Alteration Installation Team (AIT) Fundamentals and Lessons Learned

TOPIC LEARNING OBJECTIVES

Upon successful completion of this topic, the student will be able to:

1. Identify the purposes and advantages of modernization performed by Alteration Installation Teams (AITs).
2. Recognize the lessons learned from adoption and implementation of AITs.
3. Identify the roles and responsibilities of various organizations (AIT Sponsor, Regional Maintenance and Modernization Coordination Office (RMMCO), AIT manager, On-Site Installation Coordinator (OSIC), Lead Maintenance Activity (LMA), Naval Supervising Activity (NSA)) involved in AIT management.
4. Recognize the importance of the Memorandum of Agreement (MOA) in managing AIT installations during availabilities.

STUDENT PREPARATION

Student Support Material

1. None

Primary References

1. NAVSEA SL720-AA-MAN-030 - Navy Modernization Process Management and Operations Manual (NMP-MOM)
2. NAVSEA TS9090-310 (series) - Alterations to Ships Accomplished by Alteration Installation Teams

Additional References

1. NMP-MOM available at NDE website: https://www.nde.navy.mil (requires account registration)
2. TS9090-310 available at NDE website: https://www.nde.navy.mil (requires account registration)

Overview

- Purpose and Advantages
- Roles and Responsibilities
- Process

Alteration Installation Team (AIT)

- An AIT is a unit (Military, Government activity and/or Contractors and subcontractors), consisting of one or more members under the direction of an AIT Manager that is trained and equipped to accomplish specific Ship Changes(SC)/Alterations on specified ships as defined in TS9090-310 (series) Alterations to Ships Accomplished by Alteration Installation Teams
- An AIT is responsible for the installation, performance, and completion of the SC/Alteration
- Team composed of:
  - Government (e.g., Naval Shipyards, Warfare Centers)
  - Private Contractors (e.g., Lockheed Martin, Raytheon)
  - Combination (Government-led team with Contractor personnel)

Purpose and Advantages

- AITs shall be used:
  - When the ***technical and/or specific nature*** warrants
  - To accomplish installations that require ***special skill sets*** and oversight
  - To obtain substantial ***lessons learned*** by re-using the same team
  - To accomplish installations on a ***large number of ships***
- Development of alterations accomplished by an AIT are governed by the Navy Modernization Process Management and Operations Manual (NMP-MOM)
- Determination of alteration accomplishment by AIT are through established procedures noted in the TS9090-310 (series), NMP-MOM, and COMUSFLTFORCOMINST 4790.3 Joint Fleet Maintenance Manual (JFMM)
- Major examples of AIT alterations include Consolidated Afloat Networks & Enterprise Services, (CANES), Aegis Weapon System (AWS), Global Positioning System – based Positioning, Navigation, & Timing Services(GPNTS)

Overview

- Purposes and Advantages
- Roles and Responsibilities
- Process

Roles and Responsibilities

- AIT Sponsor
  - Assigns (tasks) and funds the AIT Manager
  - Cognizant SYSCOM (NAVAIR, NAVSEA, NAVWAR), Program Executive Office (PEO), Participating Acquisition Resource Manager (PARM), Ship Program Manager (SPM), Fleet Commander, TYCOM, CNO, or other sponsor
- AIT Manager
  - Assigns, formulates, and manages the AIT
  - Assigns the AIT On-site Installation Coordinator (OSIC)
  - Initiates, plans, coordinates, schedules, manages, and oversees the successful accomplishment of the alteration in accordance with NMP policy and procedures

Roles and Responsibilities

- AIT OSIC
  - Government or military employee designated by and acting with authority of AIT Manager
  - Responsible for conduct of installation
  - Point of contact for the ship and Naval Supervising Activity (NSA)
  - Ensures adherence to all rules/regulations
  - Resolves issues and quality discrepancies
- AIT
  - A unit (military, civilian, or Contractor) under the direction of the AIT Manager or designated agent of the AIT Manager
  - Trained and equipped to accomplish specific alterations on specified ships

Roles and Responsibilities

- Naval Supervisory Activity (NSA)
  - The single naval activity responsible for the integration, oversight, and verification of all work accomplished by all activities
  - Responsible for ***certification of work*** being accomplished on U.S. ships within the assigned availability
  - Responsible for controlling AIT physical access to ships
  - Ensuring that the AITs intended work is authorized and that the AITs comply with the NAVSEA technical specs
  - Quality Assurance (QA) sampling and monitoring responsibilities
  - Ensure AIT work is scheduled and integrated into the total work plan for the availability, including full system operational testing

- Lead Maintenance Activity (LMA)
  - Responsible for ***work being accomplished*** on U.S. Naval ships during any type of availability
  - Coordinate work and testing controls
  - Integrate the work of all repair/maintenance and modernization activities, including Ship's Force (S/F) and AIT work
  - Report work status to NSA
  - Coordinate preparations by assigned activities for all key events
  - Track progress of all repair/maintenance activities
  - Provide a copy of all Departures From Specifications (DFS) to S/F Quality Assurance Officer and the Type Commander

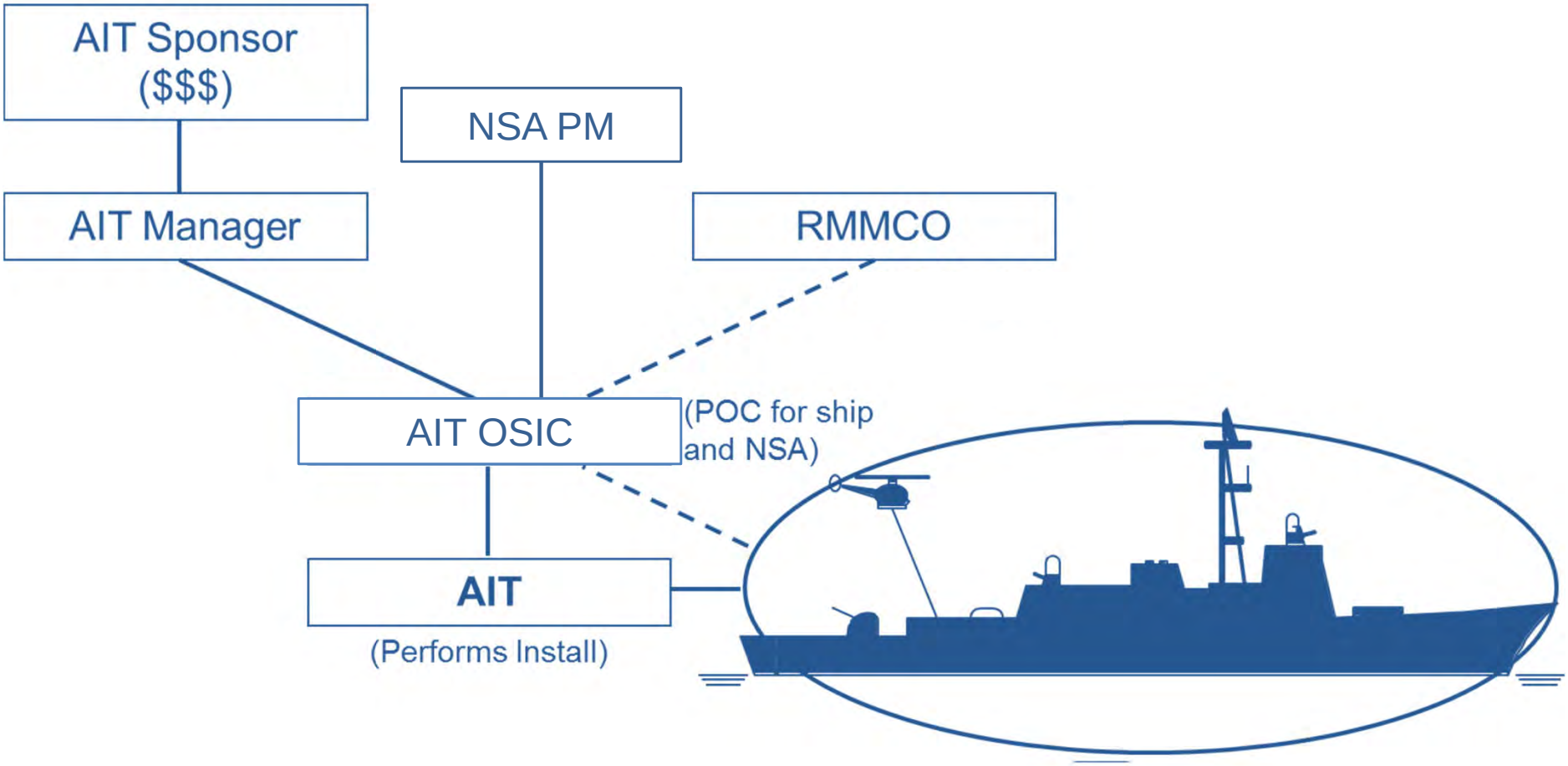
Regional Maintenance and Modernization Coordination Office

- Regional Maintenance and Modernization Coordination Office (RMMCO)
  - Regionally-aligned organization that serves as the initial point of entry for all waterfront-related SC/Alteration installations performed by AITs
  - Serves as the primary office for AIT check-in and checkout; often referred to as the *"**Gatekeeper**"*
  - RMMCO Gatekeeper designated by and acting with authority of the NSA, Regional Maintenance Center (RMC), and Ship Acquisition Program Manager (SHAPM)
  - Ensures that the AIT complies with required parts of the TS9090-310 (series)
  - ***Ensures the Fleet receives the required logistics deliverables for self-sufficiency*** (e.g., technical manuals, updated drawings, parts lists)

Need for RMMCO

- The desire to rapidly implement new Command, Control, Communications, Computers, and Intelligence (C4I), Combat Systems, and Hull, Mechanical and Electrical (HM&E) improvements in the 90s caused significant coordination, interoperability, configuration management, and supportability problems
- A significant number of alterations were installed without approved drawings and had deficient Integrated Logistics Support (ILS) products
- COMLANTFLT issued a halt to uncoordinated installations in 1998, and established the RMMCOs in 1999
- Numerous alterations are installed during major availabilities, which require significant work integration

Roles and Responsibilities



Overview

- Purposes and Advantages
- Roles and Responsibilities
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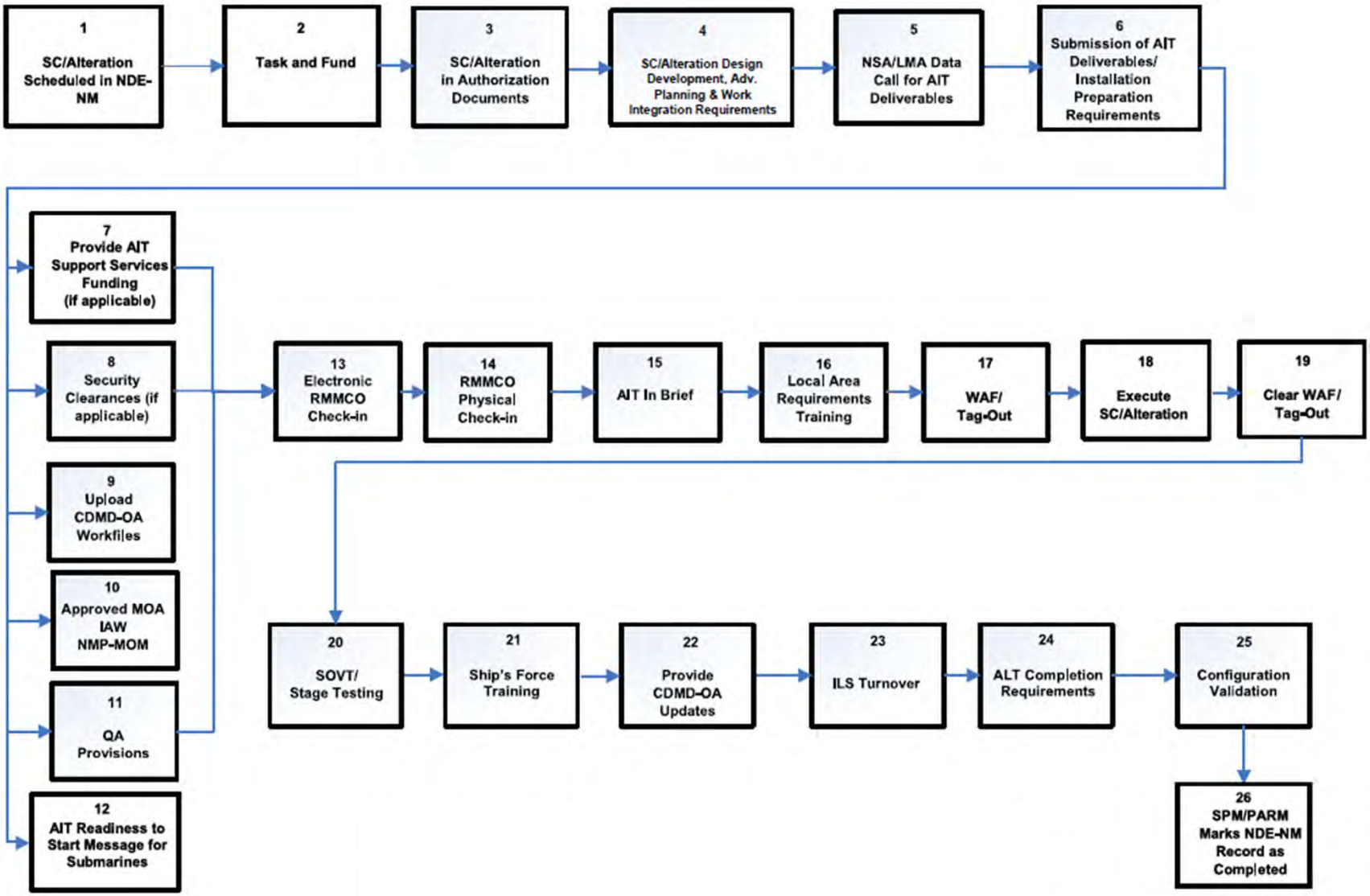
Requirements

- AIT
  - AIT OSIC will coordinate with NSA
  - Install on a not-to-interfere basis with any availability or ship's evolutions
  - Allow Ship's Force to monitor quality of work IAW Joint Fleet Maintenance Manual (JFMM)
  - Provide and follow an approved quality plan
- NSA
  - Certify all work conducted in an availability
  - Integrate all work for the availability including AIT work items
  - Work with LMA to ensure AITs are appropriately integrated
  - QA sampling and monitoring (enforcement of AIT Manager's requirements)
- Ship's Force
  - Overall responsible for safety and security of AIT work

Planning


1
SC/Alteration Scheduled in NDE-NM
2
Task and Fund
3
SC/Alteration in Authorization Documents
4
SC/Alteration Design Development, Adv. Planning & Work Integration Requirements
5
NSA/LMA Data Call for AIT Deliverables
6
Submission of AIT Deliverables/ Installation Preparation Requirements
7
Provide AIT Support Services Funding (if applicable)
8
Security Clearances (if applicable)
9
Upload CDMD-OA Workfiles
10
Approved MOA IAW NMP-MOM
11
QA Provisions
12
AIT Readiness to Start Message for Submarines
13
Electronic RMMCO Check-in
14
RMMCO Physical Check-in
15
AIT In Brief
16
Local Area Requirements Training
17
WAF/ Tag-Out
18
Execute SC/Alteration
19
Clear WAF/ Tag-Out
20
SOVT/ Stage Testing
21
Ship's Force Training
22
Provide CDMD-OA Updates
23
ILS Turnover
24
ALT Completion Requirements
25
Configuration Validation
26
SPM/PARM Marks NDE-NM Record as Completed

Planning

- Generate Alteration List
  - Ship Program Manager (SPM) Letter of Authorization (LOA)
    - LOAs issued at various milestones to monitor/manage ship change maturity requirements for authorization to install
    - Pulled from Navy Data Environment (NDE)
  - TYCOM authorized alterations
    - LOA messages for planned work
    - Quarterly AIT scheduling messages (Surface Only)
  - PARM and NAVWAR authorized alterations
    - May need to request information from PARMs and/or NAVWAR
  - NAVSEA 08 authorized alterations (if applicable)
    - Although not subject to the NMP, may be performed by 3rd party vendors
- Review Work Scope of Alterations
  - Important for impact, sequencing, etc.
  - Ship Change Documents (SCD) source of information
- Validate AIT Quality Systems
  - AITs required to have an approved quality system
  - List of all Contractors and Government activities with approved quality systems is available from NAVSEA

Planning

- Initiate discussions between AIT Manager and NSA
  - AIT manager required to contact NSA prior to start of availability IAW JFMM
  - AIT manager must provide production and test schedule for their alteration
- Request for support services
  - AIT Managers required to provide detailed list of required support services to the NSA IAW approved Ship Planning Milestones, TS9090-310 and JFMM
  - Crucial for integration of work, especially during private availabilities depending on support services called out in contract
  - AITs usually require some outside support

Planning

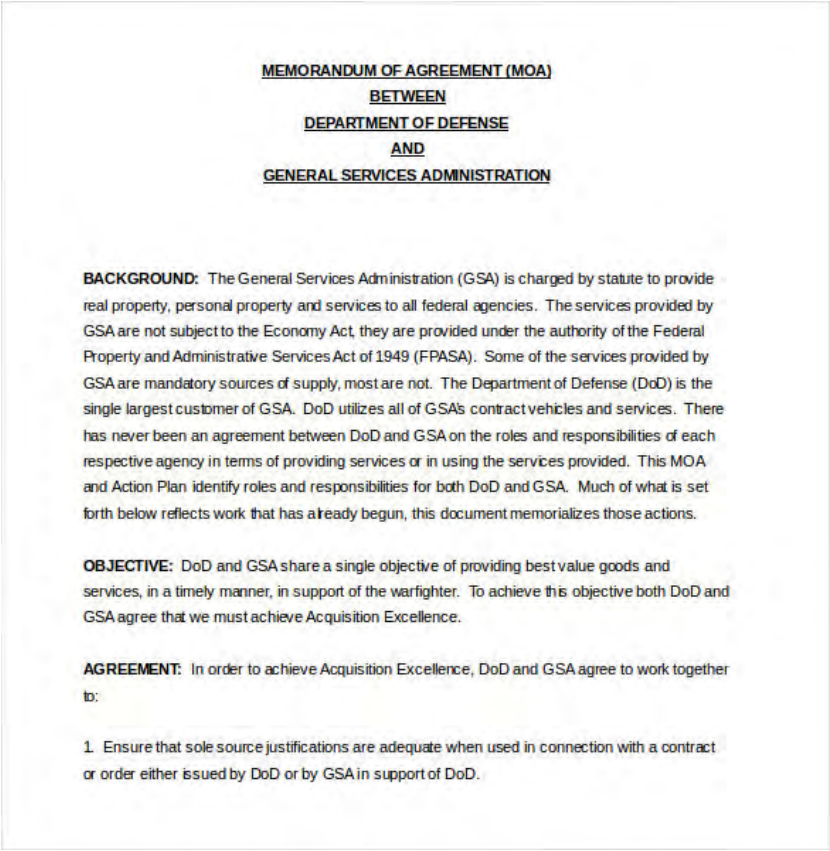
- RMMCO is the Gatekeeper for the ship and ensures that the alteration is ready for installation. Electronic check-in completed 30 days prior to installation followed by physical check-in; documents and information submitted to RMMCO include:
  - ***Ship Program Manager (SPM) or Type Commander (TYCOM) Authorization***
  - ***Integrated Logistics Support (ILS) Certification***, or TYCOM approved ILS Risk Assessment
  - Copy of Configuration Data Managers Database-Open Architecture (CDMD-OA) work file data
  - System Operational Verification Test (SOVT)/Test Procedure (TP)
  - ***Approved Ship Installation Drawing (SID)*** – NDE status per NMP-MOM
  - ***Approved Ship Change Document (SCD)*** – NDE status per NMP-MOM
  - Ship change/alteration scheduled in Navy Data Environment-Navy Modernization (NDE-NM)
  - AIT Quality Management System (QMS) accepted by NAVSEA 04RP

Planning

- Conduct an AIT In-Brief
  - Conducted by all AIT Managers or representatives
  - Reiterate requirements, articulate ground rules, and de-conflict issues
  - Support services (e.g., hot work, foundation fabrication, electrical, piping, temporary services, etc.)
  - Quality assurance
  - Discuss ***Memorandum of Agreement (MOA)*** and expectations

Memorandum of Agreement (MOA)

- AITs do not operate in a vacuum, and therefore cannot be fully self-sufficient
- All stakeholders must come together as signatories (LMA, AIT Managers, Ship's Force, NSA)
- Items to include in the MOA:
  - Occupational Safety and Health (hazardous material, asbestos, Personal Protective Equipment, gas-free, etc.)
  - Work control and tag out procedures
  - Work hours (night/weekend/holiday)
  - ILS/configuration management
  - Quality assurance
  - Cleanliness
  - Support services
  - Clearances
  - Training
  - Fire safety protocols
- Sign out by A-1



MEMORANDUM OF AGREEMENT (MOA)
BETWEEN
DEPARTMENT OF DEFENSE
AND
GENERAL SERVICES ADMINISTRATION

BACKGROUND: The General Services Administration (GSA) is charged by statute to provide real property, personal property and services to all federal agencies. The services provided by GSA are not subject to the Economy Act, they are provided under the authority of the Federal Property and Administrative Services Act of 1949 (FPASA). Some of the services provided by GSA are mandatory sources of supply, most are not. The Department of Defense (DoD) is the single largest customer of GSA. DoD utilizes all of GSA's contract vehicles and services. There has never been an agreement between DoD and GSA on the roles and responsibilities of each respective agency in terms of providing services or in using the services provided. This MOA and Action Plan identify roles and responsibilities for both DoD and GSA. Much of what is set forth below reflects work that has already begun, this document memorializes those actions.

OBJECTIVE: DoD and GSA share a single objective of providing best value goods and services, in a timely manner, in support of the warfighter. To achieve this objective both DoD and GSA agree that we must achieve Acquisition Excellence.

AGREEMENT: In order to achieve Acquisition Excellence, DoD and GSA agree to work together to:

1. Ensure that sole source justifications are adequate when used in connection with a contract or order either issued by DoD or by GSA in support of DoD.

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MOA ensures all stakeholders are involved in planning and are in agreement

Execution

- Workmanship
  - AIT OSIC responsible
  - Shall meet requirements of NAVSEA Standard Items/Maintenance Standards
  - When tasked (funded), Planning Yard provide technical oversight
  - Housekeeping
- Testing
  - System Operation Verification Test (SOVT) conducted
  - Demonstrate operational capability including SUBSAFE/Security
  - Testing included in Integrated Test Plan/Total Ship's Test Plan
- Integrated Logistic Support (ILS)
  - Training, including on-the-job training (OJT), conducted by AIT for operation/maintenance
  - Documentation turned over to ship (EOSS/PMS/drawings/APLs)
  - New onboard spares and special test equipment given to ship
- Out-brief
  - Conducted by AIT (S/F, NSA, RMMCO, TYCOM present)
  - Obtain signatures for completed alteration installation
  - Naval Message Completion Report
    - Status of completion
    - Any deficiencies
    - Comments from CO

Engineering Operational Sequencing System – EOSS
Planned Maintenance System – PMS
Allowance Parts List – APL

Lessons Learned

- Workforce integration issues:
  - AIT, S/F, and Industrial Activity (IA) wanting to perform same work in same place at the same time
  - IA has taken a system down that the AIT needs available (e.g., 400Hz)
  - AIT and IA wanting to perform incompatible work at same time (e.g., hot work and painting)
  - Short-notice lifting & handling requests
  - NSA/LMA with the input of customer de-conflicts any integration issues
- Validate AIT Quality System
- Ensure work is authorized
  - Authorization letter
  - RMMCO check-in
- AIT support services known and continuously updated
- AIT production schedule provided
- MOA signed prior to start of avail
- In-brief/out-brief conducted

Summary

- What are the purposes and advantages of using an AIT?
- Who performs AIT installations?
- What is the role of the RMMCO?
- What document is used during planning to promote discussion between stakeholders?