Expeditionary Force Development System (EFDS)

BGen Hanifen
DCG, MCCDC

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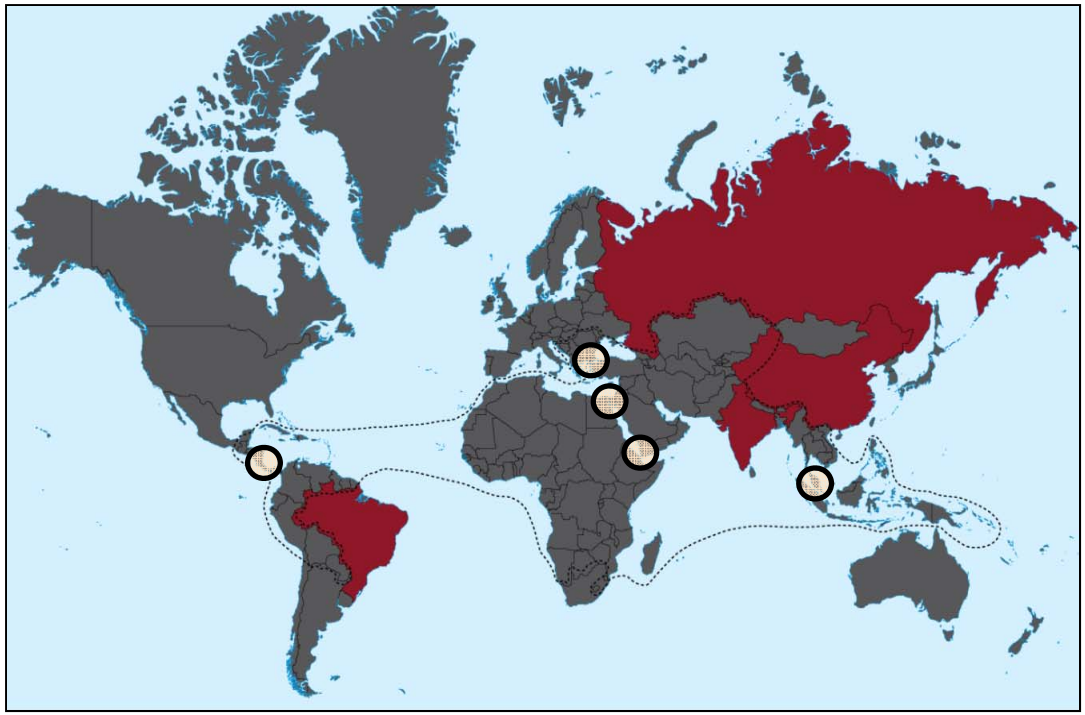
Evolving Security Environment

…driving new USMC concepts



- Assuring Access
- Demographic Shifts
- Weak and Failing States
- Emerging / Re-Emerging Powers
- The Proliferation of WMD/E
- Technological Proliferation
- Globalization
- Competition for Resources
- Disease/Pandemics
- Urbanization
- Climate Change
- Lack of Accessibility

MCIA's Long Range Threat Assessment and **JFCOM's** JOE 2010 both conclude: instability & uncertainty will be the most likely catalyst for conflict.

- **Critical requirement : forces which can rapidly *adapt* to changing circumstances, *engage* with foreign partners, and *operate* in a non-permissive *anti-access environment*.**

Balance, Versatility & Adaptability- key tenets of the force

IT Requirements
Shaped by USMC Core Competencies…

Persistent Forward Naval Engagement; Force in Readiness

Integrated Combined Arms

Service With the Navy

Lead Joint / Multinational Ops
Enable Interagency Activities

Complex Expeditionary Ops

Amphibious Capabilities & Joint Forcible Entry Ops

HQMC, Operating Forces, and Supporting Establishment DOTMLPF Implications

IT Requirements

…and by emerging Operational Concepts

Capstone Concept for Joint Operations (CCJO)

- **Combat**
- **Security**
- **Engagement**
- **Relief & Reconstruction**

} **Same General Purpose Force**

- **Joint Operating Environment (JOE)**
  - Companion document to CCJO
  - Recently published by JFCOM

Naval Operations Concept 2010

Forward Presence:
- Engagement, Response, Projection
- Forward stationed/deployed forces
- Adaptive Force Packaging

Maritime Security: Engagement, Security, Response
- Security Force Assistance, Maritime Partnerships
- Exercises & Training

Sea Control: Engagement, Projection
- Overcome Anti-Access/Area Denial

Power Projection:
- Gain/Maintain Access

Marine Corps Operating Concept Vol 3

Enhanced MAGTF Operations: disaggregated ops, speed, agility and trust supports CCJO activities

Engagement: General Purpose Force expands force options & capabilities for engagement

Crisis Response: contribution to support requirements across the ROMO

Power Projection: overcoming access challenges to enable the joint force

Force Development

General Purpose Force – supports CCJO, NOC & MOC

Power Projection – supports access challenges

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MAGTF Implications:
Significant impact to C4/IT Requirements

- **Future Force :**
  - **Combat**
  - **Security**
  - **Engagement**
  - **Relief/Reconstruction**

- **Decentralized MAGTF operations**
  - **Develop Partnership Capacity**
  - **Provide forces that can support COCOM requirements**
  - **Able to operate in the complex operational environment with capabilities to assist Host Nations, or conduct independent or joint operations.**
- **MAGTF effectiveness in complex terrain**
  - **Understanding the Human Terrain**
  - **Kinetic and Non Kinetic Capabilities**
  - **Joint/Multi-National Operations**
  - **Regionalization**
- **Complex and media-intensive operational environments**
  - **Increase effectiveness in the Information Environment**
  - **“Strategic Corporal”**
- **Communications capabilities**
  - **Operational culture, regional, & language skills**
  - **IO, PA, CMO, Combat Camera**

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Future C4/IT Requirements
more complex than ever…

- 202K growth : OpForce and supporting establishment
- Cyber dependence and concerns
- Net-Centric Operating Environment
- Energy consumption: power sources
- Scalability : JTF Hq Core & MEF down to ECO
- Organizational agility : C2 Modernization
- Distributed operations
- Joint and Multinational compatibility
- Lighten the MAGTF
- Equipment utility & versatility : “Ruggedized” and “Marinized”
- Capacity to train & operate across ROMO

Create unparalleled information sharing, collaboration, and adaptive organizations

Command and control (C2) will be leader-centric and network enabled

All need to meet Net-ready KPP in order to access the GIG

HQMC "C4 Afloat" Priorities

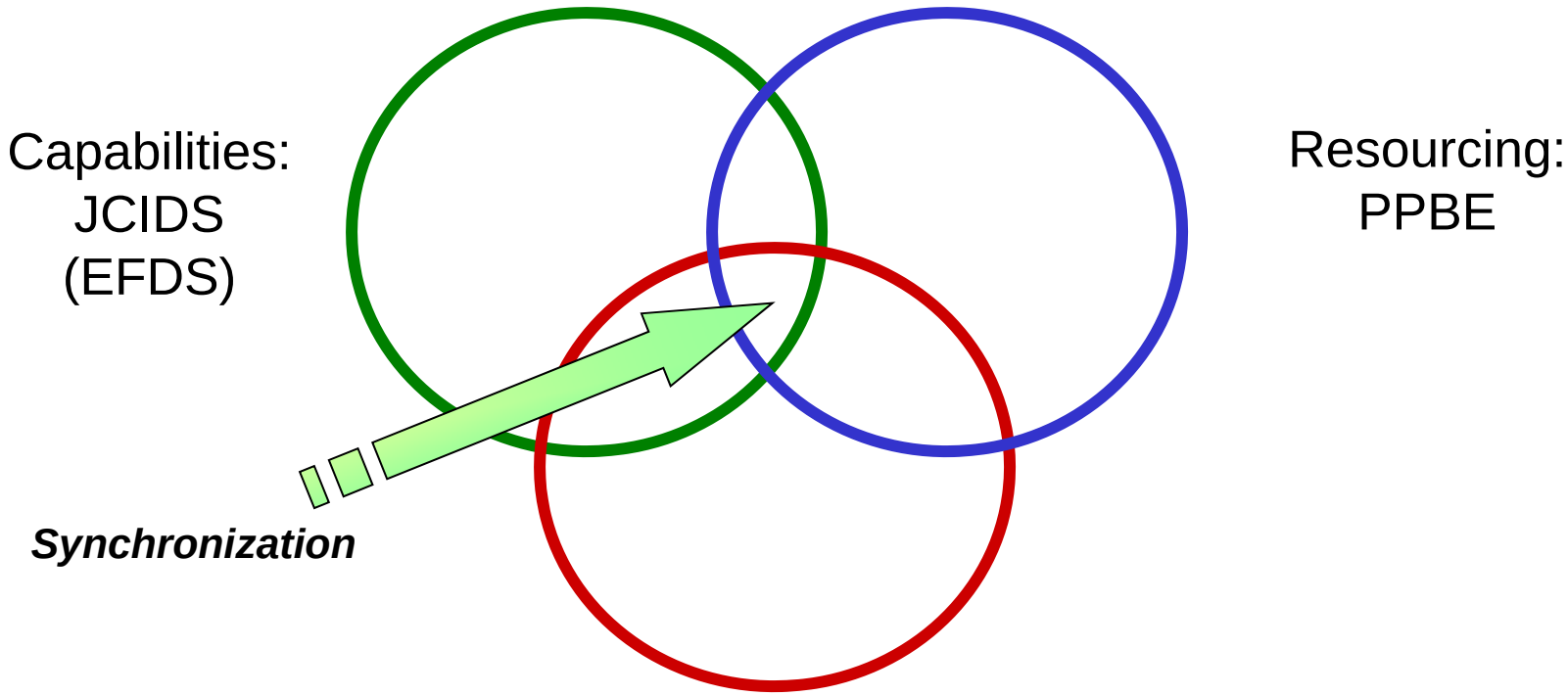
Improve engagement with the Navy from the waterfront up to the SECNAV level:

- Revalidate the baseline requirement for afloat C4I across all echelons of the MAGTF
- Overcome maritime platform shortfalls (inventory)
- Amphibious requirements survey and capabilities inventory
- Institute the Afloat Ready KPP
- Integral to MAGTF-Ship integration

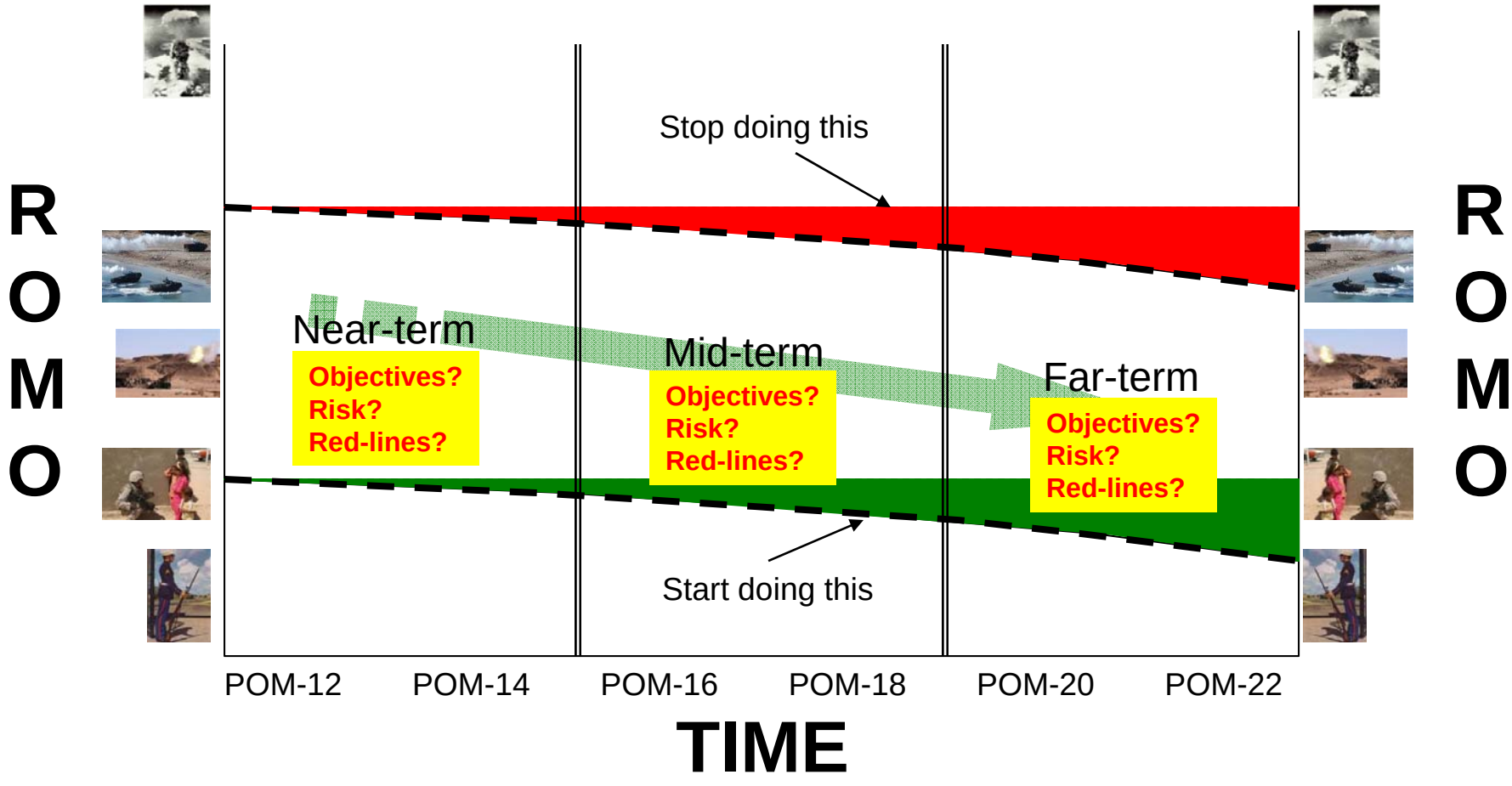
Some Key Enablers…

- **High Frequency Shipboard Automatic Link Establishment Radio (HF SAR)**
- **Conical Logarithmic Spiral Mobile (CLSM) Antenna/EMUT**
- **Commercial Broadband Satellite Program (CBSP)**
- **Networks/CANES (GIG-E, Amphib Server Initiative, Secure Wireless)**
- **Shipboard Air Traffic Control Communications (SATCC)**

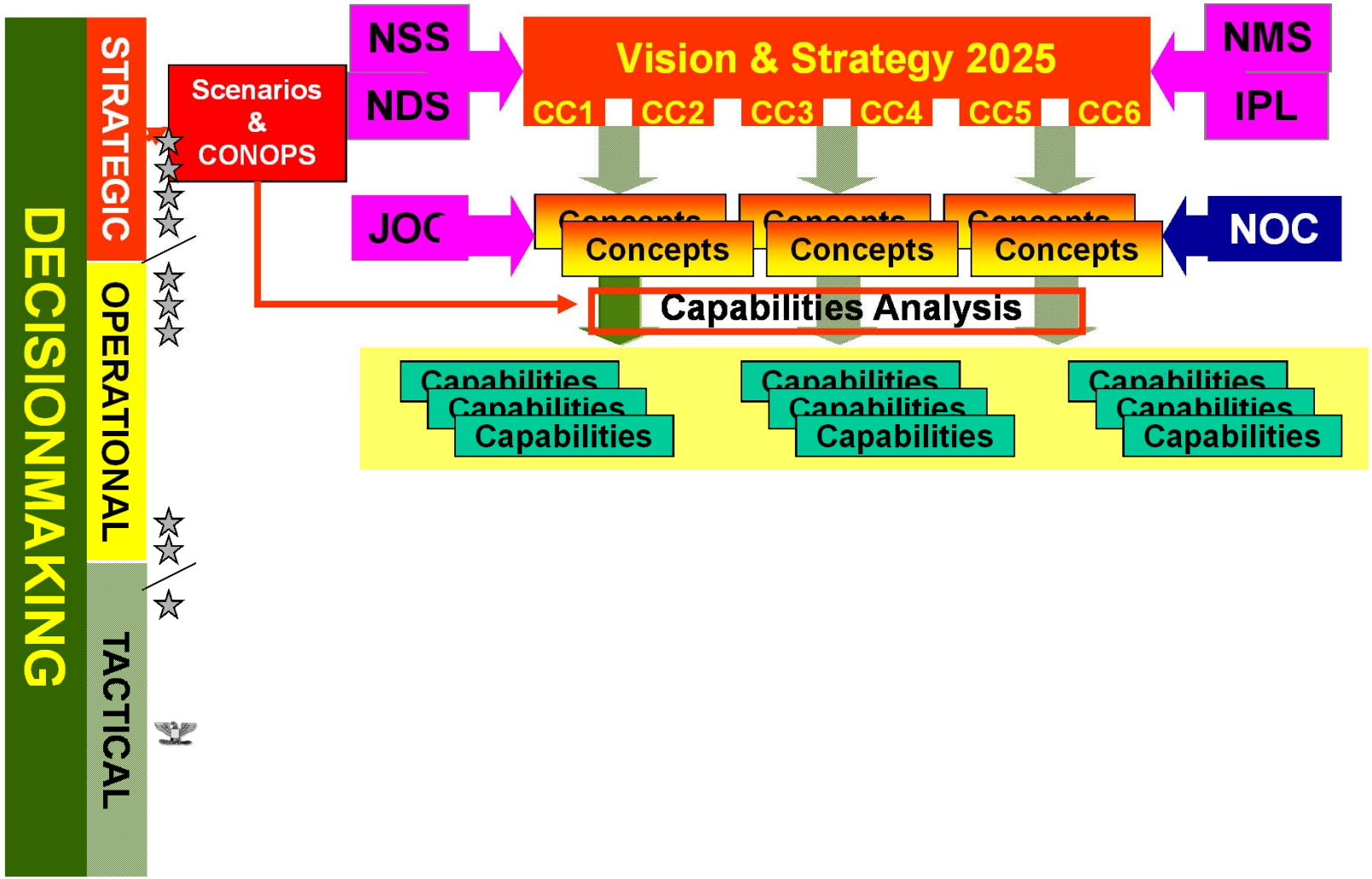
Principal DoD Decision-making Systems



Strategic Vision Implementation



Pedigreed Requirements



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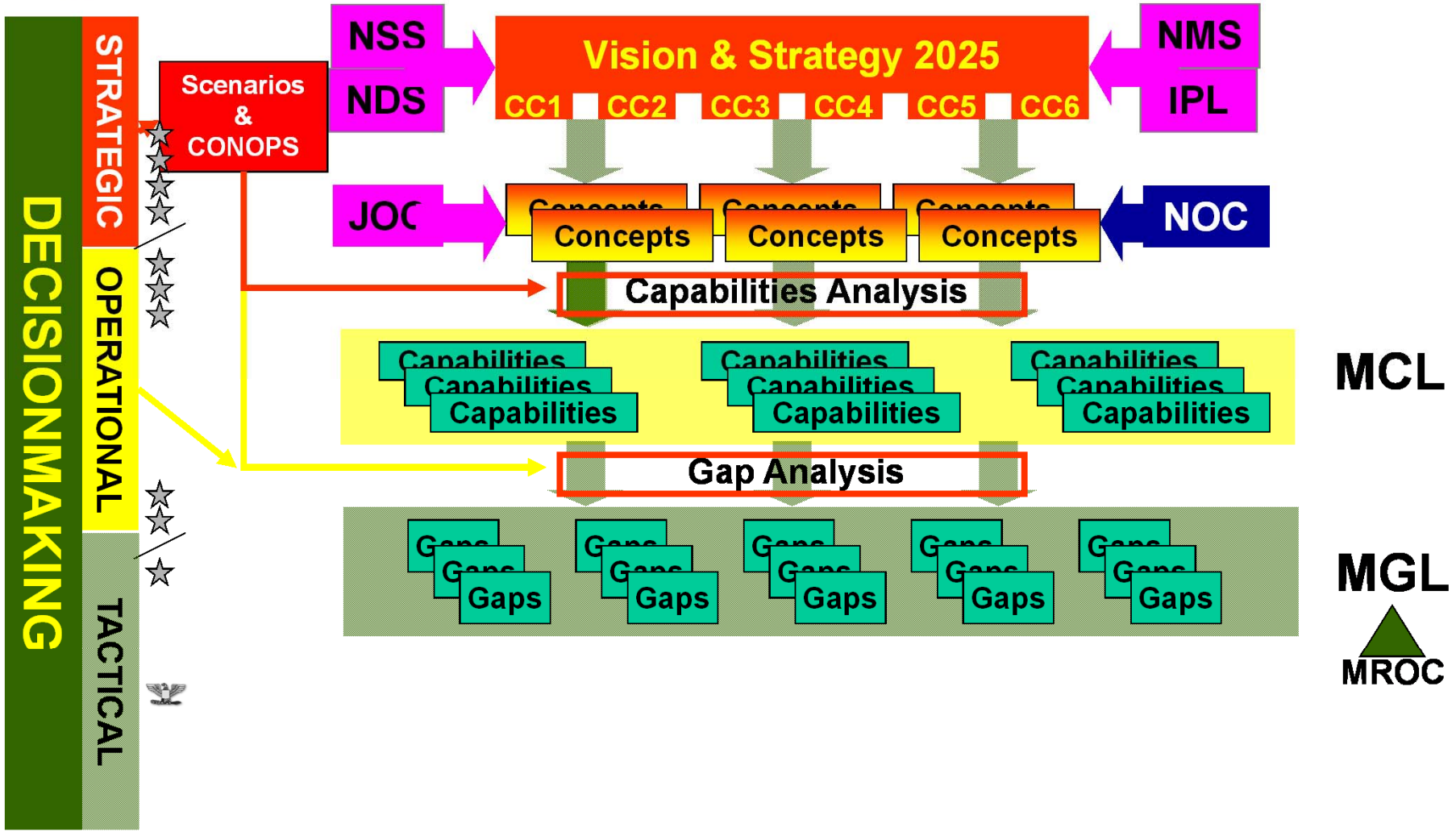
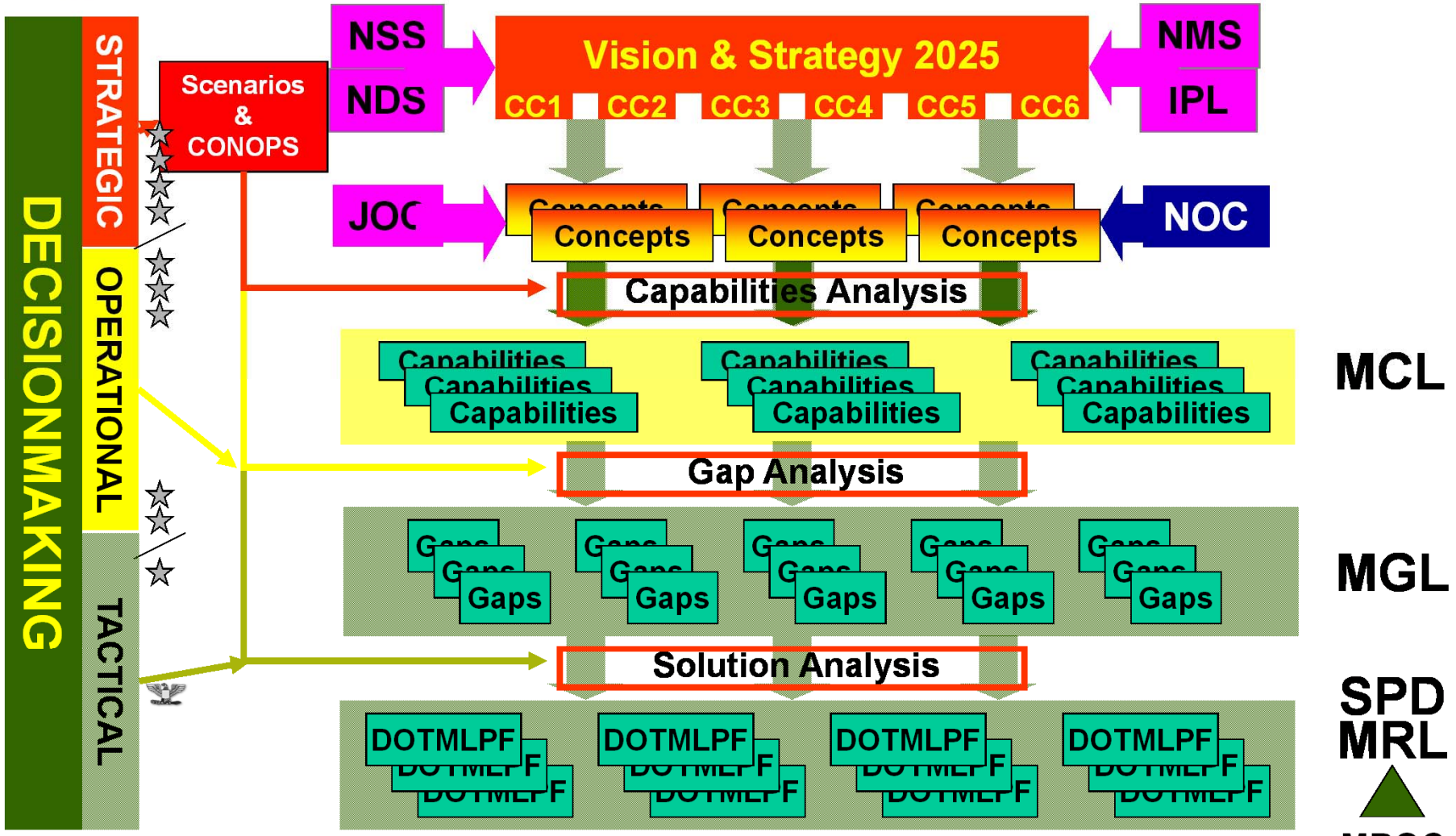
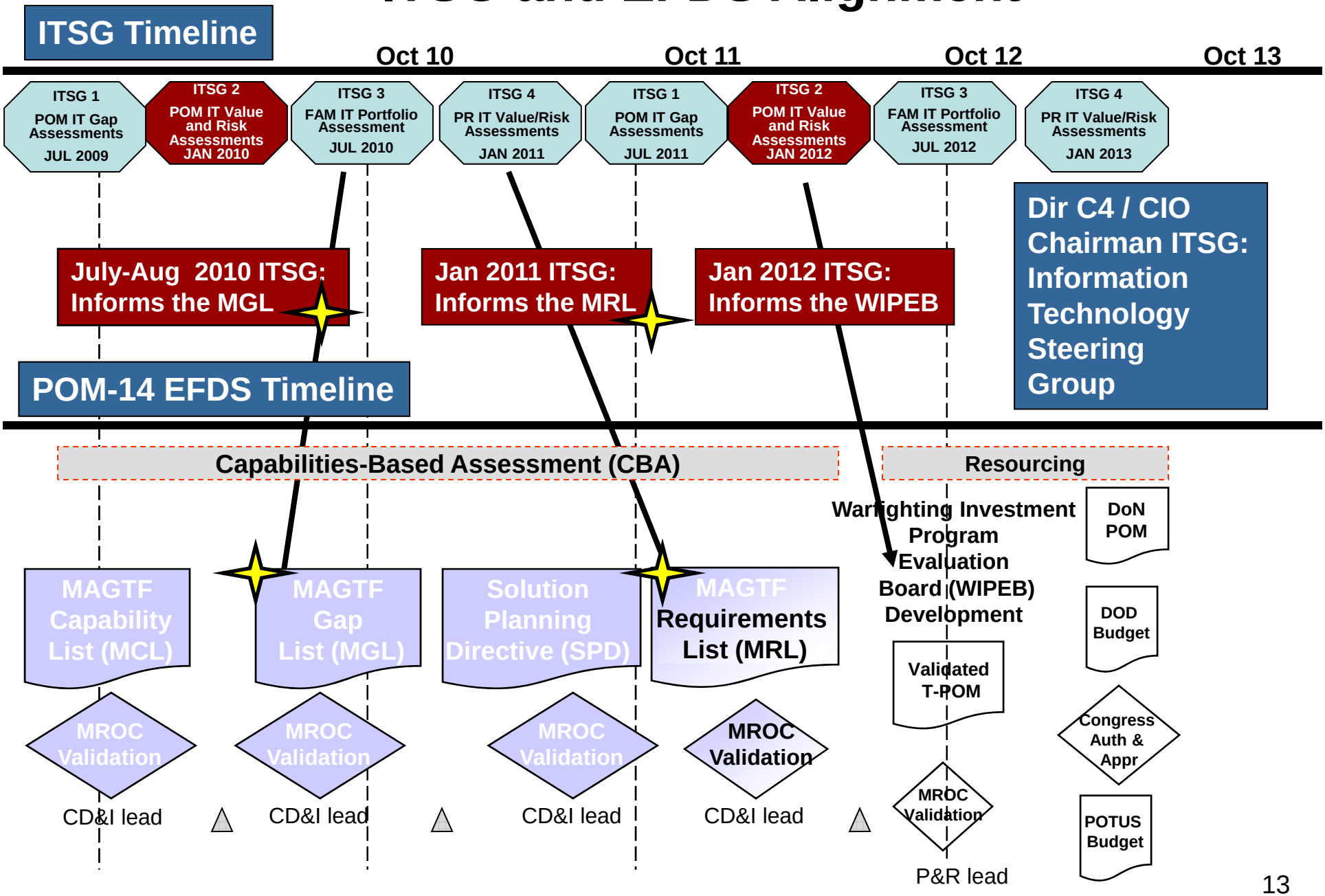


Pedigreed Requirements



ITSG and EFDS Alignment



Priority C2 Requirements

- **Combat Operations Center**
  - CAPSETs II, II, IV fielded
  - CAPSET I requirements under development now
  - CAPSET V requirements to be developed
- **Network On-the-Move**
- **Joint Tactical Radio System**
  - Ground Mobile Radio
  - Handheld, Manpack, Small Form/Fit Radio
- **Common Aviation Command & Control System (CAC2S)**

Summary

- **Thanks for your good work … significant challenges remain**

- **<u>Key C2 areas for your creative & ongoing support:</u>**

  - **Optimize IT resources through Innovation**
  - **Identification of dynamically responsive Communications and IT capabilities**
  - **Centralized Command with Decentralized Control of Cyber security**
  - **Marines, C2 platforms and weapons integrated into a networked, network-centric distributed combat force**
  - **"Green" Marine Corps Enterprise Information Environment computing infrastructure and communications**
  - **Speed the decision cycle and support an ever increasing-tempo with collaboration capabilities in virtual work environments**

Questions?

Back-up Slides

Program Evaluation Boards (PEB)

Doctrine, **O**rganization, **M**ateriel | **T**raining, **L**eadership | **P**ersonnel | **F**acilities

DOTMLPF

Warfighting PEB

- COC
- TCM
- MACCS
- GCSS-MC
- NOTM
- MCHS
- JBC-P
- BFSA
- CAC2S
- TBMCS
- MCEITS

Training PEB

- MCTIMS
- DVTE
- CCS
- LARCS
- MC Dist Learning

Manning PEB

- MCTFS
- MCRISS
- MOS
- MPS

Installations PEB

- ELMR
- CERS

Operating Force PEB

- Sense and Respond Logistics
- Automated Manifest Systems
- Satellite Bandwidth Pool

HQ & Support PEB

- SIPR Infrastructure
- Info Assurance above Core

IT and C4 requirements are resourced in multiple PEBs

Combat Operation Center

- **COC is not a component of any other system, but rather acts as the key MAGTF capability / facilitator for the integration of MAGTF Tactical Data Systems (TDS) and tactical voice radios.**

- **The COC replaces the requirement for MAGTF Commanders to develop and field their own ad hoc COC systems.**

COC CAPSET II - IV

- **CAPSET II, III and IV (model F) are fielded and deployed to Afghanistan today.**
- **System being updated to “Model G” to keep up with current technology; planned for delivery in 3rd quarter FY 2011.**
- **Enhanced Capabilities Delivered with Model "G“:**
  - Service oriented infrastructure based on C2 alerting framework and the tactical SOA framework
  - Network federation
  - Software and hardware virtualization
  - Single common software baseline for CAPSETs II - IV.

COC CAPSET I

- CAPSET I will use common hardware and software components currently organic to the COC program. It may also include components and/or technology currently available in the Navy-sponsored Deployable Joint Command and Control (DJC2) Core system or other technologies identified during the AoA.
- Initiated Analysis of Alternatives (AoA) 16 Nov 09
- Study Guidance signed by BGen Miller & BGen Brogan, 2 Apr 10
- MCCDC & MCSC participated in I MEF COC CAPSET I OPT (18 Feb 10) to define capabilities
- JCIDS documentation in development; MCATS in Sept 2010

COC CAPSET V

- **CAPSET V is the term for C2 requirements below the battalion and squadron-level COC and represents the integration of requirements down to the individual Marine-level --- essentially Company and below.**

- **MCCDC will follow the EFDS cycle which kicked off 20 Oct 2009 to define the capabilities for CAPSET V.**

- **CAPSET V requirements will be developed at the conclusion of the 2014 capabilities based analysis.**

- **CAPSET V may not require a separate AAO, but rather incorporate a family of C2 systems that are interoperable with all CAPSETs and support C2 OTM/BLOS afloat, ashore, and airborne. This will extend from the MEF Commander to the squad/team leader conducting independent targeting and fires operations.**

Network on the Move

- **Networking On-The-Move (NOTM) will deliver a self-forming/healing mobile ad hoc network capability to the MAGTF.**
  - NOTM allows delivery of information critical to the planning process allowing commanders to control the execution of MAGTF operations.
  - NOTM enables mobile forces to collaborate and access informational resources (databases, collectors) to exchange voice, data, and video information.
  - NOTM provides crucial Network Management capabilities to simplify the planning, configuring, and monitoring of the MAGTF's networks, wave forms, and spectrum.

- **NOTM will be fielded to all levels of the MAGTF (MEF down to the Infantry Company).**

- **The Concept of Employment (COE) for NOTM details the initial MAGTF concept for NOTM and will be followed by the generation of appropriate Joint Capabilities Integration and Development System (JCIDS) documentation.**
  - The capabilities described in the COE result from the identification of urgent operational needs which were initiated during Operations Iraqi Freedom and Enduring Freedom, and are further based on capability gaps identified in the MAGTF C2 Initial Capabilities Document (ICD).

- **The Marine Corps just finished an Analysis of Alternatives (AoA) to help define the material approach to fill this critical capability gap.**
  - AoA Cost estimates for a $2 Billion dollar program if we pursue the full fielding
  - Cost estimate includes R&D (USMC specific platform integration), Procurement, and O&M funding for 10 years (including a major equipment refresh midway thru the 10 year period).

Joint Tactical Radio System (JTRS)

- **Family of interoperable hand-held, vehicular, airborne, fixed, and dismounted Software Defined Radios (SDR)**
  - Provides secure, wireless networking communications for Joint Forces
  - Provides multi-channel unprecedented satellite and data networking capabilities down to the Company level
  - Will increase the number of accessible satellite channels

- **Marine Corps looking to procure both Ground Mobile Radio and handheld, manpack, small form/fit (HMS) radios through the JTRS program**

Common Aviation Command and Control System (CAC2S)

- **Common, modular, and scalable system that:**
  - Provides operators with planning and execution capabilities for air command and control operations
  - Enables integration and migration of air and ground C4ISR networks in the MAGTF
  - Allow for the display and distribution of a common operational picture, recognized air picture and status of air missions
- **In conjunction with MACCS organic sensors and weapons systems:**
  - Supports the tenets of Expeditionary Maneuver Warfare
  - Fosters joint interoperability with other services' elements

MAGTF C2 Systems Applications

- **Provides an environment in which all MAGTF C2 software applications are interoperable and scalable while implementing directed Joint C2 standards**

- **Includes development, fielding, sustainment, and incremental upgrades for:**
  - Combat Operations Center (COC) applications
  - Intelligence Operations Workstation (IOW)
  - Joint Tactical Common Operating Picture Workstation (JTCW) software

- **Closes the gap in joint C2 convergence between Army and USMC**