Actionable Situation Awareness Pull (ASAP) ACTD
FY05-08

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Test and Evaluation Forum
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Actionable Situation Awareness Pull (ASAP) ACTD, FY05-08

Enabling Tactical Commanders to Pull Tailored and Relevant Information

"Right Information at Right Time"

PACOM
Operational Manager

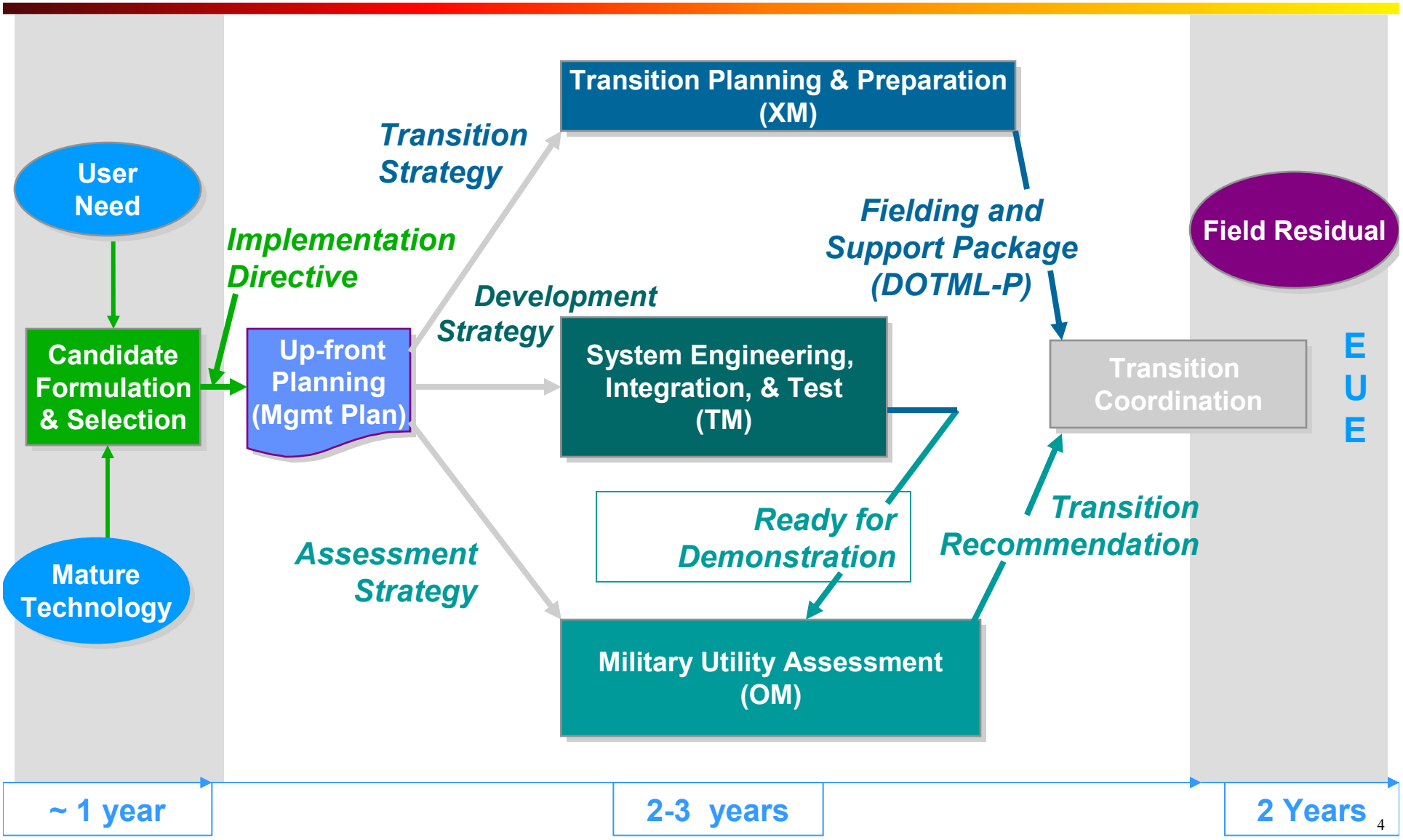
DISA – Technical Manager
Industry – Deputy Technical Mgr

DISA
Transition Manager

Overview

- **ACTD Process Overview**
  - **DUSD (AS&C) provides oversight**
  - **COCOM Sponsor for addressing Warfighter Problems**
- **NDIA C4ISR Division initiative**
  - **Precedent setting and innovative attributes**
- **ASAP ACTD Overview**
  - **Warfighter Problem and Technical Approach**
  - **Measure of Success**
  - **Concept Solution**
- **ASAP ACTD Timetable of Events**
  - **One technical demo and one operational demo each in 05 and 06**

ACTD Process



NDIA C4ISR Division Activities 2003

- Reviewed lessons learned from OEF and OIF
- Consulted with COCOM's to identify Joint Warfighter Problems (JWP)
- Formed an Industry Team to select and address a JWP
- NDIA sponsored an ACTD workshop with PACOM Pull JWP as case study
- Formed a Government Industry Team:
  - Government identified:
    - Investment – DISA $7.5M, DUSD (AS&C) $5.5M, IBS SPO $1.6M = $14.6M
    - COCOM Sponsor and Operational Manager - PACOM
    - Technical Manager and Transition Manager - DISA
  - Industry identified:
    - Investment ($ resources = $7M)
    - Technical Leadership to address the Joint Warfighting Problem
    - Posted White Paper, Quad Chart and Briefing to DoD Web-site

NDIA "forum" facilitated ASAP ---a new FY 2005 ACTD

ASAP ACTD
Innovative Teaming Attributes

- **NDIA C4ISR Division identifies the opportunity and takes the initiative**
  - **Sought DUSD(AS&C) and ASD(NII), C4ISR Div Sponsor, viability and concept acceptance**
  - **Supports NII Vision to further interoperability via TSAT, GIG-ES, JTRS & NCES**
  - **ASAP ACTD will leverage Service Oriented Architecture (SOA) developed by NII through the Net Centric Enterprise Services (NCES) program**
  - **ASAP ACTD will participate in DISA's Net-Centric Capability Pilot (NCCP)**

- **Mutual Warfighter / Government / Industry "Value-Added" Partnership**
  - **Multi Industry (30 companies) plus Government collaboratively defined ACTD**
    - **Maximizes and accelerates smart co-development, demonstration and transition of products / capability to coalition / joint warfighters**
  - **Combined Gov't / Industry funding [Direct Cash] provides significant financial benefit**
    - **For Industry---1:1 Return on Investment (ROI)**
    - **For Government—3:1 ROI**
  - **First ACTD to utilize a Deputy Tech Mgr (Titan) working directly with Tech Mgr (DISA)**
    - **Reduces government ACTD Management Overhead normally expended on SETA contractor**
    - **Maximizes Industry / Supplier SME input on ACTD warfighting capability**
  - **First ACTD to employ an ACTD Industry Oversight Executive (LMCO)**
  - **Multi-Industry Team [12 Companies]**
    - **Able to understand and co-execute interdependent approach (i.e., Net Centric Operations) across Multi-Service programs in near real time while protecting intellectual property.**

ASAP ACTD -- Precedent Setting / Smart Business!

ASAP ACTD
Problem Definition

- **Operational Problem as identified by PACOM via JWP:**
  - **Inability for Tactical Commanders in a Joint / Coalition Force to "Pull and Tailor" Relevant Actionable Information at the Right Time Regardless of Location within Bandwidth Constraints**
  - **Timeliness – Info may not be available in time to still be relevant**
  - **Initiative – Decision maker may lack user defined and sharable info**
  - **Action – Inability to manage functions of Command and Control**
  - **Security – compliance with MLS requirements**

- **Architectural Challenge associated with IBS Push into DISA JC2:**
  - **Streaming data representing near real time ISR requires high bandwidth and often overloads analyst**
  - **Lacks a data repository integrated with Legacy Systems to perform focused analysis or reachback**
  - **Cannot perform focused queries but rather subscribe to "filtered" at high granulated level**
  - **Legacy Systems not compatible with Web Based architecture (NCES)**

ASAP Does/Does Not

ASAP *Should*	ASAP Does Not
Provide operational/tactical commanders access to global information that would otherwise be limited or stovepiped	(does not) Develop new fusion capabilities (but does provide access to data to assist fusion efforts)
Leverage distributed information management servers (IBS GIN/TIN, …) so user can search selected and tailored data repositories in a controlled way	(does not) Obviate or replace existing national data repositories, or require/produce new C2 applications to display or process information (but does extend current ones w/little or no change)
Enable warfighter to selectively Query and Pull intelligence information when and where needed	(does not) Require a footprint on existing C2 and Intelligence systems (just need standard browser and access to classified network)
Support US and Coalition Tactical Commanders information needs	(does not) Produce proprietary software or use software/hardware that has not been or could not be accredited for Processing Intel data

ASAP is a SPIRAL approach to foster Faster Fieldable Services

- **The ACTD will employ Extreme Programming Process that -- designs a little, builds a little and tests rapidly fieldable enhancements.**

- **ASAP augments the on-going NCES and JC2 Service Oriented Architecture efforts that seek new methods for fielding "services" more rapidly and defining the new methods for introducing new technology into the field more rapidly**

- **ASAP employs a spiral development approach that consists of multiple builds of "complete" and fieldable functionality that is iterated for increasing level of service**

Measures of Success

Definition of success defined in early CONOPS meetings between Warfighters and Technical reps

Technical demonstrations at initial integration to measure architectural compatibility with NCES; will then spiral into NCCP.

Operational demonstrations at Live Exercises to measure compatibility with deployed systems

Extended User Evaluation in Deployed Environment to measure:

- Warfighter perceived value – observe how the warfighter uses the new capability in the field
- Robustness and scalability in a Live Loading environment
- Ease of deployment
  - Training Requirements
  - Upgradability – SW/HW
  - Ease of field problem resolution

Early Transition Opportunities: IBS, JC2, PORs

Advanced Concept Solution

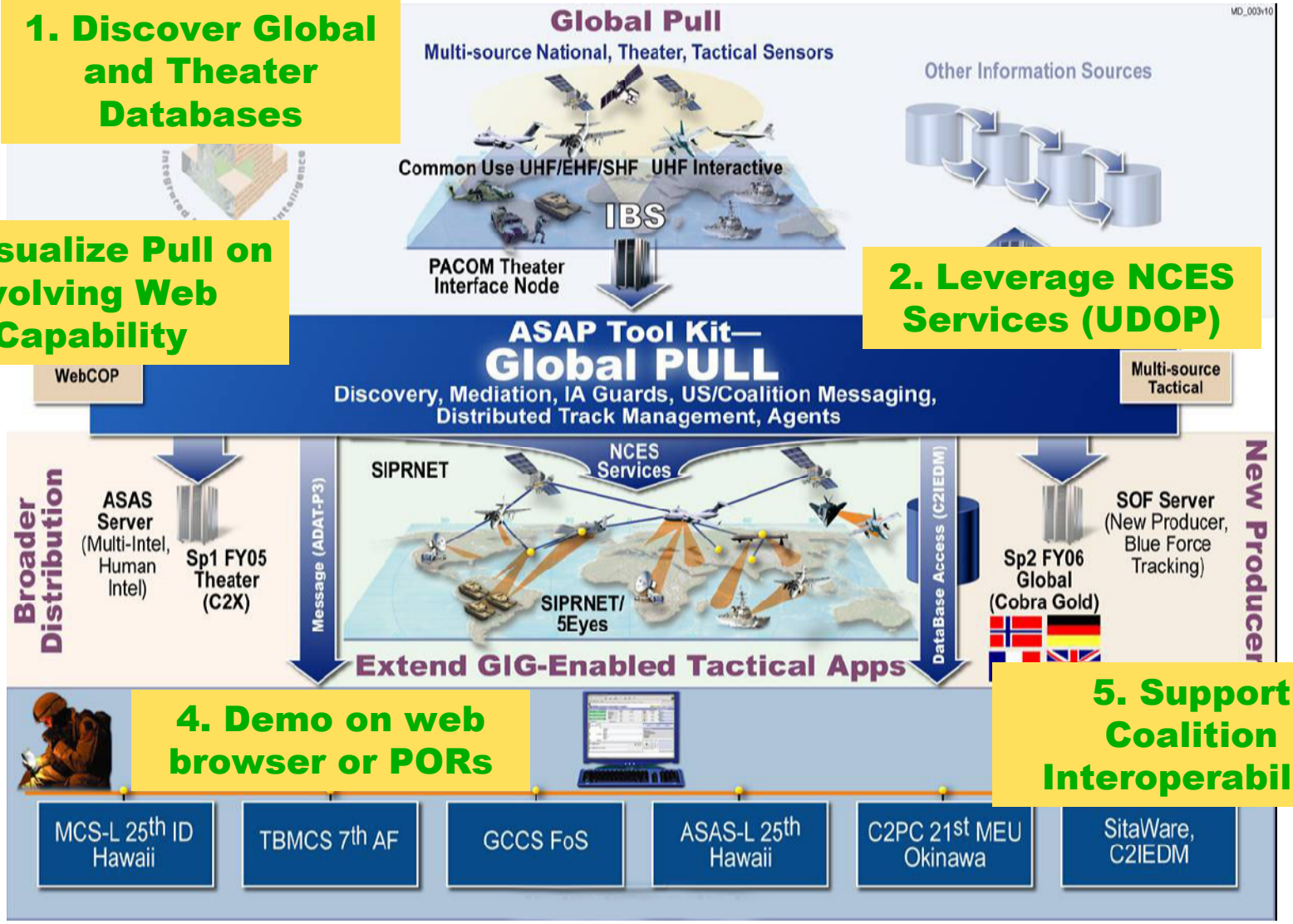
1. Discover Global and Theater Databases

2. Leverage NCES Services (UDOP)

3. Visualize Pull on evolving Web Capability

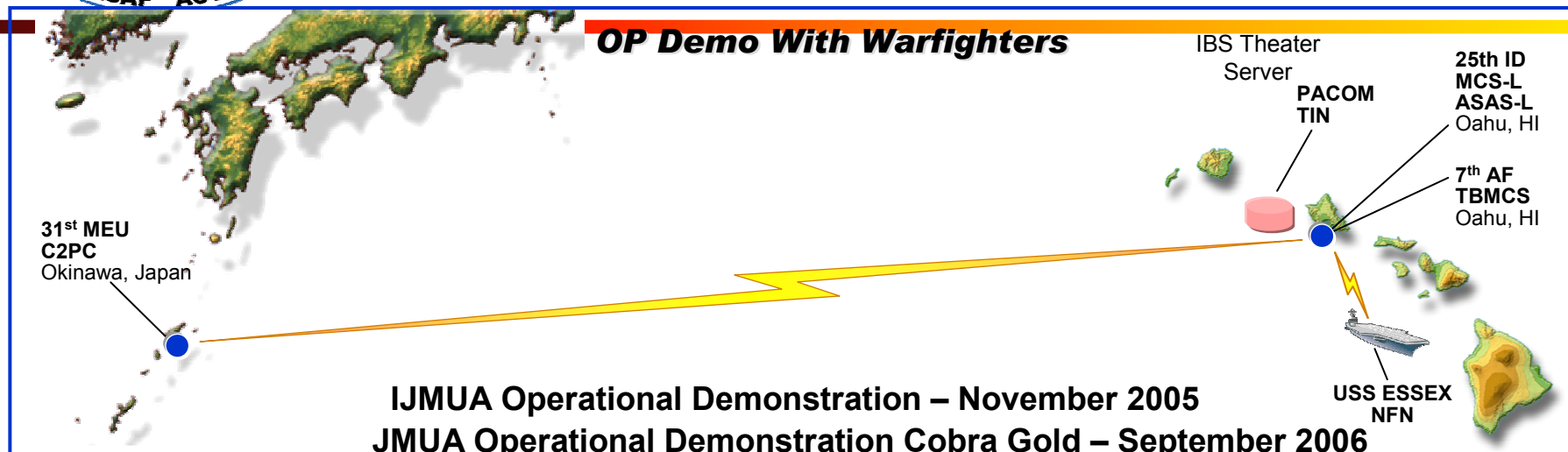
4. Demo on web browser or PORs

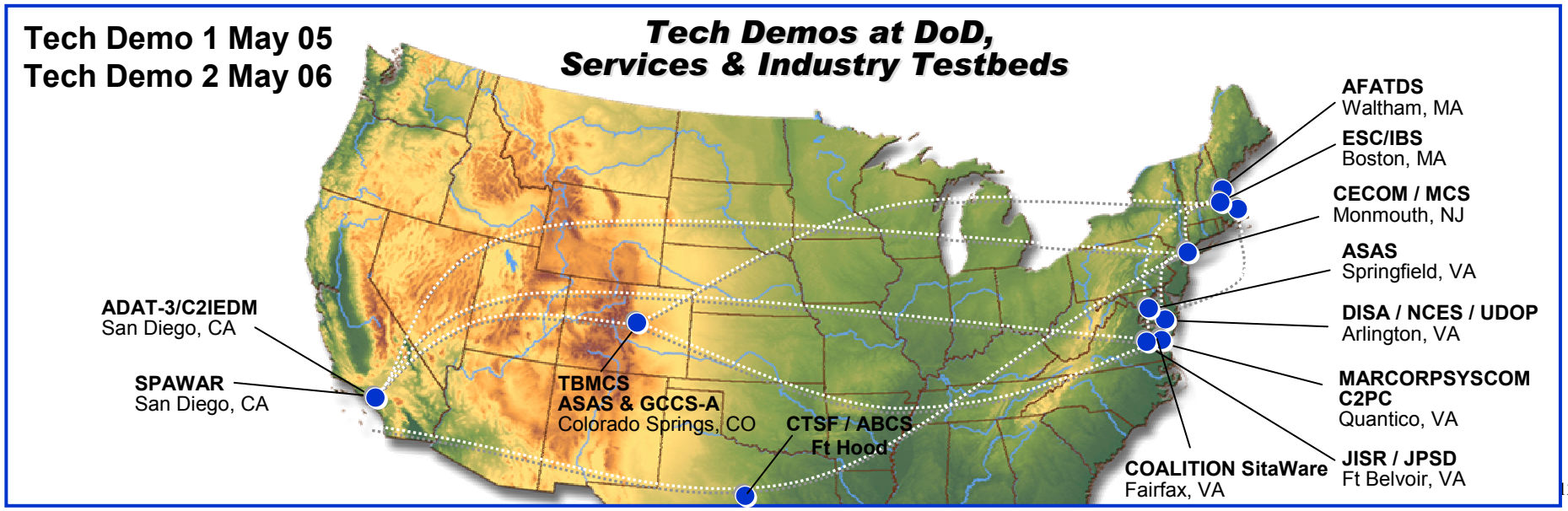
5. Support Coalition Interoperability



Demonstrations Envisioned

NCES ASAP Pull and C2IEDM Coalition Interoperability





Summary

- **ASAP ACTD addresses a high priority DoD requirement to provide tactical users with improved capability to "pull" whatever data they need, whenever they need it, from wherever they are**
- **Opportunity for COCOMs to define CONOPS for Pull capability during the ACTD to affect transformational architecture and demonstrate value of such a capability to Joint operations across multiple missions and services**
- **ASAP ACTD is resourced by DISA, DUSD (AS&C) & ESC and IRAD**
- **An Industry team comprised of approximately 12 companies dedicated to applying Net-Centric Enterprise Services (NCES) will identify a roadmap to develop and apply an ASAP toolkit to update systems for which some are the OEM.**
- **Will Use Joint and Coalition Interoperability Standards**
- **Transition Strategy planned to apply capability to each of the other COCOMs and to contribute to reusable NCES Service development**

Right Information at the Right Time and Place for Tactical Users