



*Chief of Naval Operations
Supply Ordnance and Logistics
Operations (CNO N41)*

*Optimization of Ordnance
Packaging*

Focus Initiative



Outline

- What is this effort ?
- Who is involved ?
- What is the scope ?
- What is the problem ?
- What are we doing ?
- Where are we going ?



What is this effort ?

- Optimization of ordnance packaging
 - Reduce supply chain costs
 - Enable the Sea Base
 - Improve joint interoperability
- Underway as of Jan 2004





Who is involved ?

- OPNAV
- HQ Marine Corps
- Military Sealift Command (MSC)
- NAVSEA/NAVAIR & Program Managers
- Navy PHS&T Center
- NAVSUP/NAVICP
- Fleet



What is the Scope ?

- Currently: Naval conventional ordnance
 - Excludes other supply classes (another Navy group addressing that)
- All transportation and distribution nodes and modes...Sealift...Airlift...road...rail
- True optimization suggests scope should include all DoD conventional ordnance

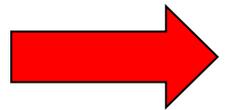
Compatible with Commercial Shipping Practices



What is the problem ?

- Non-Standard ordnance packaging
- Same ordnance in different Service's containers
- Handling of Non-Standard packages /containers
- Transportation of Non-Standard packages /containers
- Storage of Non-Standard packages /containers
- Excessive Manpower
- Excessive Dunnage
- Inefficient retrograde

Following Slides tell the story in pictures





Hoisting Non-Standard Legacy Loads



PALLETIZED LOADS AND WEAPON CONTAINERS HAVE DIFFERENT HOISTING INTERFACES AND REQUIRE DIFFERENT HANDLING EQUIPMENT.

HOOK UP IS A LABOR INTENSIVE OPERATION



Handling Non-Standard Legacy Loads



MK 83 BOMB PALLET

MODAL CHANGE POINTS REQUIRE
MULTIPLE HANDLING OF LOADS THAT
ARE OFTEN LIGHTER THAN MHE
CAPACITY- AN INEFFICIENT OPERATION

NATO SEASPARROW CONTAINERS





Non-Standard Partial Load Construction

ODD LOTS AND SMALL QUANTITY
LOADS ARE CUSTOM UNITIZED – A
SLOW PROCESS

SLOW = \$



NON – STANDARD LOAD CONFIGURATIONS
PRESENT STACKING INTERFACE AND
STOWAGE LIMITATIONS



Partial Unit Load Handling

NON – STANDARD PARTIAL UNIT LOADS UNDERUTILIZE THE HANDLING AND LOADING SYSTEMS.

NON – STANDARD WOOD PALLETS (R) WITHOUT WINGS CANNOT SAFELY INTERFACE WITH NAVY OHE





Legacy Load Dunnaging and Retrograde



CUSTOM DUNNAGING OF LEGACY LOADS IN SHIPS AND TRUCKS GENERATES A COSTLY SCRAP WOOD HANDLING AND DISPOSAL OPERATION

DIFFERENT LOAD CONFIGURATIONS, SUCH AS BOMBS AND WEAPON CONTAINERS, REQUIRE WOOD DUNNAGE FOR STOWAGE (L)



Legacy Loads in Trucks/Railcars

CBUs IN NAVY TRUCK



PROP CHARGES IN NAVY RAILCAR

155 MM PROJECTILES IN TRUCK



NON – STANDARD LEGACY LOADS DO NOT OPTIMIZE SPACE IN RAILCARS AND TRUCKS OR ISO CONTAINERS, WHICH INCREASES WOOD DUNNAGING REQUIREMENTS



CLF and Breakbulk Stowage

LEGACY LOADS REQUIRE WOOD DUNNAGE FOR STOWAGE, WHICH CREATES WASTE & RETROGRADE



BOMB STOWAGE IN THE LOWER HOLD OF A COMMERCIAL BREAKBULK SHIP – A LABOR AND LUMBER INTENSIVE OPERATION.



MISSILE CONTAINER STOWAGE ON A CLF SHIP (R)





Limited Interoperability of Legacy Loads



155 MM PROJECTILE AND PROP CHARGE LOADS ARE NOT DESIGNED FOR SHIPBOARD STACKING STABILITY AND TIEDOWN REQUIREMENTS OF NAVY AMPHIB SHIP MAGAZINES.

SAFE BREAKOUT IS A SLOW OPERATION





Limited Interoperability of Legacy Loads



155 MM PROJECTILE SKIDDED LOADS DO NOT INTERFACE WITH THE LHA ELEVATOR LOADING TRANSFER TABLE ROLLER SYSTEM. PLYWOOD SHEETS MUST BE MANUALLY INSERTED UNDER EACH LOAD TO UTILIZE THE SYSTEM



What are we doing ?

- Developed a vision of desired future capabilities
- Developed an Action Plan
 - Conduct Business Case Analysis
 - Conduct a survey of existing physical constraints and boundaries (weight and dimensions) thru the length of the supply chain
 - Conduct a survey of existing policies and standards
 - Identify service-wide and industry concepts for consideration
- Drafting “Packaging” appendix to Sea Base Logistics Concept of Operations



Desired Future Capabilities

Future Ordnance Unit Loads Will Need Enhanced Capabilities to Meet Joint Service Operational Requirements

- Load sizes designed to optimize for ISO Containers, Trucks, Railcars, Airlift (463L pallets) and SEA BASE support fleet
- Load configurations that support end user requirements
- Loads that minimize consumable material for assembly and generation of solid waste materials when disassembled
- Empty unit loads that are reconfigurable into smaller sizes for efficient retrograde processing
- Loads that incorporate standard handling features for seamless movement by all services and Distribution Process elements
- Loads that interlock when required for Bulk Handling
- Loads that are compatible with commercial shipping practices



A Joint DoD effort ?

- Exploring benefits of expanding this effort to a Joint DoD Integrated Product Team (IPT) sponsored by Office Deputy Undersecretary of Defense (Logistics, Materials and Readiness)
- Prospective Membership:
 - ARMY/EDCA/JMC
 - AIR FORCE
 - TRANSCOM/JCS
- Point of Contact:

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