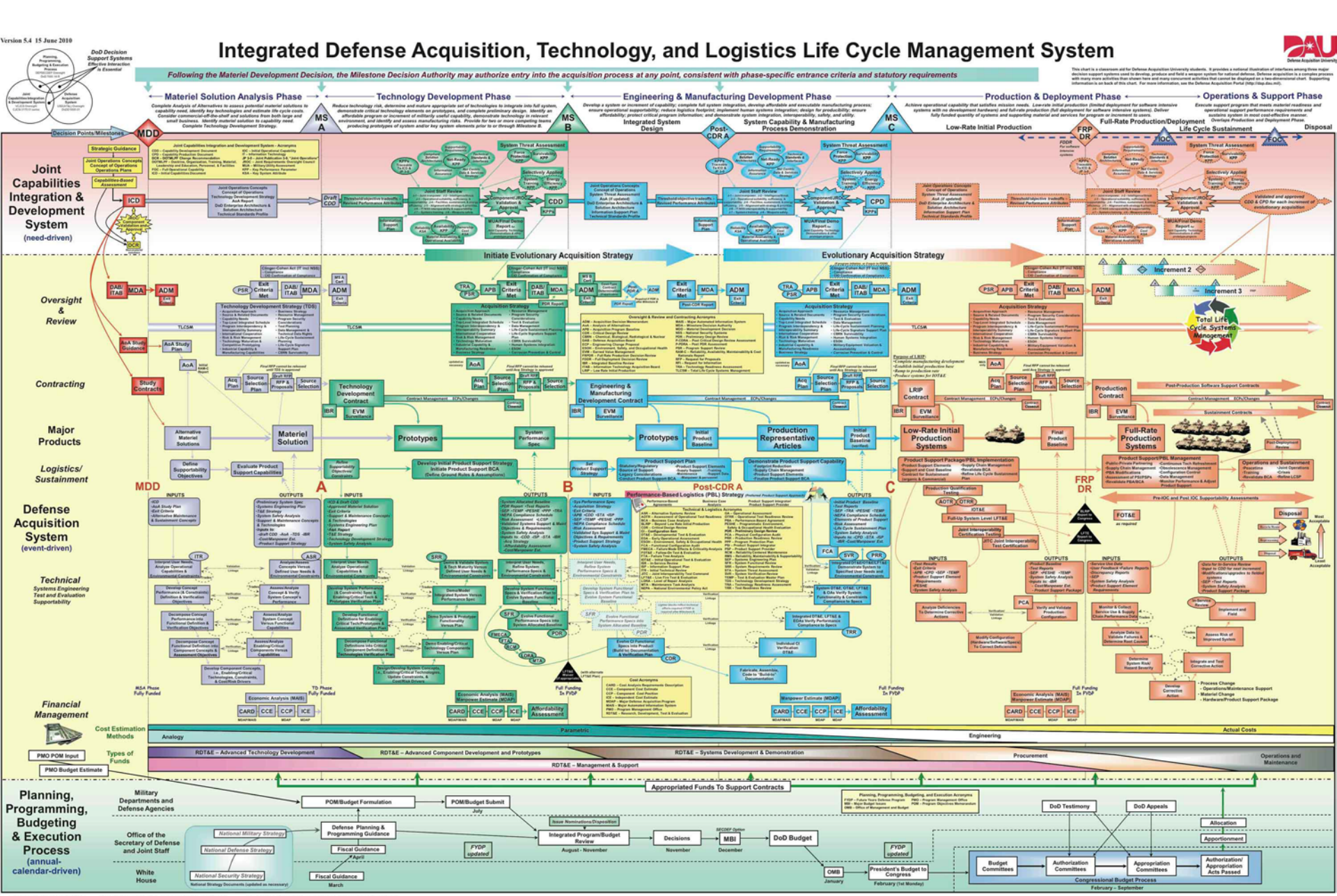
MARINE AVIATION

NDIA Expeditionary Warfare Conference

October 2011

Col Gary Kling


Version 5.4 15 June 2010
Integrated Defense Acquisition, Technology, and Logistics Life Cycle Management System
DoD Decision Support Systems Effective Interaction is Essential
Following the Materiel Development Decision, the Milestone Decision Authority may authorize entry into the acquisition process at any point, consistent with phase-specific entrance criteria and statutory requirements
Materiel Solution Analysis Phase
Technology Development Phase
Engineering & Manufacturing Development Phase
Production & Deployment Phase
Operations & Support Phase
MS A
MS B
MS C
Decision Points/Milestones
MDD
Low-Rate Initial Production
Full-Rate Production/Deployment
Life Cycle Sustainment
Disposal
FRP DR
IOC
FOC
Joint Capabilities Integration & Development System (need-driven)
Oversight & Review
Contracting
Major Products
Logistics/ Sustainment
Defense Acquisition System (event-driven)
Technical
Financial Management
Planning, Programming, Budgeting & Execution Process (annual-calendar-driven)
Initiate Evolutionary Acquisition Strategy
Evolutionary Acquisition Strategy
Post-CDR A
Post-CDR A Performance-Based Logistics (PBL) Strategy
Increment 2
Increment 3
Total Life Cycle Systems Management
Technology Development Contract
Engineering & Manufacturing Development Contract
Prototypes
Materiel Solution
Production Representative Articles
Low-Rate Initial Production Systems
Full-Rate Production Systems
Cost Estimation Methods
Types of Funds
Analogy
Parametric
Engineering
Actual Costs
RDT&E – Advanced Technology Development
RDT&E – Advanced Component Development and Prototypes
RDT&E – Systems Development & Demonstration
RDT&E – Management & Support
Procurement
Operations and Maintenance
PMO POM Input
PMO Budget Estimate
Appropriated Funds To Support Contracts
Military Departments and Defense Agencies
Office of the Secretary of Defense and Joint Staff
White House
POM/Budget Formulation
POM/Budget Submit
July
Defense Planning & Programming Guidance
Fiscal Guidance
April
Fiscal Guidance
March
Integrated Program/Budget Review
August - November
Decisions
November
MBI
December
DoD Budget
OMB
January
President's Budget to Congress
February (1st Monday)
DoD Testimony
DoD Appeals
Allocation
Apportionment
Budget Committees
Authorization Committees
Appropriation Committees
Authorization/ Appropriation Acts Passed
Congressional Budget Process
February – September
FYDP updated
Full Funding In FYDP
Affordability Assessment
Economic Analysis (MAIS)
Manpower Estimate (MOAP)
Authors Chuck Cochrane and Brad Brown

5 - 20 Years

Acquisition Marine Style

Marine Aviation

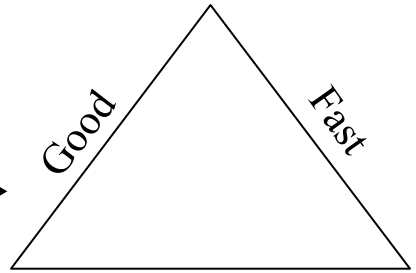
Do I need to kill something?

NO

Yes, You do!

Yes

Pick 1, maybe 2 of 3



Take it from someone

Go Kill something

Hurry Up - - go!

Functions of Marine Aviation

Marine Aviation

- ***Offensive Air Support***
- ***Anti-Air Warfare***
- ***Assault Support***
- ***Air Reconnaissance***
- ***Electronic Warfare***
- ***Control of Aircraft and Missiles***







Acquisition for Maneuver Warfare

Marine Aviation

- **Maneuver Warfare**
  - Flexibility
  - Speed/Tempo
  - Surprise/Initiative

- ***How do we maintain a technological advantage <u>and</u> the appropriate capacity to meet the challenges across the ROMO, in an increasingly volatile world, and still have a treasury?***

- **Challenge - How to acquire cost effective systems to enhance Expeditionary Maneuver Warfare.**
  - Adaptive
  - Lack of speed in acquisition breeds requirements creep
  - Moore's law vs the "good idea cutoff date"

Threats / Views

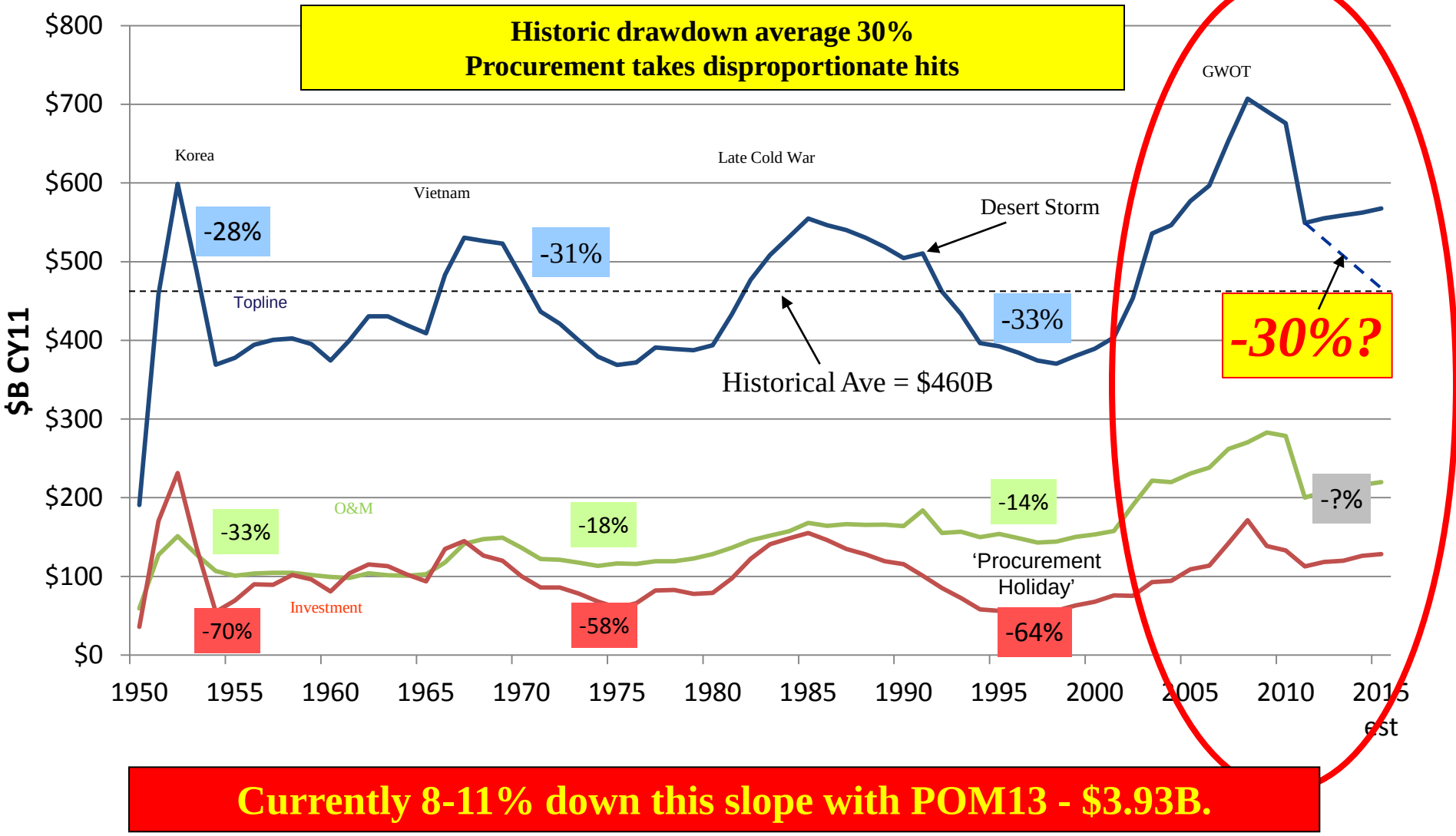
Marine Aviation

- State and Non-state
- Terrorism / Criminals / Insurgents / industrial espionage
- Hybrid
- Declining power? Reluctance to engage?
- Deterrence?
- Increased frequency for volatility and instability
- Distributed ops – re-aggregation
- Multi-domain – air, sea, land ,cyber, space

Upon what strategy and assumptions do you base long term acquisitions when making decisions for the next 30-50 years?

DOD Budget Context

Marine Aviation

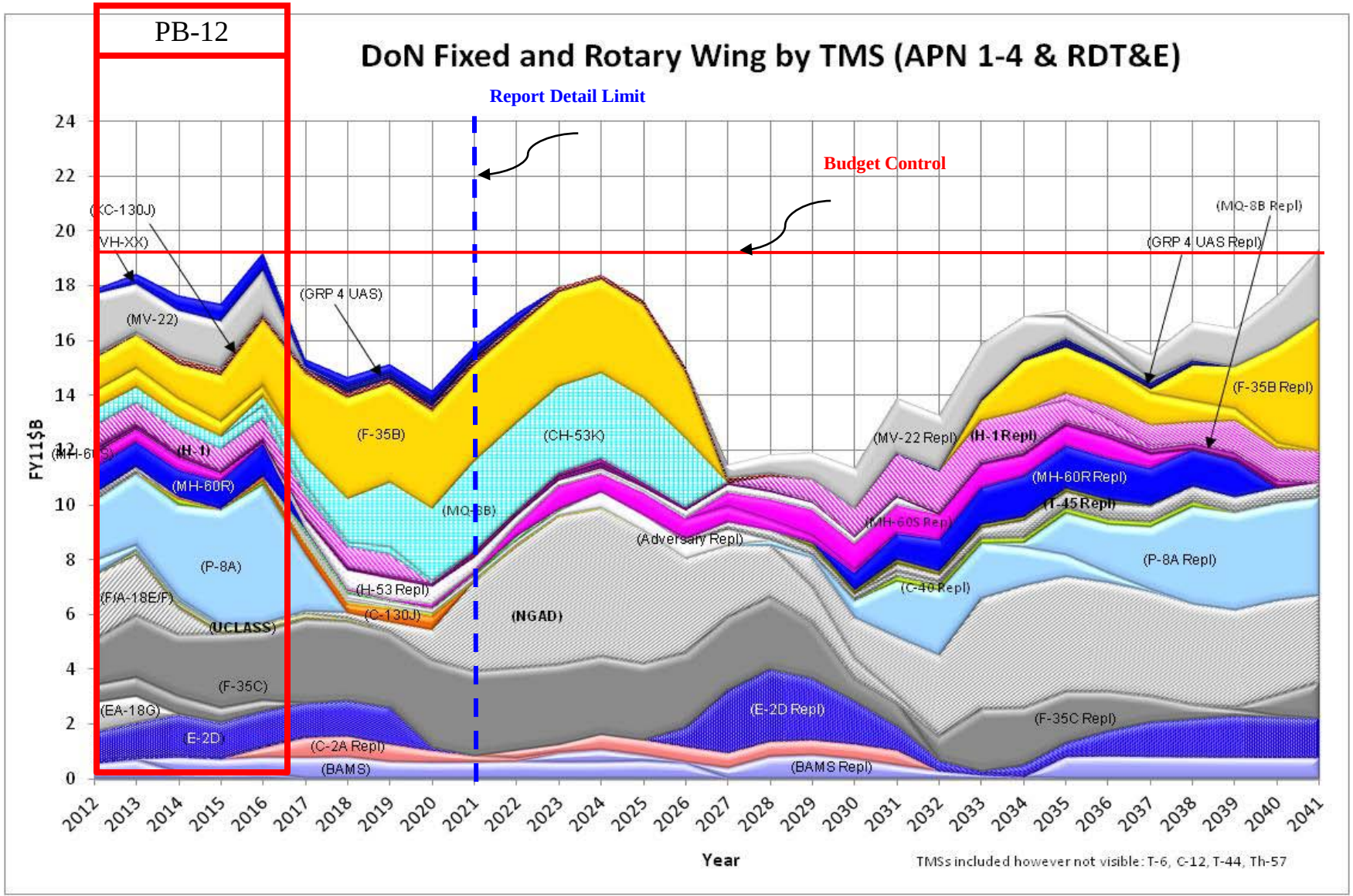


Currently 8-11% down this slope with POM13 - $3.93B.

DON Aviation Budget Context

PB-12 30 Year Aircraft Investment Plan

Marine Aviation



Marine Aviation Transition Strategy

Today

End State

KC-130 F/R/T

KC-130J

CH-46E

MV-22

UH-1N
AH-1W

UH-1Y
AH-1Z

F/A-18 A+
F/A-18 C
F/A-18 D
AV-8B
EA-6B

F-35B

CH-53E

CH-53K

ISR Services
RQ-7B

RQ-21A
Group 4

VH-3
VH-60

TBD

VXX

Transitions in progress

MWSS

Marine Aviation

Enables All Six
Control of Aircraft and Missiles
Anti-Air Warfare
Assault Support
Aerial Reconnaissance
Offensive Air Support
Electronic Warfare

- **Expeditionary Operations**
  - MWSS is the critical enabler to ACE operations
  - Tactical and Strategic Agility
  - Realignment of MWSS under MAG

- **EAF 2000 Reconstitution**
  - AM-2 Retrograde and Refit
    (6 million sq ft installed ISO OEF)
  - Next Generation Airfield Lighting/Matting

F-35B JSF Update

Control of Aircraft and Missiles
Anti-Air Warfare
Assault Support
Aerial Reconnaissance
Offensive Air Support
Electronic Warfare

Marine Aviation

MV-22B Osprey

Control of Aircraft and Missiles
Anti-Air Warfare
Assault Support
Aerial Reconnaissance
Offensive Air Support
Electronic Warfare

Marine Aviation

Since the FY11 *Marine Aviation Plan*

- 11th deployment:
  - 3 x OIF, 4 x MEU, 4 x OEF

- Enhanced Capabilities:
  - Expanded Battlespace Maneuver
  - Complicates the Enemy's defense
  - Increases Stand-off basing

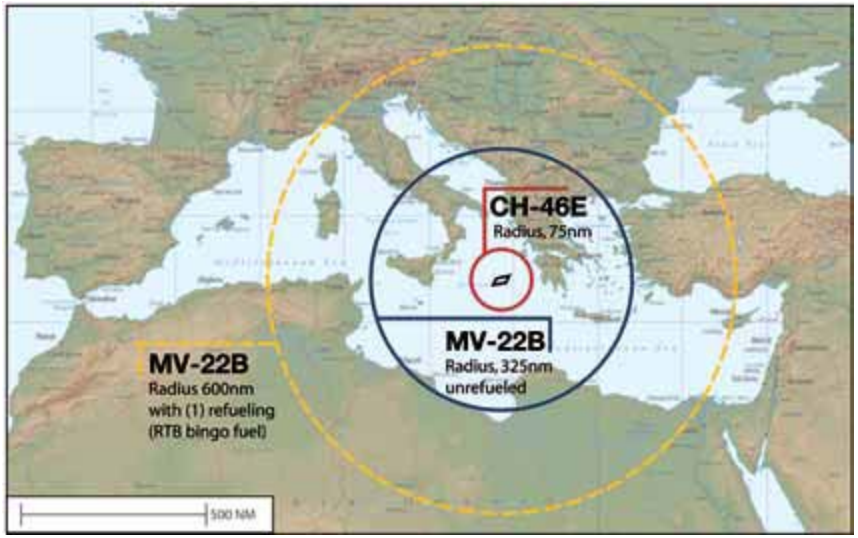
POR: 360 aircraft
AC: 16 X 12 aircraft
RC: 2 X 12 aircraft

Squadrons: 16 active, 2 reserve

MV-22B Osprey

Marine Aviation

"Turns Texas into Rhode Island."
– BGen Alles, *CG ACE MNF-W*



MV-22 MISSION SNAPSHOT

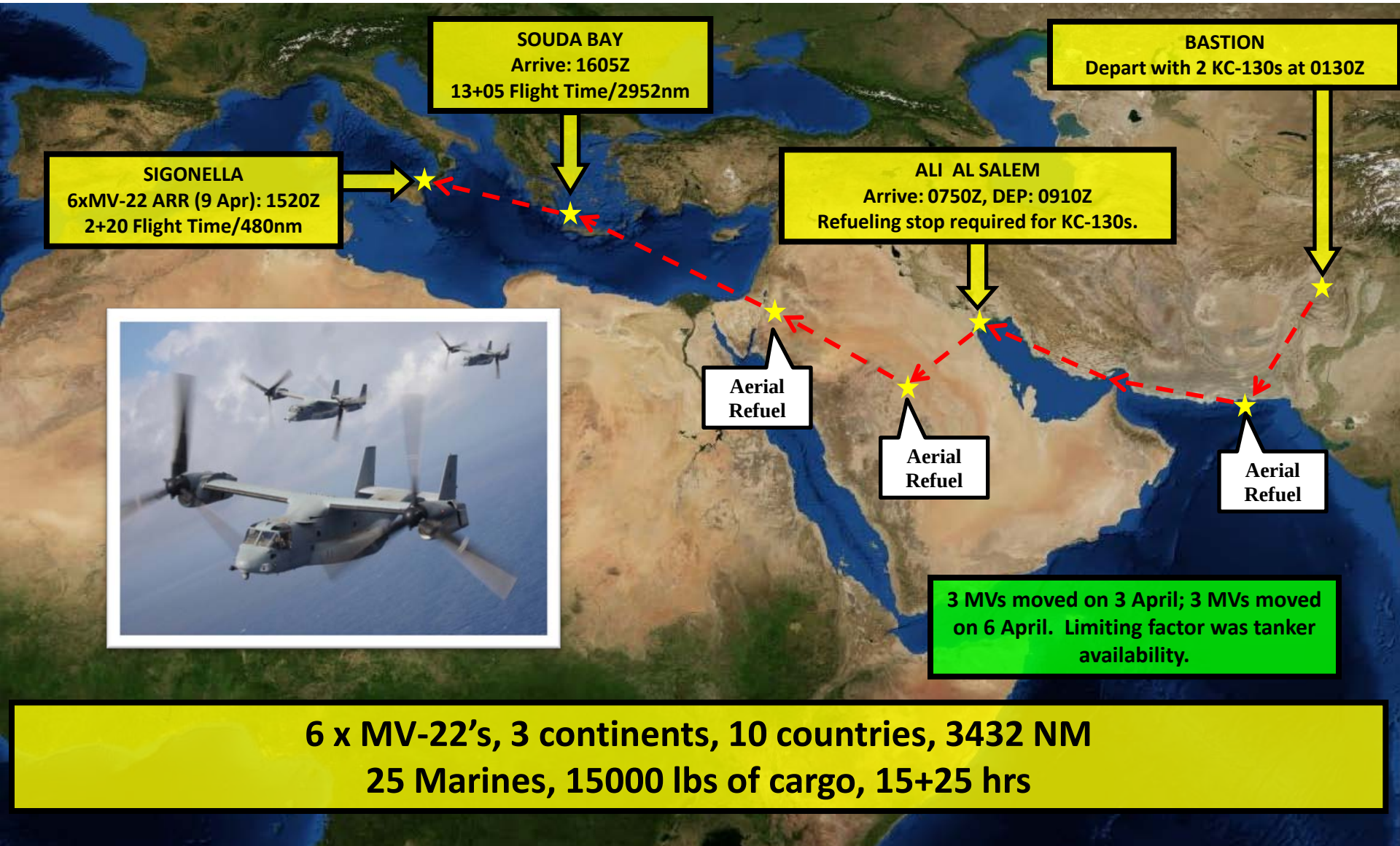
Operation Odyssey Dawn

Marine Aviation

26 MEU MV-22's prepare to launch from USS Kearsarge

Afghanistan Retrograde

Marine Aviation



6 x MV-22's, 3 continents, 10 countries, 3432 NM
25 Marines, 15000 lbs of cargo, 15+25 hrs

KC-130J

Marine Aviation

Enables All Six
Control of Aircraft and Missiles
Anti-Air Warfare
Assault Support
Aerial Reconnaissance
Offensive Air Support
Electronic Warfare

- Active FOC by 31 Dec 2011
- Reserve transition ~ FY15-26
- Enhanced Capabilities:
  - More efficient aerial delivery
  - Twice the delivery rate for Rapid Ground Refueling (RGR) ops
  - 21% increase in speed
  - Shorter Take-off distances
  - Common engine to the MV-22
  - Integrated ASE

POR: 79 aircraft
AC: 3 X 15 aircraft
RC: 2 X 12 aircraft

Squadrons: 3 active, 2 reserve

KC-130J Harvest HAWK

Marine Aviation

- Persistent ISR and attack capability conducted from KC-130 J
  - Preserves refueling capability from RH AAR Pod.

- System Components
  - AN/AAQ-30 Targeting Sight System (TSS)
  - RO/RO fire control station on modified pallet
  - AGM-114P Hellfire II in place of left AAR pod
  - Griffin Stand Off Precision Guided Munitions
  - Video Downlink to Rover

CURRENT FORCE:

1 AC VMGR SQDN x 2 MISSION KIT

1 AC VMGR SQDN x 1 MISSION KIT

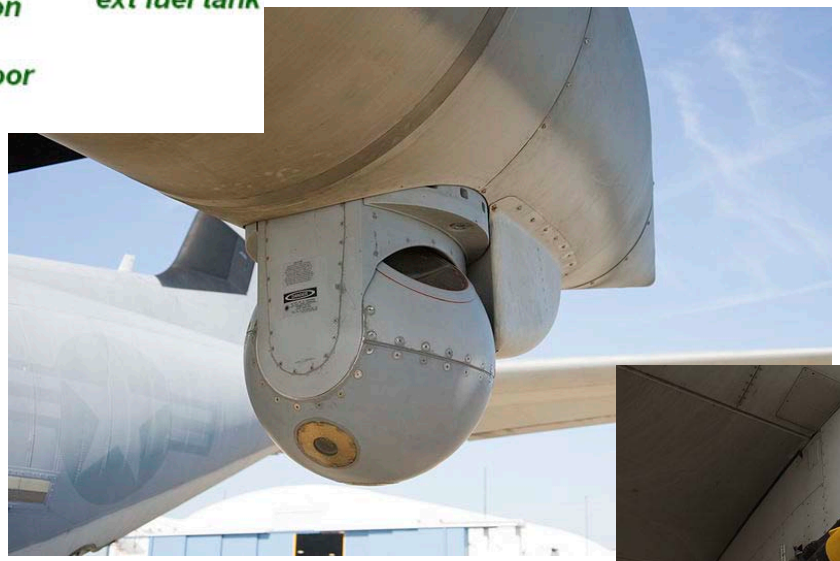
FORCE GOAL:

2 AC VMGR SQDN x 3 MISSION KITS

One kit deployed since Oct 2010 - Identified 8 confirmed and multiple suspected IEDs
Employed 74 Hellfire & 13 Griffin - Feedback from supported units is outstanding

Harvest Hawk

Marine Aviation



H-1 Program

Control of Aircraft and Missiles
Anti-Air Warfare
Assault Support
Aerial Reconnaissance
Offensive Air Support
Electronic Warfare

- AH-1Z IOC (February 2011)
  - 84% commonality between Y/Z
    - Reduction in logistics/training requirements
- To date:
  - ~48 Yankees / ~19 Zulus delivered

- Enhanced Capabilities:
  - Yankee
    - Double the range and payload
    - 170 kts versus 130 kt Vne
    - 8 Fully loaded Marines
    - Digitally integrated cockpit
  - Zulu
    - Improved Sensors – Max range Weapons employment
    - Double the Range

POR: 349 aircraft (160 Y, 189 Z)
AC: 8 X 15Z / 12Y aircraft
RC: 1 X 15Z / 12Y aircraft

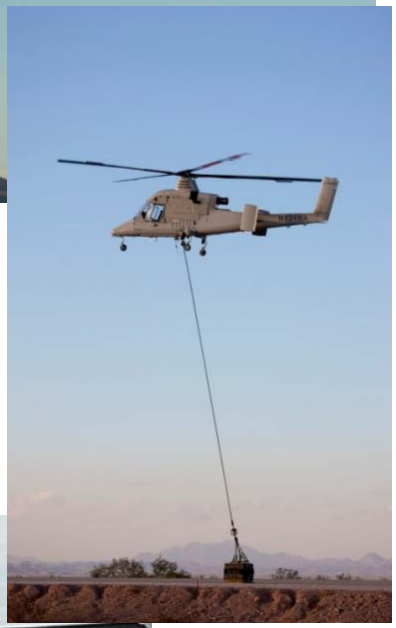
Squadrons: 8 active, 1 reserve

UAS Family of Systems

Control of Aircraft and Missiles
Anti-Air Warfare
Assault Support
Aerial Reconnaissance
Offensive Air Support
Electronic Warfare

Marine Aviation

- RQ-7B Weaponization approved
- RQ-21 Small Tactical UAS (STUAS) early operational capability
  - Fielded starting in Sep 11
- Planned Cargo UAS deployment to OEF
  - Nov 11
- VMU-3 moving to 1st MAW



Ground/Air Task Oriented Radar (G/ATOR) Transition

- **G/ATOR: A MAGTF Weapon System**
  - Incr I: Air Defense/Surveillance Radar
  - Incr II: Ground Weapon Locating Radar
  - Incr IV: Air Traffic Control

- Both Engineering Development Models (EDMs) are meeting integration and testing expectations
  - G/ATOR Incr. 1 EDM's are detecting and tracking air traffic at BWI.

- Program is on schedule
- Program is resourced in PB 12
- AAO:

ACE	Qty 31 (Incr I & IV)
GCE	Qty 38 (Incr II)
Total	69

G/ATOR replaces 5 legacy radars:
TPS-63, TPS-73, TPQ-46
UPS-3 and MPQ-62

Capability Drivers

Marine Aviation

- Decrease the Size and weight
  - Lighten the MAGTF OPT ongoing
  - 2010 MEU ACE ~ 520 K; 2020 MEU ACE ~ 800 K
- Increase the speed
  - Sensor to shooter and Kill Chain information
    - FMV, VMF, Digital Interoperability
- Increased efficiency
  - Fuel, Batteries, O&M costs

Acquisition Challenges

Marine Aviation

- **Defining requirements:**
  - What is the problem we are trying to solve?
  - Tension between clarity / industry creativity / contract legality / length of need
  - What capacity?

- **Contracting:**
  - Takes too long
    - UAS contract in work for 2.5 years

- **Multiple transitions simultaneously**
  - USMC / DoD transitions

- **Sustainment and Relevance**
  - Sustainment for the new & Legacy platforms
  - Mod / upgrade costs

Acquisition for 2025 and beyond

Marine Aviation

- Must Avoid a single view of warfare
  - The only thing certain is uncertainty
  - Surprise will be the dominant factor
- Hybrid Warfare – Train and equip for ROMO
- Cost imposing strategies
  - How do we make war too expensive (at least more expensive) for the enemy?
- Time to train & Dwell vs multi-mission platforms
  - Readiness
  - Service life
  - Simulation
- Expeditionary subsystems - Integrated Capabilities
  - Maintenance, sustainment, training, weapons, security, interoperability
  - LHA (R) – FUEL, Maint space, C2 options

Questions