

UNCLASSIFIED

UNITED STATES ARMY LOGISTICS

UNCLASSIFIED



NDIA

Innovation Panel

Supply Chain Transformation

29 Mar 2012



Dr. Vic Ramdass
Director

U.S. Army Logistics Innovation Agency

ALWAYS THERE.

ALWAYS READY.

Introductions

☐ Randy Strang

VP, Customer Solutions , UPS



☐ Early Wyatt

Deputy Asst Sec Def, Rapid Fielding



☐ Mike Burkett

VP, Gartner Research



Highlight transforming possibilities in Supply Chain Innovation

Agenda

- ❑ The Future Environment
- ❑ Implications for Military Logistics
- ❑ The Supply Chain for the Future Force
- ❑ Supply Chain Enablers
- ❑ Operational Energy



“We are always looking for ways to keep our supply chain lean, cost effective, and flexible.” – Hon. Alan Estevez, Assistant Secretary of Defense (Logistics & Materiel Readiness)



The Future Environment

“Nothing endures but change.” - Heraclitus



- ❑ Increasing rates of technological and scientific advancement
- ❑ Increased competition for finite resources
- ❑ Persistent regional conflict
- ❑ Demographic strains
- ❑ Empowered non-state actors
- ❑ Continued proliferation of weapons of mass destruction
- ❑ Hybrid threats incorporating regular and irregular warfare, terrorism and criminality

Focusing our
approach to
innovation

Increasingly complex – absolutely dynamic

Implications for Military Logistics

□ New strategic challenges

- Diverse, unstable environments
- Prolific, massively disruptive threats (NBC, cyber)
- Uncertain resource availability



□ Advanced technological capabilities

- Decision support
- Unmanned systems
- Power and energy



□ Changing human dimensions

- Demographic shifts
- Ingrained technology competencies
- New learning, training methods



“We need innovation in how we operate – our ability to re-imagine the way we fight will determine if we succeed or fail.” – CICS Strategic Direction to the Joint Force

The Supply Chain for the Future Force

“Notice that the stiffest tree is most easily cracked, while the bamboo or willow survives by bending with the wind.” – Bruce Lee

□ The future supply chain optimizes technology and human resources to remain:

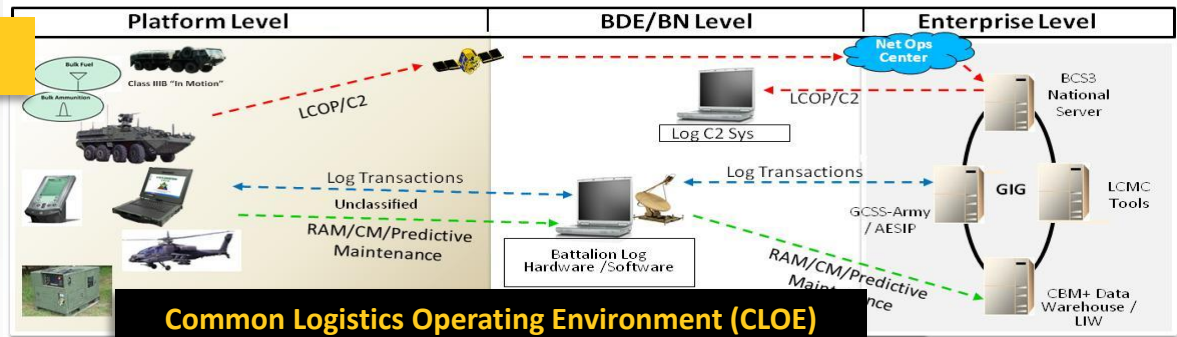
- **Versatile**
 - ✓ Tailored to meet the operational situation
- **Agile**
 - ✓ Uses diverse solutions to adapt to disruptive events and threats
- **Efficient**
 - ✓ Minimizes force resource demands

“Our aim should be a versatile, responsive, and decisive Joint Force that is also affordable.” – CJCS Strategic Direction to the Joint Force

Supply Chain Enablers

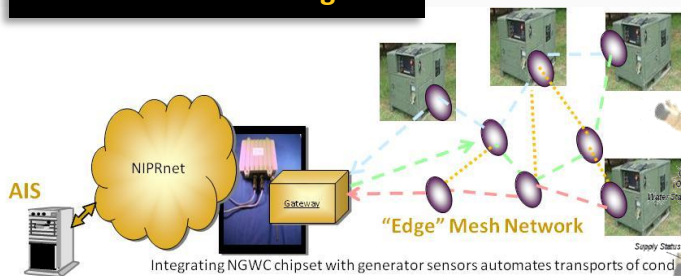


CONNECTIVITY



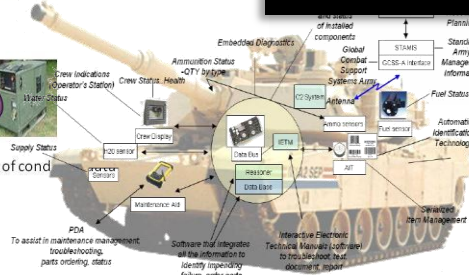
Common Logistics Operating Environment (CLOE)

Mesh Networking

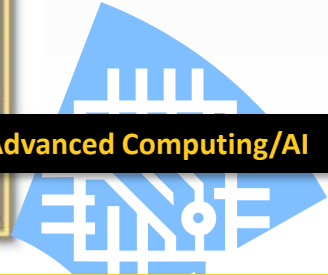


"Edge" Mesh Network

Embedded Sensors

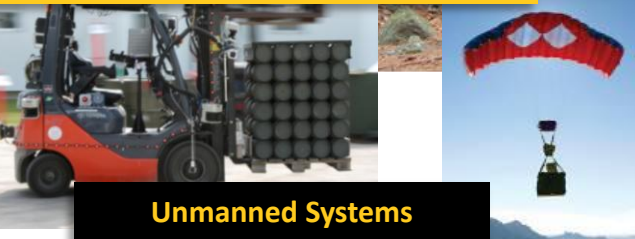


Advanced Computing/AI



DECISION SUPPORT

DISTRIBUTION/DELIVERY



Unmanned Systems

Alternative Energy



Water Purification



DEMAND REDUCTION

Soldier Interfaces



Operational Energy

The energy required for training, moving, and sustaining military forces and weapons platforms for military operations



Soldier Worn Integrated Power Equipment System



Rucksack Enhanced Portable Power System



Improved Turbine Engine Program



Advanced Medium-sized Mobile Power Sources



Tactical Fuels Manager-Defense



Ultra Light-Weight Camouflage Net System



USACE Mini-Grids for USFOR-A

Energy is a key enabler to major capabilities

Performance Goals

- Increase mobility
- Increase mission focus
- Extend endurance
- Increase availability
- Reduce fully-burdened cost
- Enhance stability operations

Key Attributes

- Lethal
- Agile
- Expeditionary
- Interoperable
- Versatile
- Sustainable

Grand Challenges

- *Give soldiers and leaders capability to manage energy status, resources, performance*
- *Significantly reduce energy footprint*
- *Provide flexibility and resiliency by developing alternatives and adaptable capabilities*

Goal: Energy-informed operations

Message to Partners in Industry & Academia

Help us:

- ❑ **IDENTIFY** emerging technology
- ❑ **REDUCE** size and weight of “Soldier Systems”
- ❑ **CREATE** transformative tools
- ❑ **INTEGRATE** critical capabilities to reduce complexity



Improve system efficiencies – reduce log requirements

Panel Discussion/Questions