



Joint Command and Control For Net-Enabled Weapons Joint Test and Evaluation (JC2NEW JT&E)

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Director



Problem Statement



Current operational concepts and joint command and control procedures do not support the joint force's ability to employ net-enabled weapons against dynamic targets

Validated by PACOM as the COCOM sponsor



Background

Today's Problem: Dynamic Targets



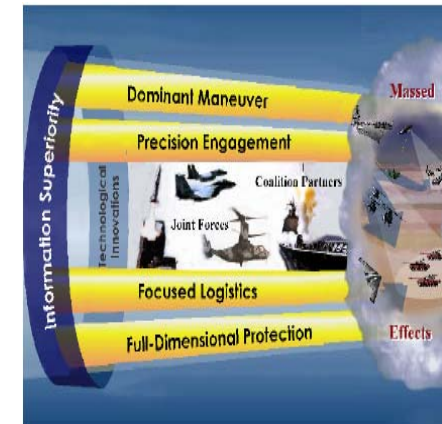


Critical Operational Shortfalls



- Increasingly precise weapons targeting
- Engagement of mobile/re-located targets
- Rapidly respond to high value and Time-Sensitive-Targets (TST)
- Employ weapons under adverse conditions
- Verify weapons impact

Joint Vision 2020



Precision Engagement

- Locate Enemy
- Generate Desired Effect
- Assess Success
- Reengage

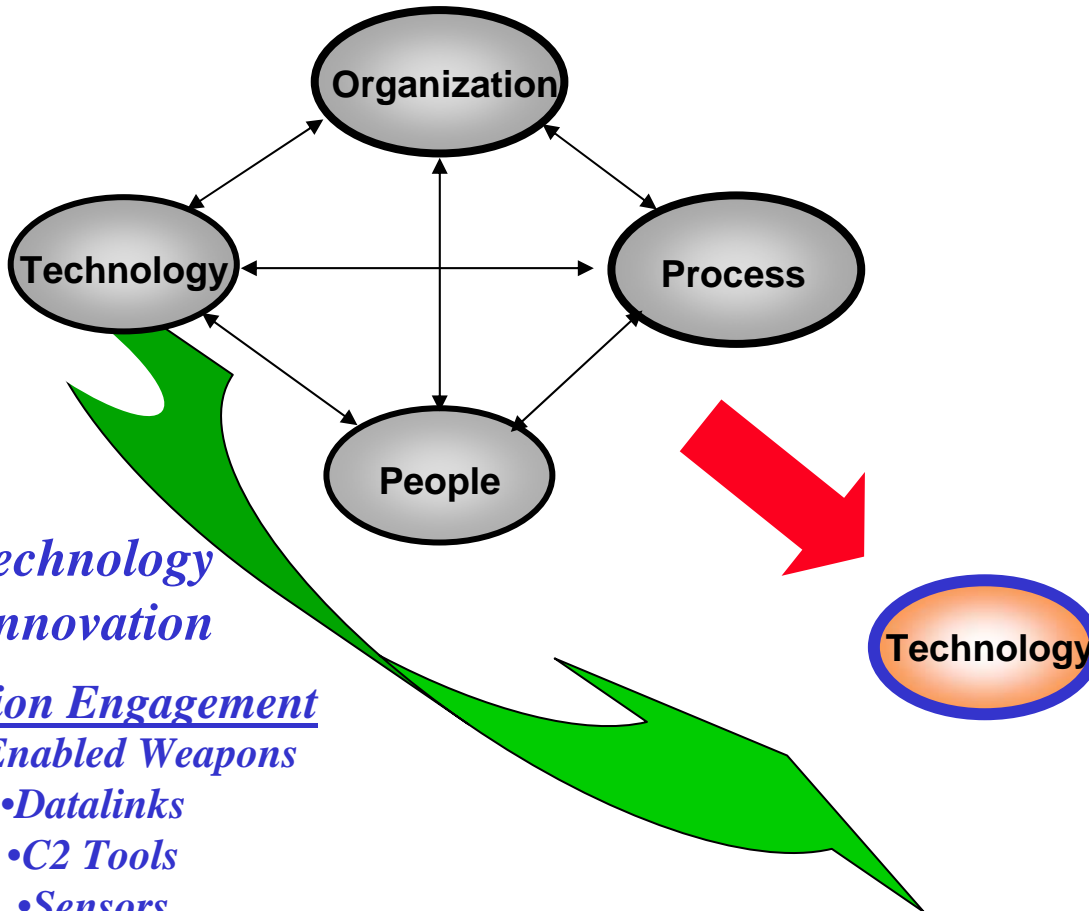
JROC ICDs validate the need to field enhanced weapon capabilities to support critical precision engagement requirements



Joint Mission Capability



Emerging Technologies Have Outpaced the Ability to Effectively Utilize the Newest Innovations



*Technology
Innovation*

Precision Engagement

- *Net-Enabled Weapons*
- *Datalinks*
- *C2 Tools*
- *Sensors*



Current or Near-Term Net-Enabled Weapons



Direct Attack

WEAPON	SERVICE	IOC	BAND	TGT set/profile
JDAM/AMSTE	AIR FORCE	2008	UHF EPLRS	Mobile or fixed / short range

Stand Off

WEAPON	SERVICE	IOC	BAND	TGT set/profile
SLAM-ER	NAVY/USMC	FIELDDED	UHF L Band	mobile or fixed / medium-long range 50-150nm

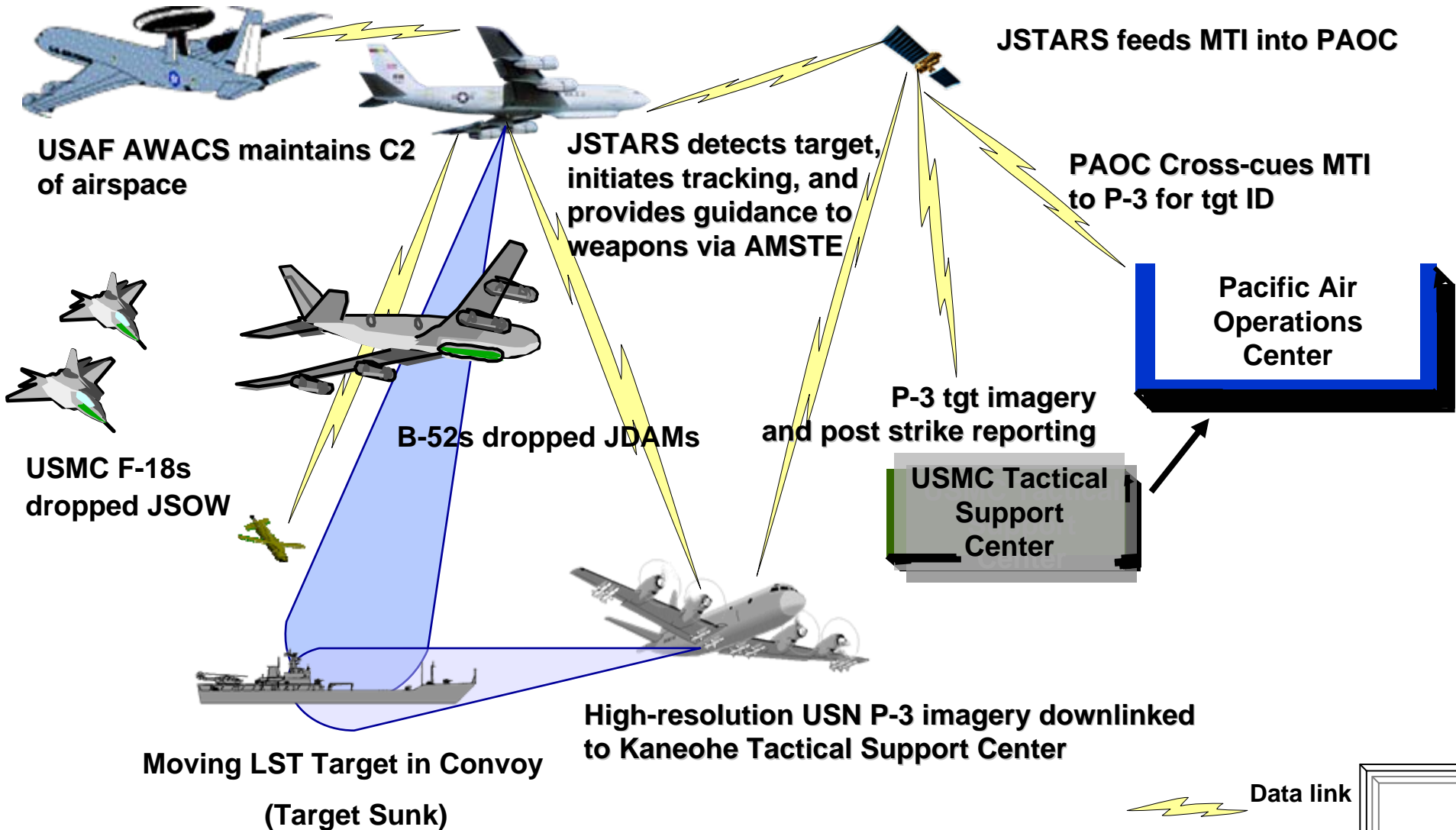
Long Range / Loiter

WEAPON	SERVICE	IOC	BAND	TGT set/profile
TLAM Blk IV Tactical Tomahawk	NAVY	FIELDDED	UHF SATCOM Tomahawk Strike Network (TSN) 5kHz	Mobile or fixed / long range 700+nm



Operation Resultant Fury

(Concept Demonstration)





Net-Enabled Weapons Future Capability (2010 >)



Direct Attack

WEAPON	SERVICE	IOC	BAND	TGT set/profile
Precision Attack Missile (PAM)	ARMY	2010	UHF L Band 1750-1850MHz	Moving, mobile or fixed / short range ~40K

Stand Off

WEAPON	SERVICE	IOC	BAND	TGT set/profile
Harpoon III	NAVY	2010	UHF or Link-16	Moving, mobile, or fixed / short-medium range
JSOW – C Bk III w/DL	NAVY	2010	UHF or Link-16	Mobile or fixed / short-medium range 15-65nm

Long Range / Loiter

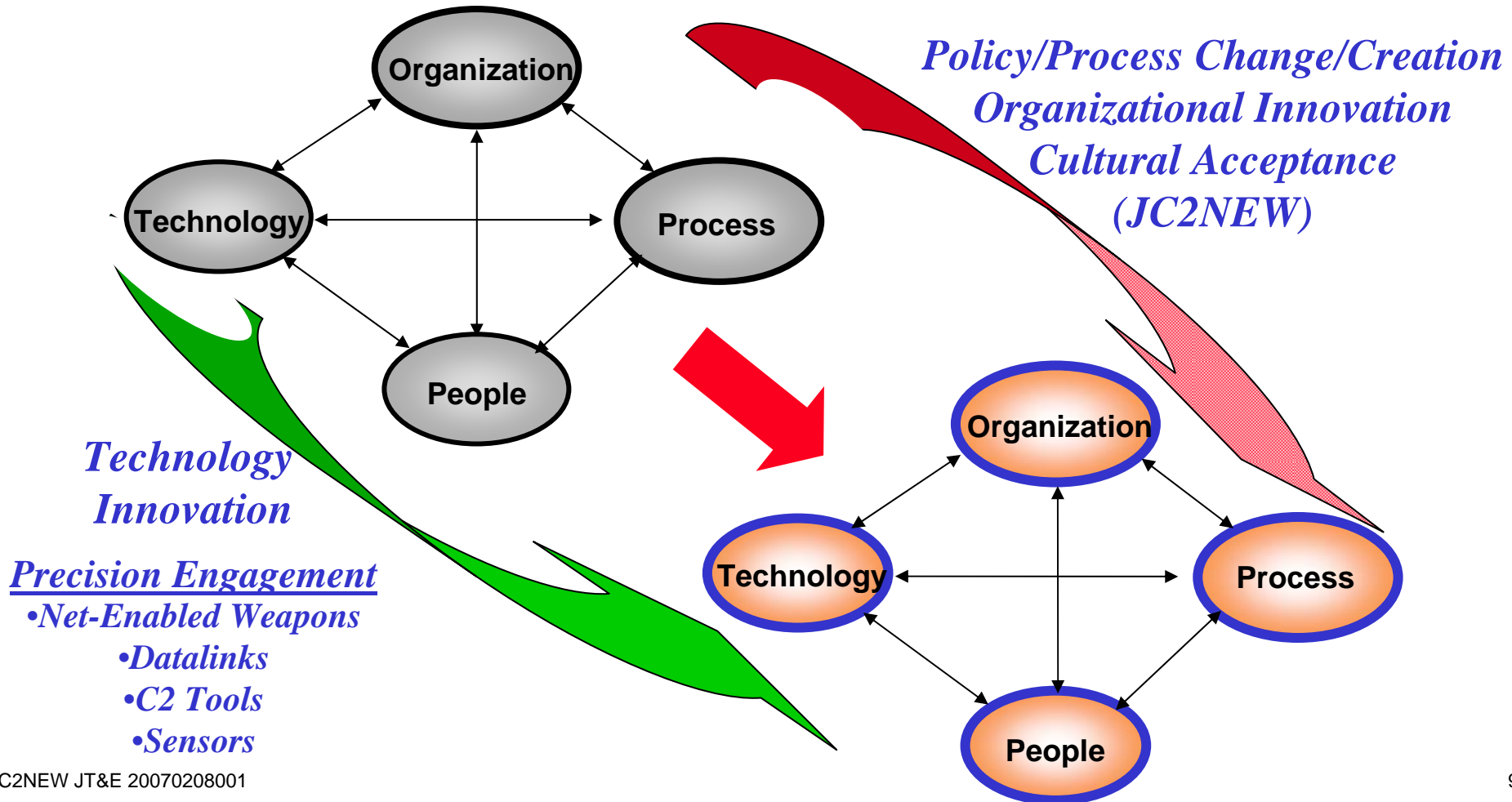
WEAPON	SERVICE	IOC	BAND	TGT set/profile
JASSM-ER	AIR FORCE	2010	BLOS National Technical Means LOS UHF	Mobile or fixed / long range 500+nm



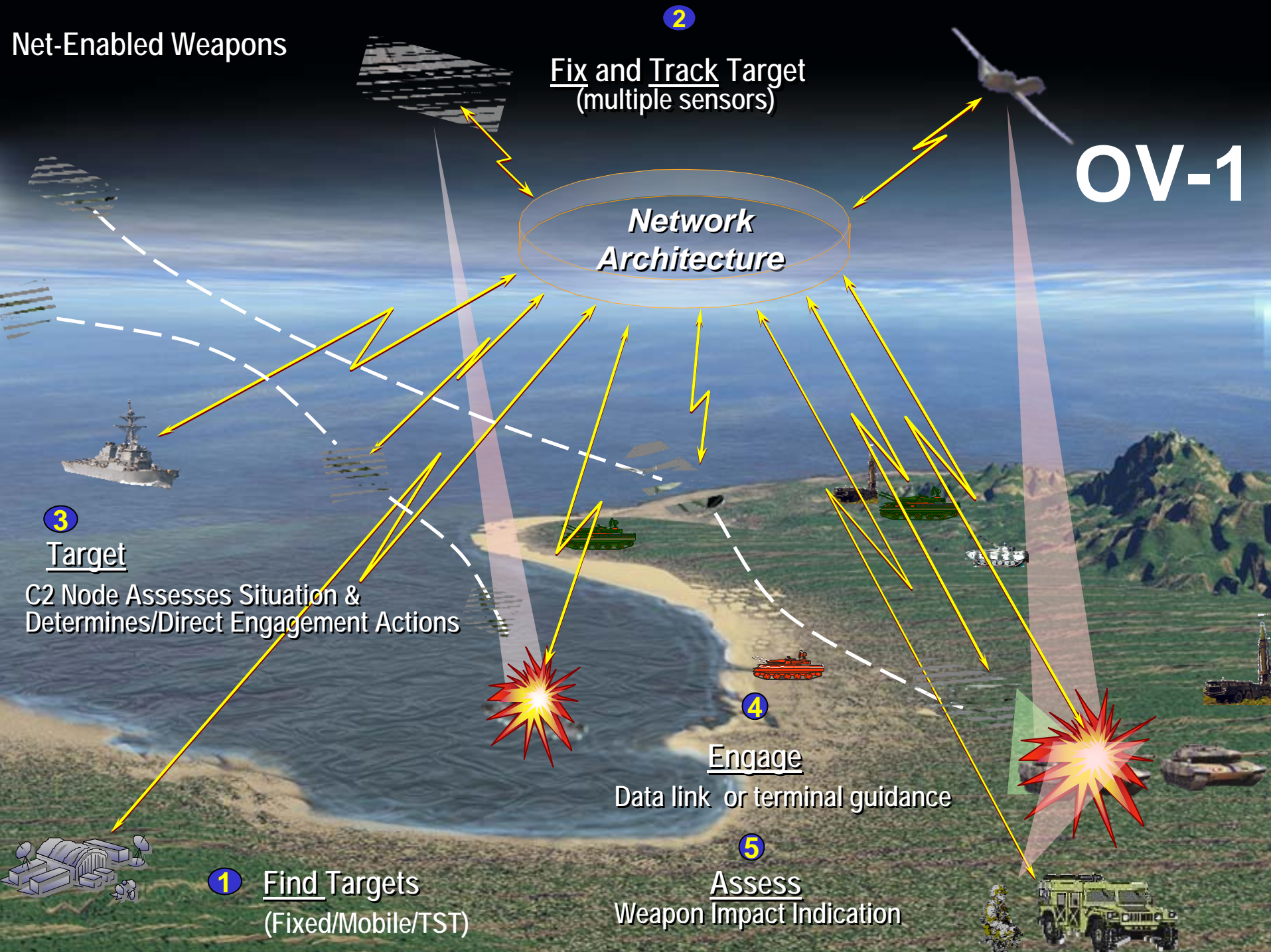
Joint Mission Capability



Provide the Joint Force Commander and supporting forces with complete transformational precision engagement capabilities in consonance with new technologies

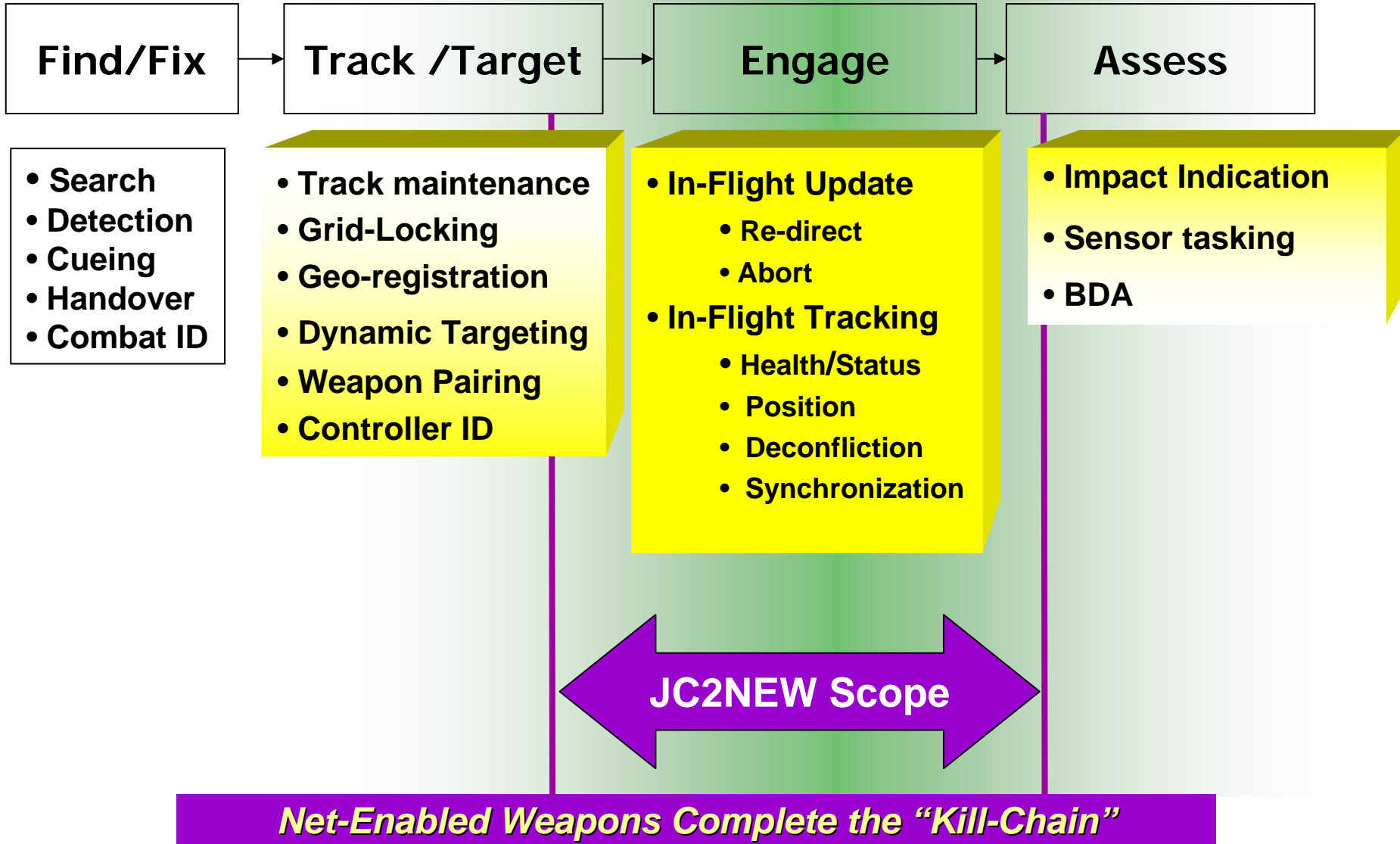


Net-Enabled Weapons





Scope





Test Concept

Oct 06 - Present Nov 07 May 08 Oct 08 Mar 09

PHASE 1

PHASE 2

PHASE 3

Program Initiation

RR 1
Virtual Flag 08-01

FT 1
Northern Edge 08

RR 2
Atlantic Strike 08

FT 2
Atlantic Strike 09

Test Team Formation

JWAG

GOSC

Mission Decomposition

Define C2 Processes and Nodes

Review and Assess TTP & CONOPS

Constructive Tools

Initial CONOPS TTP

Virtual Constructive Environment

Refine C2 Processes

Continued TTP Review, Development & Refinement For Maritime Environment

Refined CONOPS TTP

Maritime Operations

Evaluate C2 Processes & TTP

Dynamic Environment (L/V/C)

Validate Refined TTP

Evaluated CONOPS TTP

Virtual Constructive Environment

Validate and Refine C2 Processes for Scenario

Refine TTP and CONOPS For Ground Environment

Refined CONOPS TTP

Ground Operations

Evaluate C2 Processes & TTP

Dynamic Environment (L/V/C)

Validate Refined TTP

Feedback To/From Warfighter Throughout the Process

Products to Warfighter as Required



Assessment Tools



- **Modular Analysis and Test Support System (MAnTSS)**
- **CAOC Performance Assessment System (CPAS)**
- **System Architect**
- **Extend/TopView**



Value to the Warfighter (Force Multiplier)



- **Precision engagement with minimized risk**

- CONOPS and TTP to enable precision engagement of moving and stationary surface targets while minimizing risks to operators, friendly ground forces, and noncombatants

- **Enhanced tactical fire control**

- Ability to direct distributed weapon resources in a collaborative manner
- Improved opportunity of engagement
- Decoupling of local sensor/weapon pairing constraint
- Increased attack confidence, minimizing threat exposure and resource expenditures



- **Network architecture improvements**

- Network architecture considerations for Denied Access and Air Superiority environments

- **Effective training**

- Identify force structure, infrastructure, and methodologies necessary to conduct effective training for net-enabled weapons employment

ENABLING A DYNAMIC NET-CENTRIC KILL CHAIN“ ANY SENSOR ANY WEAPON”



Contact Information



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Questions / Comments



JT&E Organization



A/O 1 Mar 07

USAF: 3/8
USN: 0/1
USA: 1/4
USMC: 0/1
Contractors: 21/21
Gov't Civilian: 3/4
Total: 28/39

