

USS HARRY S TRUMAN (CVN 75) Maritime Logistic Data Network



Final Report

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1. Background.

The USS HARRY S. TRUMAN (CVN 75) was designated as “SMART CARRIER” on 24 August 1999. Several pilot programs were applied to the “as is” carrier work processes to streamline business functions, facilitate moving workload ashore and integrate improved information technology into the current workload processes to improve efficiency. The Maritime Logistic Data Network (MLDN) is one important step in improving core supply functions aboard ship and an initial step in the process to reduce shipboard workload for supply management functions and move it ashore. The MLDN pilot focused on the requisition and stock item management functions done in Stock Control.

2. Shipboard processes prior to MLDN.

Prior to the installation of MLDN, ship’s force was responsible for maintaining the validity of the Basic Requisition File (BRF) and the Basic Material File (BMF). Due to fleet manning shortages BRF/BMF maintenance was not always completed in a timely manner. Also effecting BRF/BMF maintenance is the communication constraints onboard ship with telephones, internet access and Streamlined Automated Logistics Transmission System (SALTS). The following areas of Supply management were affected

- Range and Depth Analysis
- RAB/RAO Reviews
- Stock and DTO requisition maintenance to include:
 - Tracking all requisitions that have shipping status
 - Tracking all outstanding requisitions to ensure all are current
 - Processing RODS
 - Conduct causative research
 - Follow-ups

3. Shipboard processes with MLDN installed

Through the use of MLDN and remote terminal processing under Optimized NTCSS, many of the back room functions of inventory and financial management are being done ashore. The MLDN solution takes advantage of data file replication technology to monitor and support the afloat supply operation. Under MLDN, the ship’s official stock and requisition records are replicated ashore where a number of reviews are being conducted concerning data analysis and functional review. The overall objective is to provide ashore support to assist the afloat Stock Control organization and to have some functions completed ashore for the ship. This effort has reduced costs and improved performance for the shipboard logistics and financial management functions. MLDN facilitates moving workload ashore and enhances total asset visibility for the Navy. Under MLDN, the shore support infrastructure operates a trusted and up-to-date version of the ship’s inventory management system. The ship performs basic supply management processing of receipt, issue, inventory and stow. Adjustments are being recorded in RSupply and replicated ashore into a synchronized version of RSupply operating under the MLDN link. Feedback to the ship is maintained using a remote processing capability and normal e-mail correspondence with the ship. As the solution for MLDN is proved, the goal would be

for the MLDN process to be the key catalyst for removing workload from the fleet unit and transferring that workload ashore. Through the use of MLDN and data analysis the ashore site monitors inventory movement, re-order review, manage requisitions, review inventory allowance levels and perform financial up line reporting as defined by the Air Type Commander (COMNAVAIRLANT). The two databases are kept in synchronization using a Maritime Data Link.

4. Data Collection and Analyses. Metrics data was collected by shore based personnel located at COMNAVAIRLANT. Enclosure (1) presents graphic presentations of the metrics collected.

4.1 MLDN Percent of Connectivity. Throughout the prototype, data was maintained on how successful shore based personnel were in connecting to the HSTs database. Throughout the prototype shore based personnel averaged an 89.4% success rate in connectivity.

4.2 MLDN hours of Connectivity. This metric depicts the number of hours per month that shore based personnel were logged on HSTs live database.

4.3 MLDN Requisition Validity. This metric measured HST's outstanding requisition validity. Overall HST saw an improvement in onboard stock levels.

4.4 Requisitions with no status greater than 30 days. This metric measured requisition validity.

4.5 MLDN Status Update Manhours for Work Conducted Ashore. This metric depicts the number of manhours worked ashore on the HST's database which allowed shipboard personnel to attend to other business.

5. Summary of Prototype Results:

MLDN became fully operational onboard USS HARRY S TRUMAN (CVN 75) in June 2000. Since that time, the MLDN Team has accomplished the following:

- Processed status updates on over 26,000 requisitions
- Processed 1000 stock and DTO overaged receipts
- Researched and cleared \$20M in Stock In Transit Issues
- Screened all consumable backorders against LSG assets and issued 70 line items prior to ship's deployment
- Aggressively followed up on all cancellation request submitted by ships' personnel, recouping \$400K in end-use dollars
- Identified requisitions that were issued as different document numbers than what was ordered, allowing the ship to make all necessary financial corrections prior to transaction appearing on the SFOEDL. (i.e., GZ input as G2)

- Performed various AD-HOC queries to perform analysis of various situations.
- Conducted Transmittal Letter processing test resulting in 99.9% reliability on \$3.8M in obligations
- Conducted MFCS TIR processing test resulting in 100% TIR validity.
- Answered various data calls from the ship and TYCOM

6. Customer Feedback:

“Maritime Logistics Data Network (MLDN): MLDN continues to pay big dividends—this is probably the most robust initiative and from my perspective has the brightest future of all ASDOF initiatives prototyped onboard TRUMAN. BRF maintenance is being done completely from shore to include aggressive follow-ups and administrative actions to keep active requisitions against allowance requirements. These efforts were key contributors to HST deploying at or above goal for all allowance lists. We successfully TIR'd from shore during October underway period, TIR proved to be 99.5% accurate, still investigating errors. Consistent two-way communication capability must be established to allow the shift of this function to shore. This functionality should continue to be pursued...there is definite potential for workload savings here.”

Supply Officer

USS HARRY S. TRUMAN (CVN-75)

12-00 ASDOF Initiative Update to TYCOM

7. Findings and recommendations:

Maritime Logistics Data Network (MLDN) has proven successful and has the potential to reduce workload afloat significantly. With some application changes to the R-Supply programming and the addition of NALCOMIS replication, the MLDN Team can move requisition and stock item management, financial and TIR processing and IBS receipt in processing actions ashore.

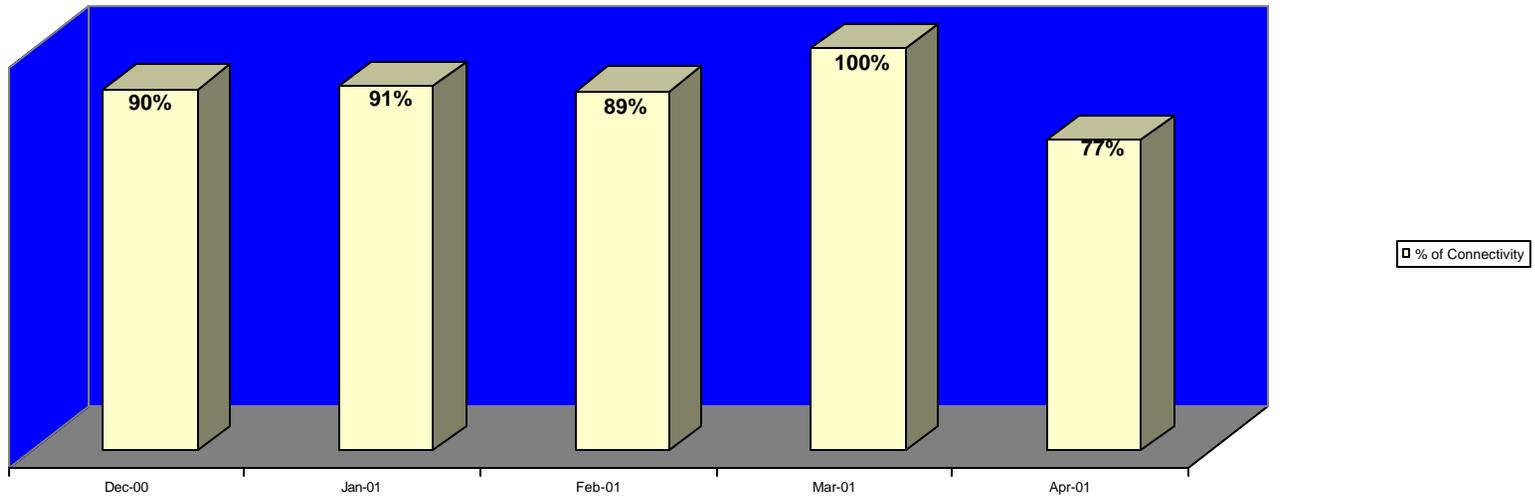
Several major benefits are realized with the transition to MLDN. These include: Greater efficiency and accuracy with Subject Matter Experts (SMEs) ashore; Higher states of readiness with increased emphasis on Range and Depth, reorder management and requisition monitoring; Increased quality of life for sailors in the fleet who no longer are required to conduct Stock Control type functions; Reduced OPTAR costs because of greater efficiencies in requisition, inventory and financial management and a host of other benefits for the activity Fleet/TYCOM.

Through the use of experienced personnel in all aspects of supply operations, systems, equipment support and maintenance, coupled with knowledge of naval logistics, and technical support processes, greater benefits can be realized resulting in reduced workload and infrastructure under afloat supply with the use of MLDN.

The next step is to prototype this technology for End Use afloat platforms to include DDs, DDGs, FFGs etc...at COMNAVSURPAC and COMNAVSURFLANT. This is the single area where use of MLDN

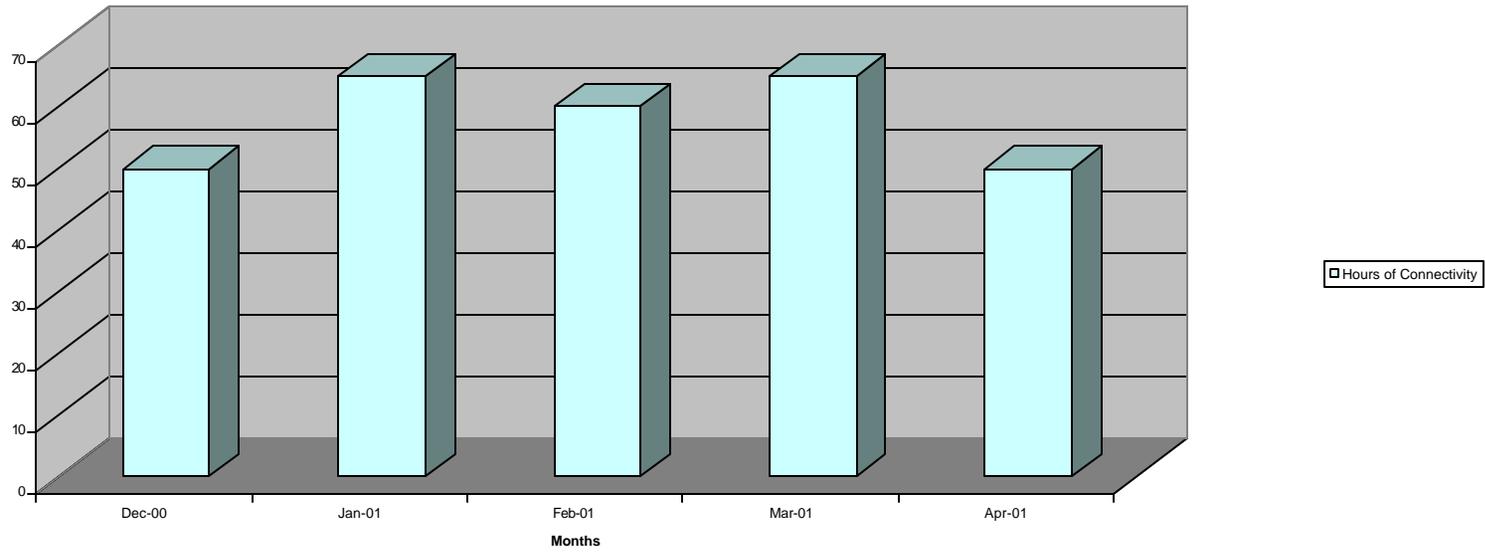
can have the greatest effect for Supply Management in reducing, streamlining workload afloat through transitioning business practices normally conducted afloat to ashore. With SPAWARSYSCEN identifying the hardware and software requirements to include the appropriate communications between afloat and ashore, NAVSUP and the Fleet/TYCOM can identify the proper rules and tools in transitioning workload ashore. It is essential that additional prototype sites be selected so that collectively key personnel can identify business processes that can be selected and prototyped in moving Supply Management processing ashore that effect Navy Working Capital Fund (NWCF) and End Use activities.

USS HARRY S TRUMAN (CVN 75)
MLDN % of Connectivity



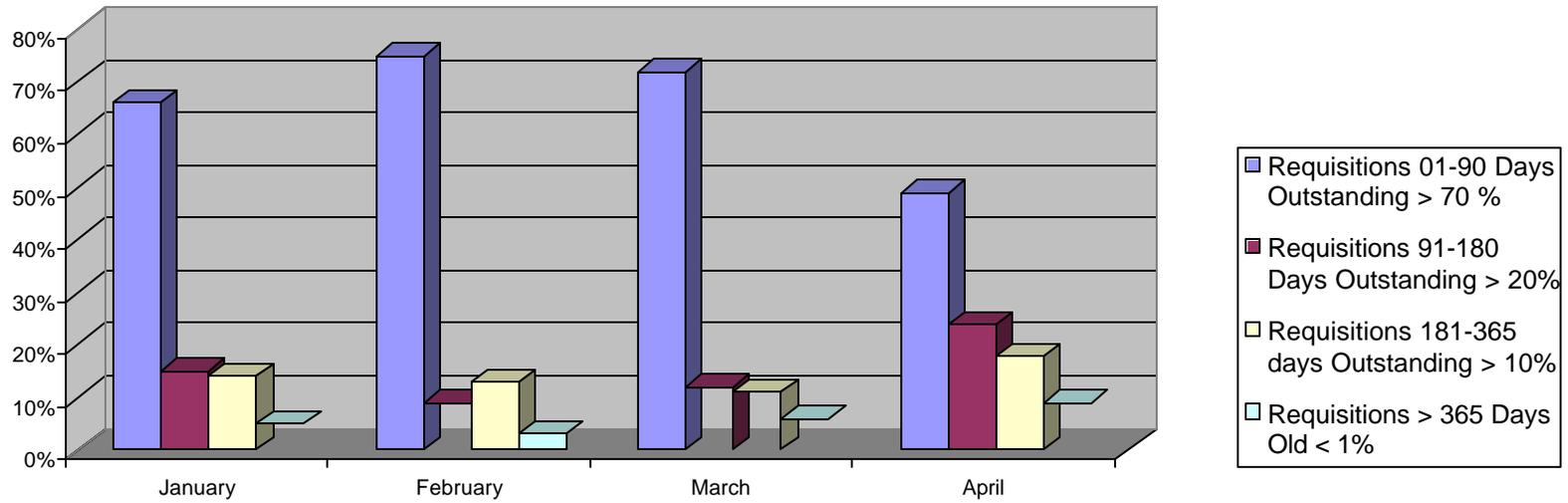
Enclosure (1)

**USS HARRY S TRUMAN (CVN 75)
MLDN Hours of Connectivity**



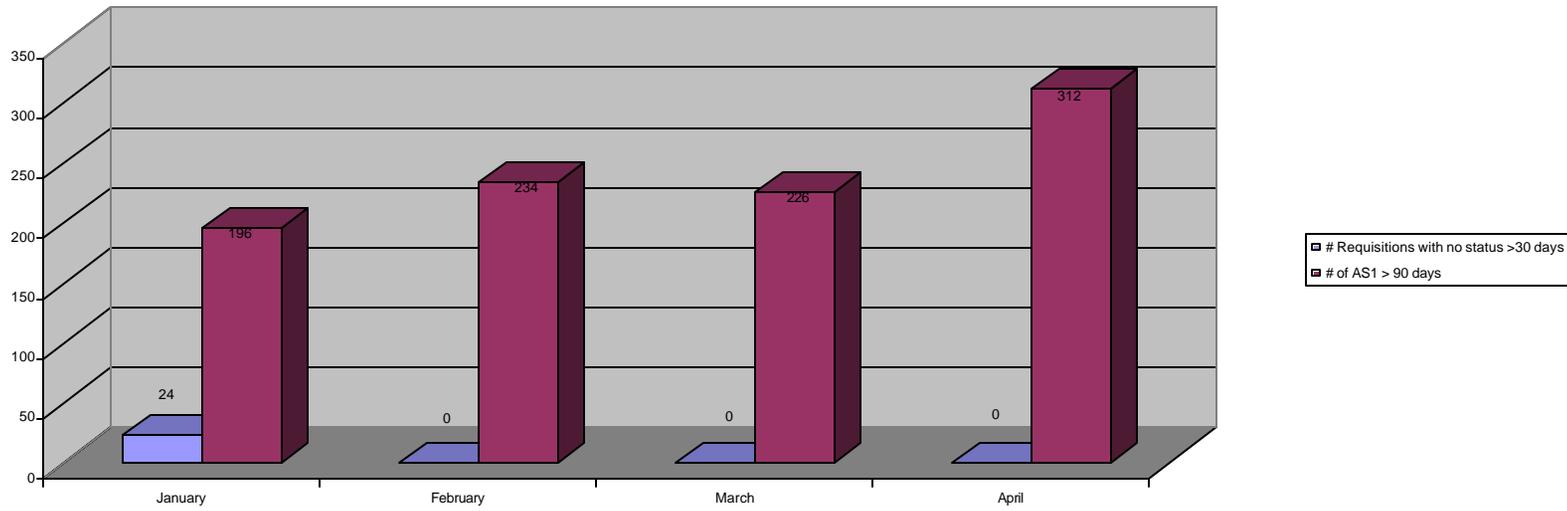
Enclosure (1)

**USS HARRY S TRUMAN (CVN 75)
MLDN Requisition Validity**



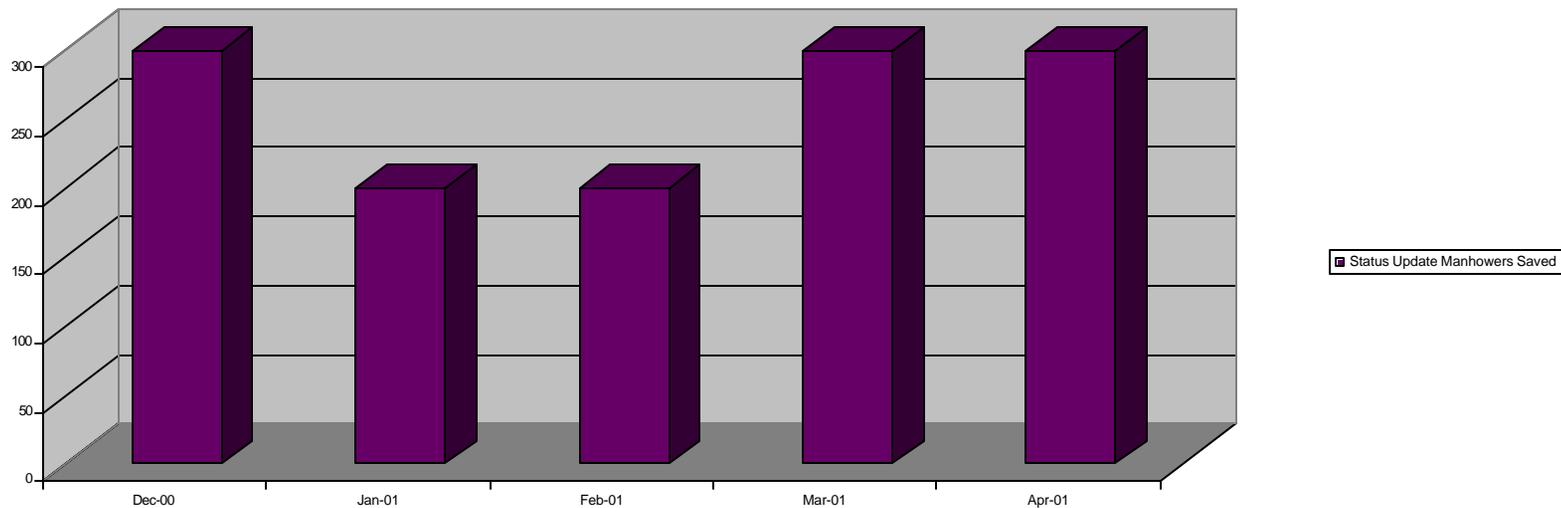
Enclosure (1)

USS HARRY S TRUMAN (CVN 75)
Requisitions with No Status



Enclosure (1)

USS HARRY S TRUMAN (CVN 75)
MLDN Status Update Manhours for Work Conducted Ashore



Enclosure (1)