



MILITARY SEALIFT COMMAND

MSC Engineering Directorate

Prepared for Military Sealift Command
by Emprise Corporation

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Learning Objectives

- **The overarching objective of this module is to introduce you to MSC's Engineering Directorate.**
- **At the conclusion of this module, you will understand and be able to describe the following:**
 - **Engineering Directorate responsibilities**
 - **Engineering Management Systems Division (N71)**
 - **Technical Division (N72)**
 - **Policy Management and Fleet Standards Division (N73)**
 - **Fleet Recapitalization Support Division (N74)**
 - **Life Cycle Management Division (N75)**



Engineering Directorate

- **Responsible for:**
 - **Command-wide engineering policies, processes, and practices**
 - **Command-wide safety and occupational health programs**
 - **In-service engineering support for Program Managers**
 - **Providing Program Managers with qualified engineering personnel**
 - **Independent advisor for N00**



Mr. Andy Busk
Engineering Director



Mr. Neil Lichtenstein
Deputy Director



N7's Roles & Responsibilities

Command Technical Authority

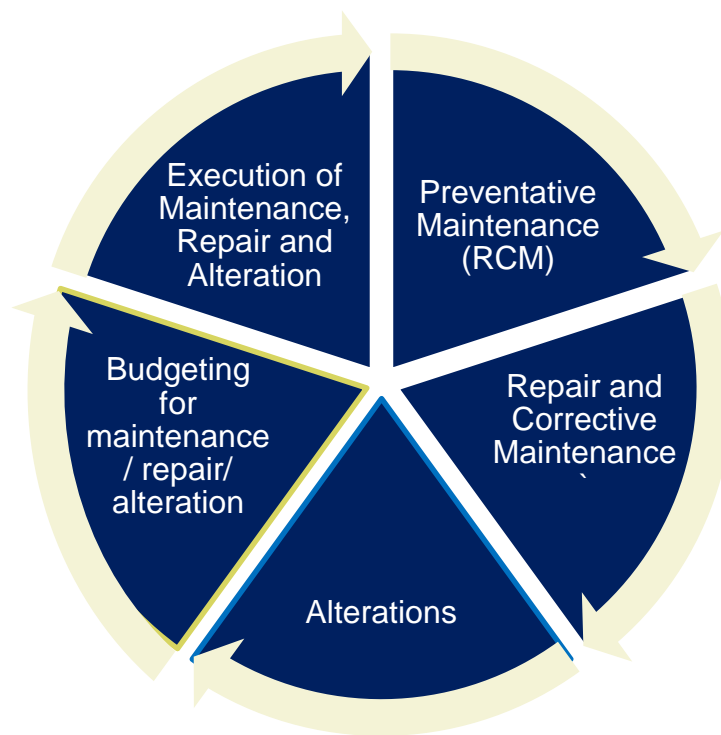
Technical Authority

- Engineering develops technical standards & requirements for maintenance, repair and alterations

Programmatic Authority

- Program determines if, when & where maintenance, repair and alteration efforts are executed within the technical standards and requirements

Support Ship Life Cycle Management





Technical & Programmatic Authorities

Technical Authority

Engineering develops **technical standards & requirements** for maintenance, repair and alterations

Programmatic Authority

Program determines **if, when & where** maintenance, repair and alteration efforts are executed within the technical standards and requirements

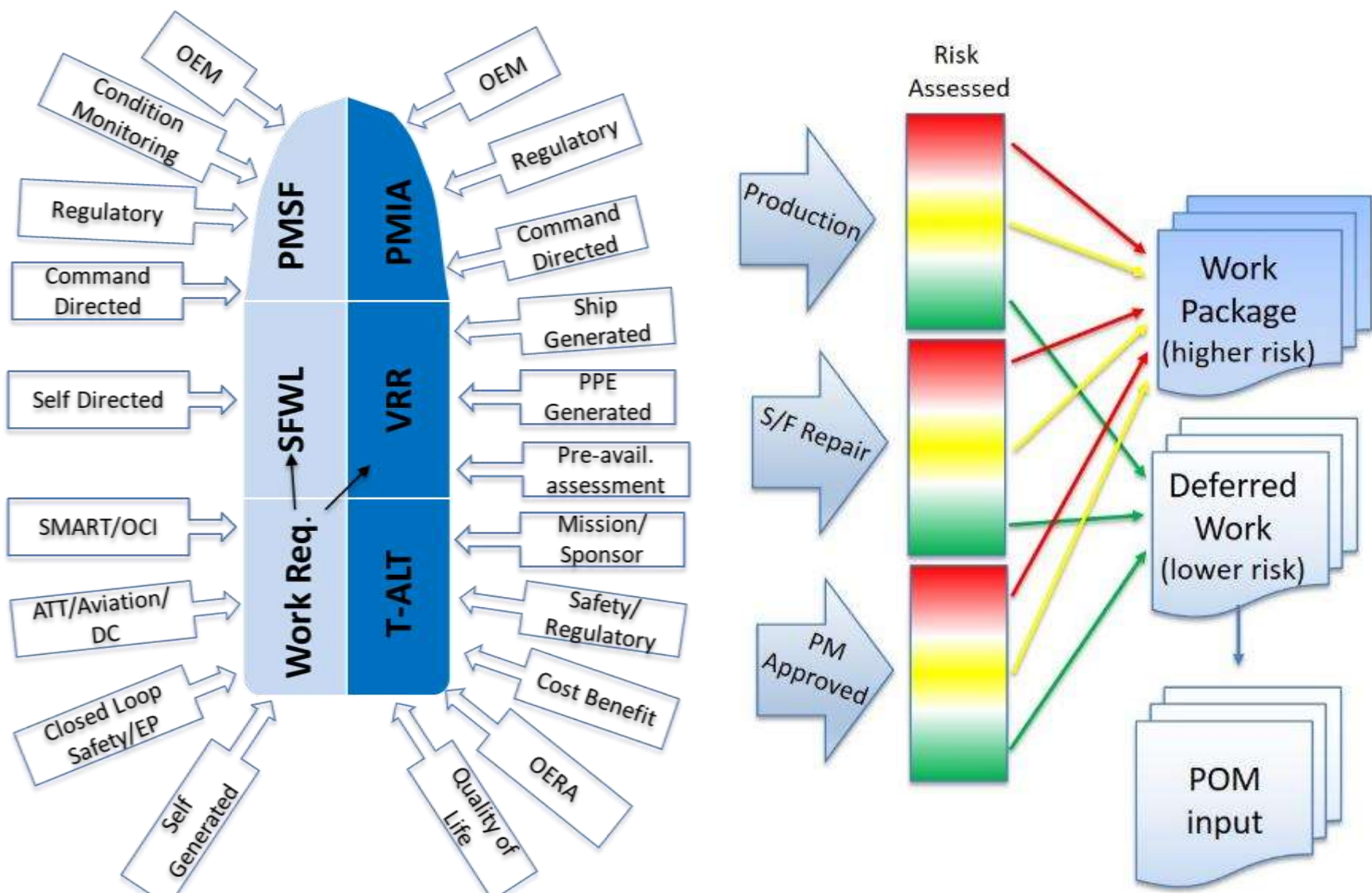
Engineering Customer Service

Engineering executes maintenance, repair and alteration efforts **approved & funded** by the Program

Provide a system of *checks and balances* to ensure the safety, reliability, performance, and affordability of Navy assets through adherence to appropriate technical standards and processes, and established engineering principles and practices.



Integrating Requirements into the Lifecycle Plan





Competency Alignment

- GOGO and GOCO program engineers are aligned under N7
- Key Benefits:
 - Customer service to Program Managers
 - PM prioritization
 - Resource realignment to meet customer needs
 - Uniform engineering requirements across command
 - Streamlined engineering functions
 - Consolidated lifecycle planning
 - Standardized technical & management resources
 - Lessons learned implementation
 - Fleet approach vs. class approach
 - Clear lines of authority
 - Personnel management
 - Competency based engineering development
 - Standardized training
 - Cross-organization exposure
 - Technical Authority management

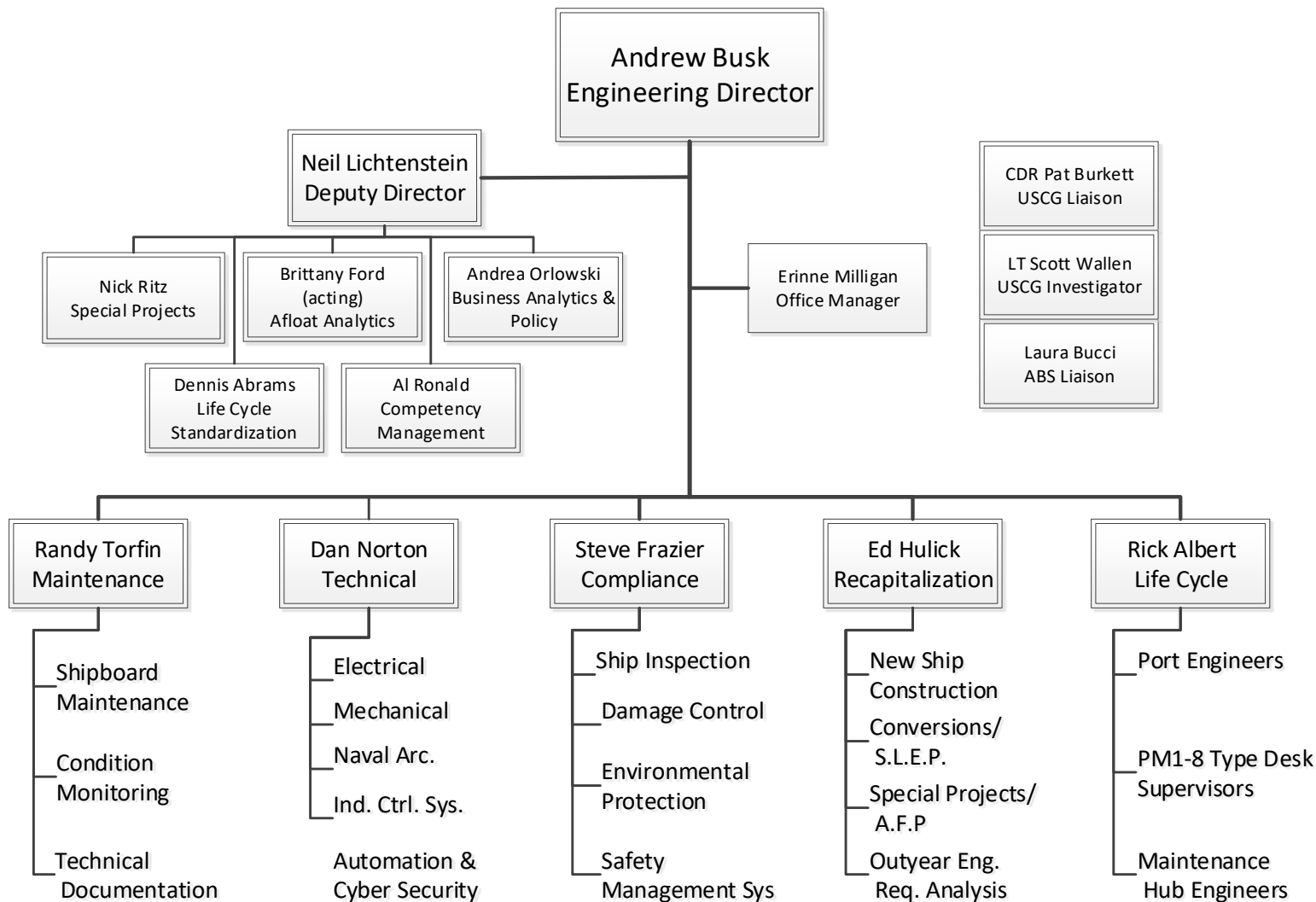


Top 5 Engineering Initiatives

- **Readiness Improvement Through Enhanced Material Observation and Validation (RITEMOV)**
- **Standardization of ship maintenance and repair**
- **Redlines (class specific minimum equipment standards required for ship mobility)**
- **Cyber for Operational Technology (OT)**
- **Alteration (TRANSALT) management**



Engineering Directorate Organization



As of 30JUL19



N7X Engineering Management

- **Ashore Engineering Competency Management**
 - N7 Engineering Academy and CMEO Ashore
 - TED Talks
- **Afloat Maintenance Analytics**
 - Ship readiness metrics (RITEMOV)
 - Repeat repairs
- **Business Analytics and Policy**
 - Policy and standards development
 - Maintenance & Repair Steering Committee
 - Policy and processes (MRMS)
 - Documented Technical Authority deviations (DFS)
 - Metrics focus: technically acceptable, on-budget, on-time
- **Life Cycle Configuration**
 - Standardized lifecycle plans
 - Lifecycle Planning, POM, Configuration Control
 - Standard Work Items (CSI, CCSI)
- **Engineering Special Projects**
 - Condition Based Class
 - Machinery Digital Twin
 - Structural Digital Twin

Personnel
18 Civilian
9 Contract



Engineering Management Systems Division (N71)

- **Responsible for development and management of:**
 - Maintenance management programs
 - Condition monitoring and analysis programs
 - Logistics support contracts
 - Training for afloat and ashore maintenance management programs condition monitoring and analysis programs, and logistics support contracts
- **Management of MSC technical documentation**
- **Comprised of:**
 - N711 – Shipboard Maintenance Management Programs Branch
 - N712 – Logistics and Analysis Branch
 - N713 – Technical Documentation Management Branch

<p><u>Personnel</u> 30 Civilian 6 Contract</p>
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Technical Division (N72)

- **Responsible for providing in-service engineering support, including:**
 - Development and maintenance of MSC design standards
 - TRANSALT development
 - Work specification and cost estimate development
 - Developing and managing engineering support contracts
 - Root-cause analysis
 - Life cycle management plan development
 - Service life extension studies
- **Comprised of:**
 - Naval Architecture Branch (N721)
 - Mechanical Engineering Branch (N722)
 - Electrical and Electronics Branch (N723)
 - Energy Conservation Branch

Personnel
76 Civilian



Policy Management and Fleet Standards Division (N73)

- **Responsible for development and management of :**
 - N7 compliance with MSC Safety Management System
 - MSC Damage control policy
 - MSC environmental protection policy
 - MSC ship inspection programs
- **Comprised of:**
 - Safety Management Branch (N731)
 - DC/EP Branch (N732)
 - Ship Inspection Branch (N733)

<p><u>Personnel</u> 34 Civilian 2 Military</p>



Fleet Recapitalization Support Division (N74)

- **Responsible for:**
 - Interface between MSC, Navy's ship acquisition community, and shipbuilders
 - Planning and management for major conversion programs
- **Comprised of:**
 - New Ship Construction Branch (N741)
 - Conversion Support Branch (N742)
 - Project Engineering (N743)

Personnel
19 Civilian



Life Cycle Management Division (N75)

- **Responsible for :**
 - Recruiting, training, and assigning qualified engineering personnel to MSC Program Managers and Ship Support Units (SSUs)
 - Command-wide uniformity of engineering business processes and practices
- **Comprised of:**
 - N751 PM1 Fleet Oilers Branch
 - N752 PM2 Special Missions Branch
 - N752A PM2 T-AGSE Branch
 - N753 PM3 Prepositioning Branch
 - N753B PM5 Sealift Branch
 - N754 PM4 Service Support Branch
 - N755 SSU / APE Manager Branch
 - N756 PM6 Fleet Ordnance and Dry Cargo Branch
 - N757 PM3 ESB / ESD Branch
 - N758 PM8 Expeditionary Fast Transport Branch

Personnel
150+ Civilian



Let's Review

- Match each division with its primary mission
 - **N71** **1. Planning and management of MSC involvement with new construction ship acquisition projects**
 - **N72** **2. Engineering policy and fleet standards management; N7 QMS compliance management**
 - **N73** **3. Recruiting, training, and assigning qualified engineering personnel to MSC Program Managers and Ship Support Units**
 - **N74** **4. Development and management of maintenance management programs; technical documentation management**
 - **N75** **5. In-service engineering support**



Summary

- **During this module, we have discussed:**
 - **Engineering Directorate responsibilities**
 - **Engineering Management Systems Division (N71)**
 - **Technical Division (N72)**
 - **Policy Management and Fleet Standards Division (N73)**
 - **Fleet Recapitalization Support Division (N74)**
 - **Life Cycle Management Division (N75)**



Additional Information

- For additional information, please refer to:
 - N7 Portal (<https://msc.navy.deps.mil/Pages/LandingPage2.aspx?ncode=N7>)



Final Questions





Revision History

Date	Version	Description	Author
4/8/19	2.0	Revised slide template. Updated content.	Gary Fields
8/7/19	2.1	Verified content is consistent with current COMSC Instructions and QMS and SMS procedures; Updated N7 organizational chart; Added N7 Deputy Director; Added slides 4-8; Corrected minor format errors	Gary Fields