Potential JLEnt Research Areas

• **Precepts of Globally Integrated Logistics (GIL)**
  • Prepositioned stocks
  • Appropriately resourced JLEnt
  • Rapid and flexible transportation system
  • Capability for agile allocation and adjudication of logistics resources
  • Resilient and comprehensive information network
  • Flexible worldwide network of logistics nodes
  • Modularized & interoperable logistics capabilities

• **Required Capabilities**
  • Logistics information network
  • Agile allocation and adjudication
  • Logistics considerations in deliberate and contingency planning
  • Maximize access to overseas logistics support
  • Asset visibility across JLEnt
  • Continuity of logistics when cyber degraded
Potential JLEnt Research Areas (cont.)

- Cyber Challenges to DoD Logistics
- Supply Chain Resilience
- DoD Logistics Visibility & Control
• Improving procurement lead time forecasting
  – Can industrial base measures be used to improve planning for vendor delivery times?
  – Is there a role for big data analysis in predicting procurement lead times?
  – What are the economics of segmenting items into 3 basic approaches to resupply – (1) traditional procurements using EOQs, (2) long term contract with regularly scheduled deliveries, and (3) vendor managed government inventory?

• Improving component repair
  – Assessment and improvement recommendations of DoD maintenance scheduling practices
  – Analysis of expanded / improved repair parts kitting to reduce awaiting parts delays

• Attacking DMSMS problems with 3D printing
  – Assessment of current DoD 3D printing initiatives, identifying gaps and potential areas for further application

• Assessing delivery performance
  – Compare and contrast time-definite delivery in the commercial world and in the Department of Defense
  – What are the alternatives to a 85% goal for on-time delivery

• Assessing reverse pipeline performance
  – How to measure and improve the effectiveness and efficiency of the pipeline for returning failed components for repair
DASD (SCI)
Supply Chain Risk Management
Academic Research Opportunities

- Improved stakeholder planning for end-to-end disruptions
  - Assess military services and DLA planning
  - Analysis of available risk management tools – DoD and commercial

- Early detection of counterfeit parts
  - Assessment of quality checks performed by suppliers and by DoD storage activities
  - Evaluation of counterfeit detection tools – DoD and commercial

- Comprehensive identification of intellectual property within DoD supply chain
  - Stakeholder review and case law analysis of intellectual property rights and application
  - Assessment of DoD and commercial safeguards against loss of intellectual property

- Early detection of industrial base problems
  - Recommendations on early identification of DMSMS problems before they disrupt the procurement of replenishment stocks

- Improved parts support to depots
  - Review and analysis of interaction between maintenance depots and parts suppliers (DoD and commercial)
  - Recommendations on improving depot forecasting of repair parts requirements for component repair (i.e., maintenance bills of materials)
Potential Research Topics 2017

• Sea Basing and Expeditionary Logistics
• Distributed Operations Logistics
• Ground Program Modernization
• Aviation Modernization
• How to Lighten the MAGTF While Preserving Force protections, Fires, and Maneuver
• How to Better Realign Logistics Capability Throughout Deployed forces
• Enterprise Approaches to Readiness that Encompass the Entire logistics Chain
• How to Better Work with Industry to Look for Ways to Make Our Equipment Lighter, Easier to Maintain, and More Energy Efficient
• How to Improve and Optimize the Total Life Cycle Management Process to Optimize Equipment Readiness.

• How to Improve Contingency Contracting as a Force Multiplier
• The Future of Unmanned Logistics Delivery Systems and How to Integrate These Into Expeditionary Operations
• Knowledge Driven Logistics – How to Improve C2 for Logistics, Logistics Chain Management, Decision Support Tools, and Logistics Management Information
• How to Improve Science and Technology Initiatives that are Critical to Modernization of Military Logistics Capabilities
• In transit visibility, push vs pull for ordering supplies
• Divestiture/excess management,
• Optimizing service disposal processes
• Successful redistribution of supplies
“Define the Force; Core Competencies”
“Engage the Force”
“Enable the Force”
“Training Course Updates”
“Multi-Skilling”
Proposed Research Topics

• DA/G4:
  • Future Joint Force Maneuver

• HQMC/I&L:
  • Household Good Storage vs. Shipment to Okinawa: Cost vs. Quality of Life
  • Alternative Models for Non-Tactical Vehicle Use
  • Personnel Administration Processes and Standardization Analysis
  • Expeditionary Force 21 (EF-21) Logistics Concept of Operations
  • Innovation in Military Logistics: Models to Harness Innovation from External Sources
  • Feasibility of Conditions Based Maintenance for USMC B, C, and D TAMCNs
  • Evaluation of Feasibility of the Wartime Reserve System-Performance Analysis
  • Modernization Of Marine Corps Terminal Operations

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Proposed Research Topics (cont.)

• AF/A4:
  • Long Term Impacts of Reduction of Operations and Military Drawdown/Reductions in Annual Budgets on the Industrial Base
  • Centralization of Individual Protective Equipment (IPE)

• DLA:
  • Counterfeit Parts Mitigation
  • Supply Chain Exploitation
  • Warehouse Automation (Automation and Advancement of Information Technology Strategies at Defense Distribution locations)
Proposed Research Topics (cont.)

• ASD (L&MR)/JS J4:
  • Globally Integrated Logistics
    • Agile global logistics resource allocation and adjudication capability
    • Resilient and comprehensive information environment
    • Reconcile constrained logistics resources with competing operational demands
    • Rapid and flexible transportation system able to move forces and supplies quickly between and within theaters
    • Prepositioned capabilities and stocks that can be shifted between theaters
    • Flexible worldwide network of logistics nodes
  • Planning, Executing & Controlling Logistics in a Cyber-Degraded Environment
  • DoD Logistics Visibility & Control
  • Active Component/Reserve Component Mix for Logistics Enabling Capabilities
  • Leveraging & Maximizing Partner Logistics Capacity

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U.S. Special Operations Command (USSOCOM)

- USSOCOM’s expanding roles are changing how it sustains the SOF operator

- What impact might additive manufacturing have on the distribution enterprise in the next 15 years?

- Should aerial refueling tankers be globally commanded and controlled rather than chopped to theaters (in order to accommodate competing global and trans-regional threats)?

- Are US flagged ships the guarantee we think they are?
  
  -- We often cite the importance of US flagged ships, but since many US flagged ships are subsidiaries of foreign companies, could those companies reflag when we need them most?