NDIA 3rd Annual Systems Engineering & Supportability Conference

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Source: JP 2-01.1

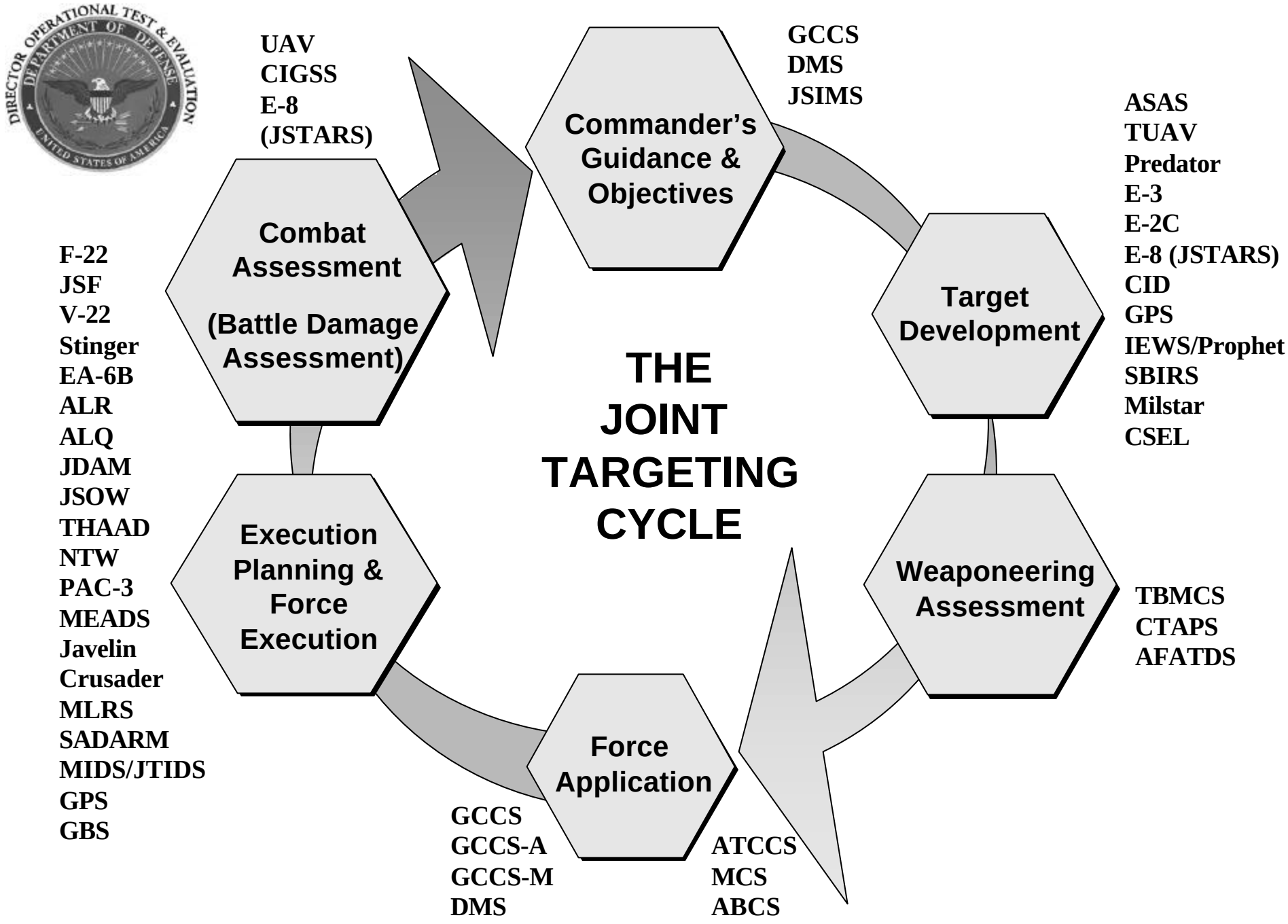
Targeting Cycle is Slow for Prosecuting Time Critical Targets

Such targeting proved problematic in Operation Allied Force last year. Though the military had in place a time critical targeting element composed of Army and Air Force operators and targeters for that conflict, ***the personnel did not have "the software and information processing we need to really make it quick."*** Jumper* said yesterday.

By Frank Wolfe
Defense Daily
September 8, 2000

*Air Force General John Jumper,
Commander of Air Combat Command

Programs on DOT&E Oversight That Support Joint Targeting Cycle



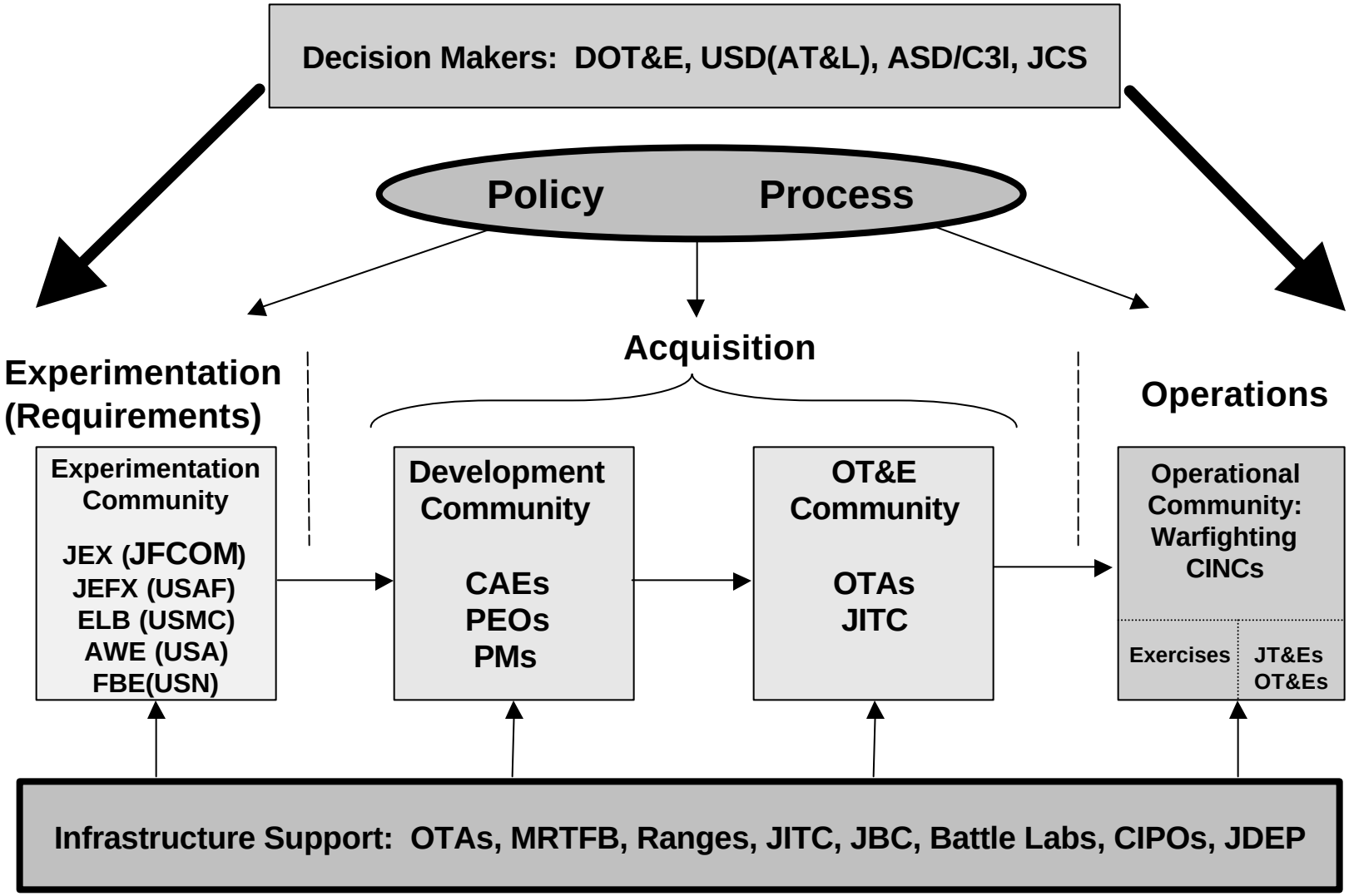
Prosecuting Time Critical Targets

- Cycle remains the same.
- For time critical targeting, C^2 functions should be done faster.
- Collaborative tools can reduce C^2 decision times.
- Flag Exercises/ASCIET can provide realistic test environments for time critical target evaluations.
- Lack of adequate joint and intra-Service interoperability adversely impacts on C^2 decision times.

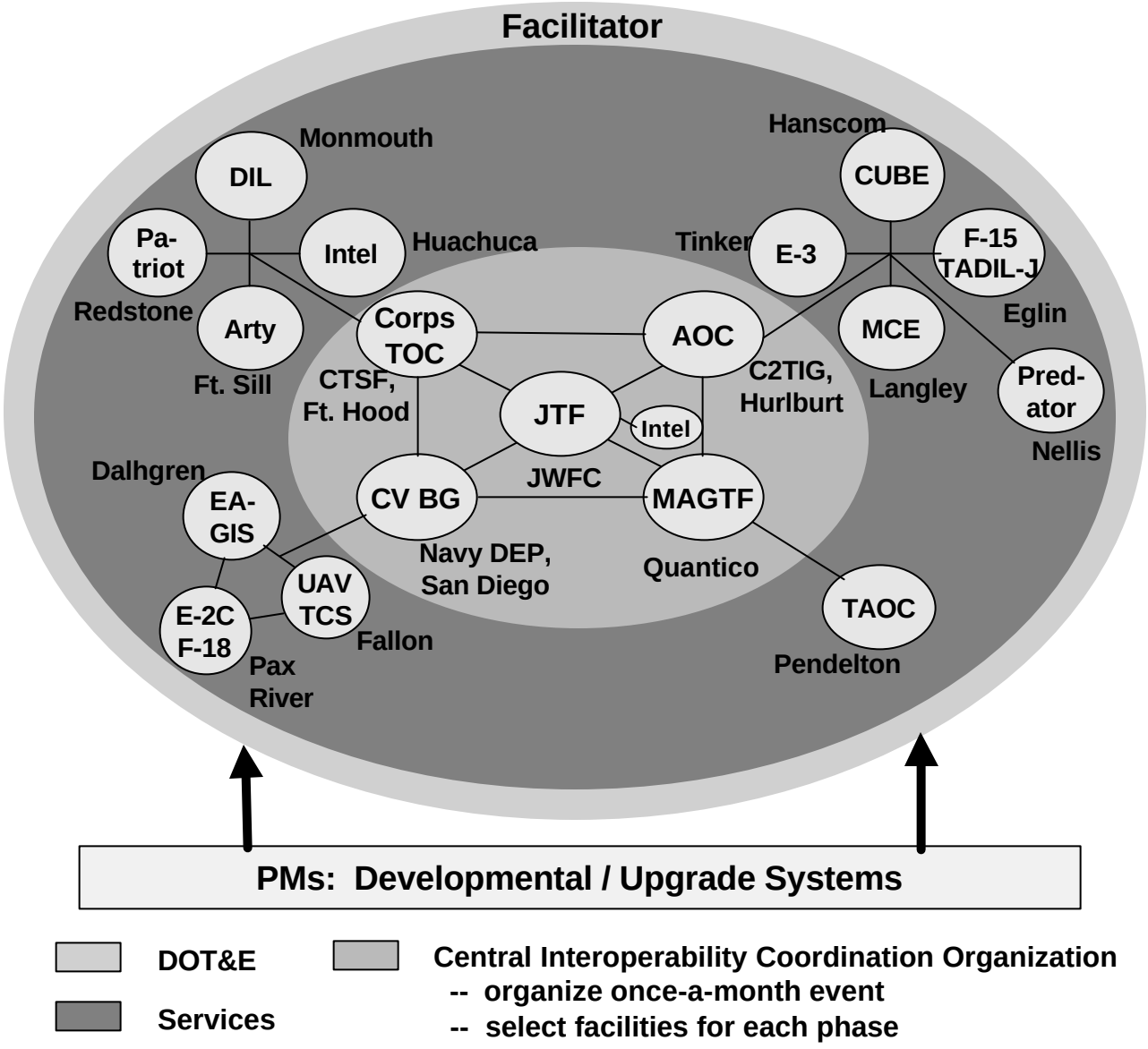
Today's Reality

- **Most testing is done in a stove piped fashion.**
  - **The entire targeting cycle with system-of-systems environment not tested.**
- **Concept of Operations are developed after the system development is completed.**
- **Systems are developed with technology push rather than user pull.**

Interoperability Test and Evaluation Infrastructure (Macro Level)



Example of Networked Testbed Construct

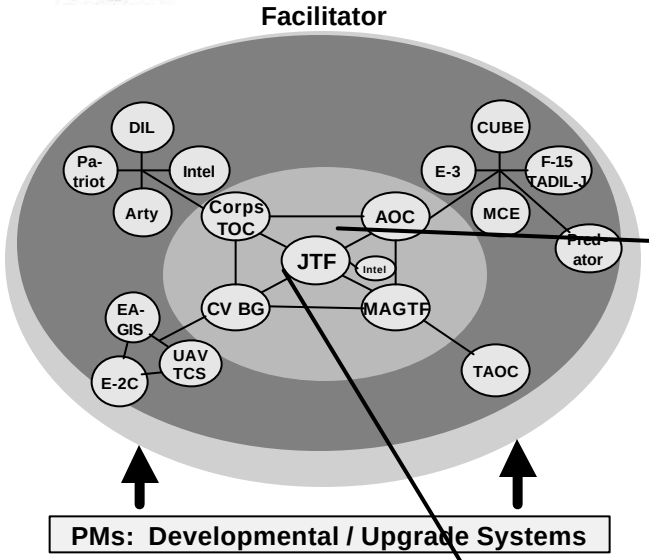


DOT&E

Services

Central Interoperability Coordination Organization
-- organize once-a-month event
-- select facilities for each phase

Infrastructure Improvements Needed at Testbed Facilities (Use MRTFB Concept)



Hardware-in-the-Loop

- GCCS
- Intel Systems
- -----
- -----

Communications Connectivity

- Internal (e.g., LAN, Buried cables)
- External (e.g., DoD networks, leased ATM links, T-1 lines)

Sim / Stim

- Scenario
- Threat
- Systems
- Common environment

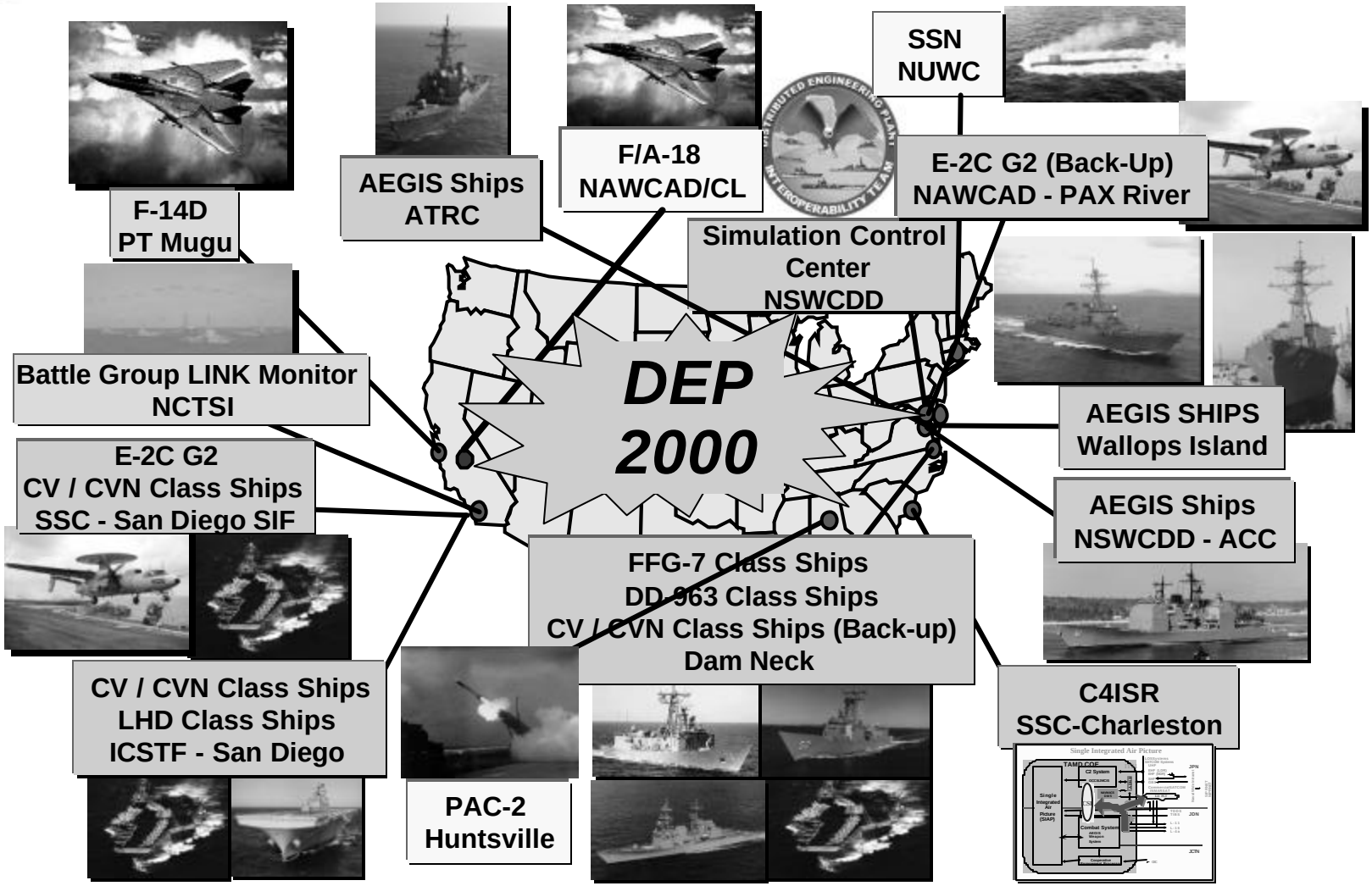
Technical Support

- Personnel
- Tools (e.g., database preparation/management, instrumentation, data authentication / reduction / analysis)

Currently exist

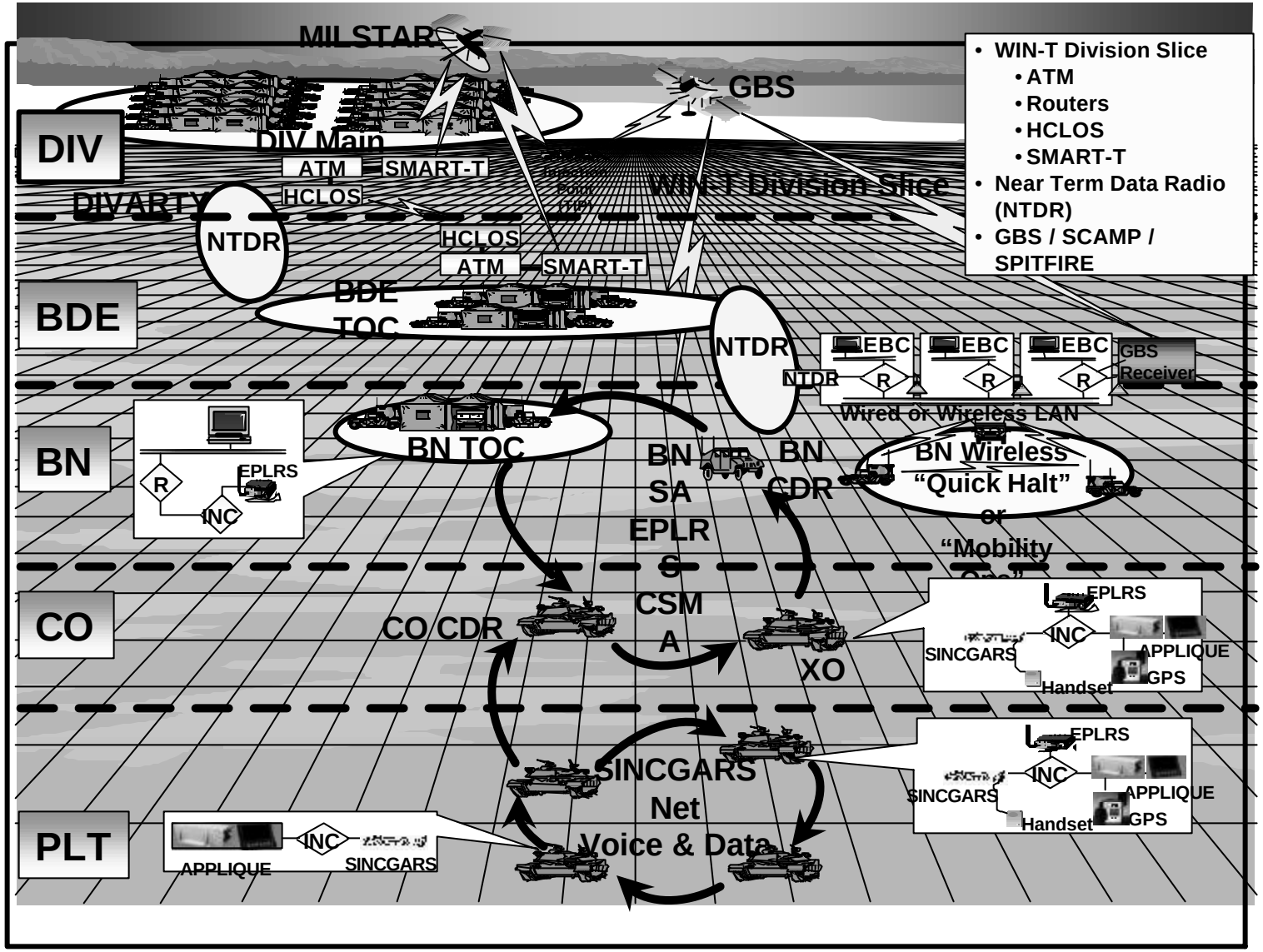
Currently inadequate, need infrastructure improvement

Growing The DEP Network



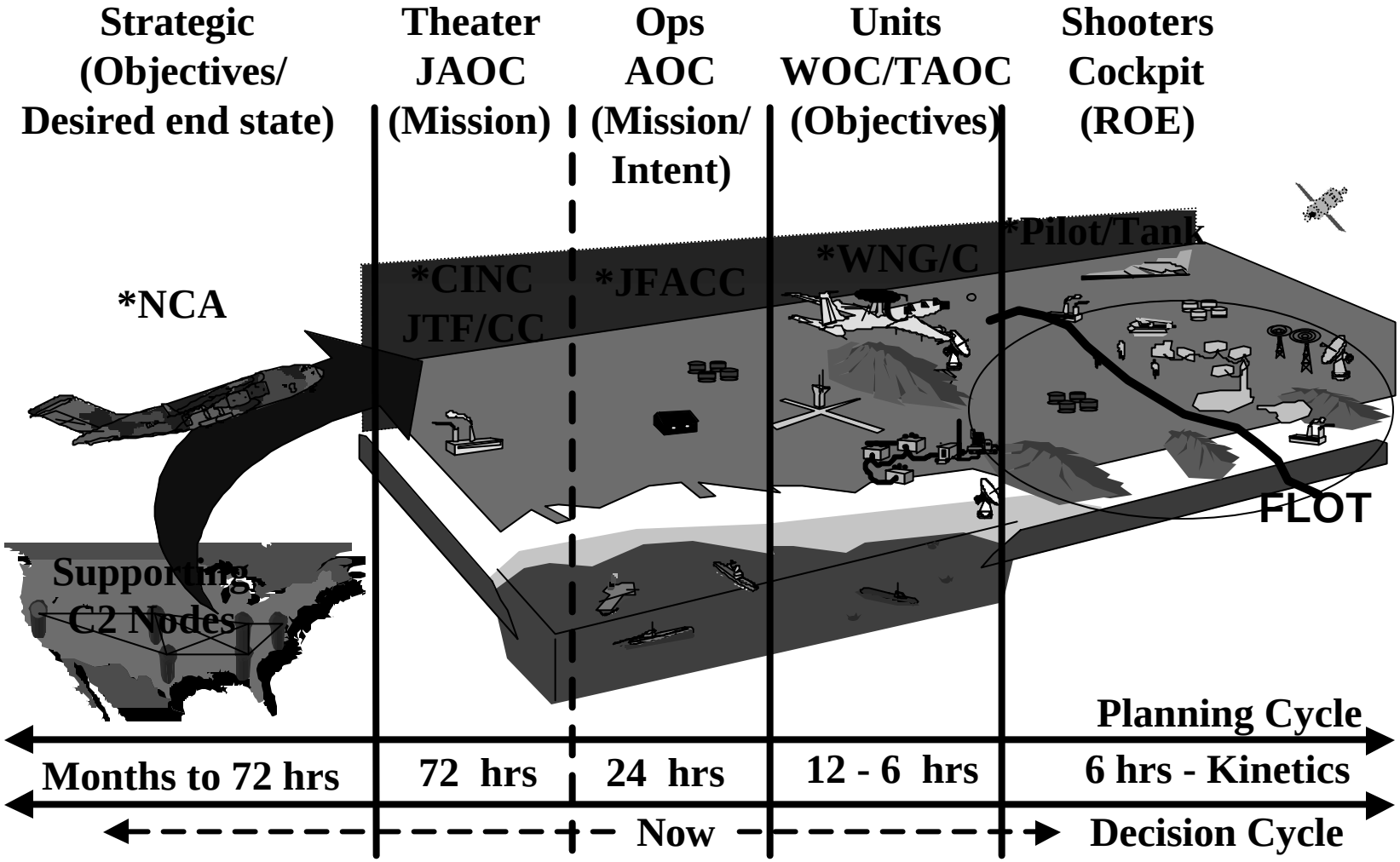
Source: NCTSI

Operational Organizations Represented By Army Testbed Facilities*



* Derived from Army briefing material

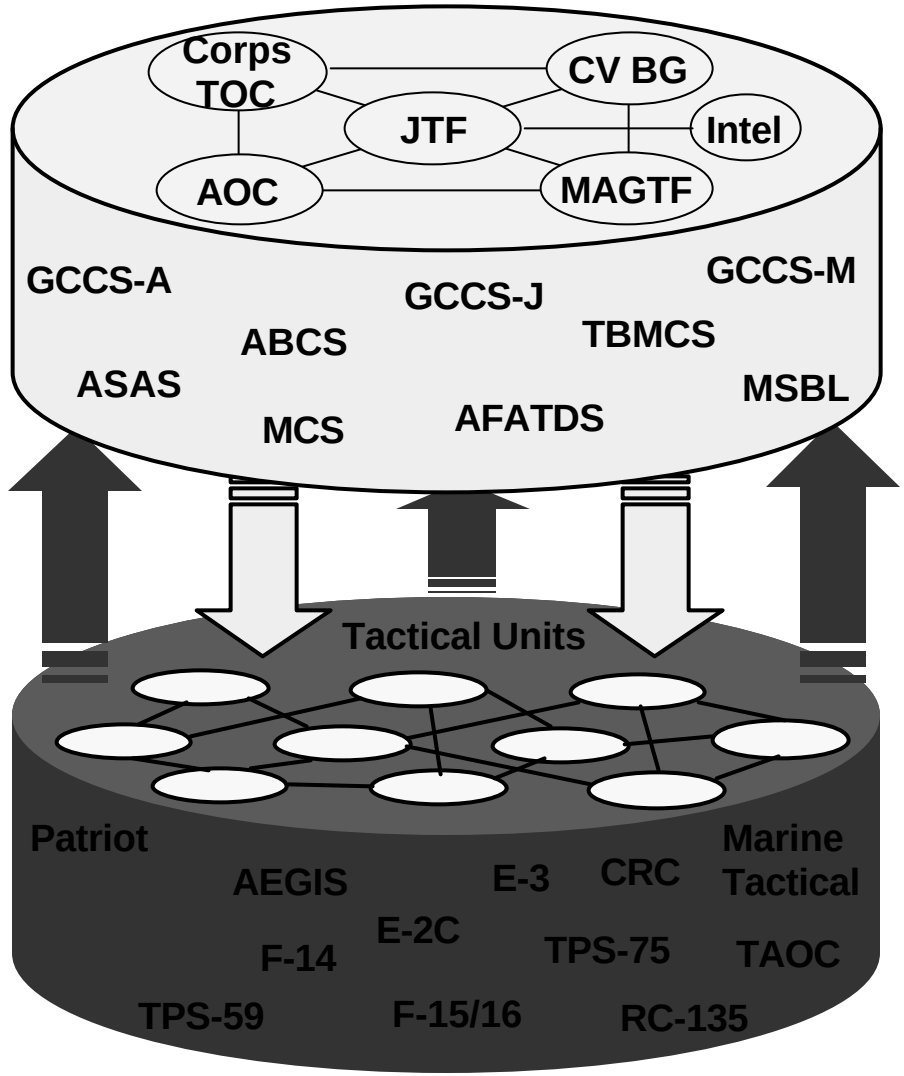
Operational Organizations Represented By Air Force Testbed Facilities*



* Based on Air Force briefing material

Relative Focus of T&E Testbed and JDEP

T&E Testbed (Top-down)



JDEP (Bottom-up)

- Building down from JTF level planning and reporting systems to tactical systems
- Developmental & Operational Interoperability
- Standing Capability

- Building up from Tactical sensors, shooters, C2 to JTF level systems
- Engineering Interoperability
- One event per year

Problem Areas That Need Resolution

- New TTPs/CONOPS to reduce C2 response times are necessary.
- Training is inadequate.
- New C^2 Tools (fusion, correlation, collaboration) must be developed and tested.
- Many C^2 and weapon systems lack interoperability. Solutions must be developed and tested.
- Need more system-of-systems testing.