

NDIA
21st Annual National Logistics
Conference

***Adapting Logistics Capabilities
to National Security
Requirements***

Industry Keynote

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Agenda

- **A Walk through History**
- **What we can learn from the past**
- **Thoughts on logistics transformation**



The Origin of Logistics



- **From the Greek word “logistikos”**
- **Originally used in Roman and Byzantine times when there was a military administrative official with the title “Logists”**
- **Implied a skill in the sciences of mathematical computations and outcomes**

Historical Perspective



When US Logistics Started

- By resolution in 1775 the Continental Congress provided for a staff to administer aspects of its military establishment. On 16 June legislation was passed authorizing an Adjutant General, a Commissary General of Stores and Provisions, Quartermaster General, among others
- The First TRANSCOM



Historical Perspective



The beginning of the Defense Industrial Base

- 1639 ~ manufacture of gunpowder
- 1647 ~ cannon cast
- 1680 ~ powder mill
- After British prohibited in 1774 the export of firearms to the colonies, domestic public arms factories were established



Historical Perspective, War of 1812



The Defense Industrial Base Grows with both Public Arsenals and Private Industry

- **1812 ~ Eli Whitney accepts contract for the manufacture of muskets**
- **Production of muskets at the national armories increased steadily from 1808 to 1812**
- **1840-1850s ~ defense contracting evolves**

Defense Industrial Base continues to grow with a number of Private Industry suppliers providing rifles, pistols and swords

Reliance on Coalition Partners



Revolution. General Washington continually handicapped by lack of munitions, supplies and transportation. The situation was improved by aid from France

Civil War. The Confederate army was hindered and never succeeded in overcoming its supply deficiencies even with some small arms and fabric from the UK and support from France late in the war

WW I. The US Army could not have played the decisive role without weapons, munitions, supplies and transportation furnished by allies

OIF. US forces were reliant on coalition and friendly allied support for water, fruits and vegetables, and batteries, among other things

LOGISTICS and Warfighting



Logistics



Equivalence

Strategy



Tactics



Historical Perspective, Revolutionary War



- **Burgoyne's Surrender at Saratoga**



- **What Borgoyne considered essential in numbers of men and artillery and baggage proved to be only a burden against success**
- **In moving heavy ordinance and stores he lost one of the most important elements in warfare -- timing**
- **For the Americans, lines of communication remained open, resupply generally was adequate, and troops were sufficiently well re-equipped**

Historical Perspective, Civil War Logistics and Missed Opportunities

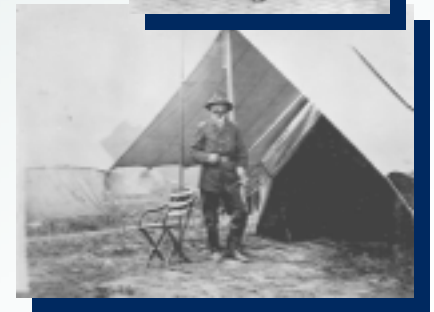


1st Manassas: If Confederate forces had logistics support they could have pursued Federal Forces all the way to Washington.

Peninsular Campaign, Spring 1862, McClellan moved 110,000 men and supplies employing 400 steamers and sailing vessels, 14,500 animals and 44 batteries of artillery

Antietam: Logistics provides an opportunity, not exploited

Gettysburg: The Union Victory at Gettysburg can be ascribed to an immense logistical advantage through use of railroads to bring up supplies and men to General Meade



Historical Perspective: To what extent have things changed?



Quote from the Army Chief of Military History ref the North Africa and Mediterranean Campaign in 1942

“A situation as shocking to the War Department as it was embarrassing to the Services of Supply in the European theater developed when it became necessary to reorder large quantities of Class II and IV supplies that were known to be already in the United Kingdom but which, because of faulty marking and lack of proper records, could not be found in time to equip the forces preparing to sail from Britain.

It hardly helped matters when requisitions arrived without proper identification and when timely status of supply reports were lacking.”



The Classical Principles of Logistics Continue to Apply

- **First with the most**
- **Equivalence**
- **Materiel Precedence**
- **Economy**
- **Flexibility and Dispersion**
- **Feasibility**
- **Timing**
- **Unity of Command**
- **Knowledge through Information**



GAO Report on OIF



“A backlog of hundreds of pallets and containers of materiel at various distribution points due to transportation constraints and inadequate asset visibility.”

“A discrepancy of \$1.2 billion between the amount of materiel shipped to Army activities in the theater of operations and the amount of materiel that those activities acknowledged they received.”

“A potential cost to DOD of millions of dollars for late fees on leased containers or replacement of DOD-owned containers due to distribution backlogs or losses.”

“The cannibalization of vehicles and potential reduction of equipment readiness due to the unavailability of parts that either were not in DOD’s inventory or could not be located because of inadequate asset visibility.”



“The duplication of many requisitions and circumvention of the supply system as a result of inadequate asset visibility.”

The accumulation at the theater distribution center in Kuwait of hundreds of pallets, containers, and boxes of excess supplies and equipment that were shipped from units redeploying from Iraq without required content descriptions and shipping documentation.

“DOD did not have adequate visibility over all equipment and supplies transported to, within, and from the theater of operations in support of OIF.”

“DOD did not have a sufficient distribution capability in the theater to effectively manage and transport the large amount of supplies and equipment deployed during OIF.”

GAO Report on OIF



“The failure to effectively apply lessons learned from Operations Desert Shield and Desert Storm and other military operations may have contributed to the logistics support problems encountered during OIF.”

“At times there were shortages of some spares or repair parts needed by deployed forces.

“Army pre-positioned equipment used for OIF was not adequately configured to match unit needs.

GAO Report on OIF



“DOD contractors used for logistics support during OIF were not always effective.

“Physical security at ports and other distribution points in the theater was not always adequate to protect assets from being lost or taken by unauthorized personnel.



For Logistics the Battle is the Pay-off.

Beyond the procurement of military supplies and equipment there remain the closely related activities of storage, distribution and transportation to get materiel into the hands of the troops and to all the battle areas*

***The Sinews of War, Army Logistics 1775-1953, Office of the Chief of Military History, United States Army**



The most elegant element of logistics transformation is the design of logistics solutions into the weapon system itself

- **Designing systems for maintenance free operation**
- **Use of autonomic solutions employing prognostics and health management**
- **Different ways of thinking about managing obsolescence through technology refresh strategies**
- **Performance Based Logistics Business strategies, for system level total sustainment, where long term contracts and tailored incentives force lean principles and continuous improvement in system level availability and TOC reduction**

Concluding Comments

- * **Elegance of engineering solutions**
- * **Courage to employ new business models**
- * **Integration of logistics into the overall command and control so that we truly achieve equivalence as the classical principle states:**

***Strategy, tactics and logistics,
as history has proven,
is what wins wars.***

A Historical Perspective to Drive the Future



“The line between disorder and order lies in logistics...”

...Sun Tzu

“My logisticians are a humorless lot ... they know if my campaign fails, they are the first ones I will slay.”

...Alexander

“There is nothing more common than to find considerations of supply affecting the strategic lines of a campaign and a war.”

...Carl von Clausewitz

“Logistics comprises the means and arrangements which work out the plans of strategy and tactics. Strategy decides where to act; logistics brings the troops to this point.”

...Jomini: *Precis de l' Art de la Guerre. (1838)*

“Gentlemen, the officer who doesn't know his communications and supply as well as his tactics is totally useless.”

...Gen. George S. Patton, USA

“The war has been variously termed a war of production and a war of machines. Whatever else it is, so far as the United States is concerned, it is a war of logistics.”

...Fleet ADM Ernest J. King, in a 1946 report to the Secretary of the Navy

“Bitter experience in war has taught the maxim that the art of war is the art of the logistically feasible.”

...ADM Hyman Rickover, USN

“Forget logistics, you lose.”

...Lt. Gen. Fredrick Franks, USA, 7th Corps Commander, Desert Storm