



# **Aircraft Modifications & Instrumentation**

## **NAWCWD, China Lake, CA**

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# Introduction

- Who are we?
- Who do we support?
  - Rapid Warfighter Response
  - Integrated Program Teams (IPTs)
    - F/A-18 (Advanced Weapons Laboratory)
    - AV-8
    - H-1
    - Air Test & Evaluation Squadron THREE ONE
    - AIR Test & Evaluation Squadron NINE
    - Misc. Weapons IPTs
  - Foreign Militaries (Australia, Finland, Kuwait, Switzerland)
  - Others



# Aircraft Supported

- VX-31
  - 18 F/A-18(A-G)
  - 5 AV-8
  - 3 Helicopters
    - UH-1Y,AH1-W, AH1-Z
- VX-9
  - F/A-18 as required
  - UH-1Y,AH1-W, AH1-Z
- Other



# What Do We DO?

- Aircraft Scheduling & Range Coordination
- Engineering & Integration
- Modification Proposals & Level 3 Flight Clearances
- Air Facilitate Mod/Flight Clearance Process
- Vehicle hardware modifications/configuration
  - Pre-ECP
  - Aircraft Upgrades
  - Weapons Upgrades
  - Instrumentation
- Air Vehicle software configuration
  - Mission Computers, Stores Management, RADAR, etc..



# Instrumentation

- 20 Installed Systems
- 9 Mobile systems
- Various capabilities of systems
  - Core System (1553, Video, RS422, RS232, Misc. PCM, Secure Telemetry)
- Additional Capabilities
  - Avionics Fibre Channel (5 Aircraft)
  - RADAR IQ (6 Aircraft)
  - Analog (4 Aircraft)
  - High Speed Video (mobile)
- Test Vans



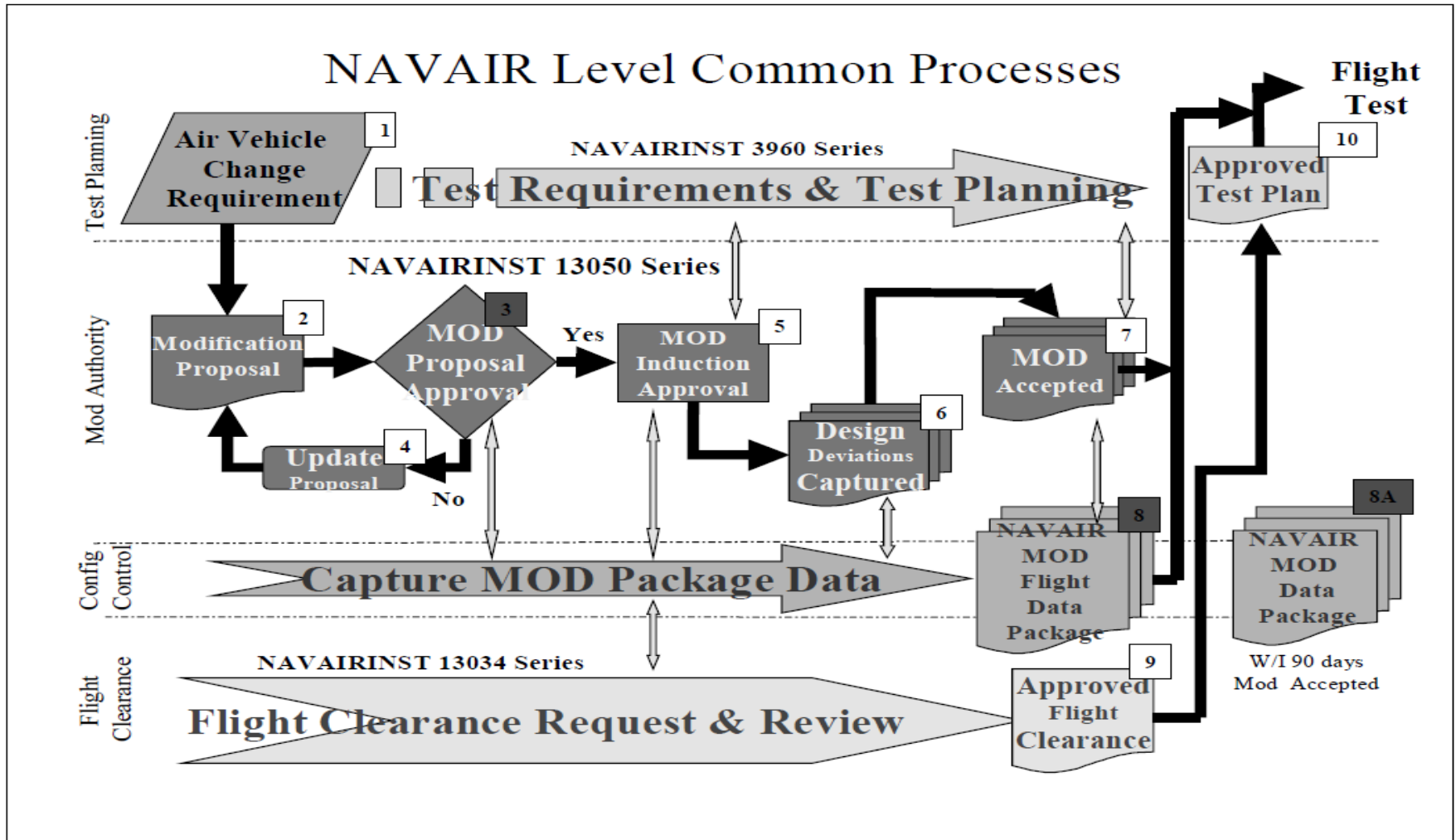
# Getting It Installed

- Preparation
- The processes
  - Approval to Modify
    - Ownership
    - Modification Proposal (VX-30/31 Instruction 13050)
    - Green Box Modifications
  - Flight Clearance (NAVAIRINST 13034.1)



# Modification Process

Modification Process Flow Chart

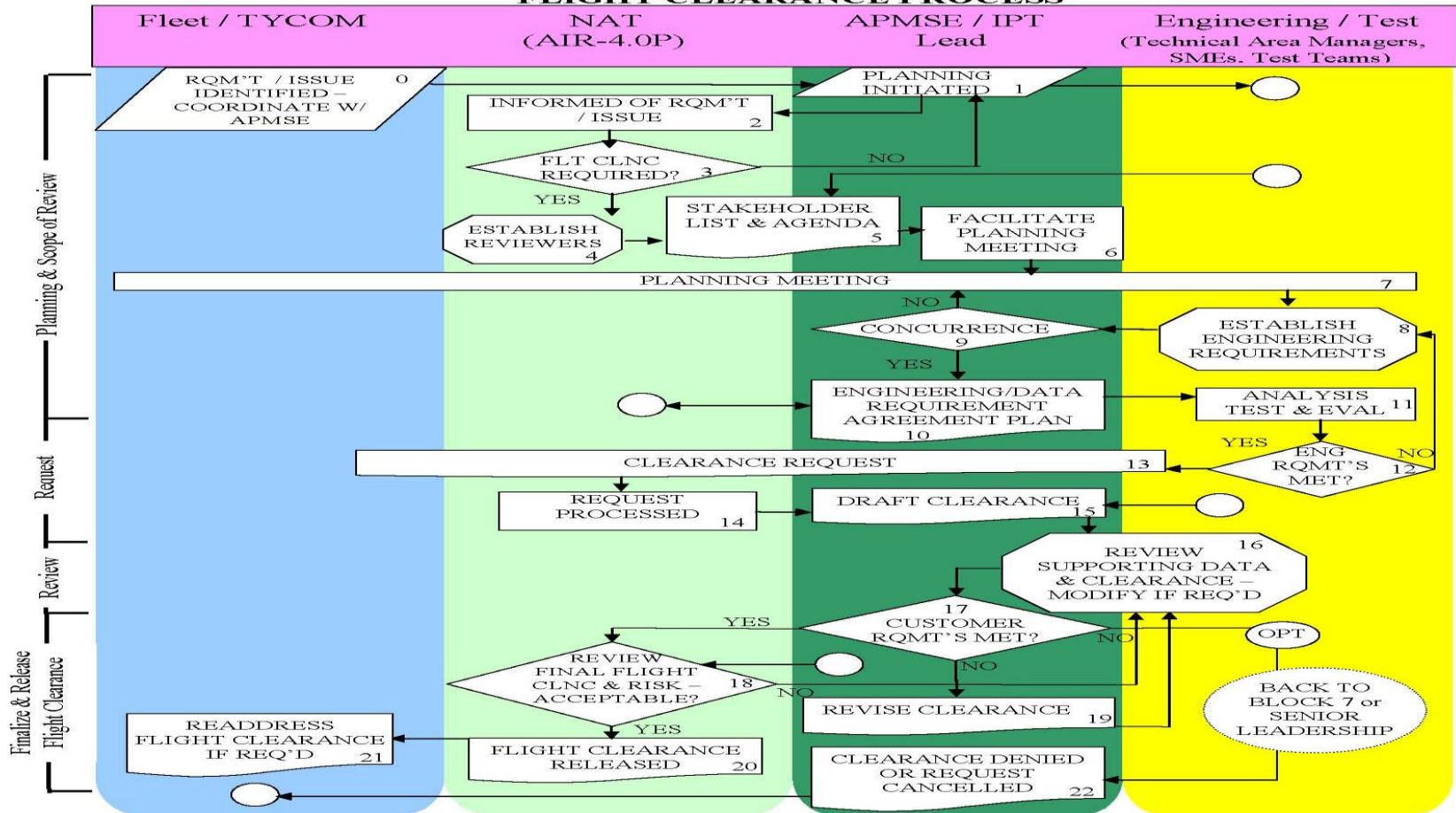




# Flight Clearance Process

NAVAIRINST 13034.1D

## FLIGHT CLEARANCE PROCESS







# Flight Clearance Process (View 2)

**PLANNING MEETING REPORT SHEET**

Date: \_\_\_\_\_

PLATFORM: \_\_\_\_\_ PROJECT/PROGRAM: \_\_\_\_\_

POC's: \_\_\_\_\_

Facilitator: \_\_\_\_\_ 4OP Staff attendee: \_\_\_\_\_

Chair/Desk/Step at meeting: \_\_\_\_\_

Project/Program POC: \_\_\_\_\_

PM's: \_\_\_\_\_

Was clipboard for PM's produced prior to the meeting?  yes  no

PM's identified (only): \_\_\_\_\_

Were any PM's identified different than clipboard?  yes  no

If yes, identify (only): \_\_\_\_\_

List PM's: \_\_\_\_\_

Anticipated date of request: \_\_\_\_\_

Anticipated need date of flight clearance: \_\_\_\_\_

\*revised 23 June 05



**Planning Meeting and EDRAP Development**



**Release Flight Clearance**



**Generate and Submit Request**



**Determine Scope of Review**



**Execute Review**



**Finalize Flight Clearance**



# Flight Clearance Empowerment

- **AIR-4.0, has been delegated Tech Authority Responsibility by AIR-00 to:**
  - Ensure that our technical standards, tools and processes ensure the safety, reliability and performance of our products, are practical, are complete and meet programmatic needs
  - Ensure that our products are certified to meet those requirements
  - Ensure that our products are supported properly throughout their lifecycle
  - Ensure the timeliness and responsiveness of technical decisions without excessive review and oversight



# Team Empowerment

- Flight Clearances
  - Level 3 Interim Flight Clearances
  - TAE (Technical Area Expert)
    - Instrumentation & Strength
  - Most all USN/USMC platforms
- Modifications
  - None
  - Working on Instrumentation Green Box



# What Slows Us Down (good or bad)

- Money
- System Level Priority
- Geography
- Resource Availability
  - Aircraft
  - Maintenance
- Procurement
- Dynamics



# Improvement Efforts

- Green Box Empowerment
- NAVPASS Database
- Increased Local Empowerment



**END**

Questions?

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