Depot Maintenance Requirements Determination

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OPNAV N43

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Depot Maint Requirements Determination

- Relationship between required capabilities for War-Fighting and depot maint?
- Demo how Service takes risk, areas of risk, and mitigation strategies?
- Deferred Maint in Budget versus actuals in execution year?
- Major factors influencing accuracy of future year projections?

A Typical Day in the Navy

11 Sept 2001:

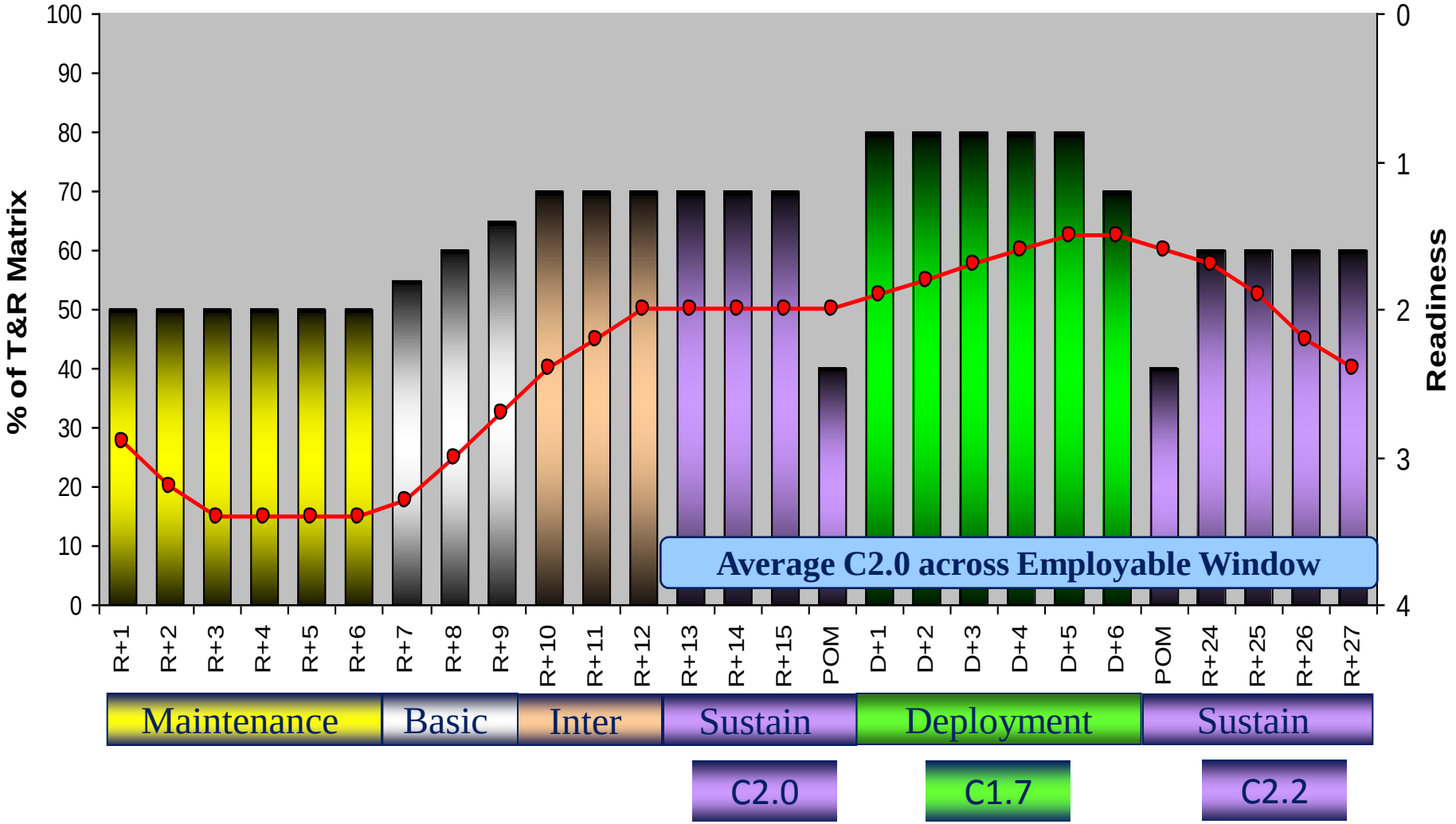
- **316 Ships**
- **371K Sailors**
- **92 Ships Deployed**
- **2 of 12 CVNs Deployed**
- **Minimal Boots on the Ground**

Today:

- 288 Ships
- 318K Sailors
- 113 Ships Deployed
- 4 CSGs Deployed
- 25+ Ships in Theater
- Expeditionary Support
- Maritime Security Operations
- ~ 1.2M Flt Hours
- And More…

Navy is Engaged Across the Globe

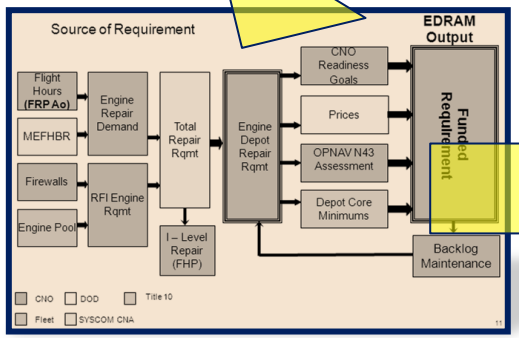
Aviation FRTP Profile



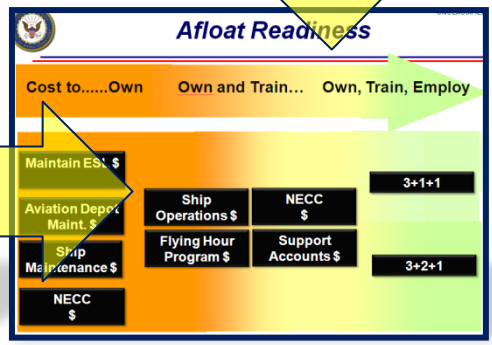
USN Maritime and Aviation Maintenance Requirements

- Requirements Are Prioritized to Achieve Measured/Calculated Outputs
- Accredited Models Determine Resource Rqmts to support FRTP Cycle
- Ship Maintenance is 100% Modeled
- Aviation Maintenance is 85% Modeled
- Independent Third Party Conducts VV&A Every Three Years

CNO Priorities



Maintenance Requirements



Maintenance Resources

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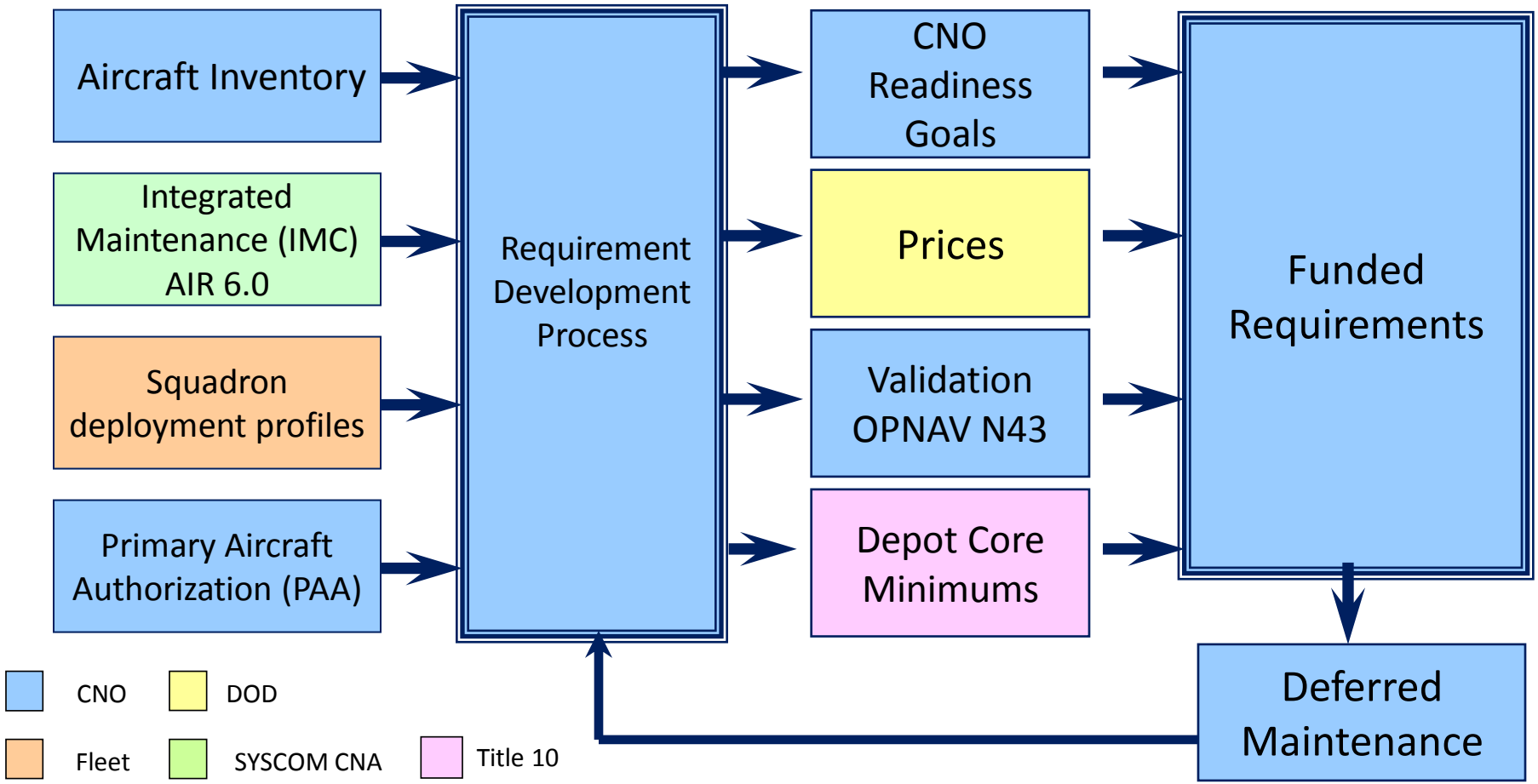
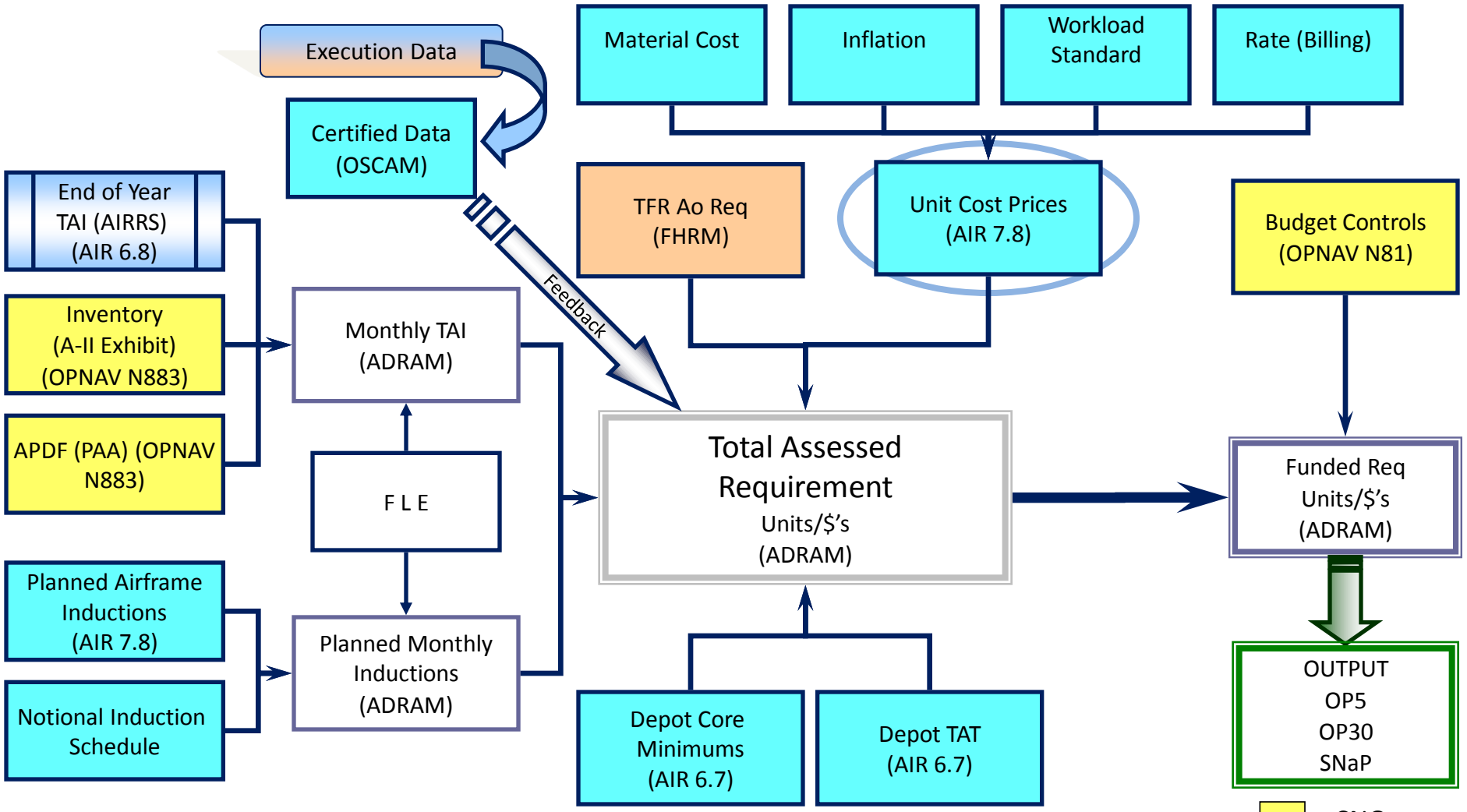
Airframe Depot Readiness Assessment Model (ADRAM)

Source of Requirement

ADRAM Output



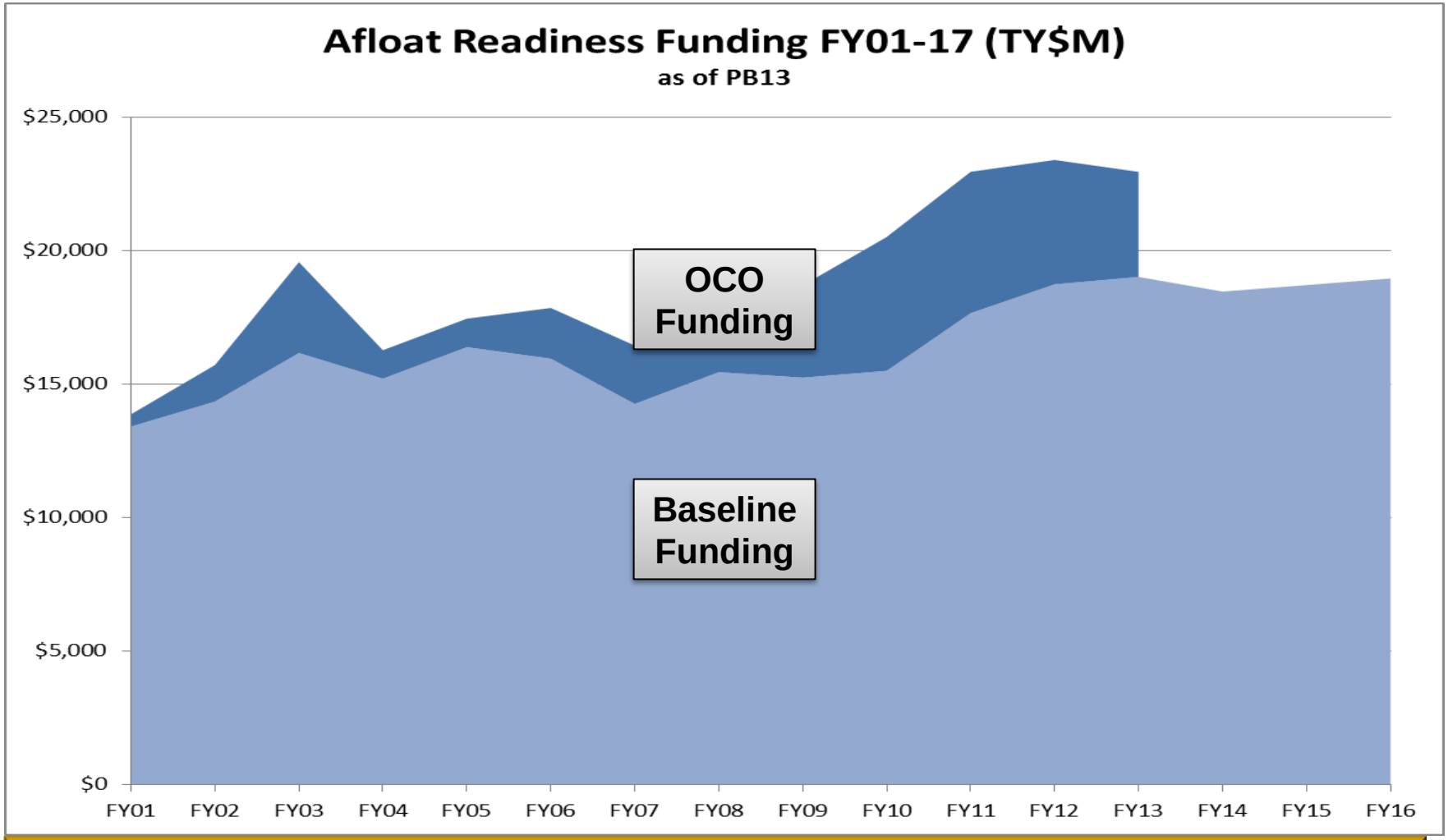
Airframe Depot Readiness Assessment Model (ADRAM)



TAI	=	Total Aircraft Inventory
APDF	=	Aircraft Program Data File
PAA	=	Primary Aircraft Authorization
AIRRS	=	Aircraft Inventory & Readiness Reporting System
ADRAM	=	Airframe Depot Readiness Assessment Model

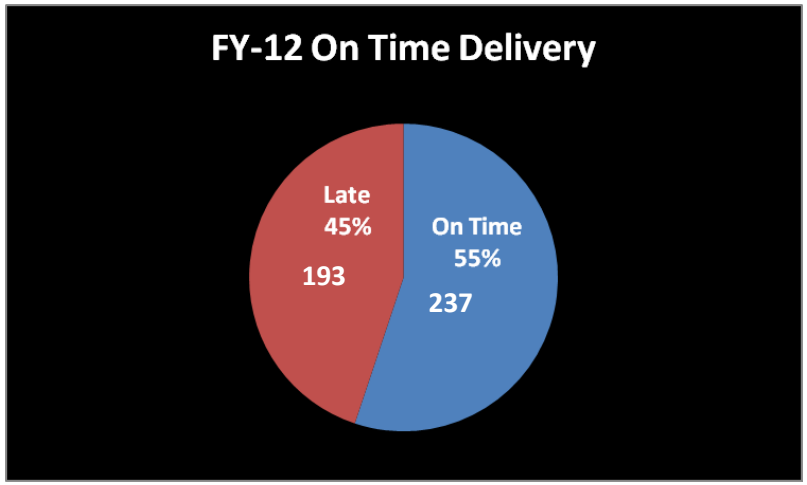
FLE	=	Flight Line Entitlement
Req	=	Requirement
TAT	=	Turn Around Time
TFR	=	Task Force Readiness
FHRM	=	Flying Hour Resource Model

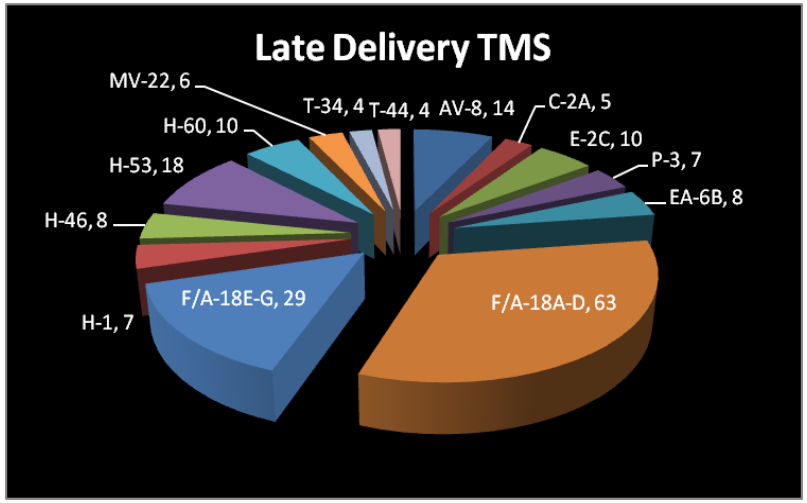
N43 Fleet Readiness O&M,N Accounts



Supplemental Funding Critical @ Current Fleet Demands

COMFRC ON-TIME DELIVERY PERFORMANCE





FY-12 On-Time-Delivery Performance

- *FY-12 Aircraft Completions Oct-Aug: 430*
- *FY-12 On-Time-Delivery Target: 70 Percent (301)*
- *FY-12 On-Time-Delivery Actual: 55 Percent (237)*
- *FY-12 Late Deliveries Actual: 45 Percent (193)*

FY-12 Late Delivery Drivers by TMS

- *F/A-18 A-D (Represents 33 percent of COMFRC Late Deliveries)*
  - *FY-12 Units Processed: 82*
  - *On-Time-Delivery Target: 70 Percent (58)*
  - *On-Time-Delivery Actual: 23 Percent (19)*
  - *Late Deliveries Actual: 77 Percent (63)*
  - *Impact to Flight Line Gap: 23.1*
- *Primary Driver: HFH Inspection Engineering/Material*

- *F/A-18 E-G (Represents 15 percent of COMFRC Late Deliveries)*
  - *FY-12 Units Processed: 59*
  - *On-Time-Delivery Target: 70 Percent (41)*
  - *On-Time-Delivery Actual: 51 Percent (30)*
  - *Late Deliveries Actual: 49 Percent (29)*
  - *Impact to Flight Line Gap: 00.0*
- *Primary Driver: 7R Components/Flight Surfaces, Landing Gear*

COMFRC COST AND ON-TIME DELIVERY PERFORMANCE

Aircraft	Plan (M$)	Actual (M$)	Cost Delta ($)	OTD
AV-8	12.1	15.5	-3.40	42%
C-2A	10.9	12.3	-1.40	62%
E-2C	28.2	26.9	1.30	38%
P-3	10.4	9.6	0.80	30%
EA-6B	10.9	10.7	0.20	65%
F/A-18A-D	50.5	47.5	3.00	23%
F/A-18E-G	8.6	9.3	-0.70	51%
H-1	17.3	15.6	1.70	87%
H-46	26.7	30	-3.30	50%
H-53	45.3	46	-0.70	42%
H-60	34.4	33.1	1.30	88%
MV-22	4.1	4.6	-0.50	45%
T44	2.9	3.1	-0.20	0%
Total	262.3	264.2	-1.90	
			Pearson r = 0.04916	

FY-12 Cost Performance

- *FY-12 Aircraft Completions Oct-Aug: 430*
- *FY-12 Total Planned Cost: $262.3M*
- *FY-12 Total Actual Cost: $264.2M*
- *FY-12 Total Overall Cost Delta: - $1.9M*

FY-12 Negative Cost Drivers by TMS

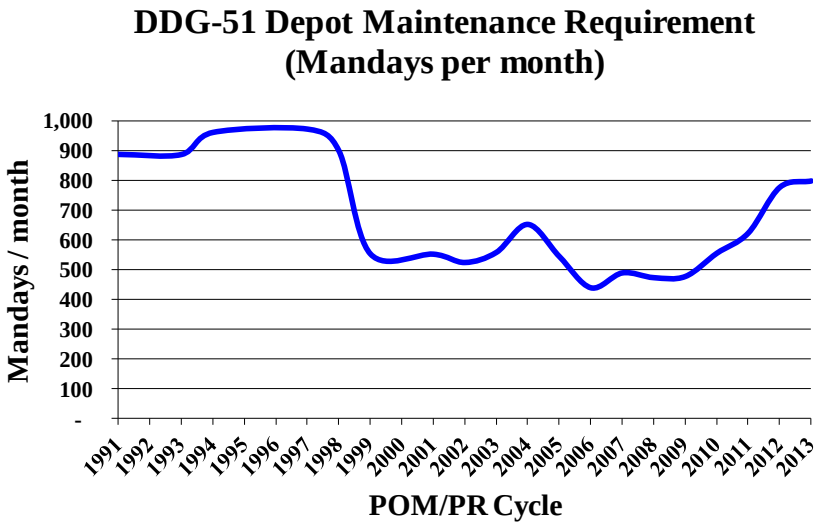
- *AV-8: (- $3.4M) 28 percent above plan*
  - *Labor associated with concurrent and Stand-alone Modifications*
- *H-46: (- $3.3M) 12 percent above plan*
  - *Labor associated with concurrent modifications*
- *C-2A: (- $1.4M) 13 percent above plan*
  - *Labor associated with tail surface material condition, cannibalization costs*

FY-12 Cost VS OTD Correlation

- *Pearson correlation coefficient r = .04916*
  - *Indicates no relationship between OTD and Cost*
  - *Data shows poorest "cost" performers have better OTD than best "cost" performer (F/A-18A-D)*

Maritime Improvement Initiatives

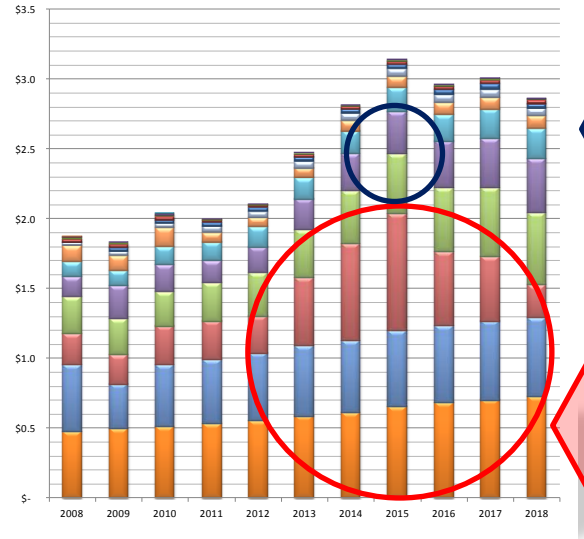
- Reverse Optimal Manning
- Re-establishment of Surface Maintenance Engineering Planning Program (SURMEPP)
- Reconstitute Surface Intermediate Maintenance
- Expanded Material Condition Inspections
- Partnership with American Bureau of Shipping
- SURFMEPP revision of Class Maintenance Plans



Aviation Improvement Initiatives

- **Naval Aviation Enterprise**
- **USN/USMC Simulator Investments**
- Fleet Readiness Centers
- **Public/Private Partnerships**
- Continuous Process Improvement
- **Air Systems Support Modeling**
- **Fully Burdened Cost Per Flying Hour (O&S)**

F/A-18E/F
O&S Cost Drivers



Secondary:
- AVDLRs
- Depot

Primary:
- Manpower
- Fuel
- Mods

Objective:
- Align PPBE
- Develop Automated Planning Tools
- Enable Strategic Cost Management

Improved Cost Driver Visibility for More Focused Efficiency Efforts

Readiness "Kill Chain"

SURVEILLANCE | DETECT | TRACK | ID/ENGAGE | LAUNCH | CONTROL | LETHALITY | ASSESS

Readiness "Kill Chain"

- CPI
- Capture Data
- Operate
- Execute Maintenance
- Maintainer in Place
- Retail Supply
- Support Equipment
- Tools/Tech Data
- Training
- Wholesale Supply
- Support Concept
- Test
- Design for Supportability

Logistics Impacts Each Link of the "Kill Chain"

Logistics Assessment

NAE Readiness & Costs Metrics

Operators | TYCOM N41/N42 | HQMC | COMFRC | NAVSUP | DLA | NAVAIR

T/M/S Data Driven Analysis

Provider Organizations

Resource Sponsors

NAVAIR | NAVSUP | NAVSEA | BUPERS NPC

OPNAV / HQMC

and more . . .

Issues Affecting Readiness & Cost

Root Cause Analysis

Actionable POA&M

AIRBOARD | TRW | RLT | M&SCM | MAERB | CR CFT

NAVAL AVIATION ENTERPRISE NAE

CURRENT READINESS & COST → FUTURE READINESS: DESIGN FOR SUPPORTABILITY

Take Aways

- Relationship between required capabilities for War-Fighting and depot maint?
  - Readiness Kill Chain + FLE/RBA & Acft-RFT essential
- Demo how Service takes risk, areas of risk, and mitigation strategies?
  - Funding at less than 100%, close monitoring of both backlog and RBA
- Deferred Maint in Budget versus actuals in execution year?
  - Significant requirement shrinkage with aggressive Acft Strikes, FID extensions.
- Major factors influencing accuracy of future year projections?
  - OPTEMPO?
  - Acft Transition Schedule (APDF Changes?)
  - Workload Standard accuracy
  - Aggressive 'rates' pressurization, but not undoable/inaccurate rate levels
  - 'Cost Estimates' to 'Results' tracking