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Agile and Secure Information Capabilities to the Warfighter and Mission Partners:

Tactical Edge Solutions


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Purpose

- **Provide information on Joint Staff J6 Data and Services initiatives to improve C2 effectiveness at Battalion and below and in the Denied-Disconnected Intermittent Limited (D-DIL) bandwidth domain.**

Agenda

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- **Background**
 - **Tactical Edge Data Solutions (TEDS) Joint Capability Technology Demonstration (JCTD) and Coalition Warfare Program (CWP)**
 - **Tactical Infrastructure Enterprise Services (TIES) JCTD**
 - **Summary/Way Ahead**

JS J6 DSD Mission Statement

- The Data and Services Division enables warfighter access to authoritative data sources and improves data interoperability by establishing common C2 data and service standards, integrating these standards into capability requirements, and facilitating implementation within programs of record.

Tactical Edge Data Solutions (TEDS) JCTD/CWP

- TEDS JCTD will present a common, interoperable, net enabled solution to expose and share information from the tactical edge.

Tactical Infrastructure Enterprise Services (TIES) JCTD

- TIES JCTD will deliver a Joint, federated C2 capability to meet operational requirements in the Denied-Disconnected Intermittent Limited (D-DIL) bandwidth domain.



Tactical Edge Data Solutions (TEDS) Joint Capability Technology Demonstration (JCTD)/ Coalition Warfare Program (CWP)

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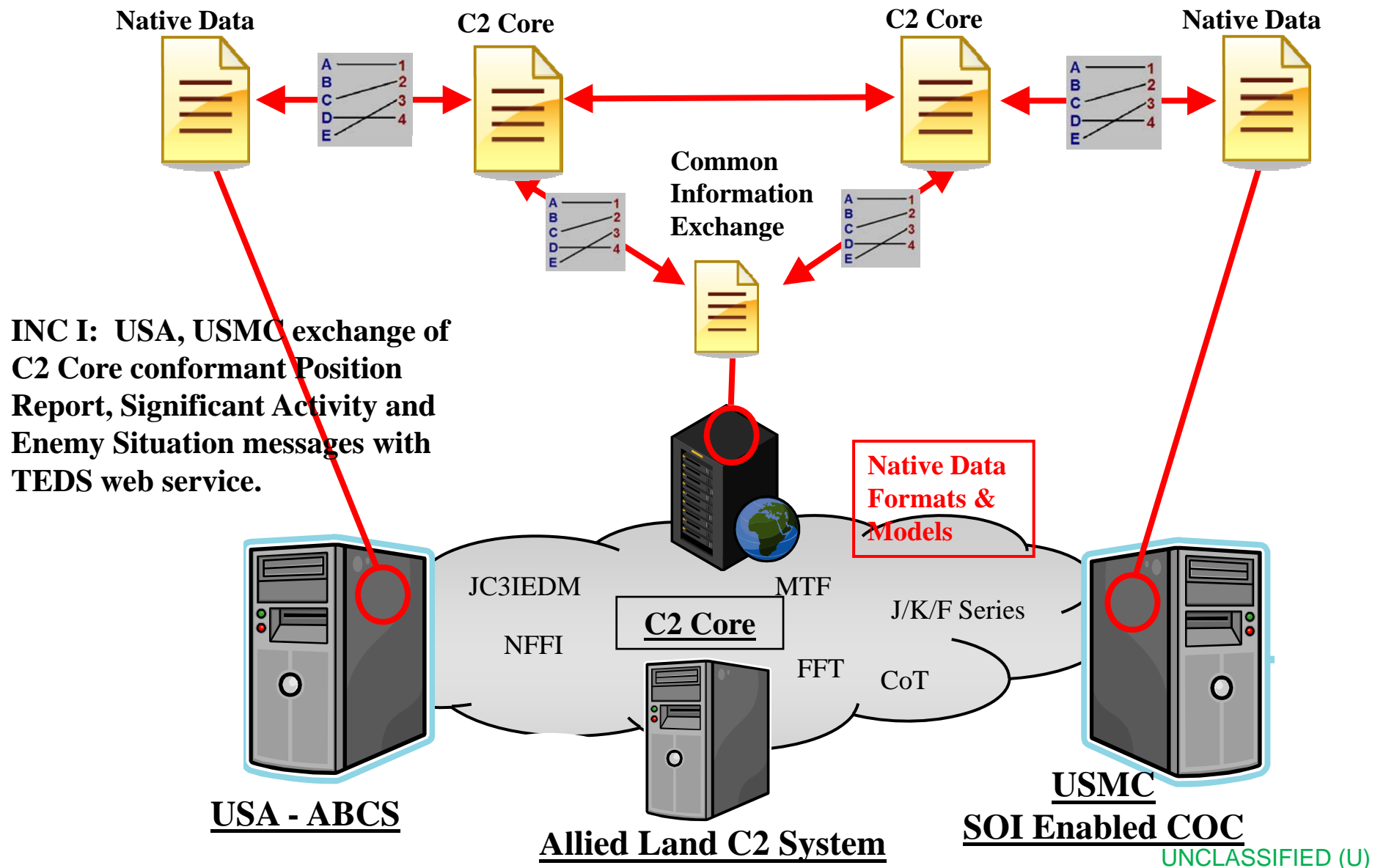
Bottom Line Up Front (BLUF)

- TEDS JCTD will present a common, interoperable, net enabled solution to expose and share information from the tactical edge
 - C2 Core Conformant Information Exchange Specifications
 - Web Services to expose and share C2 Core Conformant Data
 - Mediation between identified Service and coalition data producers native data formats using C2 Core Conformant XML Schemas
 - A standard, reusable process to apply C2 Conformant Software and Service to any C2 producer



Joint operations to the lowest level with coalition partners

TEDS JCTD INC II EXPANDED CONOP



TEDS INC III FY 12 CAPABILITIES

- **Build out Information Exchange Specifications (IES) to support USA & USMC migration from Joint Data Handler (JDH) to a TEDS-based solution***
- **Deliver a JC3IEDM-C2 Core web service available for use by all MIP partners.**

****Messages to be exchanged: Position Report, Significant Activity, Enemy Situation, Observed Position, Air Tracks and Tactical Graphics (16)***

- **Tactical to Strategic Information Federation (USA, USMC, USN)**
 - **Enterprise Services for data visibility and sharing using Joint User Messaging (JUM) and Attributes Based Access Control (ABAC).**
- **U Core – C2 Core solution with USA-USN (Significant Activity – Urgent Notice msgs)**

TEDS INCREMENT III FY 12

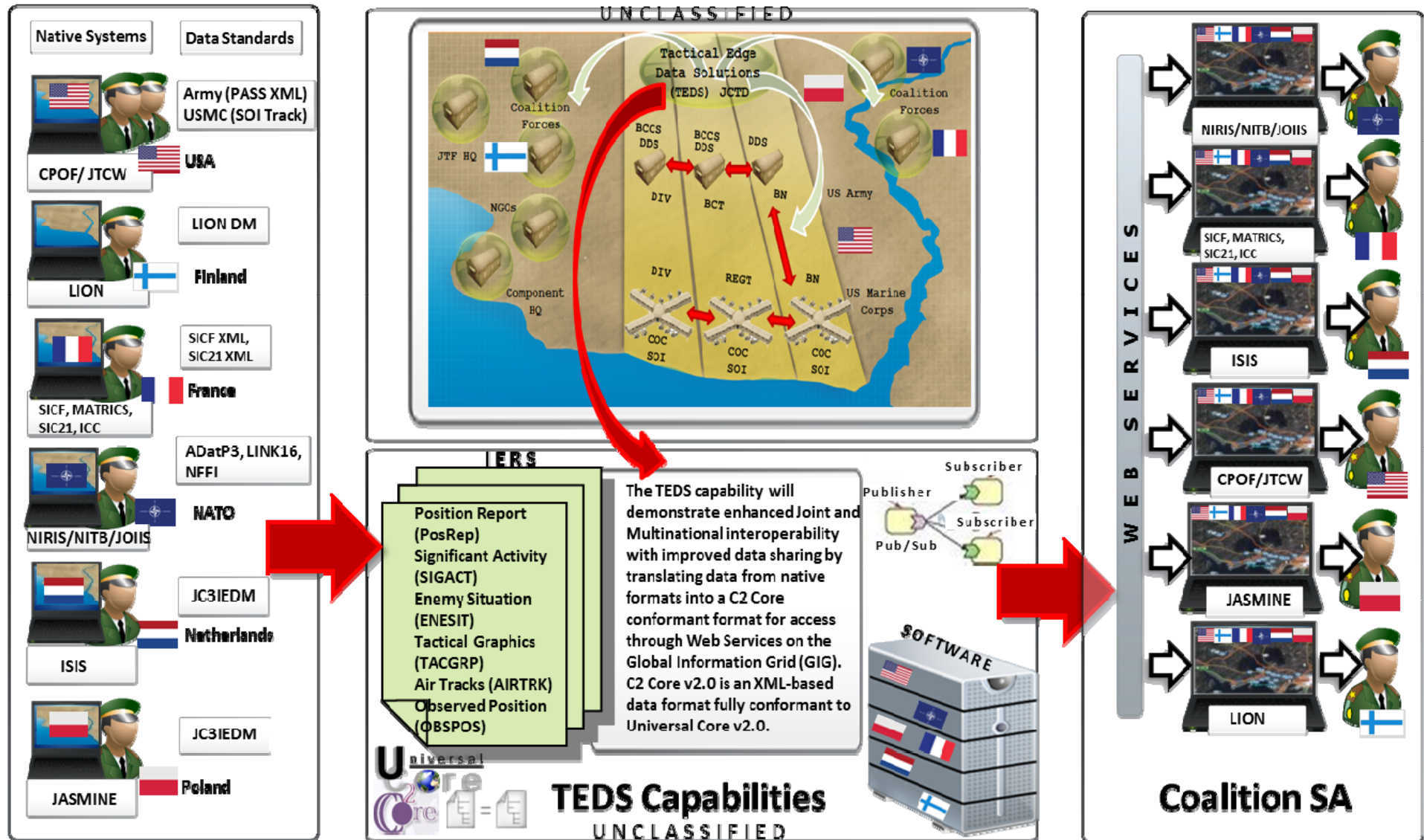
- **CWIX 12 / Operational Demonstration 2 - June 4-21**

- US Army
- US Marine Corps
- ACT/NC3A
- France
- Finland
- Poland
- Netherlands

- **US Navy – fully integrated into TEDS team**

- **TEDS Enterprise Services Demonstration (TESD)**
 - Aug 14-16 (P) APG, MD, SPAWAR and MCTSSA San Diego, CA

TEDS JCTD/CWP CWIX 12 OV-1

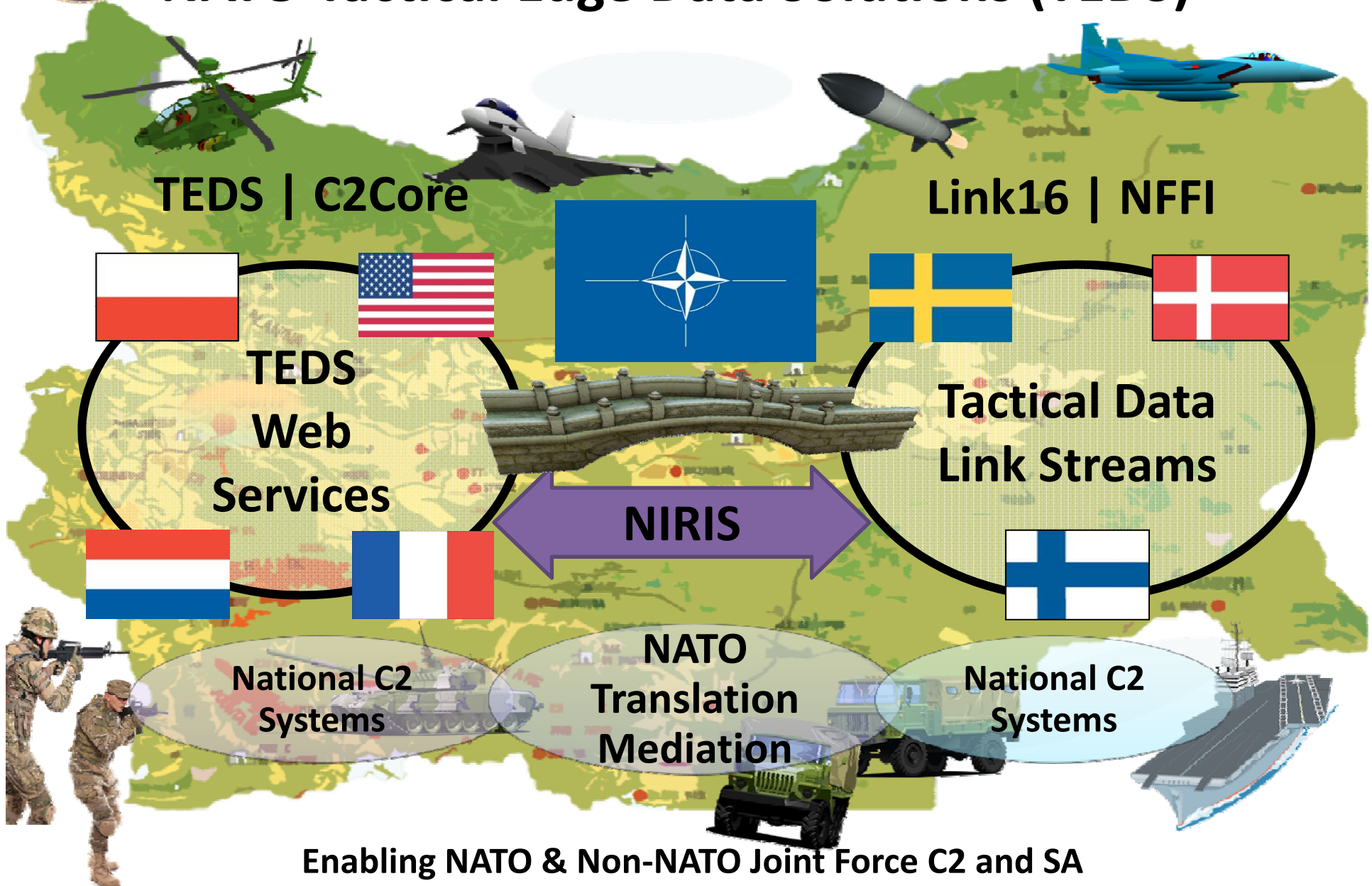




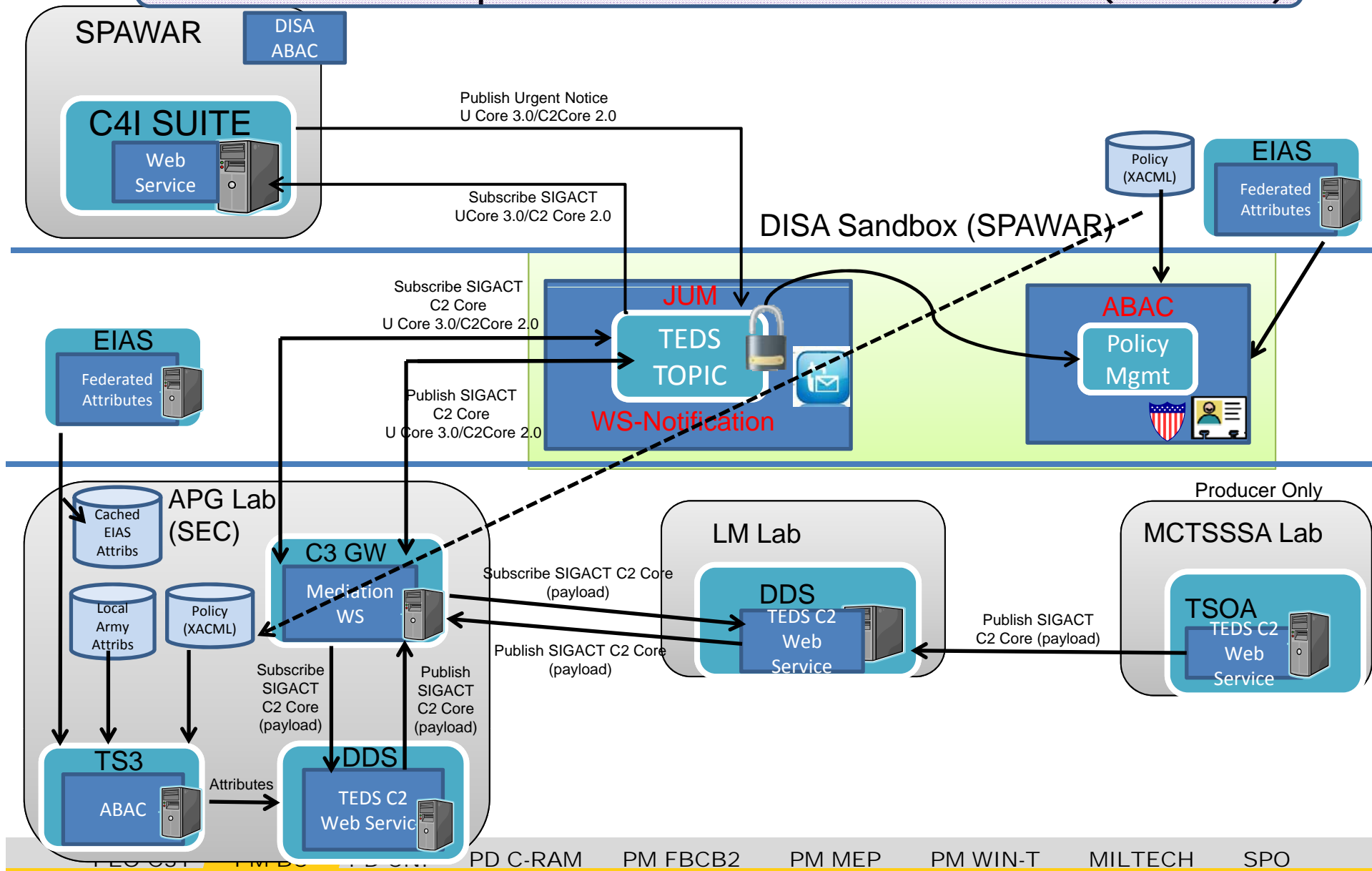
CWIX 12



NATO Tactical Edge Data Solutions (TEDS)



TEDS Enterprise Services Demo (TESD)



TEDS Transitions

	US Army	US Marine Corps	US Navy
INC 1 FY10	PD CS	C2PC/JTCW	N/A
INC 2 FY11	C2IVM CS 15-16 Signed TA	TSOA V2 Signed TA	N/A
INC 3 FY12	C2IVM CS15-16 LTC Brian Lyttle PdM SMC	TSOA V3 LTC Tyrone Ferrel MAGTF C2, pending	C4I Suite Brendan McMullen, NAVFAC pending



DRAFT

Tactical Infrastructure Enterprise Services (TIES) JCTD FY 13-14

**Candidate Nomination Board (CNB)
May 23, 2012**

Participants

- **COCOM Sponsor: JCS J6/SOUTHCOM (P), SOCOM (P)**
- **Oversight Executive: DASD (RF) Bill Reyers**
- **Operational Manager: JCS J6 David O'Neill david.oneill@js.mil, 757-836-5711**
- **Technical Manager: USMC(P), USN(P), USA(P)**
- **Transition Manager: USN(P), USMC(P), USA(P)**
- **Enterprise Manager: DISA (?)**
- **Other participants / partners: ONR, USAF**

(P)= proposed



TIES JCTD

Operational Problem Statement

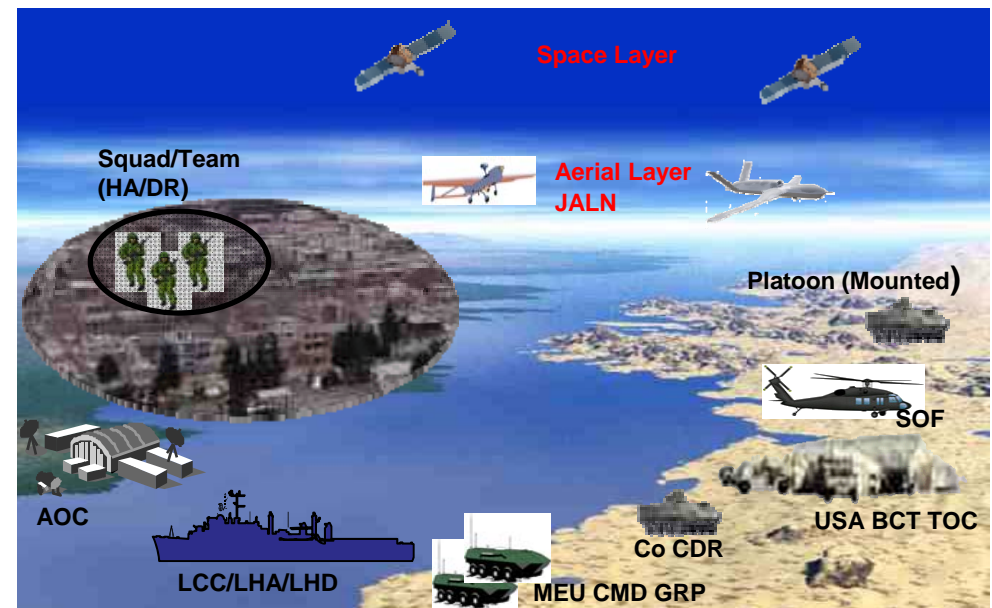


Operational Problem Statement.

- Timely sharing of C2 information at the Tactical Edge is constrained by ad hoc use of applications and services (e.g., chat, data compression, search utilities and messaging) .
- No common way to maintain C2 data consistency across Joint and coalition forces in the Denied-Disconnected Intermittent Limited Bandwidth (D-DIL) (>128Kbps).

Evidenced by.

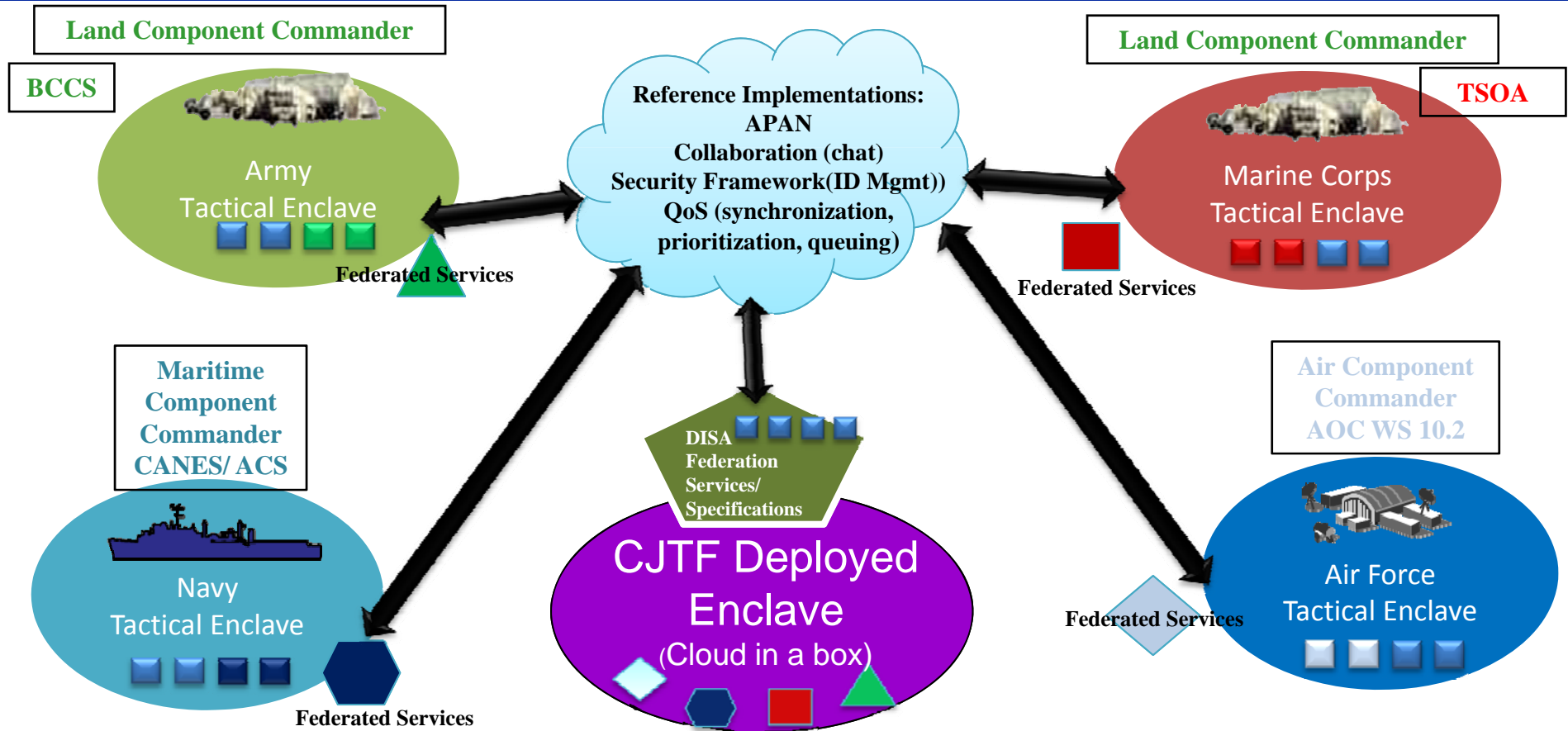
- Ships cannot connect to All Partners Access Network (APAN) to conduct Humanitarian Assistance /Disaster Relief (HA/DR) mission.
- Following network outages databases are not synchronized (e.g., bluefor, redfor, targeting data) and manual updates are required.
- Multiple versions of Chat inhibit effective, timely C2 and limit interoperability.
- C2 systems lack federated services for critical data exchange.
- USMC Situational Awareness (SA) with higher echelons is degraded during phased transition ashore.



Common tactical services solutions are needed to satisfy warfighter information sharing requirements



TIES CONOPS



Common Service/Interface



POR Service implementation



Service specific adapter that communicate with their



respective enclaves residing in their local enclave

BCCS-Battlefield Command Common Services
CANES-Consolidated Afloat Network Enterprise Services
AOC WS-Air and Space Operations Center Weapon System

TSOA-Tactical Services Oriented Architecture
ACS-Afloat Core Services



TIES JCTD

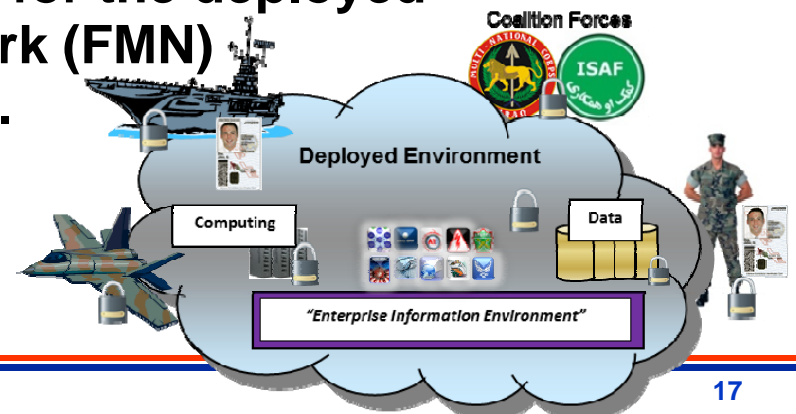


Proposed Concept.

- Deliver a Joint, federated C2 capability to meet operational requirements in a Denied-Disconnected Intermittent Limited (D-DIL) bandwidth domain.

What the JCTD will do.

- Provide federated solutions for Chat, Security Framework and Quality of Service to overcome D-DIL operational constraints by leveraging service oriented technologies of fielded solutions.
- Deliver a reference architecture and implementation framework for Tactical Edge for reuse and acquisition efficiency.
- Serve as a pathfinder and risk reduction for the deployed component of the Future Mission Network (FMN) and Joint Information Environment (JIE).





TIES JCTD

Activities/Deliverables



Year 1, FY 13: Develop COCOM validated operational concept, build reference architecture/implementation, lab test solution, then assess in operational environment.

Specific Deliverables Include:

- **Deliver Identity management, QoS/data synchronization, collaboration / chat (i.e. XMPP) framework.**
- **Tactical Edge reference implementation for Humanitarian Assistance/Disaster Relief Missions on APAN to exchange information with USN ships in the D-DIL environment.**

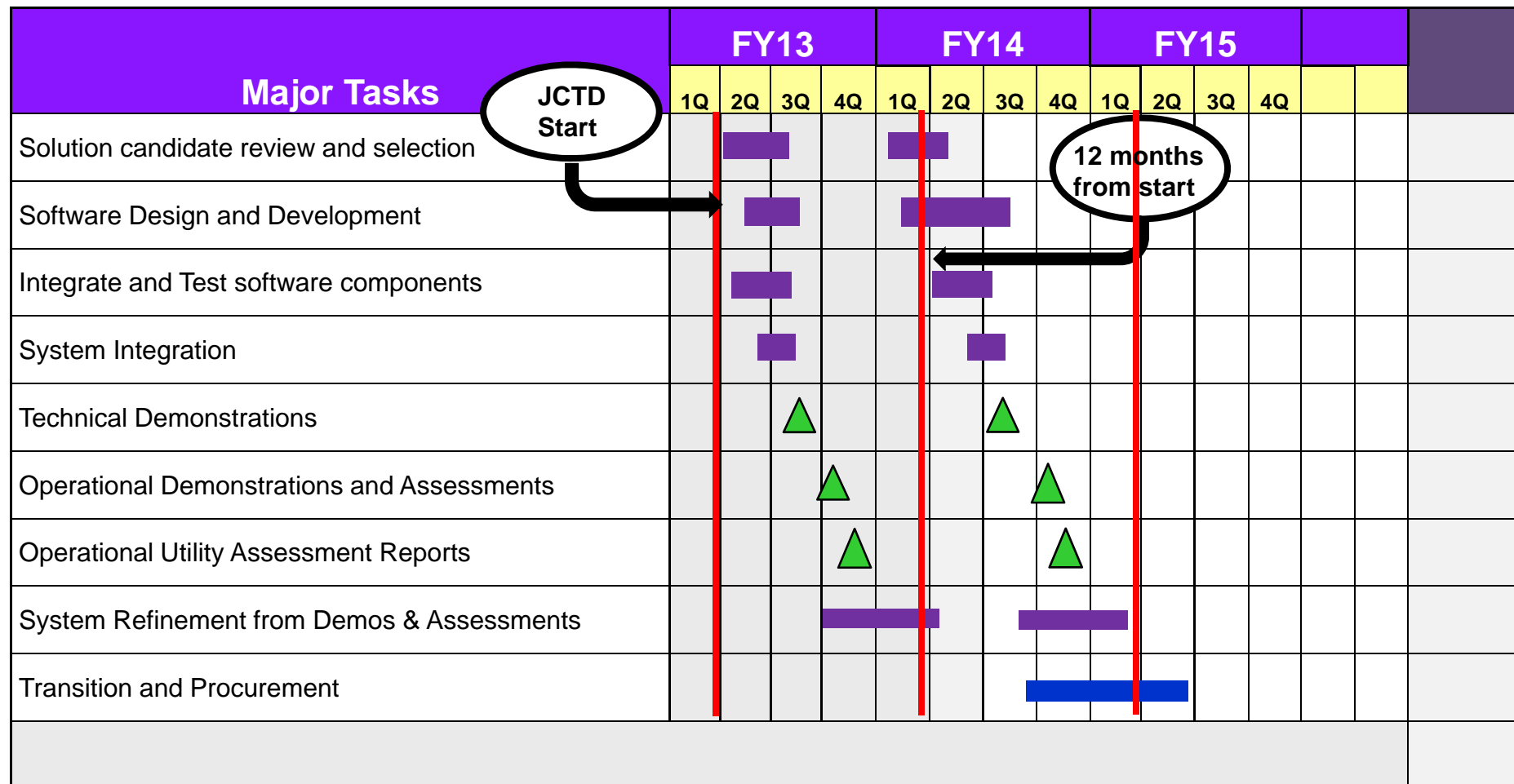
Year 2, FY 14: Update operational concept, expand reference architecture/implementation, demonstrate solutions in operational environment and transition.

Specific Deliverables Include:

- **Tactical Edge implementations for USA, USAF, USN, USMC and SOF C2 systems to exchange data and resynchronize after network disconnect.**
- **DISA reference implementation and architectures as enterprise services to interface with tactical edge.**
- **Deliver TTPs, lesson learned, source code, CONOPs.**



TIES JCTD Schedule and Cost





TIES JCTD


Partnerships and Status



Partner/Specific Organization	Status	Management Roles
CCMD Sponsor/Partner	CCMD TBD/JS J6	MG Bowman, JS J6
Joint Staff J6 DD C2I	On board	Operational Manager
USA PEO C3T – PM MC	On board	TM/XM (P)
USMC MARCORSYSCOM-PG 23	On board	TM/XM (P)
USAF AOC WS	Interested	
USN PMW 160 CANES	Interested	TM/XM (P)
DISA CTO	On board	Enterprise Manager(P)
OUSD (AT&L) / DASD (C3&Cyber)	On board	
OUSD (AT&L) / DASD (RF)	On board	Oversight Executive
ONR	On board	

TM- Technical Manager
XM- Transition Manager

Summary

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- **Joint Staff J6 DSD is facilitating implementation of tactical data and service solutions within C2 capabilities.**
 - **TEDS JCTD is successfully transitioning capability to US and NATO programs to address tactical data interoperability.**
 - **TIES JCTD will deliver reference implementations and federated tactical core services for chat, Identity Management and Quality of Service.**
 - **Both TEDS and TIES provide agile and secure information capabilities for US and coalition warfighters.**

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QUESTIONS?

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