



# *Future Aircraft Carriers*

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CVN 21 Program Manager*

**OA and Carrier Opportunities**  
8 August 2007





# CVN 78 Characteristics

## Integrated Island

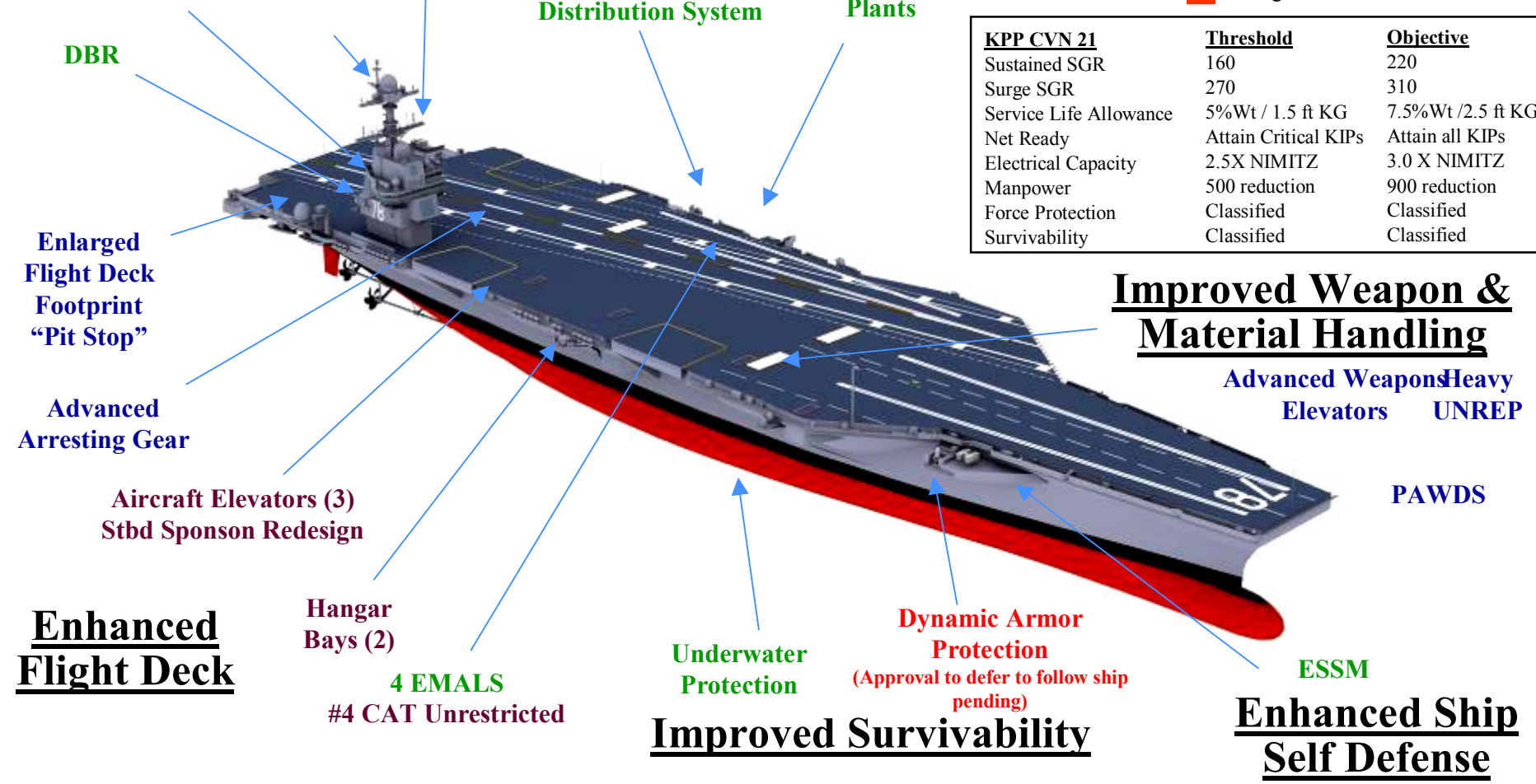
## New Propulsion/Electric Plant

- CVNX 1
- Brought Forward from CVNX 2
- NEW
- Change since MS B

**Smaller Island Re-Positioned Aft & Outboard**  
**Composite Mast with Clamp Antenna**  
**JPALS**

**All Electric Aux Services**  
**Zonal Electrical Distribution System**  
**New Propulsion Plants**

<u>KPP CVN 21</u>	<u>Threshold</u>	<u>Objective</u>
Sustained SGR	160	220
Surge SGR	270	310
Service Life Allowance	5%Wt / 1.5 ft KG	7.5%Wt / 2.5 ft KG
Net Ready	Attain Critical KIPs	Attain all KIPs
Electrical Capacity	2.5X NIMITZ	3.0 X NIMITZ
Manpower	500 reduction	900 reduction
Force Protection	Classified	Classified
Survivability	Classified	Classified



**DBR**

**Enlarged Flight Deck Footprint "Pit Stop"**

**Advanced Arresting Gear**

**Aircraft Elevators (3) Stbd Sponson Redesign**

**Enhanced Flight Deck**

**Hangar Bays (2)**  
**4 EMALS**  
**#4 CAT Unrestricted**

**Underwater Protection**  
**Improved Survivability**

**Dynamic Armor Protection**  
 (Approval to defer to follow ship pending)

**Enhanced Ship Self Defense**

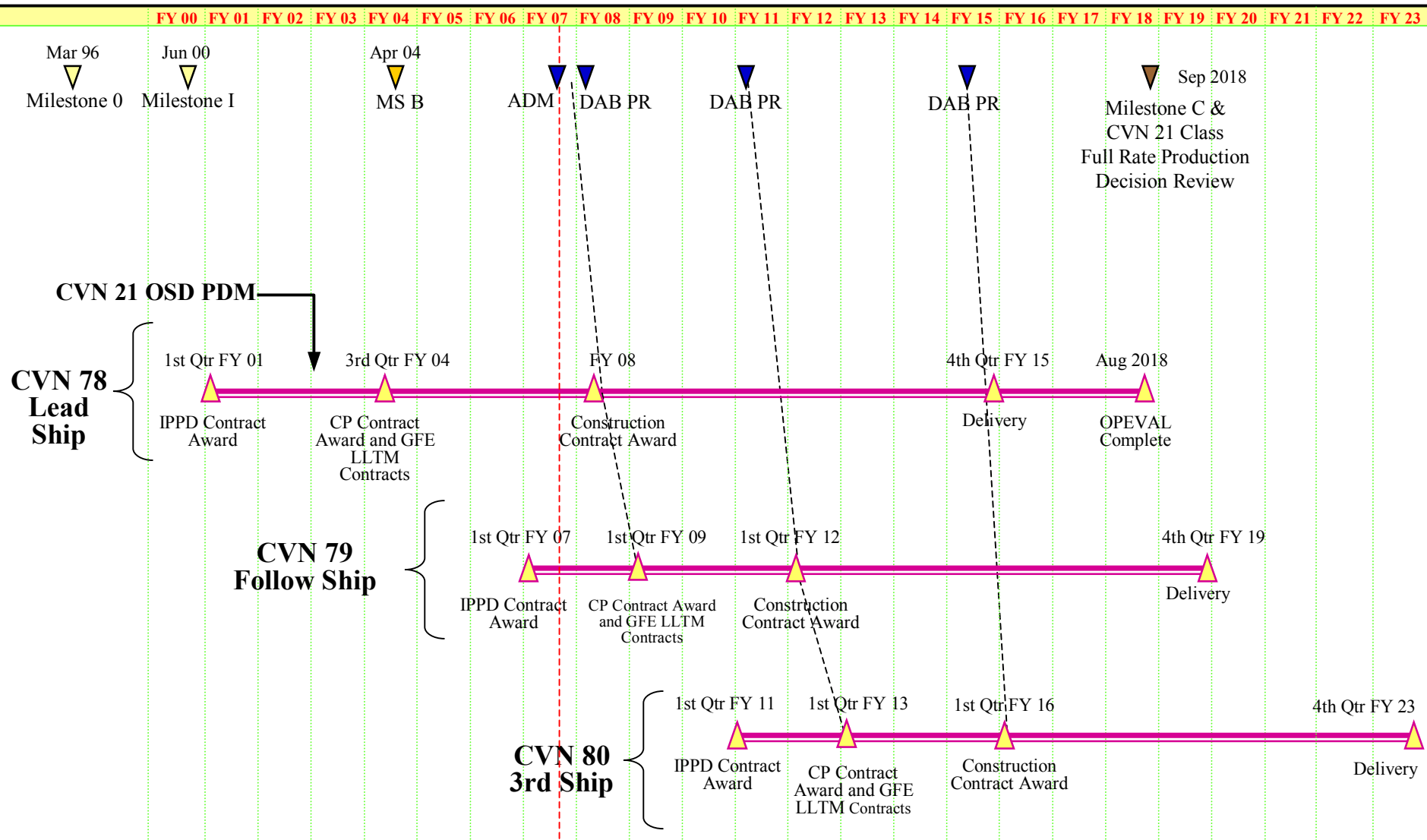
**Improved Weapon & Material Handling**

**Advanced Weapons Heavy Elevators UNREP**

**PAWDS**



# Program Schedule





# PM Phase Accomplishments- Platform

## June '07 Month End

<u>Platform</u>	
CON	83%
ARR	61%
DET	41%
<b>TOTAL PM</b>	<b>58% Comp</b>

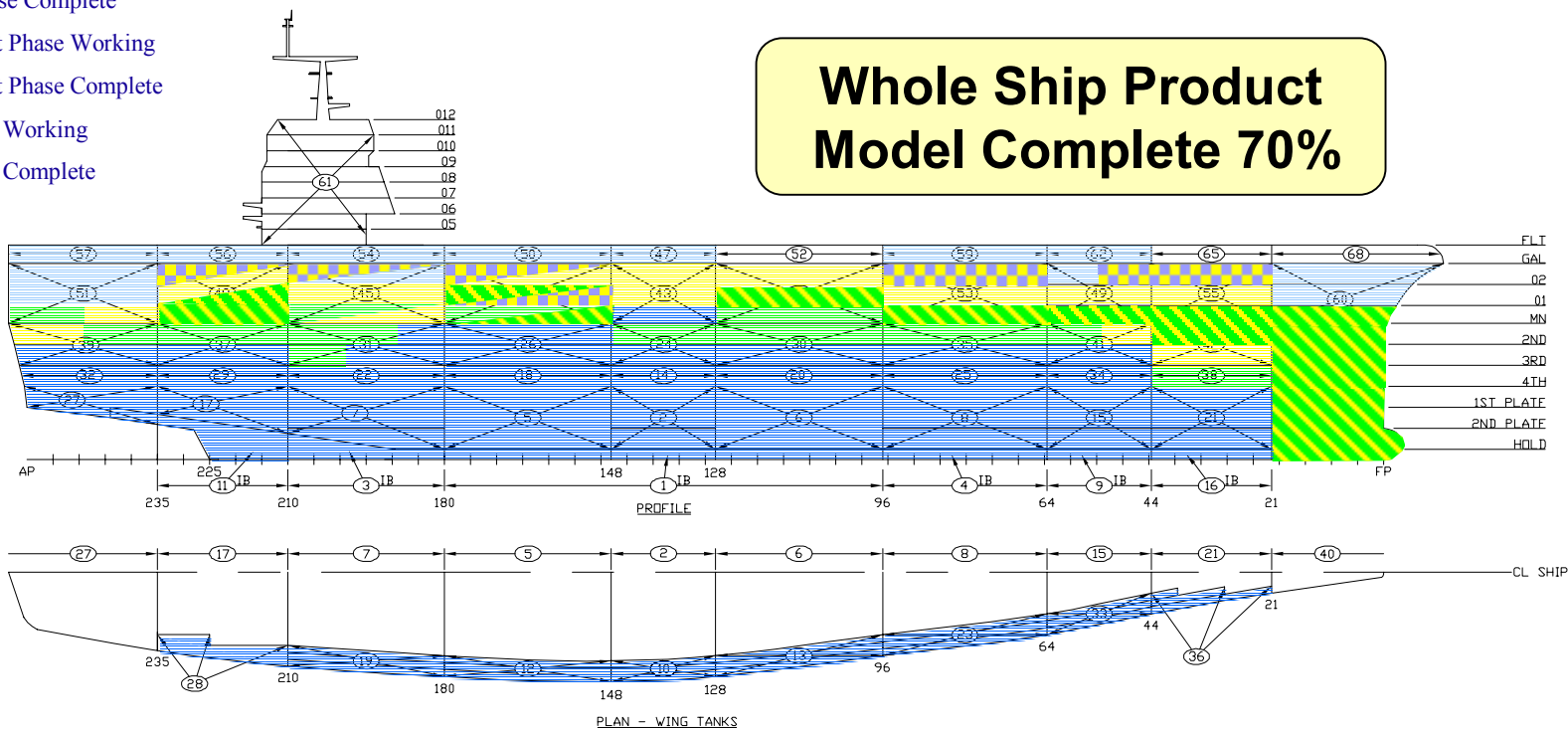
<u>Propulsion Plant</u>	
CON	100%
ARR	100%
DET	100%
<b>TOTAL PM</b>	<b>100% Comp</b>

### Current Phase Status

- Concept Phase Working
- Concept Phase Complete
- Arrangement Phase Working
- Arrangement Phase Complete
- Detail Phase Working
- Detail Phase Complete

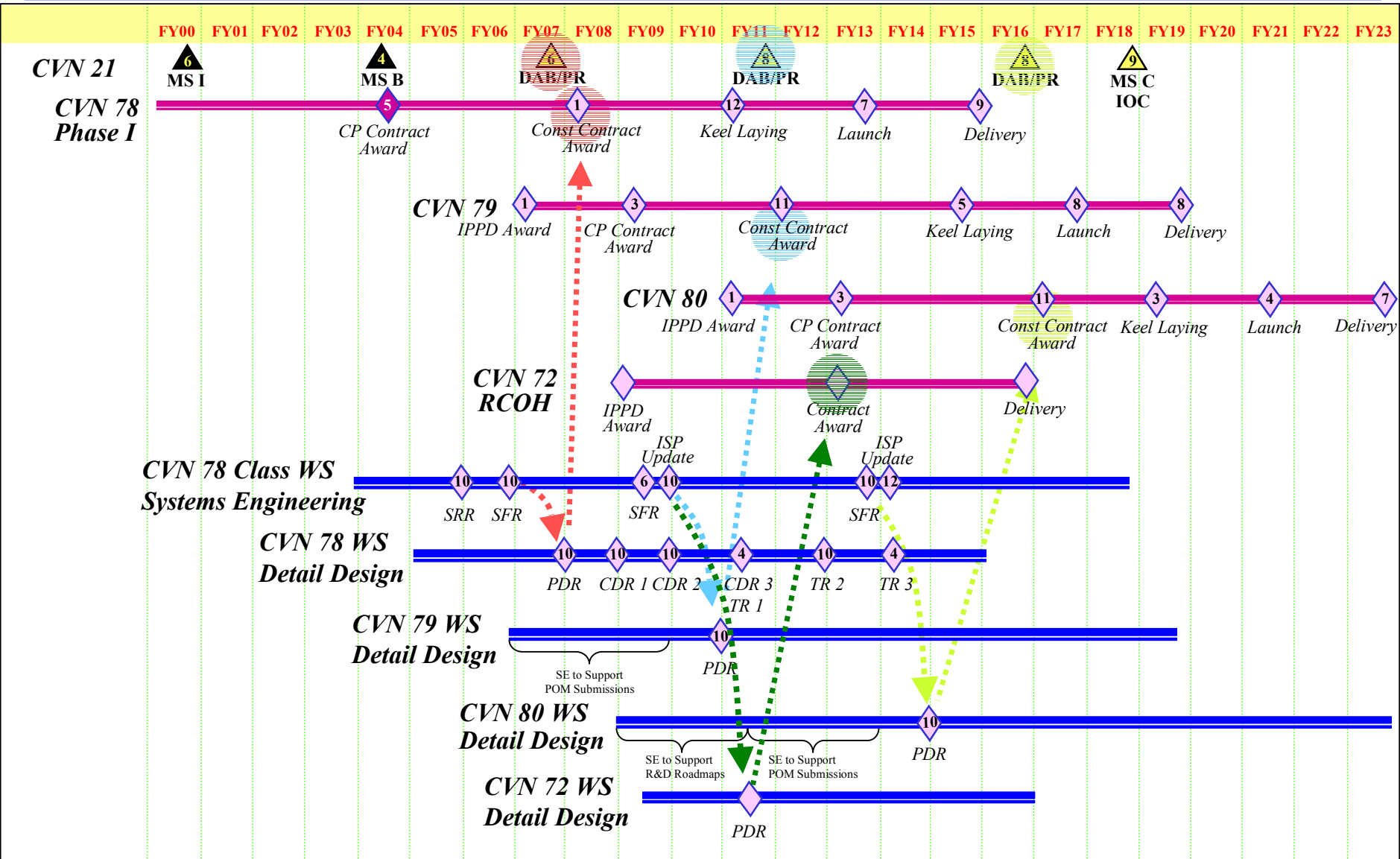
As of 6/24/07

**Whole Ship Product Model Complete 70%**



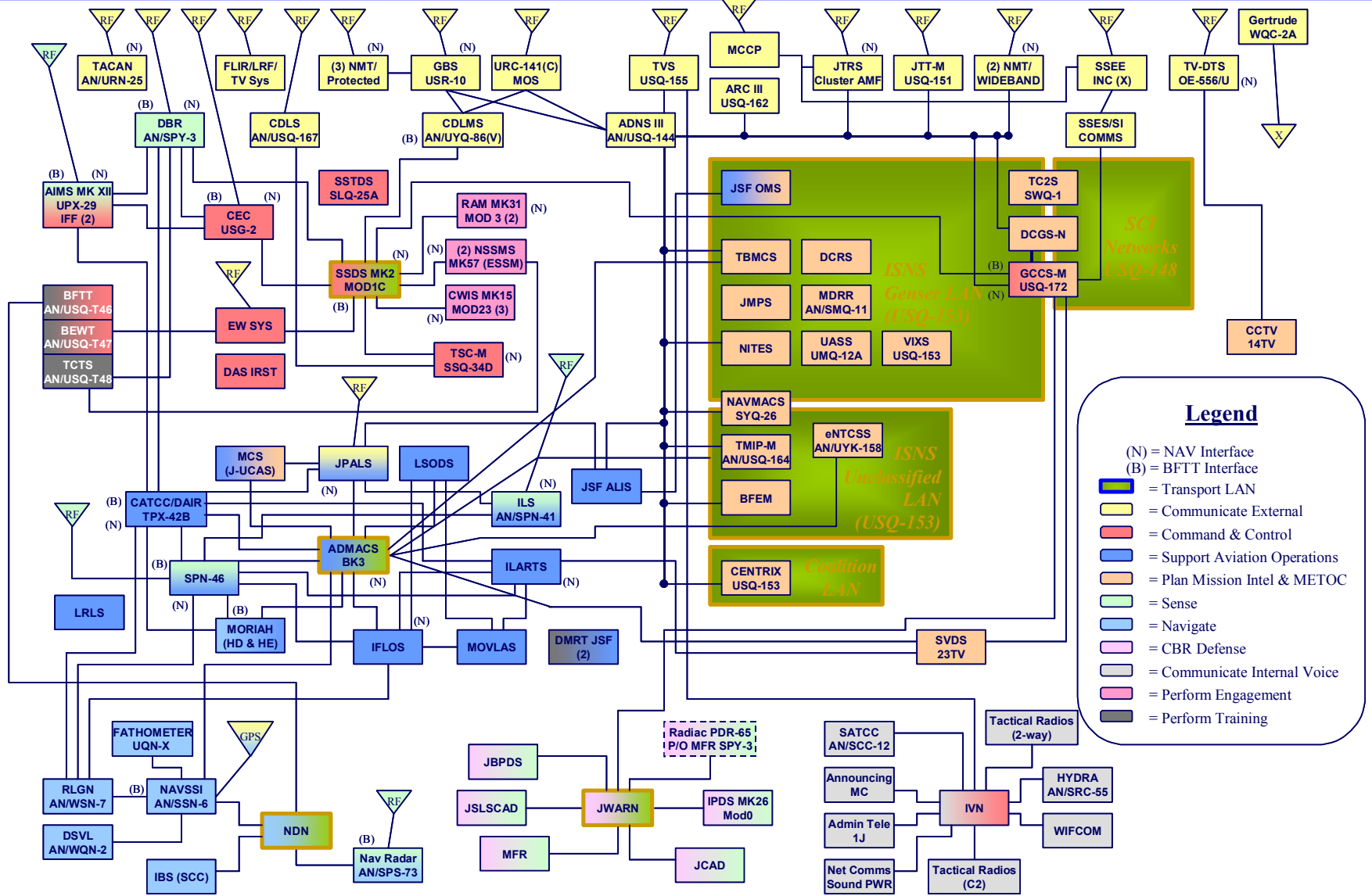


# Aircraft Carrier Warfare System Engineering





# CVN 21 Internal SV-1



### Legend

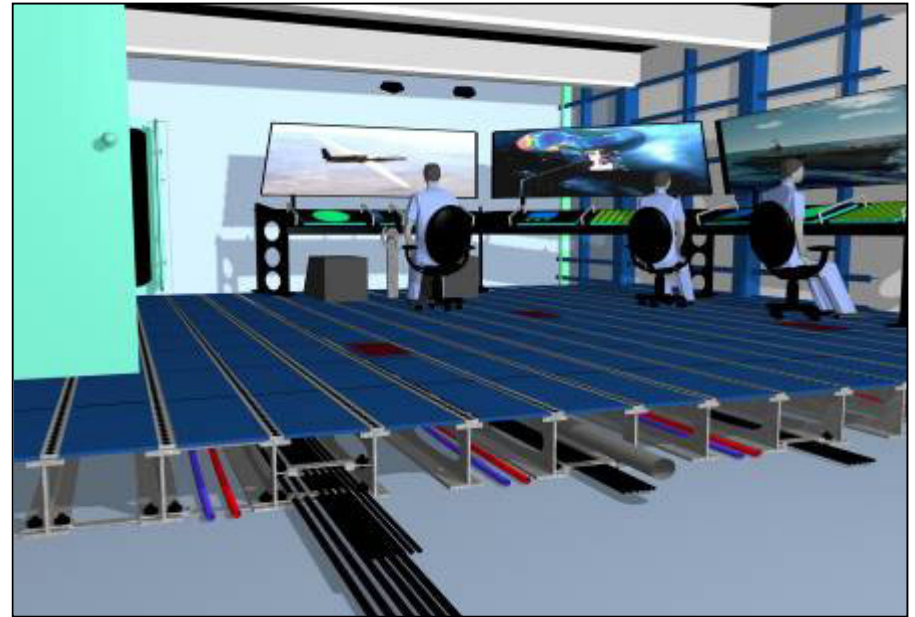
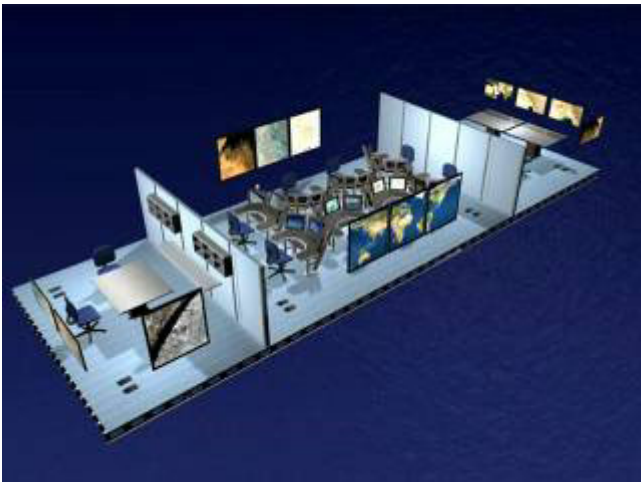
- (N) = NAV Interface
- (B) = BFTT Interface
- = Transport LAN
- = Communicate External
- = Command & Control
- = Support Aviation Operations
- = Plan Mission Intel & METOC
- = Sense
- = Navigate
- = CBR Defense
- = Communicate Internal Voice
- = Perform Engagement
- = Perform Training



# *Flexible Spaces*

## ➤ Includes:

- Raised deck
- Moveable bulkheads, lighting and ventilation
- Bulkhead mounting rails
- Distributed power, cooling
- Modular furniture



**Reserved Space on the 03 Level for Technology Insertion**



# OA Assessment FY 07

## Subsystem Focus

C4I SYSTEMS
USQ-144K(V)2 Increment III ADNS
DCGS-N Distributed Common Ground Station - Navy
USQ-172 (V) 4.X GCCS-M
NMT Navy Multiband Terminal
CANES Consolidated Afloat Network & Enterprise Services
IA Information Assurance
JWARN Joint Warning and Reporting Network
TBMCS Theater Battle Management Core System
MCCP Mast Clamp Current Probe
UYQ-86 (V)X CDLMS

NAVSEA
MK2 MOD 1C SSDS SSDS
Dual Band Radar (SPY-3 MFR / VSR)
MK 15 Mods 21 & 22 Phalanx CIWS Block 1B CIWS
MK 31 Mod 3 RAM GMWS RAM
MK 29 Mod 4 GMLS NSSMS
CEC USG-2A
USQ-T46C(V) BFTT BFTT (TSTS)
JPBDS/JCAD/JSLSCAD
SSQ-34C CV-TSC Carrier Tactical Support Center
EW System

NAVAIR
ADMACS Block 3 Aviation Data Management Control System
SPN-46 (ACLS) Automated Carrier Landing System
TPX-42A (V)14 w/ FC3 CATCC/DAIR
Sea Based JPALS Joint Precision Aircraft Landing System
UPX-29() AIMS MK XII IFF
JSF ALIS JSF Autonomic Logistics Information System
TC2S
JMPS Joint Mission Planning System

LDY
IBS

Following Systems were taken off the list:

- 1) MFEW replaced with generic EW System
- 2) AMF JTRS replaced by CANES and ISNS (Not listed in baseline)

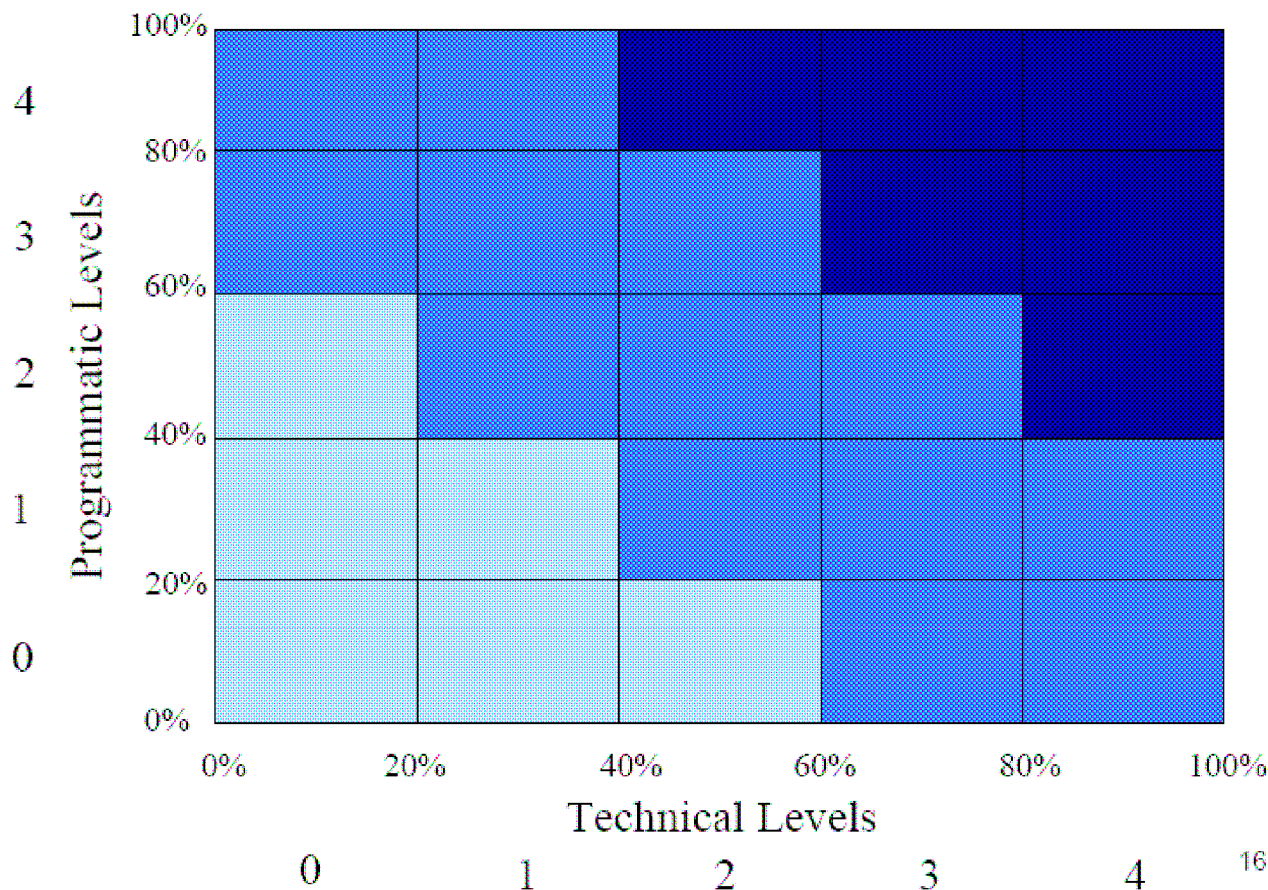
New Assessment Required

Update Current Assessment

- Including data from last year's assessment



# OA Assessment Tool Matrix



## Programmatic Levels

- 4: Open and Net Centric
- 3: Common
- 2: Migrating to Openness
- 1: Connected
- 0: Isolated

## Technical Levels

- 4: Enterprise
- 3: Common
- 2: Layered & Open
- 1: Layered
- 0: Closed