Using Logistics to Gain Competitive Advantage

Parallels between Industry & Expeditionary Warfare

NDIA Expeditionary Warfare Conference
26 October 2005
Overview

Although the examples aren’t perfect, there are several striking similarities between the characteristics of expeditionary warfare and the battle for market share within industrial and consumer markets…
Similarities include…

• **Availability** \(A_o\) is critical to the military and to many industrial firms – a requirement to support the customer

• Resources are constrained, so **effectiveness** and **efficiency** have to be balanced

• “Silos” lead to **suboptimization**…E2E process design required

• **Change agents** can be critical to achieving success
Characteristics of Expeditionary Warfare

- Agility
- Versatility
- Flexibility
- Responsiveness
- Forcible-entry capability
- Sustainability

*Source: Expeditionary Warfare – www.exwar.org*
Agility

Worldwide responsiveness; ability to rapidly deploy (in any environment)
Agility
Customers leverage global footprint of 3PLs to gain access to new markets without huge capital investments.

- Availability of needed supplies and parts
- Optimization of transportation and logistics spend
Agility
An integrated network allows customers large and small to “look big” while remaining agile.

- Seattle
- Reno
- Ontario
- Chicago
- Louisville
- Dallas/Ft. Worth
- Harrisburg
- Miami

Ground Service
- Red: 1 Day
- Light Blue: 2 Day
- Dark Blue: 3 Day
Versatility

Ability to undertake a variety of missions across the spectrum of operations
A sign of versatility is the ability to move in reverse, as well as forward…

BEFORE:
TAT = 10+ days

End User

Prepare for Shipment

Multiple Repair Depots (based on legacy)

Sometimes units went to more than 1 depot

1 Day

1-5 Days

2-5 Days

Prepare for Shipment

1 Day

Multiple spare parts stocking locations

1 Day

1-5 Days
Toshiba’s Reverse Logistics Cycle

1. Recovery
2. Consolidation
3. Transportation Next Day Air
4. Integrated Logistics Repair

End User → Repair

The UPS Store

2-4 day LT

Overnight

Store-Level Daily Demand
Toshiba Results

- Improved integration of pick up and drop off points by adding 3000+ UPS Store locations
- Improved repair quality - lowered repeat repair incidents by 41%
- Faster repair speed - next business day TAT improved by 17%
- Improved customer satisfaction - statistical shift in “delighted” customers
- Root cause analysis - improved quality data feedback design teams

- Multi-million dollar annual inventory savings
- Reduced TAT by 2-5 days (or more)
- Recovery of warranty costs
- Consolidated authorized service provider network to optimize inventory and transportation
Versatility
Conditions do not allow for “business as usual” support of customers within Iraq and Afghanistan...

Problems
• No existing footprint
• Ground transportation subject to theft and violence

Solution
• Established an air network to deliver five days / week to key bases (from UAE)
Flexibility

Ability to shift focus rapidly from one mission to an entirely different one, without having to return to bases for refitting or retraining
Flexibility
Integrated, yet flexible supply chains allow businesses to match supply and demand through postponement strategies…

...while optimizing transportation spend.
Flexibility
UPS Trade Direct Process Flow

A complete, integrated, multi-modal solution

<table>
<thead>
<tr>
<th>PICKUP / CONSOLIDATE SHIPMENTS</th>
<th>CLEAR CUSTOMS</th>
<th>DECONSOLIDATE SHIPMENTS</th>
<th>FINAL DELIVERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight and individual packages are picked up and consolidated</td>
<td>Consolidated shipment crosses the border in a single customs clearance</td>
<td>Freight moves via LTL Packages enter UPS package delivery network</td>
<td>Package and LTL shipments are delivered direct to multiple retail stores and/or end customers</td>
</tr>
</tbody>
</table>

FULL VISIBILITY: End-to-end tracking provided throughout the supply chain.
Responsiveness

Forward deployed (or rapidly deployable), enabling swift response with sustainable power
Responsiveness
Service levels (A_o requirements) dictate “just in case” inventory requirements…

Network can be continuously rebalanced and aligned based upon historical trends, actual consumption, “op tempo”, etc.
Customer commitments dictate response level…

National Next Day Commitment

National 4-Hour Commitment (100%)

National 4-Hour Commitment (80%)

Regional 4-Hour Commitment

1 Site

48 Sites

12 Sites
Responsiveness in the Service Parts Logistics Supply Chain

**Inventory Replenishment**
- Inventory stored in central distribution; provides late night order cut-off for overnight service levels
- Automatic replenishment requests based on business rules are sent to central distribution from forward stocking points
- Part is picked from multi-client facility
- Part is shipped to local FSL for replenishment

**Dispatching Critical Parts**
- Inventory specialist sources the parts from network of 750+ forward stocking locations
- Part is picked, packed and tendered (typically within 20 minutes) to courier (or made available for pickup)
Forcible-Entry Capability

Possessing credible “come-as-you-are” striking power, forces can identify, overcome, and defeat an adversary’s access-denial defenses and strategy.
Meeting market demand with value-added services…

Kitting, configuration, and customization
Configurable labels and pack slips
RFID compliance
Refurbishment
Repair and end-of-life services
Sustainability

Ability to continue operations indefinitely (in an austere environment, without host-nation support and without reliance upon pre-existing infrastructure)
Sustainability
Performance Based Logistics

PBL contracts can ensure availability over time, by aligning the goals of all the parties concerned…

Example: Phalanx CIWS program was one of the first uses of PBL and commercial shipping to support a critical defense system – has been in place since 2000

- UPS Louisville receives carcasses from Navy
- Carcasses routed to OEM or repair vendor via UPS (90%) or LTL and returned to stock after repair
- Phase 1: US domestic; Phase 2: Includes international
- Visibility and exception notification provided through Event Tracker / Web Tracker

<table>
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<tr>
<th>60 month contract</th>
<th>Initial Inventory</th>
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</thead>
<tbody>
<tr>
<td>M-F operation (8a-5p) + after-hours service</td>
<td>21,981 total parts</td>
</tr>
<tr>
<td>28,000 ft² storage</td>
<td>16,400 ready to use parts</td>
</tr>
<tr>
<td>Volume: ~20 units/day</td>
<td>5,581 parts needing repair</td>
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Thank You
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