Wharton Service Supply Chain
Thought Leaders Forum 2006
Readiness/Availability Resource Planning and Execution

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Supply Chain Integration | United States Department of Defense

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DoD would be like Wal-Mart . . .

... if Wal-Mart's 3000+ stores moved

... if a Wal-Mart stockout meant that everyone inside the store could die.

... if associates had to wear a different kind of vest.
DoD Logistics is Big Business

Annual Budget:
$42 billion in supply
$68 billion in maintenance
$10 billion in transportation
$120 billion total logistics costs
(FY 05 President’s Budget)

Operational Resources
51,000 vendors
2000+ legacy logistics systems
45,000+ requisitions per day
$77 billion inventory

$700 billion in assets:
• 300 ships
• 15,000 aircraft
• 30,000 combat vehicles
• 900 strategic missiles
• 330,000 ground vehicles

It’s a complex enterprise, and a central challenge is delivering cost effective operational availability.
Backorders Impact Readiness

**DLA Air Force Weapons System Backorders Relationship to Air Force MICAP Hours**

![Graph showing the relationship between DLA Air Force backorders and MICAP hours from January 2000 to November 2005. The graph includes data points for MICAP hours and DLA backorders.]

Data Source for AF MICAP Hours - DLA J-4, MSgt Nugent

Data Source for AF Weapons Systems Backorders - DLA J-4, Ms. Margaret Gandy
Readiness Based Sparing

Opportunities

- Exploit Multi-Indentured Structures
- Exploit Multi-Echelon Structures
- Use advanced Optimization Algorithms and Forecasting Methodologies
- Integrate Strategic and Tactical Planning
- Develop interoperability between RBS systems at Services/Agencies
- Beginning 3 initial COTS RBS implementations this year

Better answers to what do I need, how much do I need, and where will I need it
Performance-Based Logistics

- 98% current OR Rate (total)
- 94% average OR Rate over 189 days of combat operations.

- Life Cycle Management
- Gov’t/Industry partnership

- Focused on warfighter needs
- Buying outcomes (not inventory)
- Aligning incentives to outcomes

C-17 Globemaster Sustainment Partnership

- Performance-based contract between AF and Boeing
- Requires contractor to provide continuously increasing levels of sustainment support
- Includes both item management and depot-level repair
- $4.9B FY04 through FY08

Decreased Response Time 70%-80%

<table>
<thead>
<tr>
<th>Navy Program</th>
<th>Pre-PBL</th>
<th>Post-PBL</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-14 LANTERN</td>
<td>56.9 Days</td>
<td>5 Days</td>
</tr>
<tr>
<td>ARC-210</td>
<td>22.8 Days</td>
<td>5 Days</td>
</tr>
<tr>
<td>H-60 Avionics</td>
<td>52.7 Days</td>
<td>8 Days</td>
</tr>
<tr>
<td>F/A-18 Stores Mgmt System (SMS)</td>
<td>42.6 Days</td>
<td>2 Days CONUS 7 Days OCONUS</td>
</tr>
<tr>
<td>APU</td>
<td>35 Days</td>
<td>5 Days</td>
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</table>
**Commodity Management**

**DEMAND CHARACTERISTICS**

<table>
<thead>
<tr>
<th># of Bearings NSN’s</th>
<th>118,854</th>
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</thead>
<tbody>
<tr>
<td>Replenishment items</td>
<td>14,171</td>
</tr>
<tr>
<td>NSO /non stock</td>
<td>100,445</td>
</tr>
<tr>
<td>Service Managed</td>
<td>4,238</td>
</tr>
</tbody>
</table>

Total Bearings usage (1) $233M

Total Bearings spend (2) $272M

- Sole sourced $51M
- Competitive $165M
- Undetermined $56M

**INVENTORY INVESTMENT CHARACTERISTICS**

<table>
<thead>
<tr>
<th>DoD wide = 664</th>
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<tbody>
<tr>
<td>Navy</td>
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<tr>
<td>USAF</td>
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<tr>
<td>Army</td>
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<tr>
<td>DLA</td>
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</tbody>
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Total Bearings inventory (3) $426M

- Replenishment $161M
- NSO/non stocked $104M

**SUPPLY CHARACTERISTICS**

- Supply Availability 85%
- Administrative Lead-time (avg.) 115 days
- Production Lead-time (avg.) 159 days
- Backorder age (avg.) 48 days

**PERFORMANCE CHARACTERISTICS**

- CY 2004 data for "active" items (stock code = replenishment)

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(1) CY 2004 demand, (2) CY 2004 contract spend, (3) Inventory is a snapshot as of July 2005; Spend lags demand;
Visibility is Critical to Effective Logistics Support
Benefits Based on Experience

- RFID for last tactical mile
  - II MEF tagging materiel for operating units
  - Associating tags with SATCOM on trucks

- Real-time asset visibility

- Real cost avoidance:
  - Reduced inventory in Iraq from $127M to $70M
  - Reduced wait time from 28 to 16 days
  - Increased fill rate from 77% to 89%
  - Reduced retail backlog from 92,000 to 11,000 orders

Increased confidence in the supply chain
"We have begun to move from logistics as a necessary reality, to supply chain as offense."

The Honorable Ken Krieg, USD(ATL)