



F/A-18 & EA-18G Program

Capable, Affordable & Joint Interoperable...Today & Tomorrow



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Key Messages

F/A-18E/F Super Hornet: The world's most capable, affordable, and effective multi-mission fighter-attack aircraft operating from carrier flight decks through 2030.

With state-of-the-art sensors, pinpoint targeting, advanced computing and connectivity capabilities, and precision weapons, the F/A-18E/F and EA-18G are transforming the way the Navy fights (e.g. AAW, ASUW, NTISR and TST).

Next-generation capabilities -- cooperative, multi-moving, and multi-spectral targeting, Combat ID, IP-based networking, and networked enabled weapons -- are on the F/A-18E/F Super Hornet & the EA-18G Growler "Flight Plan."



Navy Carrier Strike Groups & F/A-18 Hornets

- Carrier flight decks operate only with Hornets, Super Hornets and USMC F/A-18A+ jets
- Boeing continues to produce and deliver aircraft 3 months ahead of schedule
- Super Hornet “Flight Plan” ensures Next Generation capability paces the threat well past 2024
- Super Hornets to fly from carrier flight decks until 2030
- Long term, low cost logistical support contracts in place
- Future Air Wing ‘mix’ will consist of Super Hornet, EA-18G, E-2D, F-35

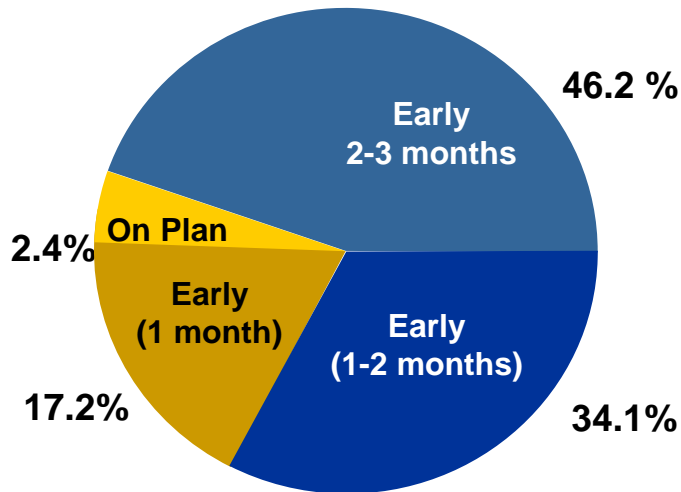


The F/A-18E/F is the key element of the USN's long-term force structure



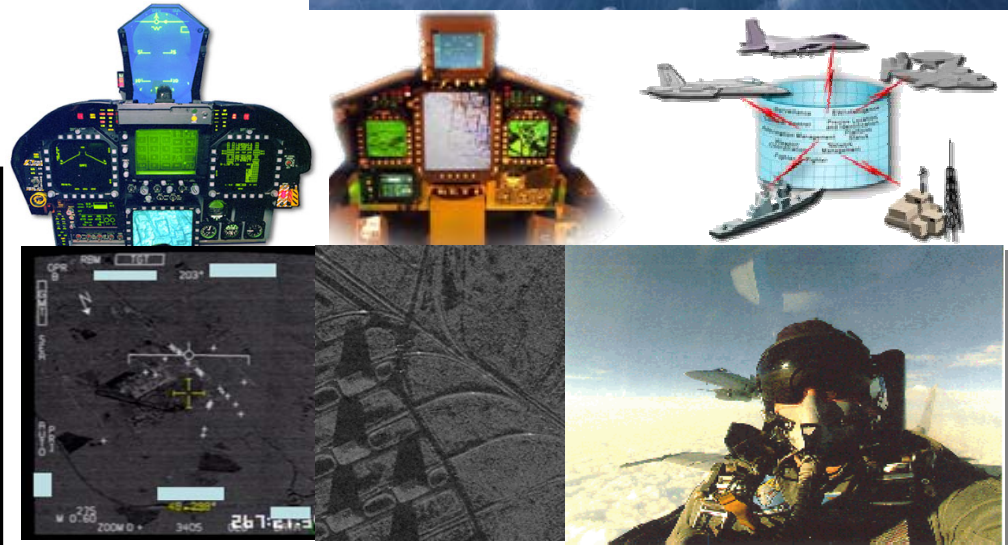
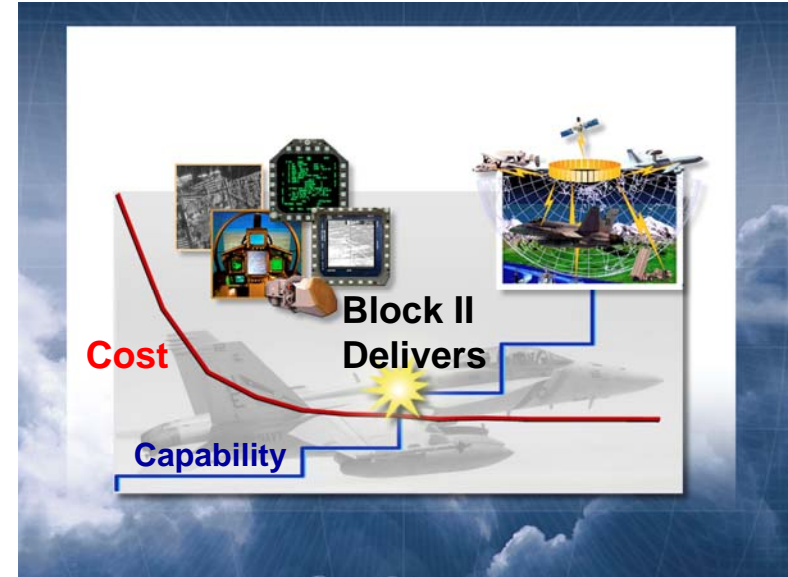
Program Performance

F/A-18E/F Production Deliveries (314 aircrafts as of May 2007)



Average: 50 days early

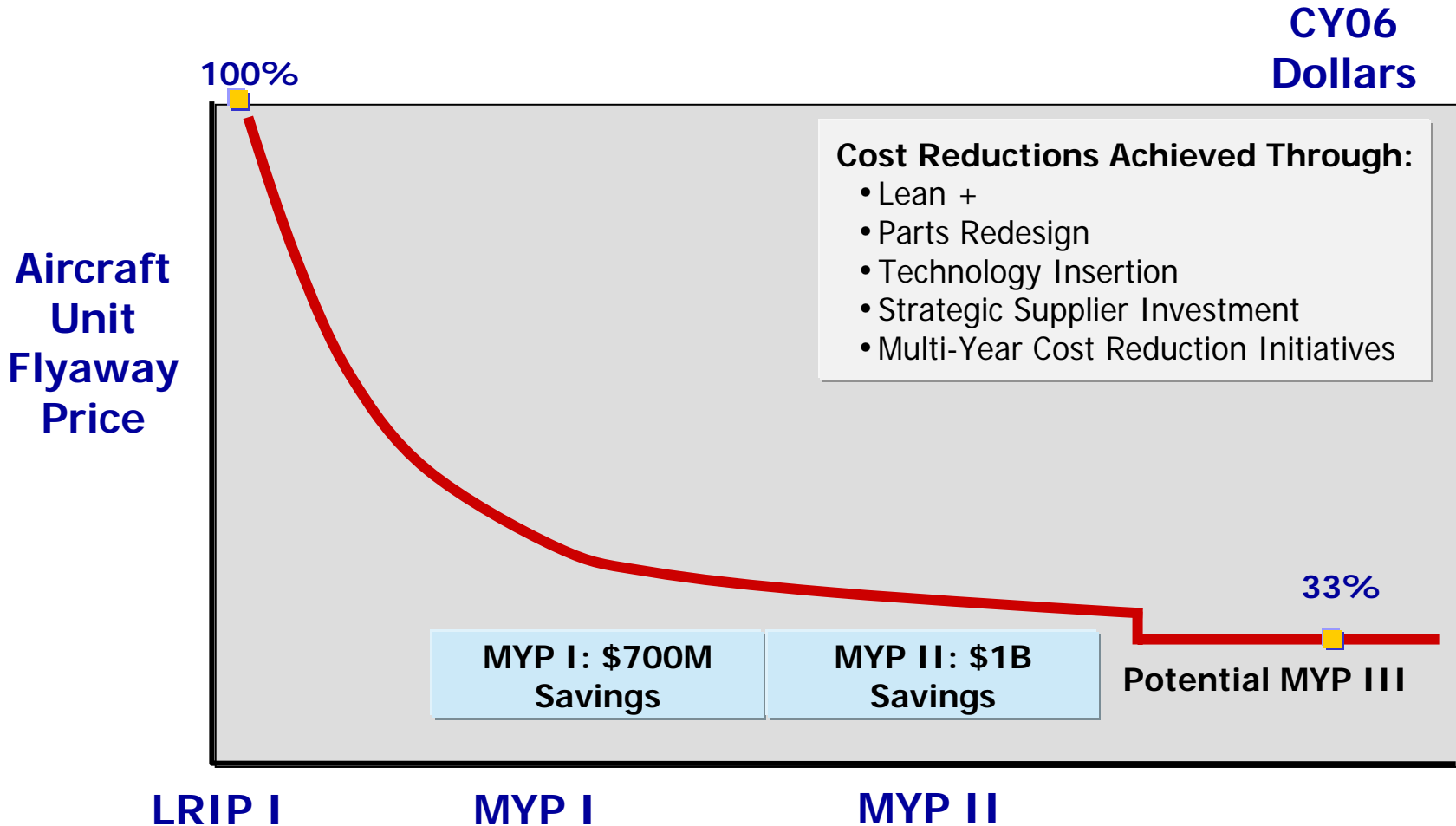
- ✓ 100% Delivery Performance
- ✓ IOC in 2001
- ✓ PBL Support Contracts in place
- ✓ Still meeting 100% KPPs





Cost as a Competitive Advantage

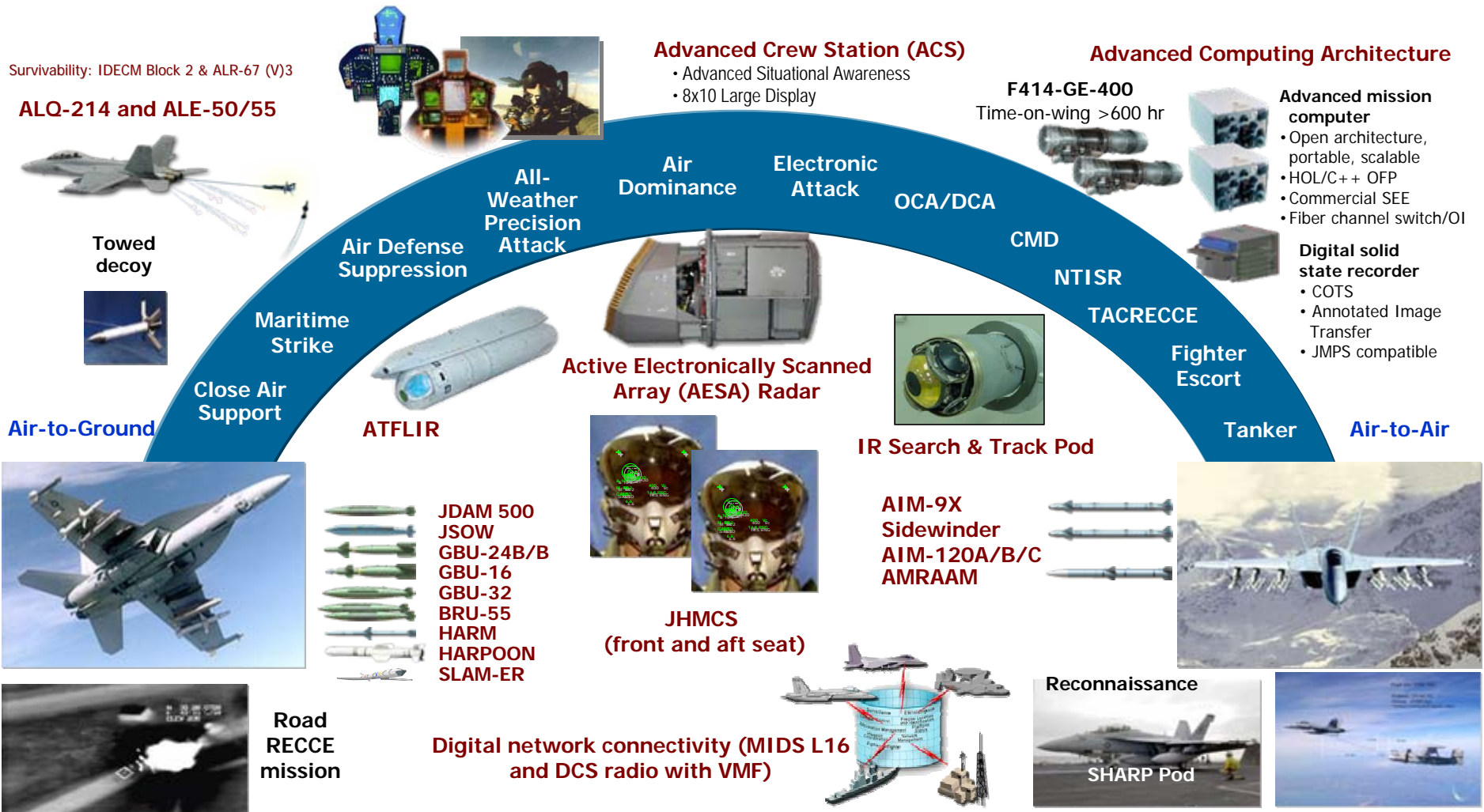
F/A-18E/F Price and Capability





The Multi-Mission Super Hornet

Flexible Air Power



**Unprecedented multi-mission flexibility...
First day of the war capable and everyday thereafter**



F/A-18E/F Balanced Approach to Survivability

EFFECTIVENESS

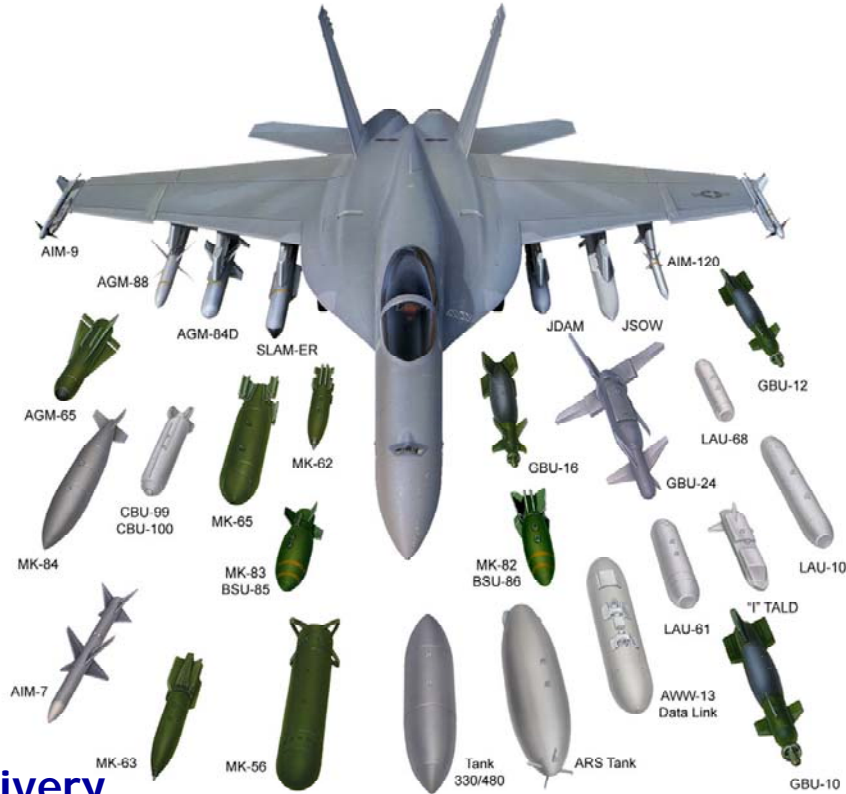


Hard to See, Hard to Hit, Hard to Kill

SURVIVABILITY



Large Payload Capability and Multi-Mission Flexibility



- Precision Weapon Delivery
- Survivability
- Advanced Countermeasures

**High Volume Precision Fires,
Largest Payload, Significant Mission Flexibility,
Network Enabled Weapons**

AIM-9X



JDAM

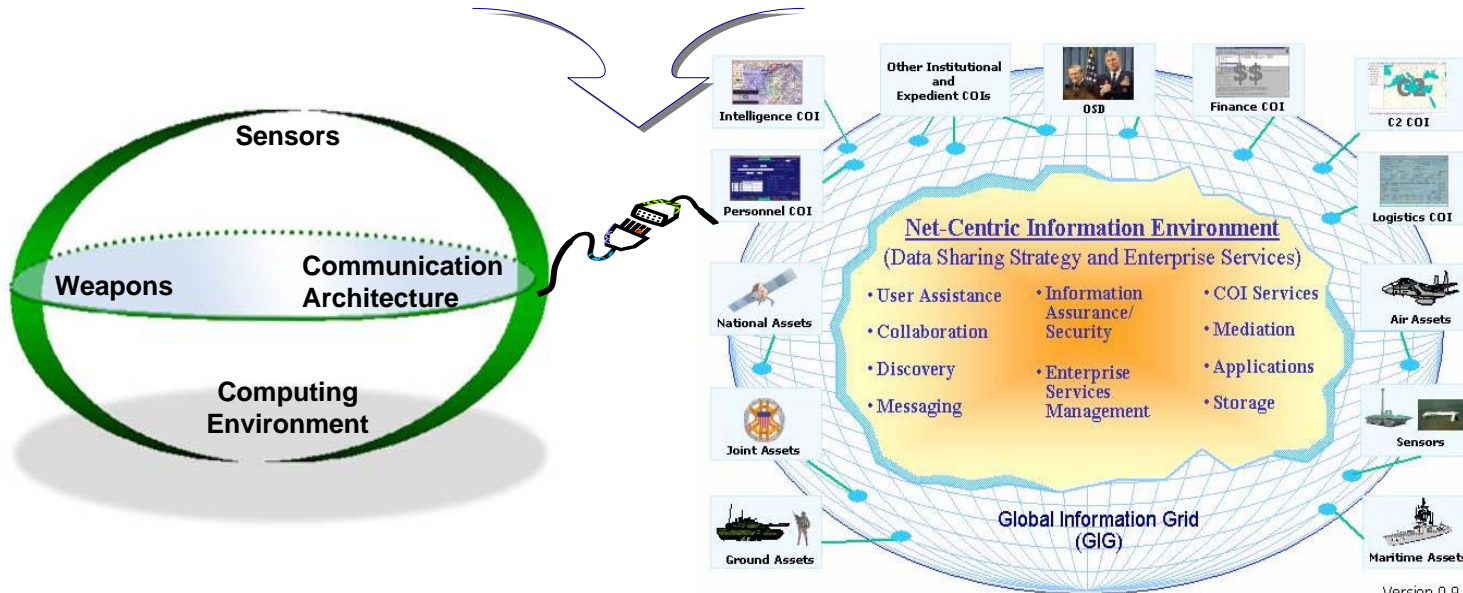




Joint Interoperability and Networking

The platform must seamlessly move its sensor and weapon information on/off the aircraft, then into and across a joint, networked Battle Space.

Multiple Platforms



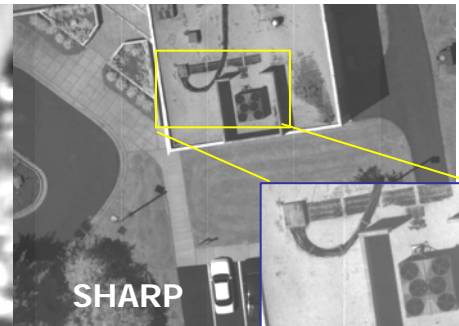
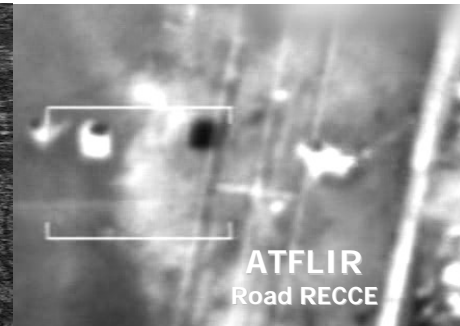
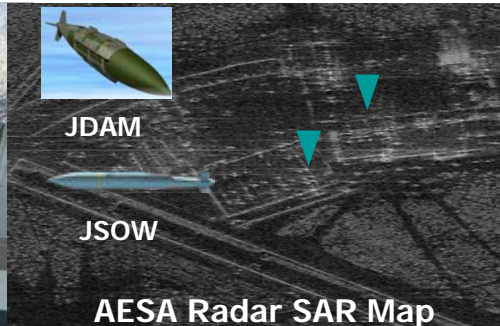
Version 0.9

Information flow thru/into Battlespace

- COTP
- BHI
- Onboard Mensuration Coordinates
- BFSA
- Images
- Streaming Video
- Electronic Order of Battle (EOB)
- Surface Picture
- CID:
 - Fixed Target
 - Moving Targets
- Single and Multi-ship Geo-locate



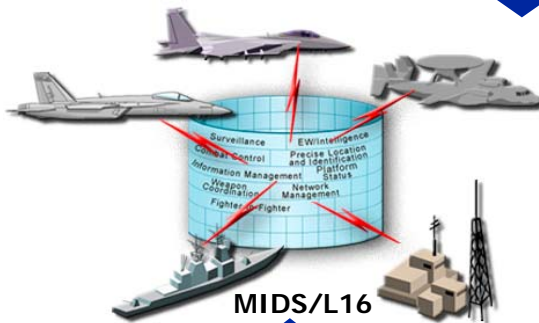
Super Hornet Links the Power of the Network to the Warfighter



AIRCRAFT SENSOR INTEGRATION



DCS/VMF
nine-line brief



MIDS/L16



ATFLIR VIDEO DATA LINK



SHARP DATA LINK

CONNECTIVITY PATHS



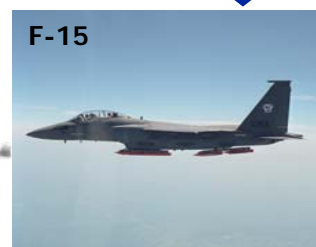
E-2D



SOF



Ground Station
(CAOC)



F-15



Rover III

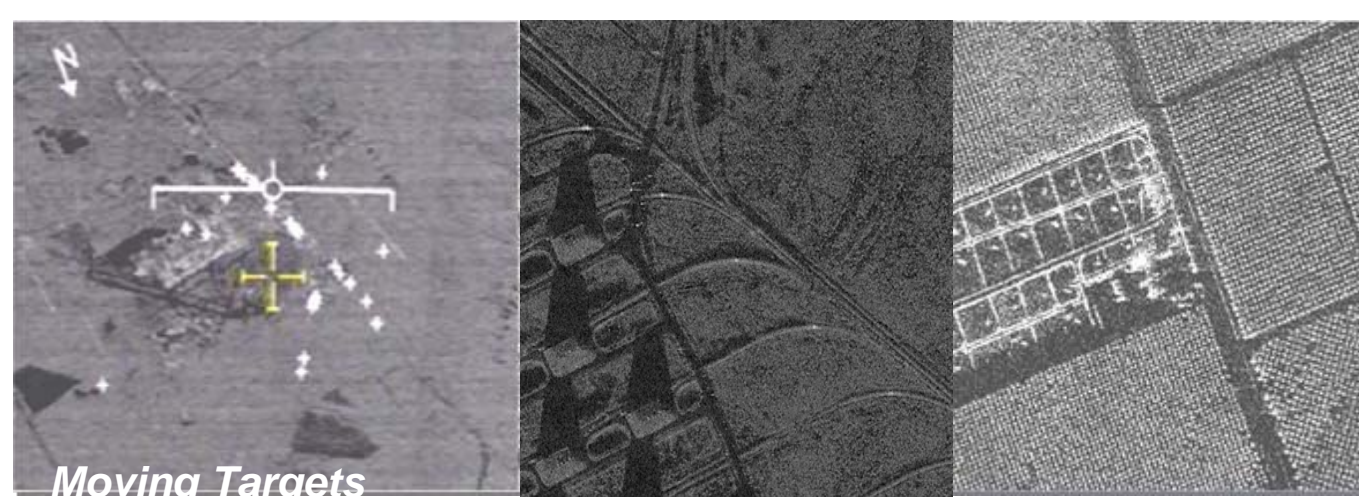
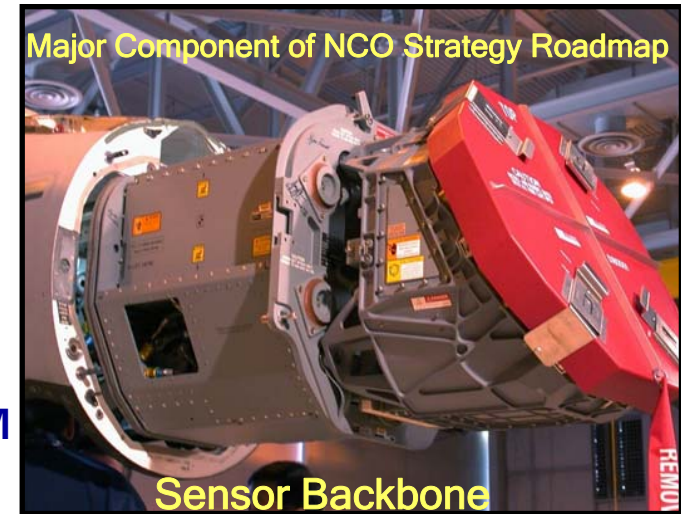


Carrier
Strike Group



Active Electronically Scanned Array (AESA)

- Most advanced air-to-air & air-to-ground radar available today
- Simultaneous missions (E/F) & decoupled cockpits (F)
- Electronic Attack & Surveillance
- Cruise Missile Defense
- Destroys targets with advanced AIM-120 AMRAAM
- Future mods include Advanced Sensor Fusion



- Affordable
- Low Maintenance Cost
- Highly Reliable
- 8000+ flight hours
- Operational today

Self-Generated Targeting Coordinates



AESA/JDAM/Link 16

Precision Strike Capability Over the Network

F/A-18E/F
AESA SAR
map and
aircrew
designated
targets



AESA precision self-targeting
thru the weather in a
networked environment

Integrated weapon system
performance

AESA is a force multiplier

Thru link 16 network and
future networks all joint forces
have AESA capability

Target designation
received by
Non-AESA aircraft
via Link16



Link 16

Link 16

Major component of NCO
strategy roadmap

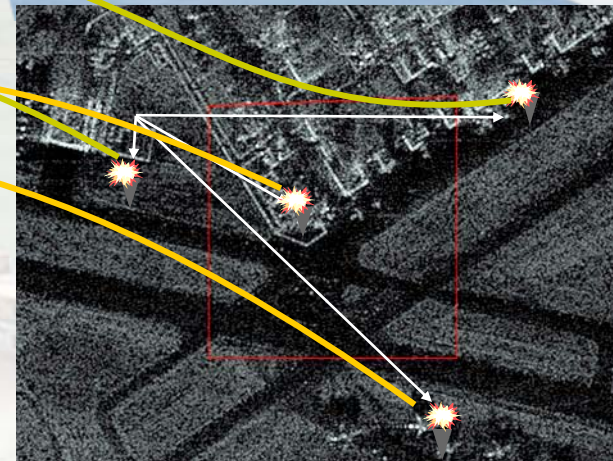


Targeting coordinates sent
over MIDS from AESA aircraft
to non-AESA strike aircraft

Multiple target attack in
single pass

Machine-to-machine targeting

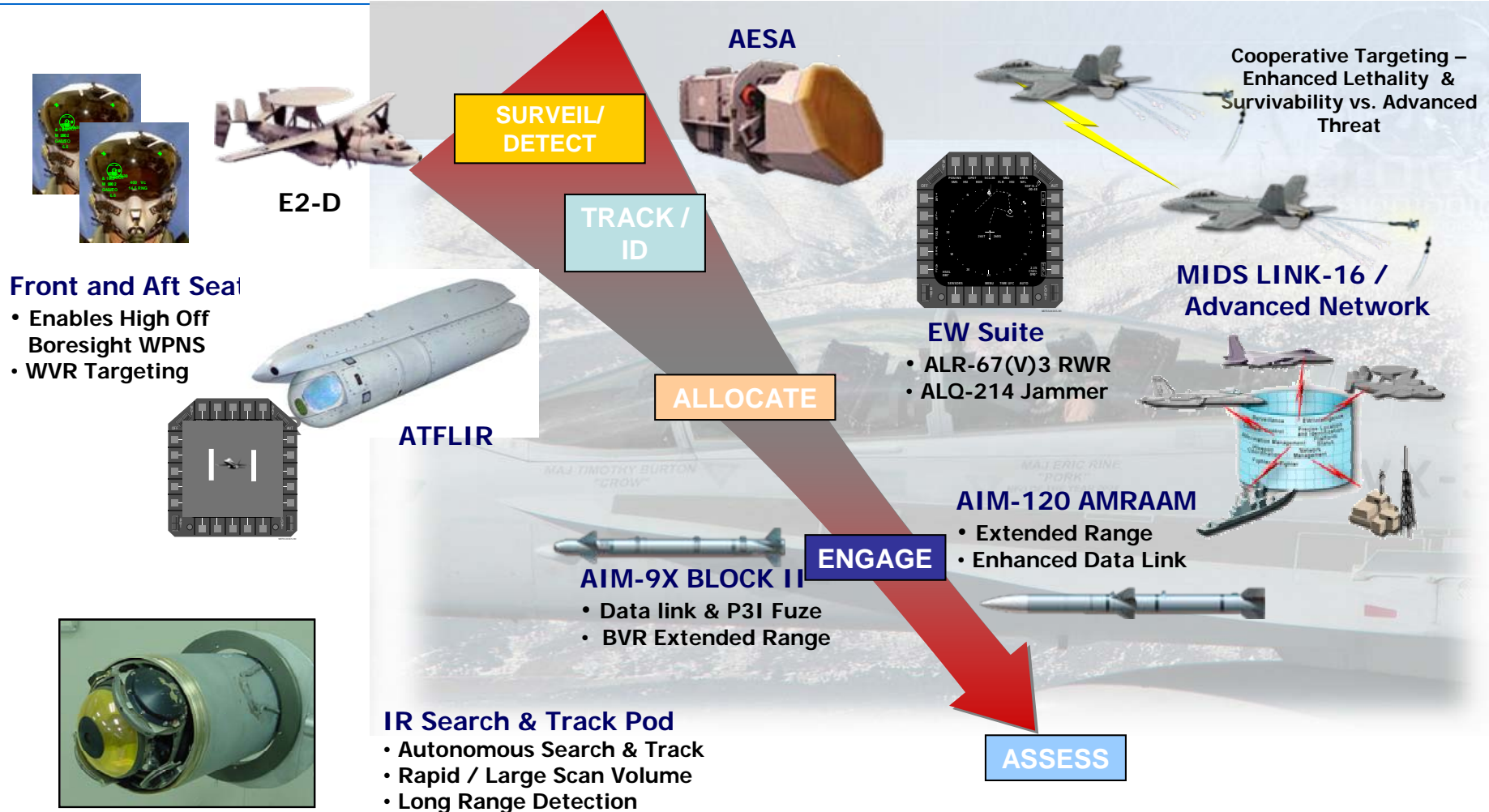
High volume precision fires



All four MK-84 JDAM hit their targets
well within specification limits



Multi-Spectral Air Dominance



Super Hornet Block II providing Air Dominance against Advanced Air threats in 2024.



F/A-18E/F "Flight Plan"

Next Generation Capability Paces the Threat

POM08/PR09

POM10

POM12

POM14

Distributed Targeting

Onboard Geo-Registration Multiple Movers Combat ID
 Distributed Targeting IRST

Sensor Integration

Electronic Surveillance Electronic Attack Combat ID Fusion
 Cooperative Targeting Emitter Geo-Location

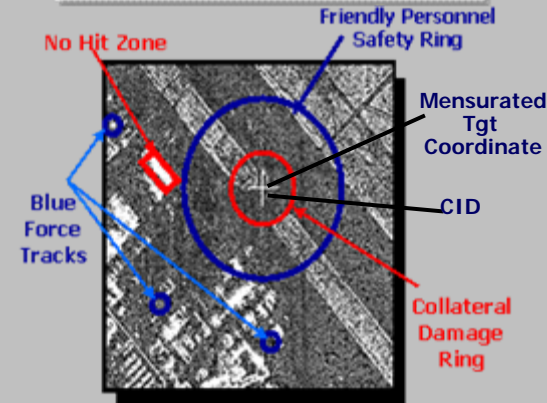
Airborne Networking

Most Advanced IFF MIDS-JTRS w/TTNT Network Applications & Services
 SATCOM UAV Connectivity

New A/A and A/G Weapons Integration

Networked Enabled Weapons AMRAAM HOBS Dual Mode Weapons

Information Superiority on the Battlefield



Real Time Information In and Out of the Cockpit



Developed with Open Architecture Principles

- Modular Design
- Reusable Application Software
- Life Cycle Affordability



EA-18G Growler

Next-Generation Airborne Electronic Attack Aircraft

- Will provide critical support to ground forces in the Global War on Terror
- Protects current and future strike aircraft
- Ten major improvements over EA-6B predecessor
- Program on time, on budget, meets all requirements



DoD Airborne Electronic Attack future capability depends upon successful EA-18G program execution



EA-18G Configuration

ALQ-218(V)2 RF Receiver System

- Wideband receiver provides accurate emitter identification and location
- Selective reactive jamming capability

Avionics Pallet

- ALQ-218(V)2
- CCS Receiver
- Electronic Attack Unit (EAU)

ALQ-227(V)1 Communication Countermeasures Set (CCS)

- Smaller and more capable than USQ-113 with expandable infrastructure
- Transmit function through low-band ALQ-99 jammer pod

ALQ-99 Tactical Jamming Pods

- Proven system is already in U.S. Navy inventory
- Ongoing transmitter upgrade program

- Crew Vehicle Interface
 - Advanced Crew Station (ACS)
 - Joint Helmet Mounted Cueing System (JHMCS)
- Link 16 / Multifunction Information Distribution System (MIDS)
- Digital Memory Device (DMD)

Interference CANCELLATION System (INCANS)

- Provides UHF communications capability during ALQ-99 jamming
- Significant communication and situational awareness improvement

AESA radar

AIM-120C

AGM-88

Multi-mission Advanced Tactical Terminal (MATT)

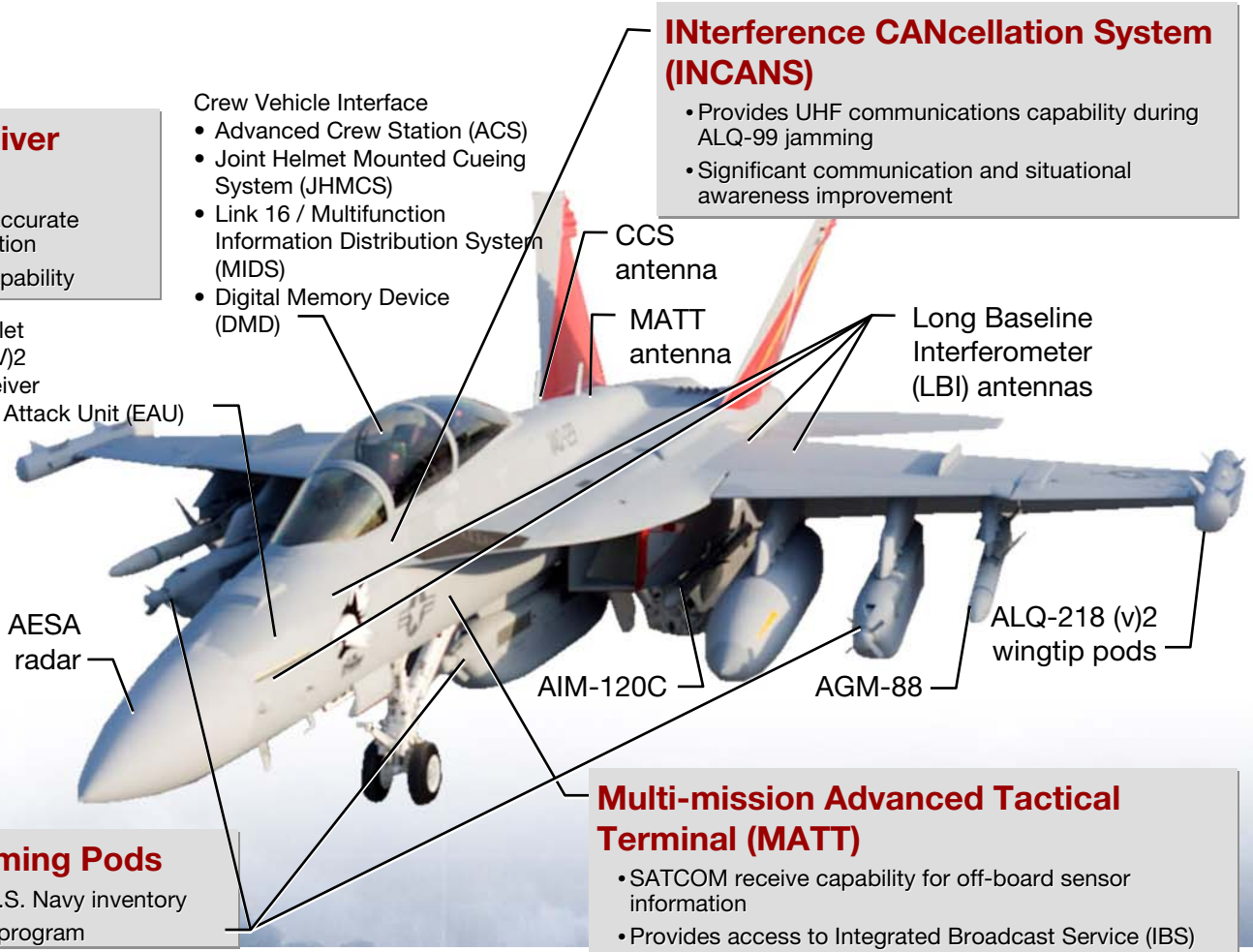
- SATCOM receive capability for off-board sensor information
- Provides access to Integrated Broadcast Service (IBS)

CCS antenna

MATT antenna

Long Baseline Interferometer (LBI) antennas

ALQ-218 (v)2 wingtip pods





EA-18G Performance to Plan

- **At 85% complete in SDD, the EA-18G Program is ahead of schedule and on budget**
 - First flight 1 month early!
 - Last 2 software releases one month early!
 - Major software functionality pieces developed 7 months early!
 - Earned Value Cost Index is better than 1.0
- **EA-18G is meeting all requirements**
 - All Key Performance Parameters and Technical Performance Measurands meeting required levels *with margin*
- **Testing is progressing well and verifying capability**
 - Successfully completed initial operational assessment in support of Low Rate Initial Production authority
- **Transition to fleet and production commencing (2009 in IOC)**

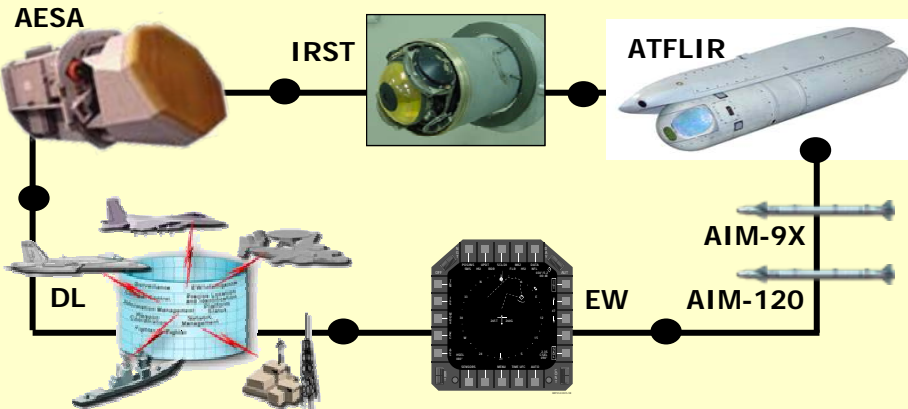
The EA-18G provides significant capability increases to the warfighter for Airborne Electronic Attack



Next Generation Super Hornet

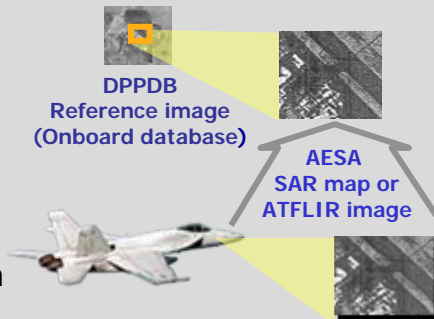
Land, Air and Maritime Combat

Multi-Spectral Air Domination -Sensor Integration-

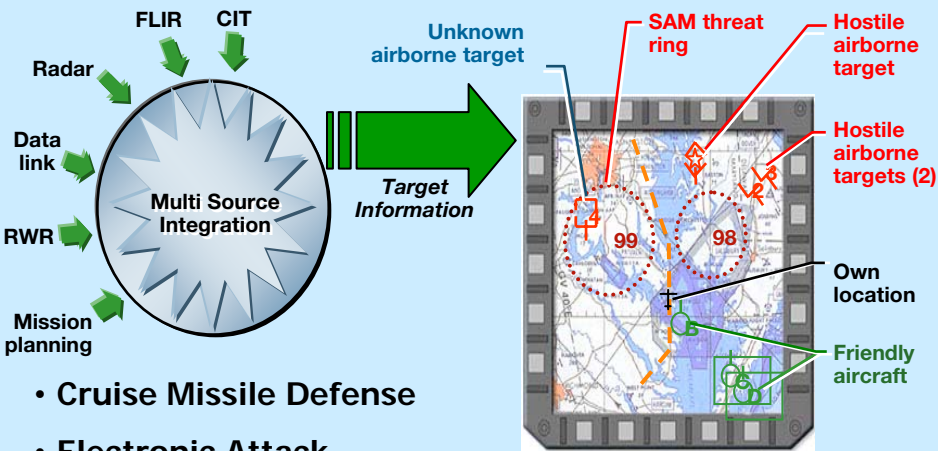


Revolutionary Strike Capability -Precise, Time Sensitive, Onboard Targeting-

- Multiple Movers
- A-G Combat ID
- Specific Emitter ID
- Multi-Ship Geo Location
- War-At-Sea

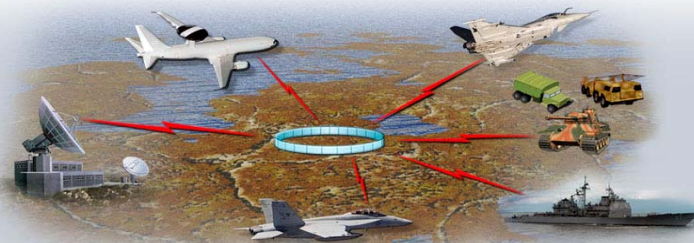


Sensor Fused Targeting Solutions in Land or Maritime Environments



- Cruise Missile Defense
- Electronic Attack
- High Gain ESM

IP-Based Network and Connectivity



- TTNT
- SATCOM
- UAV/NUCAS
- Networked Weapons
- AEA Battle Management



Questions?

PRIORITY:

“ Build a Fleet for the Future

... balanced, rotational, forward deployed, and surge capable – the proper size and mix of capabilities to empower our enduring and emerging partners, deter our adversaries, and defeat our enemies”

- CNO (CNO Guidance 2007)