

2004 TACOM APBI



**Government and Industry Unite
to Support Our Forces**

Future Combat Systems



Advanced Planning Briefing for Industry (APBI)

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Overarching Acquisition Strategy



- **Buy** Future Combat Systems; **Equip** Soldiers; **Field** Units of Action (UA)
- Embrace Evolutionary Acquisition while Requirements Mature
- Contracting via Lead Systems Integrator
- Demonstrate-Live and Virtual-Force Operational Capabilities of the UA
- Balance Test and Evaluation with Modeling and Simulation
- Sustain DARPA/Army Collaborative Relationship for the Future
- Expand to Joint, Interagency, and Coalition Partners
- Design for Supportability-Performance-Based Logistics
- Identify and Manage Risk throughout the Program
- **Accelerate fielding of FCS capability to the Current Force**

It is about the Networked System of Systems
and how it enables Dominant Land Combat
for Current and Future Forces



Key Tenets of the Program



- Create Opportunity for ***Best of Industry*** to Participate
- Leverage Government ***Technology*** Base to Maximum Extent
- ***Associate*** On-Going Enabling Efforts With LSI-Led Activity
- ***Collaborative Environment*** from Design Through Life Cycle
- As a Minimum, ***Commonality*** at Subsystem/Component Level
- Design/Plan for ***Technology Integration and Insertion***
- Maintain and Shape the ***Industrial Base*** for the Future
- Retain ***Competition*** throughout Future Force Acquisition
- Appropriate ***Government Involvement*** in Procurement Processes
- Consistent and Continuous ***Definition of Requirements***
- Maintain and Shape ***Government Acquisition*** Community
- Program ***Affordability*** — ***Balance*** Performance and Sustainment
- One Team Operating with ***Partnership and Teamwork***

The tenets remain constant:
Applying them to the Current and Future Force



What Are Future Combat Systems



- **Comprised of a family of systems**
 - Advanced, networked air- and ground-based maneuver, maneuver support, and sustainment systems
 - Includes manned and unmanned platforms
 - Networked via a Battle Command architecture
- **Will operate as a system of systems**
 - Network **existing systems, systems already under development, and new systems to be developed**
 - **Network will enable:**
 - **improved ISR, battle command, real time sensor-shooter linkages, and increased synergy between echelons and within small units.**
 - **capabilities** available to UA small units enable the UA to connect to UE, joint capabilities, and national assets



FCS Family of Systems



- **FCS Network: key foundational integrating capability**
- **8 Manned Ground Vehicle variants**
- **4 Unmanned Air Vehicle classes (from small unit to brigade level)**
- **3 categories of Unmanned Ground Vehicles:**
 - Armed Robotic Vehicles (Assault, RSTA, Light variants)
 - MULEs (cargo & countermine variants)
 - Small Unmanned Ground Vehicle (manpackable)
- **Unattended Ground Sensors**
- **Unattended Munitions**
 - Non-Line of Sight Launch System (missiles in a box)
 - Intelligent Munitions System
- **Each of these systems is designed within a System of Systems Common Operating Environment (common integrating software)**



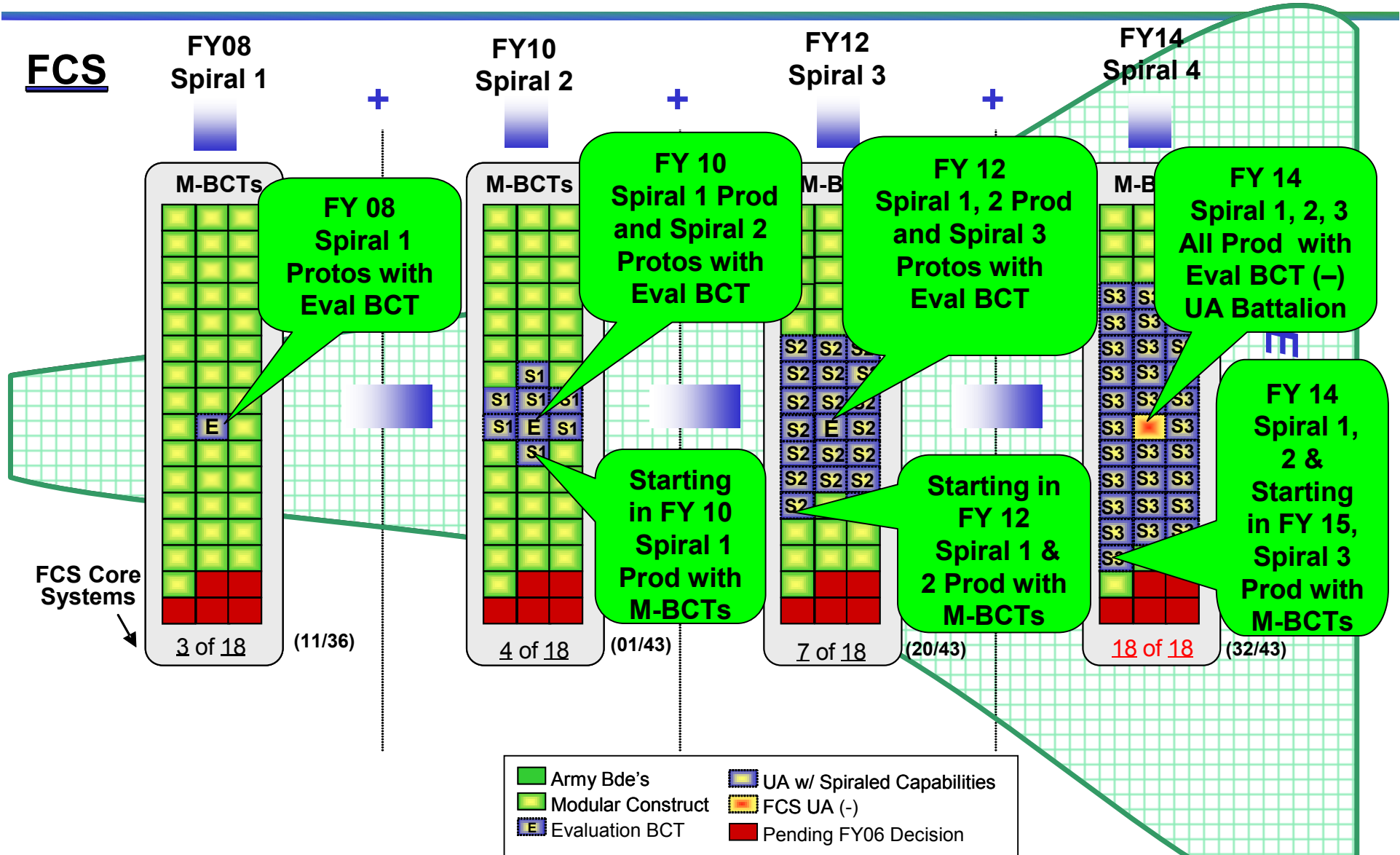
Key Objectives



- Preserve the **Systems of Systems** focus, and **Field** all (to include currently deferred systems) FCS Systems plus the network, at threshold capability by 2014
- **Field Future Force capabilities to Current Force units** in discrete “spirals” starting in FY08, and provide networked capability to UAs (FCS-equipped UA) by 2014
- **Prioritize** the development and demonstration of the network and SOSCOE, unattended munitions, sensors, and unmanned air and ground vehicles
- Embrace evolutionary acquisition through **Spiral Development** employing a design, build, experiment, and test approach in concert with the user, vice the current concurrent developmental construct.
- Increase **Schedule** (original scope intact, plus additional scope for experimentation/Spiral out), to address internal and external assessment recommendations and provide Army with near-term funds required for current operations
- Deliberately identify and assess **Spiral out** candidate technologies/capabilities for integration into Current Force Units of Action.
- Incorporate a deliberate and robust design, build, experiment, and test approach to **Build Knowledge**, adequately inform **Decision Points**, facilitate assessment of spin-offs, provide feedback to software development, integration & verification, user activities and user tests
- Invest in Technology Maturity and reliability enhancement activities to reduce cost and schedule risk
- Meet congressional language for NLOS-C with an integrated approach to all MGVS System development and production

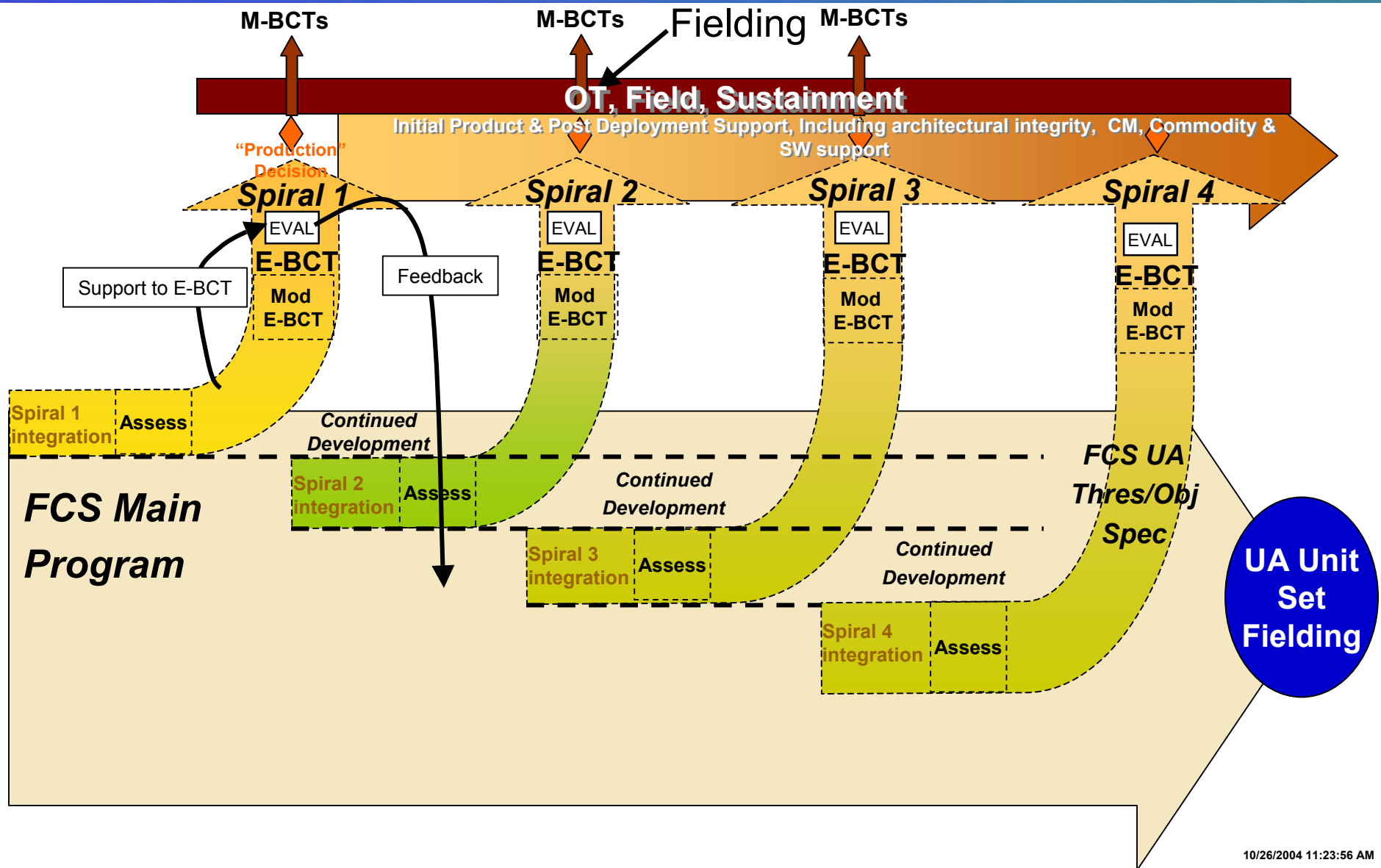


Acceleration Process





FCS Revised Program





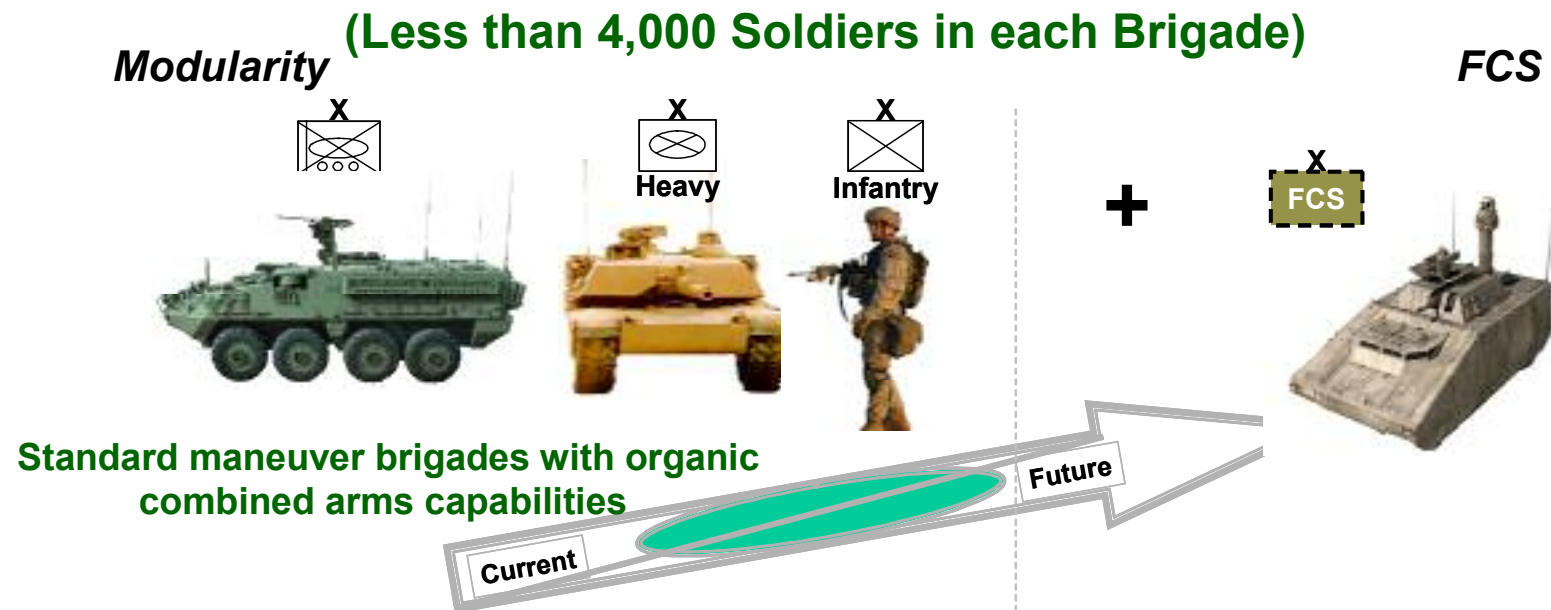
FCS Program Adjustments



- **Previously deferred FCS systems returned to FCS development**
 - UAV Class II
 - UAV Class III
 - Armed Robotic Vehicle (ARV)-Assault
 - ARV-Reconnaissance
 - FCS Maintenance and Recovery Vehicle
- **Experimentation inserted into program to prove revolutionary concepts, mature architecture and components and assist spiral development**
- **"Spiral Out" packages start in FY 2008 and will successively insert FCS capability into Current Force Modular Units of Action**



Organization: FCS-equipped UA Commonality With Current Force



FCS-equipped UA design influenced Heavy and Infantry modular brigades

Common design characteristics:

- Modular
- Campaign quality with joint and expeditionary capabilities
- Combined Arms battalions
- Increased Recon & Surveillance at lower echelons
- Organic fires battalion
- Organic logistics support battalion

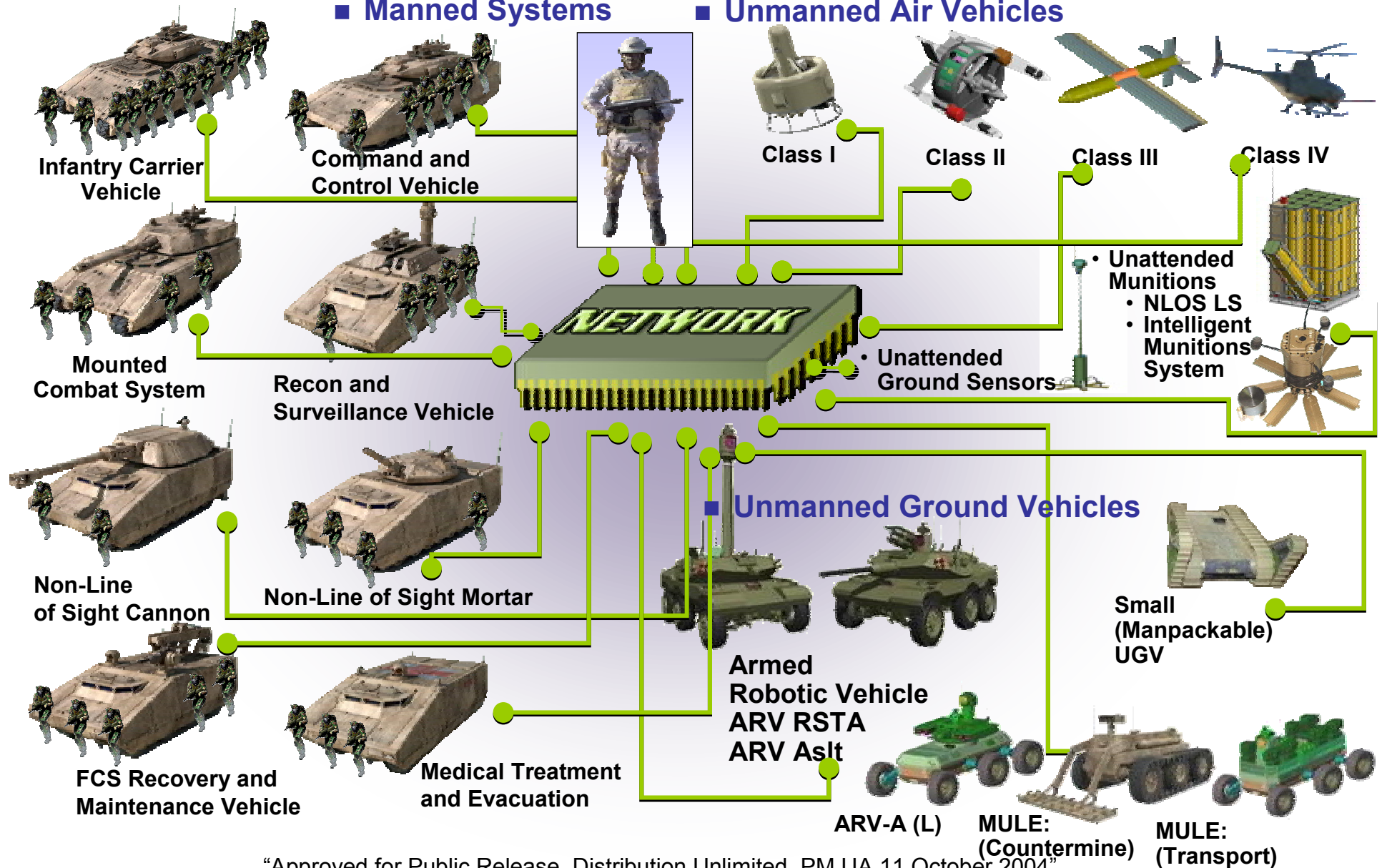


Future Combat Systems



Manned Systems

Unmanned Air Vehicles

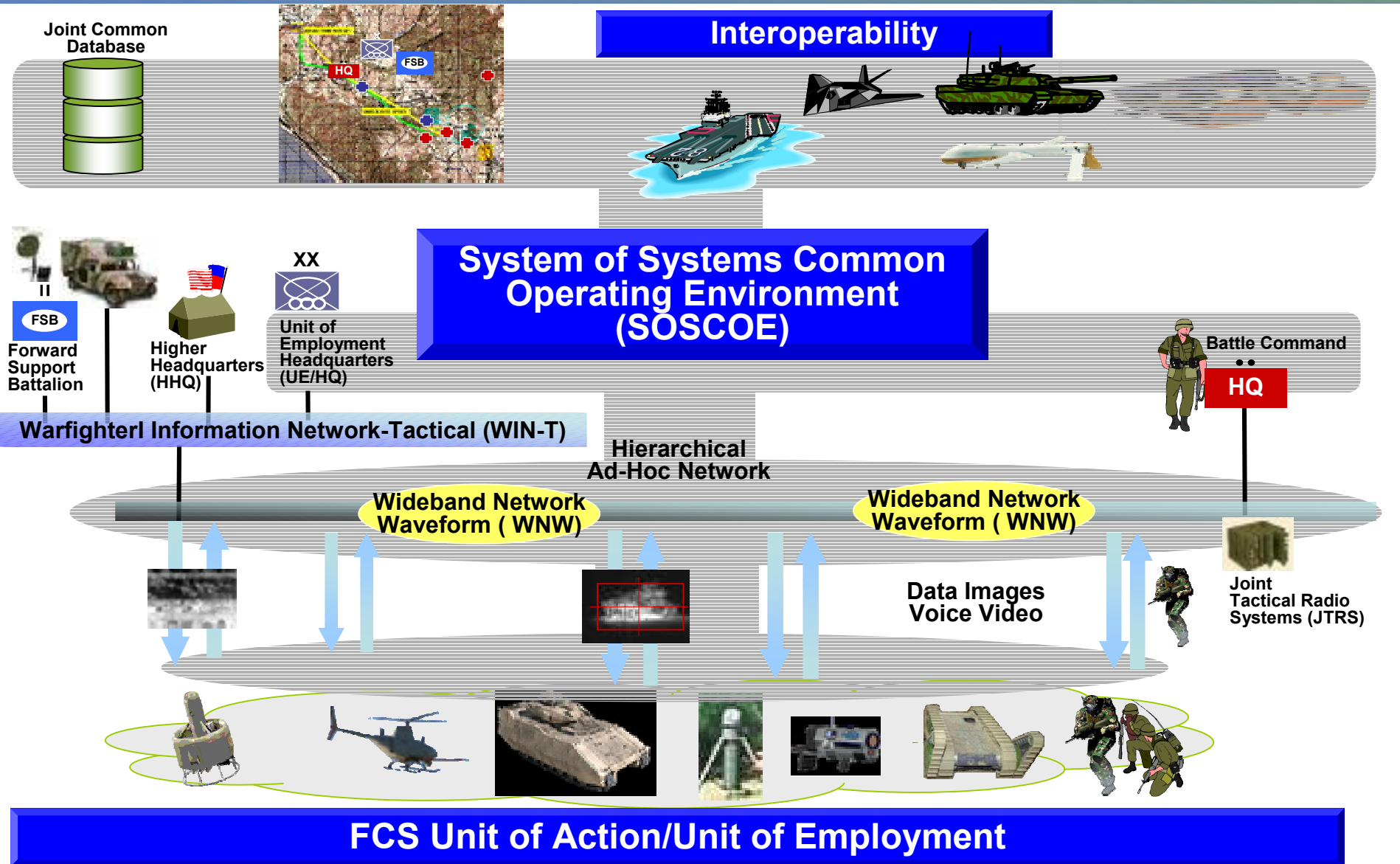


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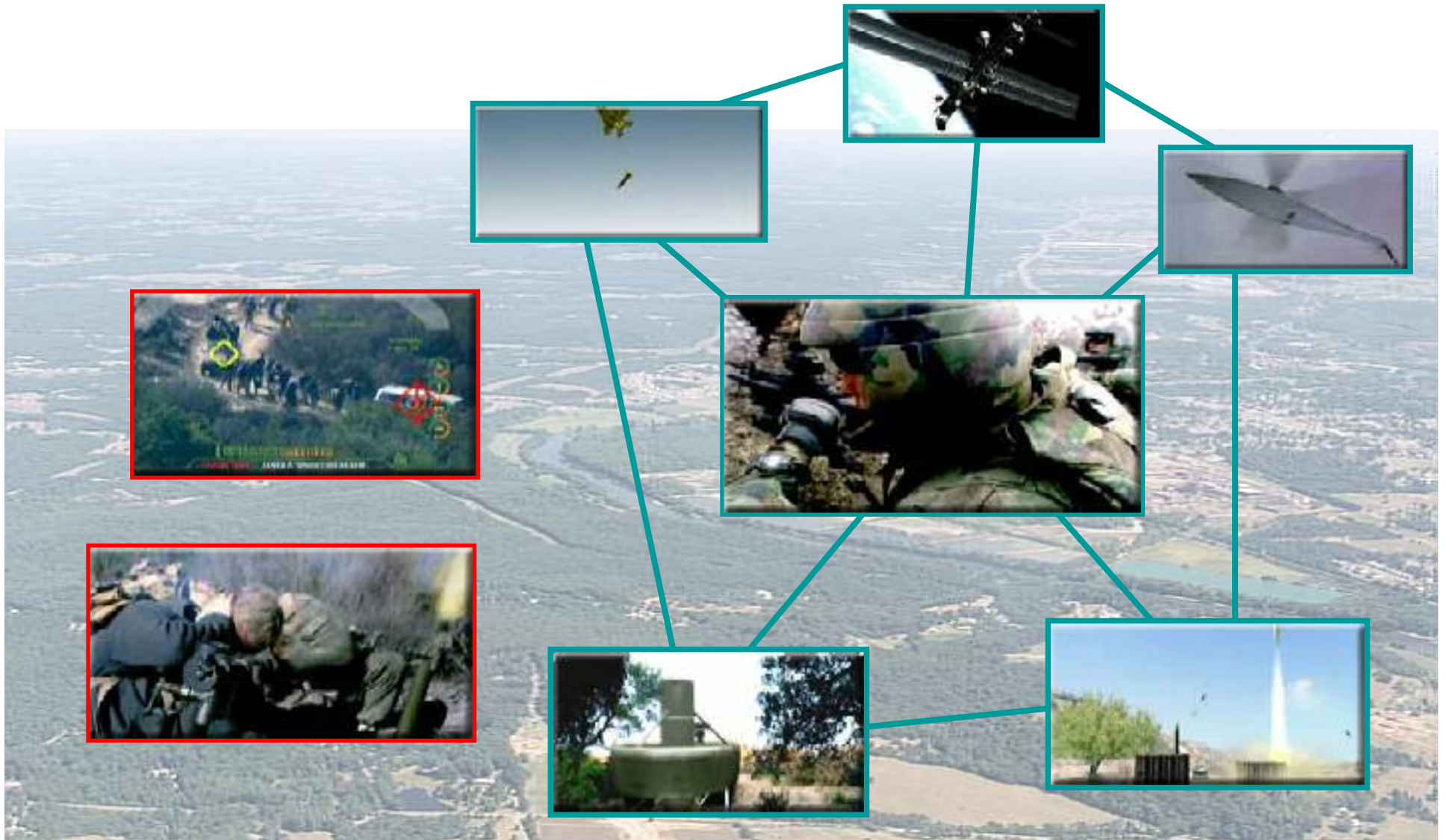
FCS Network Centric Architecture

A New Way of Warfighting





FCS Network-Centric Scenario



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FCS LSI and Partner Opportunities



- Opportunities for LSI and partners listed or linked to FCS website
- FCS is pursuing innovative ways for maximizing Small Business involvement in upcoming competitions for previously deferred systems
 - Unmanned Aerial Vehicles (UAVs) Class II, and III RFPs Q1 '05
 - **Source Selection Criteria may reward SB content and SB teaming**
- LSI Spiral Development and Technology Planning (SD&TP) IPT will participate in the 8th Annual Army Small Business Conference
 - High interest technologies to the FCS program to be identified
 - Focus on innovative technology enablers for systems that are lightweight, inexpensive, mobile, lethal, reliable, sustainable, network-centric, and interoperable
 - Soliciting technical “white papers” beginning Q1 '05
- Logistics (2005)
 - Interoperability Kits
 - Logistics Data Repository
 - Interactive Electronic Technical Manual (IETM)



Opportunities (continued)



- Opportunities exist for 2nd and 3rd tier support to recent, pending and future selections
 - Ground Sensor 2nd tier suppliers just announced for:
 - **Multifunction RF System, Combat ID System, Reconnaissance & Surveillance Mast, Medium Range EO/IR System, and Automated Target Recognition System.**
 - MGV Competitions
 - **Guns and Ammo Handling Systems (announcement Q3 '04)**
 - **Propulsion (announcement pending)**
 - **Traction Drive System (Q4, 04)**
 - **Track Drive System (RFP 05)**
 - **Liquid Cooled Power Module (RFP 05)**
 - Air Sensors (RFP Q4 '04)
 - Unmanned Ground Vehicle subsystems/component competitions will begin Q1 '05
 - Air & Ground Communications: Antennas & other equipment RFPs beginning Q4 '04
- Previously selected Armed Reconnaissance Vehicle (ARV) with United Defense to enter System Development and Demonstration



How to Get Involved with FCS



- Regularly check the FCS Website Home Page at: www.boeing.com/fcs
- Located on this website:
 - FCS Business Opportunities of the LSI and 23 Partners (Contacts with websites)
 - Information on Submitting Unsolicited Proposals
 - Partners' Requests for Quotes / Information
 - FCS Business Opportunities
 - FCS Supplier Information Submittal Form
 - Supplier Diversity information (specific LSI / Partner Small Business contacts provided in FCS Business Opportunities Brochure)
 - FCS calendar with upcoming conferences and events
 - Submit Questions to LSI and Partners



Looking Forward



“Outstanding efforts to date have allowed the Army to accelerate spiral capability to the current force”

- The One Team partnership is working**
- Our mission has been expanded due to confidence in our performance**
- This is a good thing...For the Army, for Industry and for the Soldier**

One Team – “Equipping our Joint Warfighters with the World’s Best Capability



Summary



- **Future Combat Systems will provide a significant increase in Army warfighting capability to the Joint Force Commander**
 - A key land combat concept supporting joint concepts
 - Enables a greater degree of joint interdependence
- **FCS enables a campaign quality Army with Joint and expeditionary capabilities**
- **FCS is underpinned by operational and organizational concepts, documented future capabilities, and an operational architecture**
- **FCS is a transformational Acquisition process**
 - Program has a sound foundation
 - Worth the risks

A Campaign Quality Army with Joint and Expeditionary Capabilities

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