Funded requirements must include a Transition Plan to Operations.

Navy METOC Requirements Management Process

- **ANWIR Cycle**
  - Standardization for broader DoD applications
  - METOC models
  - IT applications

Navy METOC Accreditation Process

- **Administrative Models Oversight Panel**
  - **Technical Accreditation**
    - Milestone I
      - Journal Article, Publication, or Technical Report
    - Milestone II
      - Validation Test Report
        - Peer review
        - Expected performance and limitations
    - Milestone III
      - CPTET test documents results
  - **Formal Accreditation**
    - AMOP Review & Approval at each Milestone

Accreditation oversight depends on the nature of the capability.

Validation Metrics

- **Metrics depend on capability & development phase**
  - Demonstration & Validation Phase
    - Demonstrates performance in simulated O&I environment
    - Demonstration Plan document
    - Technical Implementation Plan document
    - Verifies value of new capability
  - Implementation Panel develops scorecard for tests

Metrics are chosen and weighted based on operational impacts.

Example 1: NAVDAS-AR (4D-VAR data assimilation)

Example 2: NAVDAS-AOD (Aerosol Optical Depth)

Example 3: NCODA/WaveWatch III data assimilation

FNMOC Challenges

- Complicated computational environment that encompasses
  - Data collection
  - Data assembly
  - Data assimilation
  - Forecasting
  - Post-processing
  - Dissemination
- Must comply with Information Assurance standards of Department of Defense

Downstream Dependencies

Best Practices

- Responsibility for each transition clearly assigned
- Testing of changes takes place in parallel to operations
  - Operations should not be disrupted
- Testing on systems configured similar to the targeted environment
- Continuous, strong interaction between R&D and operations
- Feasibility must be demonstrated through the entire operational process.
  - Considerations include:
    - Networks, Routers, and Communications circuits
    - Database Servers
    - Reliability and Operational protocols
    - Disk, I/O, and CPU resources
    - Load Leveling
- Strong interface with customers to inform considerations for dissemination, use, & impact of new products

Providing R&D access to FNMOC systems shortens schedule and reduces costs.