Logistics Initiatives

- Army -

Initiative	Summary	What AEC can do
Performance-Based Logistics	<p>Program Managers use PBL to:</p> <ul style="list-style-type: none"> • Buy results rather than products or services. • Provide the “Best Value” support concept 	<ul style="list-style-type: none"> • Relate evaluations to applicable measures of PBL. • Relate logistics findings to effectiveness and efficiency of achieving mission success.
ASA ALT Memo 2 January 08 (Prototyping & Competition)	<p>Acquisition Strategy Report will:</p> <ul style="list-style-type: none"> • Evaluate competing prototypes for the earliest acquisition milestone • Document the prototyping strategy and resulting technical maturity 	<ul style="list-style-type: none"> • Prepared to test and report capabilities and maturity of early prototypes
ASA ALT Memo 6 December 07 (Reliability)	<p>Program Managers will (Very Early):</p> <ul style="list-style-type: none"> • Establish early reliability test thresholds • Incorporate the thresholds into contracts • Detect and report threshold breaches 	<ul style="list-style-type: none"> • Evaluate reliability in T&E programs earlier • Report logistics burdens (and costs) of off-target reliability earlier
JCIDS	<ul style="list-style-type: none"> • Joint Capabilities Integration Development System 	<ul style="list-style-type: none"> • AEC chairs an Army-level working group to standardize logistics requirements for developing programs
CLOE	<ul style="list-style-type: none"> • Common Logistics Operating Environment 	<ul style="list-style-type: none"> • Developed a PM’s web-based guide to Net-Centric CLOE to standardize Army network architectures and data formats.



Logistics Initiatives

- AEC -

- Operability (as a Measure) ——— Used in Future Combat Systems. The amount of functional capability which is available to a military commander
(BRASS)
(Battle Ready and Sufficiently Supported)
- Logistics Footprint ——— Does the system incur logistics burdens
Evaluation beyond the current capacity of gaining command?
(requiring added support/materiel/manpower)
- Cognitive Workload ——— Are the Unit's and Soldier's jobs still
Evaluation within manageable mental workload levels?
- Modeling & Simulation ——— Extrapolates support and mission results
over large organizations



Summary

The Army recognizes the criticality of fielding logistically supportable materiel, and is taking initiatives towards ensuring better supportability.

AEC has the mission to evaluate that supportability for new systems, whether traditional acquisitions or in rapid acquisition programs – and has taken the lead to bring about the Army's goal via thorough logistics evaluations of Army development programs.

