



***TRANSFORMING NAVAL AVIATION
MAINTENANCE FOR THE 21ST CENTURY***

**RDML(S) Michael Hardee
COMMANDER
NAVAL AVIATION DEPOTS**

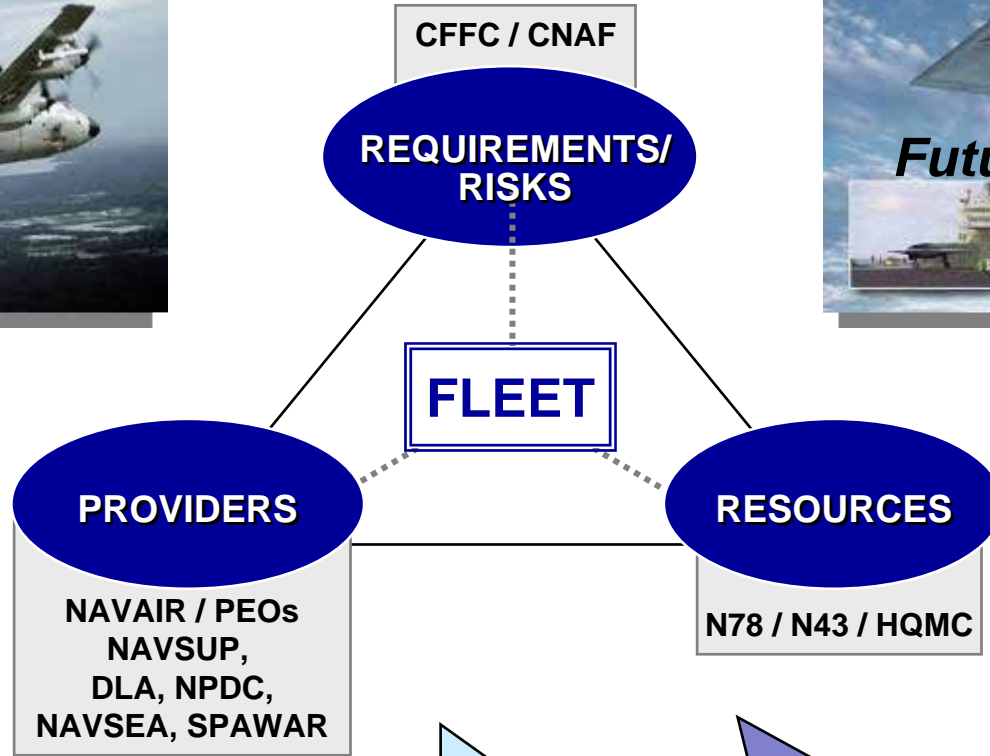
25 October 2005

OUTLINE

- **WHERE WE'VE BEEN**
 - DEPLOYED READINESS FOCUS
- **WHERE WE ARE:**
 - ENTERPRISE MANAGEMENT
 - COST-WISE READINESS
 - READY FOR TASKING AIRCRAFT
 - TMS FOCUS
 - *AIRSpeed*
(ie. LEAN, SIX SIGMA, TOC)
 - PBL / PPP
- **WHERE WE ARE HEADED:**
 - PBL / PPP
 - FLEET READINESS CENTERS



NAVAL AVIATION ENTERPRISE



Metrics

- **TURN-AROUND-TIME**
 - RFT
 - WIP
- **RELIABILITY**
- **COST**

RIGHT FORCE ...
RIGHT READINESS ...
RIGHT COST ...

Naval Aviation Enterprise NAVRIP CFT

NAVRIP Readiness Cross Functional Team

Team Leader: RADM Starling, CNAL

NAVRIP Steering
Committee

- Linkage
- Alignment

TMS Teams Drive Focus on RFT, M Rating, Cost

Readiness Standards & Policy

Leader:

Flag Officer to be named

- Resource Prioritization
- TMS Team Husbandry
- Policy
- M-Rating achievement
- Metrics management & automation
- Requirements mgmt (M-ratings, RFT)
- Cost Standards - Earned value
- Productive ratios

Maintenance & Supply Chain Management

Leader:

RDML Roesner / RDML Williams

- RFT achievement
- Performance gap closure
- FHP cost drivers & cost initiatives
- Enterprise AIRSpeed
- Provider metrics management
- FHP Cost Initiative mgmt

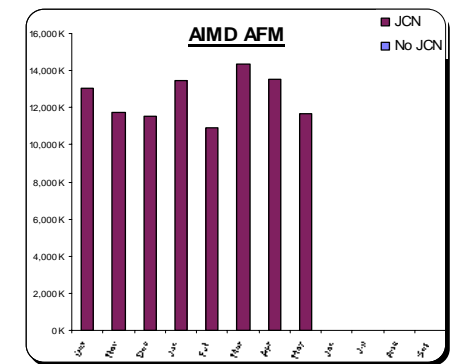
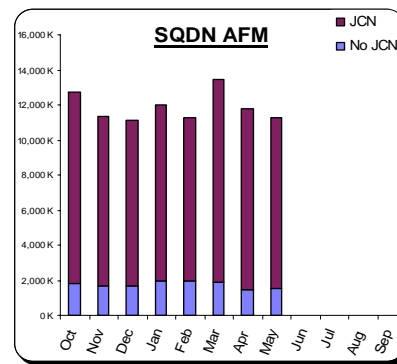
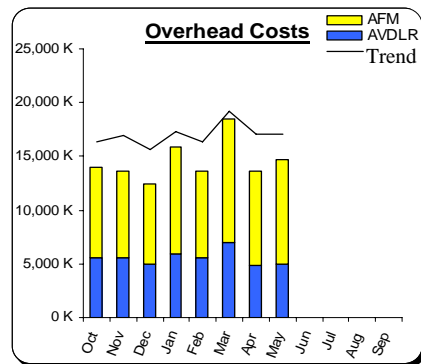
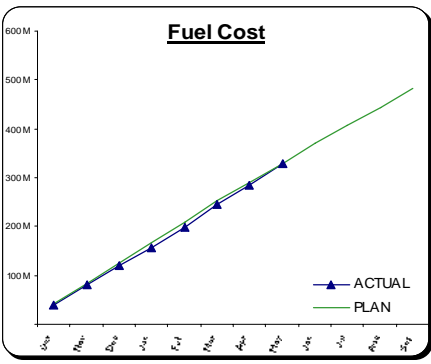
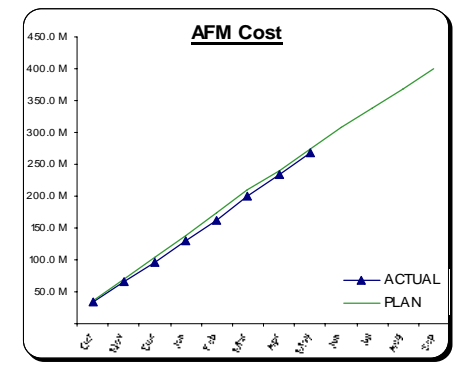
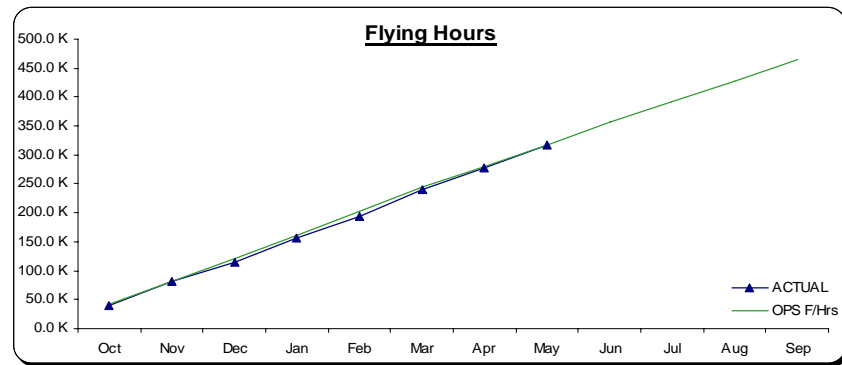
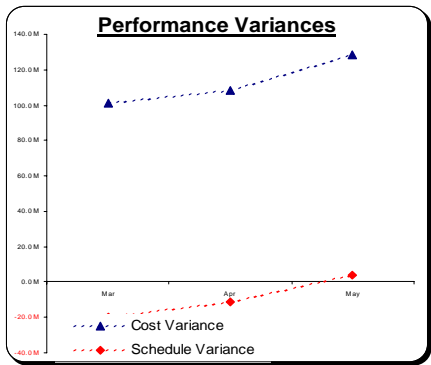
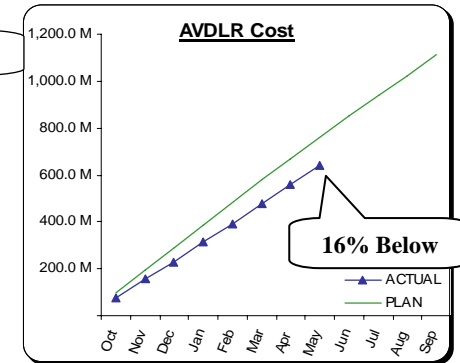
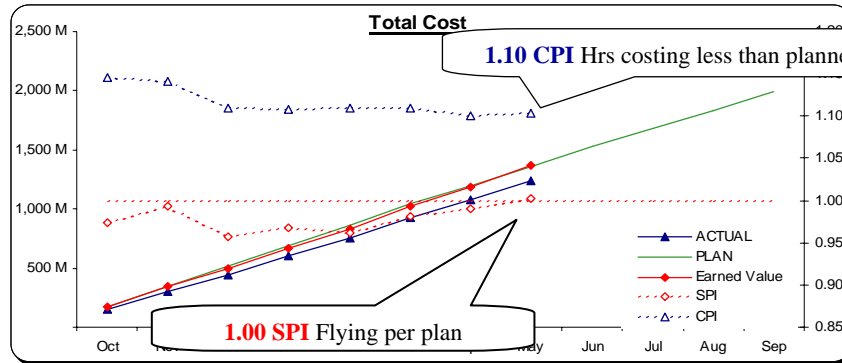
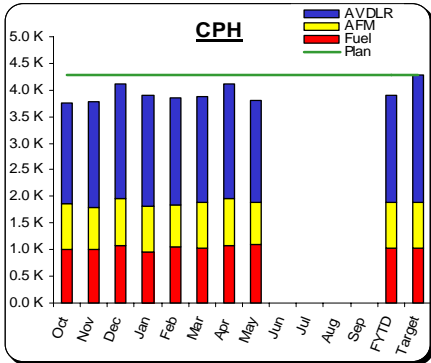
Acquisition & Life Cycle Support

Leader:

RDML Venlet

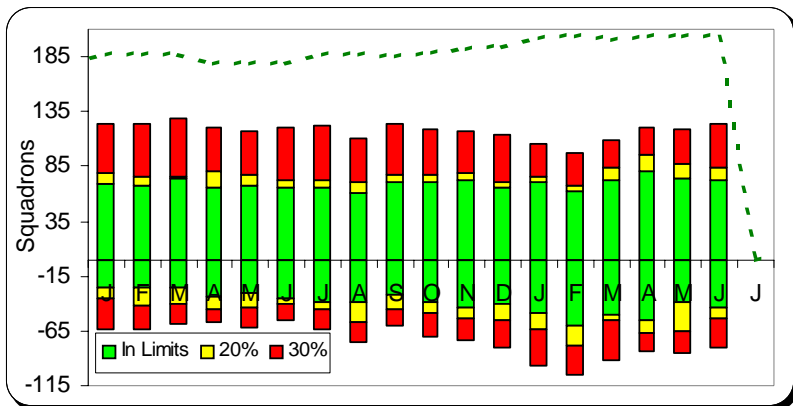
- Acquisition metrics development and management
- Product Enterprise Team architecture and implementation
- Acquisition cost drivers and cost initiatives
- Productive Ratios

FHP CNAF USN Direct Cost Example

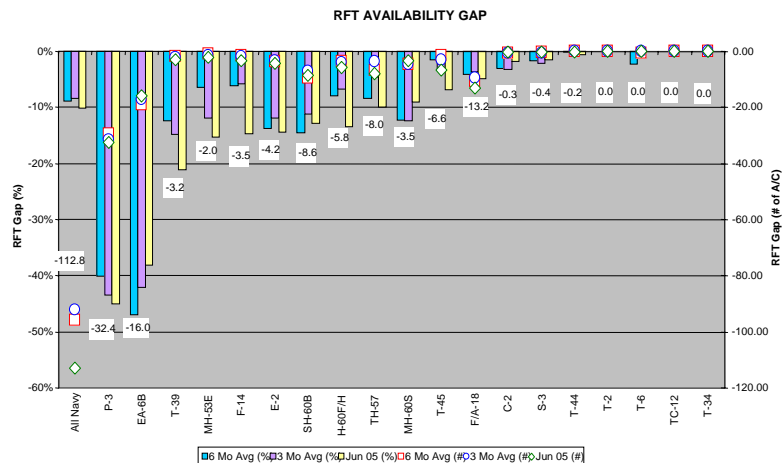


NAVRIP "Big Four" ROLLUP

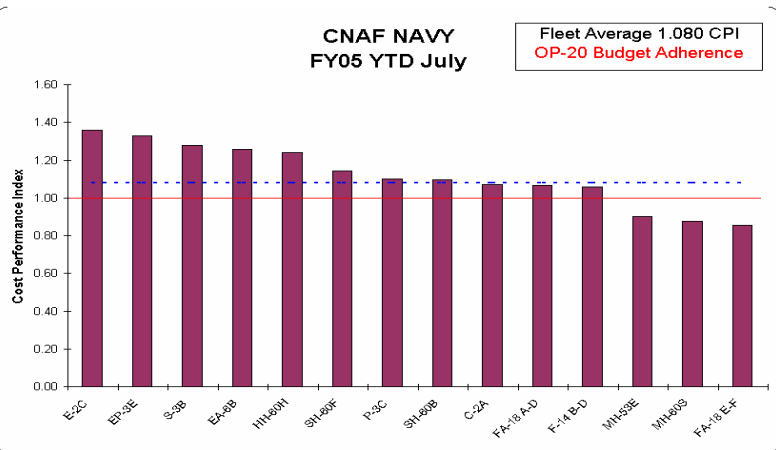
READINESS



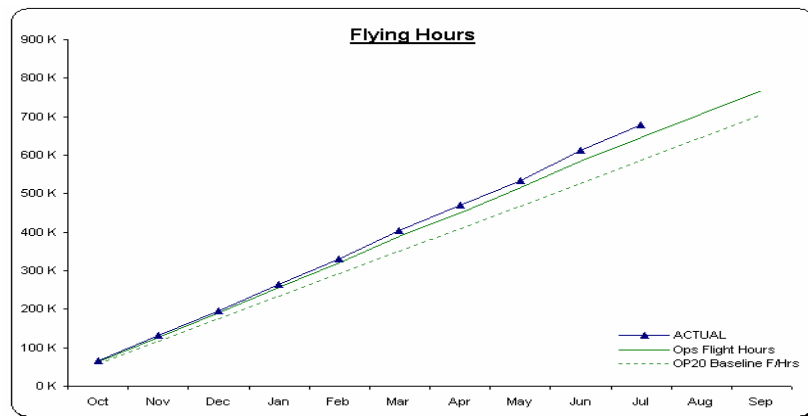
RFT AVAILABILITY GAP



COST PERFORMANCE



FLYING HOURS PROGRAM



$$\text{CPI} = \text{EARNED VALUE} / \text{ACTUAL TOTAL COST}$$

Cherry Point Continuous Improvement



Platform/ Engine	Reduction in TAT – Avg. (days)	WLS Change (hours)	Decreased Travel Distance (feet)	Workforce Size (Decrease)	Reduction in Depot WIP- Assets available to Fleet
H-46	35	+3719	Pending AIRSpeedLean Events–on- going	No increase	11
AH-1W PMI 1	9	+204	579,600	3	OIF
T58GS16A	37	-6	2,120	2	6
H-53	146	+ 1200	Pending AIRSpeedLean Events–on- going	Minimized Increases	16
F402RR408A Repair Conversion	177	+162	186,800	1	14

North Island AIRspeed Deployment



- **F/A-18 PMI 1**

- Avg. Cycle time from 190 days - 140 days
- WIP reduced by 12 A/C
- Results achieved despite work content growth from 6453 hours to 8335 hours

- **CH-53**

- 376 Days TAT to 318 days
- Current target: <260 days

- **E-2**

- PMI 2 TAT reduced from 225 days to 180 days
- PMI 1 TAT reduced from 100 days to 35 days

- **C-2**

- PMI 3 SLEP TAT reduced from 400 days to 300 days
- \$1.8M Savings to NAE in reduced execution hours on E-2 PMI 1 and PMI 2 events vs. FY06 funded workload

- **Components:**

	Pre-LEAN (TAT Days)	Post-LEAN (TAT Days)
– <i>Dynamic Components</i>	89	49
– <i>F-18 Displays (Kaiser PBL)</i>	109	39
– <i>Surfaces/ Canopies</i>	73	53

Single Piece Flow and Synchronized Pull System Based on Fleet Flight-line Requirements

AIRSpeed CLOSES SOME OF THE READINESS GAP

Jacksonville AIR Speed Value Delivered



- **P-3**

- *Reduced TAT by 24 Days (225 Days to 201 Days)*
- *Improved Stability / Reduced Variability by over 40 Days (79 Std Dev to 69 Std Dev)*
- *Sold 22 Aircraft vs. 19 Aircraft in FY04*
- *Reduced WIP by 5 Aircraft (from 17 to 12)*

- **EA-6B**

- **Work in Process (WIP) Reduced from 17 Aircraft to 9**
 - *WIP reduction returned 2 Squadrons to the Fleet*
- **Aircraft Returned to Fleet Faster (FY04 vice FY05)**
 - *Reduced Cycle Time from 463 Days to 380 Days*
 - *Increased On-time Deliveries from 31 percent to 83 percent*



- **F/A-18 Center Barrel Replacement (CBR+)**

- *16 percent reduction in TAT between first two deliveries*

- **Engines**

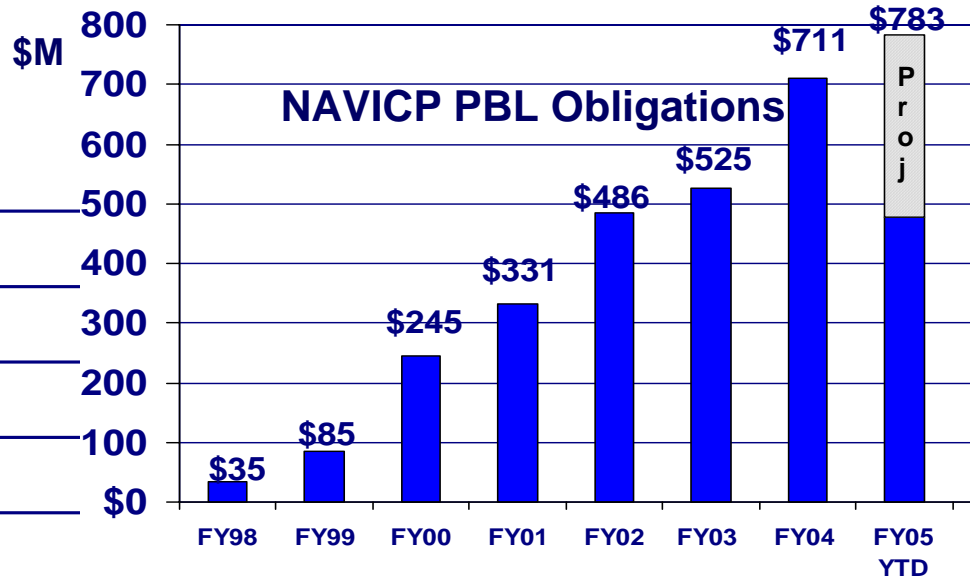
- *F414 Turn-Around-Time Reduced from 65 to 32 Days*

- **F404 Main Fuel Control System**

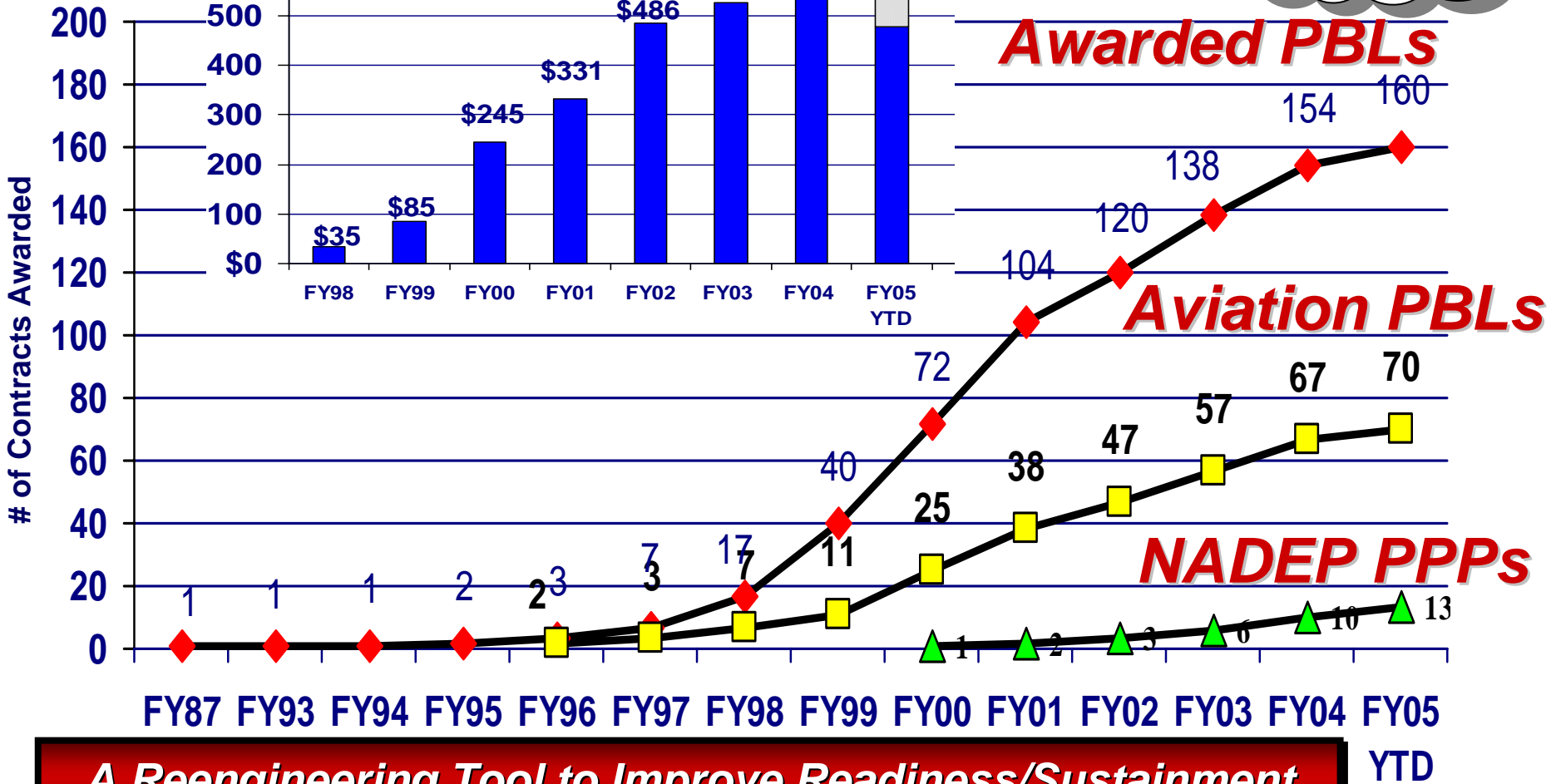
- *Turn-Around-Time Reduced from 39 to 22 Days*
- **Winner of the Honeywell Quest Award for Continuous Process Improvement**



PBL Status Overall



42K items,
24% of demand
covered

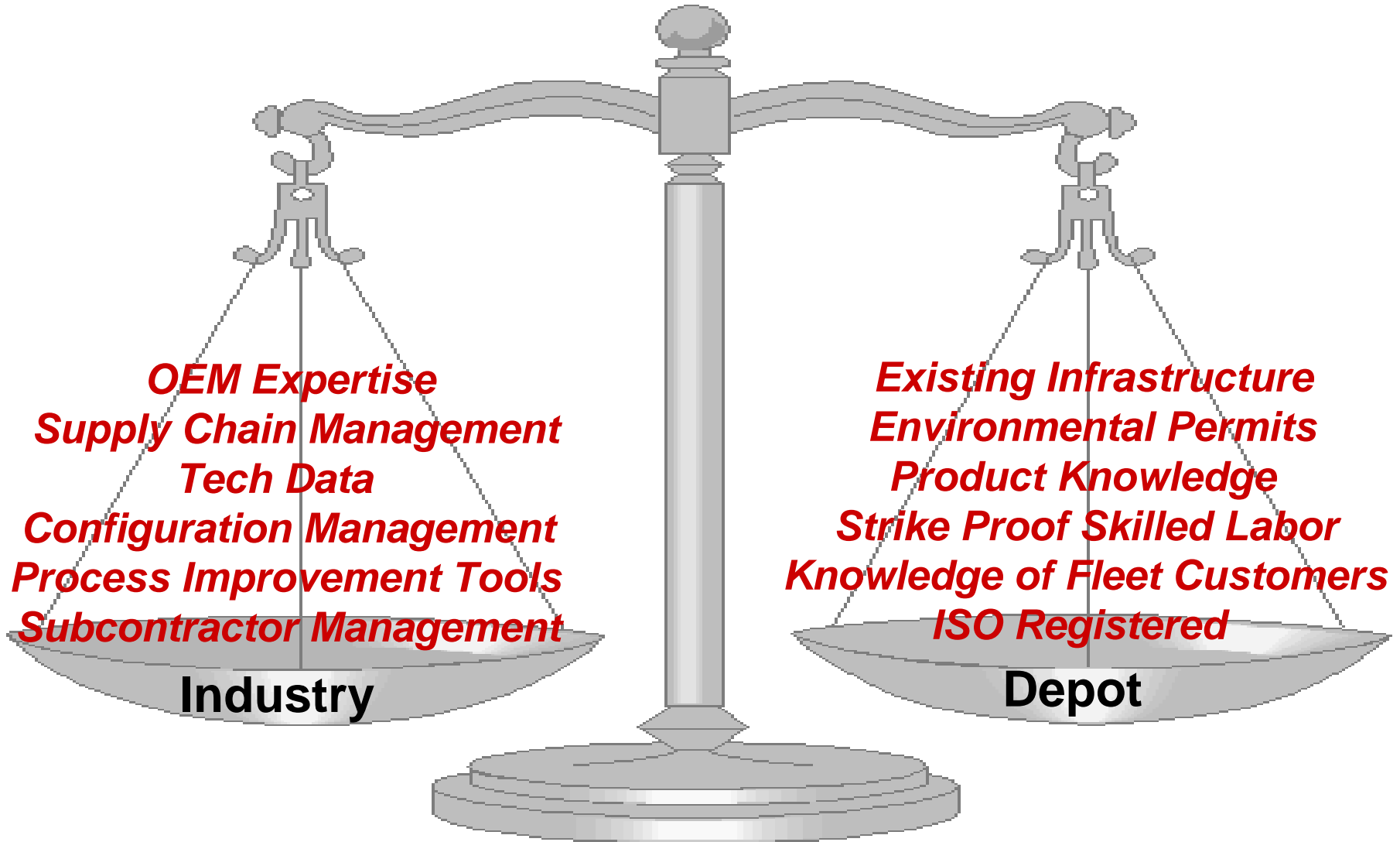


A Reengineering Tool to Improve Readiness/Sustainment

YTD

Public-Private Partnering With the Depot

Achieving the Optimum Mix and Balance of Best Business Practices



FLEET READINESS CENTER “Approach”

- **Shift Maintenance Concept**

- **Three Levels to Two**

- (On Flight Line – Off Flight Line)

- Move capability to fleet

- Integrate I/D and optimize resource allocation

- Shift “point-of-sale”

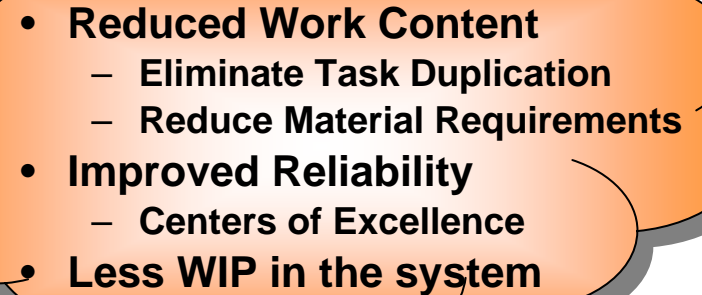
- **TMS Focus**

- **Regional Alignment**

- **Remove Organizational White Space** (ie. Improve Value Stream)

- **Reduce Total System Cycle Time**

- **Employ Naval Aviation Enterprise Approach**

- 
- **Reduced Work Content**
 - Eliminate Task Duplication
 - Reduce Material Requirements
 - **Improved Reliability**
 - Centers of Excellence
 - **Less WIP in the system**

MAJOR TRANSFORMATION IN THE DELIVERY OF AVIATION MAINTENANCE!

FRC Regional Alignment

FRC NORTHWEST

AIMD WHIDBEY ISLAND
NADEP NI Det Whidbey IS

FRC WEST

AIMD LEMOORE
NADEP NI Det Lemoore

Site Fallon

NADEP NI Det Fallon
AIMD Fallon

Site Fort Worth

AIMD Atlanta (FA-18 Support)
AIMD Fort Worth

Site Pendleton

NADEP NI Det Pendleton

Site Pt. Mugu

AIMD Pt Mugu

Site Yuma

NADEP NI Det Yuma

FRC SOUTHWEST

NADEP NI Det Miramar
AIMD North Island
NADEP North Island
NADEP North Island DET NI

Site Patuxent River

AIMD PAX RIVER

Site N. Orleans

AIMD Atlanta (E-2C Support)
NAVAIRES New Orleans

FRC MID ATLANTIC

AIMD OCEANA
AIMD Norfolk
AIMD NAS Corpus Christi
NADEP CP Det Oceana
NADEP JAX Det Norfolk
NADEP JAX Det Oceana

FRC EAST

NADEP CHERRY POINT
AIMD Willow Grove

Site New River

NADEP CP Det New River

Site Beaufort

NADEP JAX Det Beaufort

FRC SOUTHEAST

NADEP JACKSONVILLE
NADEP JAX Det Cecil Field
AIMD Brunswick
AIMD JAX

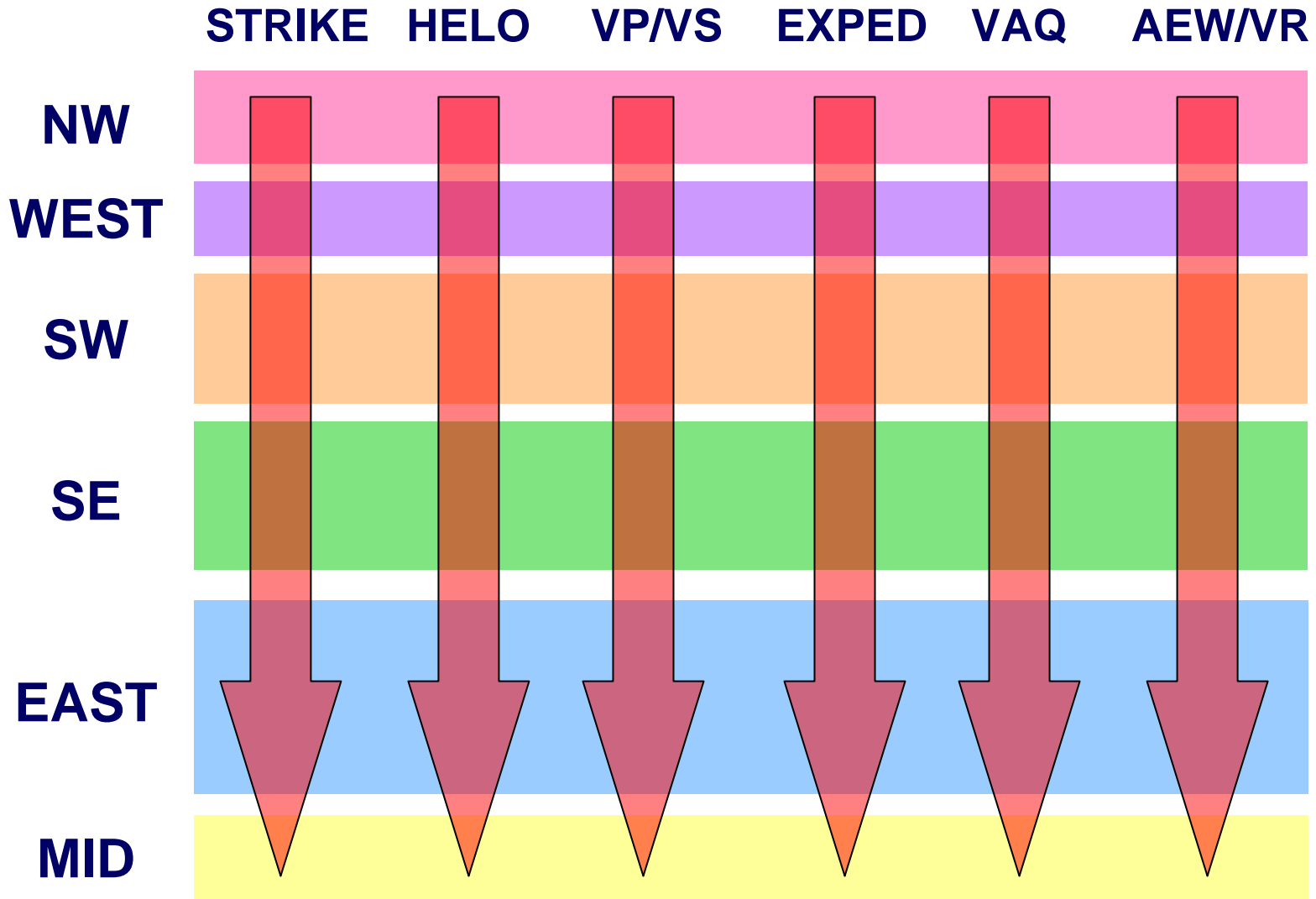
Site Key West

AIMD Key West

Site Mayport

AIMD Mayport
NADEP JAX Det Mayport

TMS Team Alignment





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25 October 2005



Tuesday, 25 October



- **11:30 AM: Lunch**
 - Buffet in BJCC Exhibit Hall
 - Walkway to BJCC – from Sheraton atrium
 - Identification badge required for entry
- **2:00 PM: 5 Breakout Sessions**
 - Located on 1st & 3rd floors (BJCC East Meeting Rooms)
 - Sessions run concurrently—select only one
- **4:00 PM: Exhibit Hall opens**
- **4:30–6:00 PM: Reception in Exhibit Hall**
- **7:00 PM: Reception at Barber Vintage Motorsports Museum**