




AMERICA'S ARMY: THE STRENGTH OF THE NATION

LIA Command Brief

As of September 8, 2011

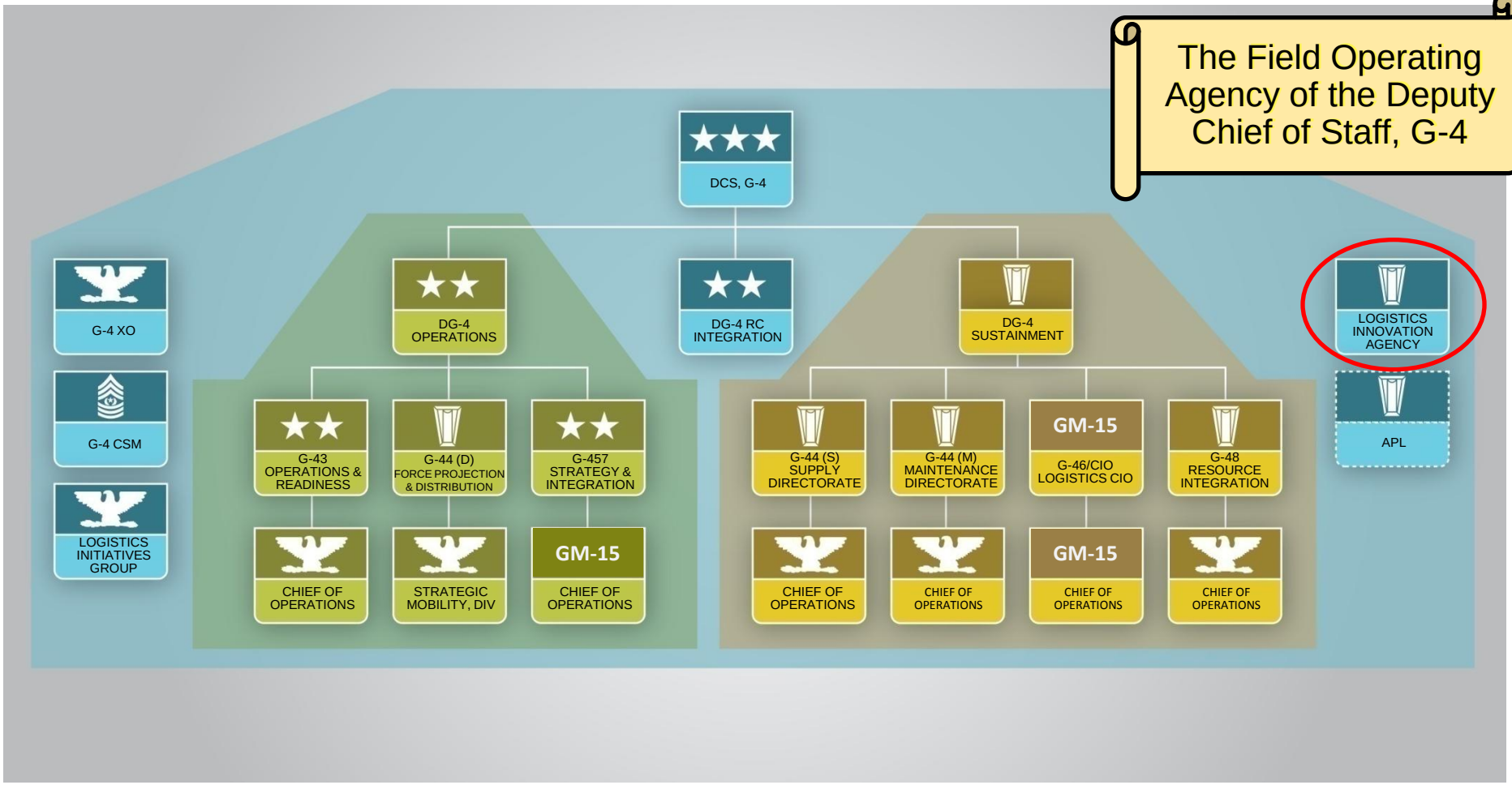
U.S. Army Logistics Innovation Agency
https://lia.army.mil

Command Brief Objective & Outline

- G-4 Organization
- History
- Mission & Current Focus Areas
- Agency Profile
- LIA Organization
- Profile of Workforce
- Role in Log Community
- Strategic Plan
- Current and Completed Projects

HQs, Department of the Army

Deputy Chief of Staff, G-4 (Logistics) Organization



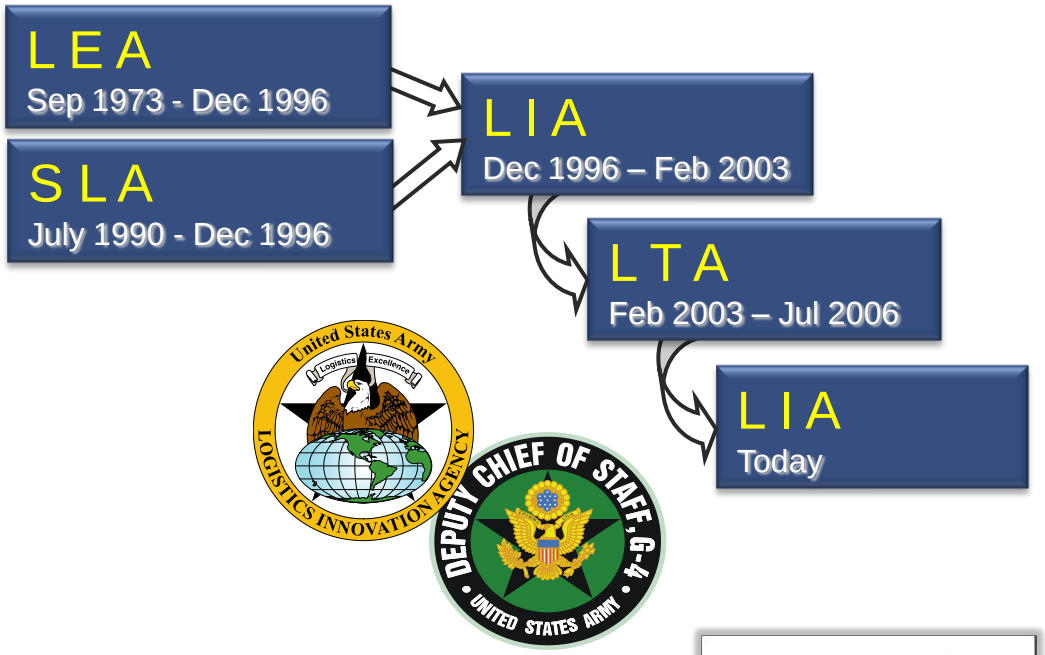
LIA History

In 1995 HQDA ordered the DCSLOG to streamline.

The Logistics Evaluation Agency (LEA), the ODCSLOG Field Operating Agency in New Cumberland, PA, and the Strategic Logistics Agency (SLA), a Staff Support Activity, in Alexandria, VA, were merged in December, 1996 forming the Logistics Integration Agency (LIA), the new Field Operating Agency of the DCSLOG, with a civilian SES Director.

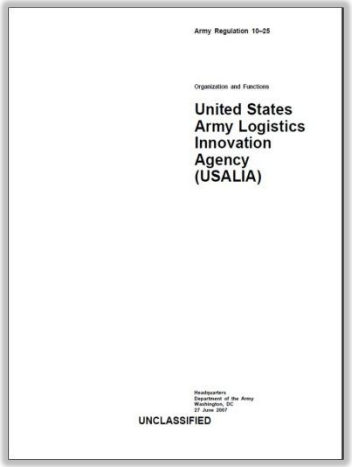
In 2003 LIA became the Logistics Transformation Agency (LTA).

In 2006 LTA became the Logistics Innovation Agency (LIA), remaining the Field Operating Agency of the DCS, G-4 with a civilian SES Director.



AR 10-25

Prescribes the mission, principal functions, command/staff relationships, and channels of communications of LIA.


Army Regulation 10-25

Organization and Functions

United States Army Logistics Innovation Agency (USALIA)

UNCLASSIFIED

LIA's Mission

To provide innovative solutions for improved logistics readiness

Innovative Solutions
Demonstrate, assess and transition innovative solutions to address logistics gaps

Exploration & Discovery
Aggressively explore new and emerging technologies & processes to improve logistics responsiveness

Current Focus Areas

- Logistics S&T Demonstrations
- Unmanned Systems for Logistics
- Common Logistics Operating Environment
- Energy
- Data Fusion

Vision
To be the logistics innovation leader

Agency Profile

Our Customers and Stakeholders:

- ODCS G-4
- OASA(ALT)
- PEOs/PMs
- AMC
- FORSCOM
- ATEC
- Other Services
- OASA(IE&E)
- COCOMs
- REF
- TRADOC
- CASCOM
- OSD

Our Strategy:

Use an adaptive organizational environment to identify, demonstrate, and assess logistics solutions that address emerging and future needs.

Focused On Supporting the Warfighter

LIA Organization

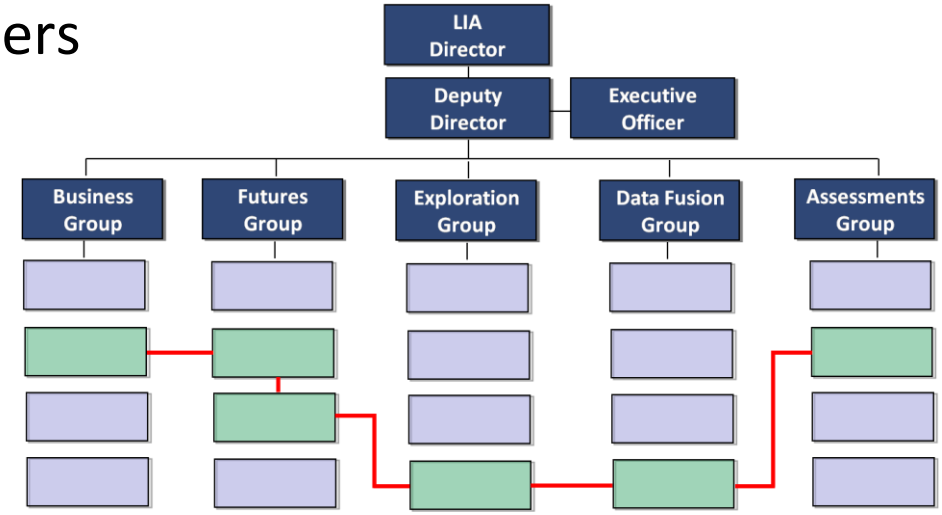
- **LIA Director**
  - **Deputy Director**
    - **Executive Officer**
  - **Business Group**
    - Fiscal Resources
    - Contract Management
    - Human Capital
  - **Futures Group**
    - Long-Term Strategies
    - Science & Technology Reviews
  - **Exploration Group**
    - Technology Demonstrations
    - Technology Assessments
  - **Data Fusion Group**
    - Logistics Architecture
    - Log Domain Demos and Assessments
  - **Assessments Group**
    - Business Process Analysis
    - Operational Sensing
    - Policy Enhancements

LIA Workforce

- Two geographic locations
  - Fort Belvoir, VA
  - New Cumberland, PA
- 99 Civilians and 5 military positions
- Multi-disciplined logisticians with experience in:
  - Transportation
  - Maintenance
  - Supply
  - Engineering
  - Computer Engineering
  - Operations Research
  - Business Management
  - Contract Management
  - Project Management

Matrix-Supported Teams

- Fosters culture of teamwork and knowledge sharing
- Project Teams consist of members from across the organization
- Provides expertise in required areas
- Allows for formation of flexible ad hoc teams



Role in Logistics Community

- Innovator
  - Provide HQ level perspective on any/all issues related to new applications of logistics-related technologies, policies, process enhancements, and business practices

- Integrator
  - Serve as integrator of new and emerging technology solutions with logistics needs and gaps

- Program Leader for G-4
  - Science and Technology
  - Common Logistics Operating Environment
    - Condition Based Maintenance Plus
    - Army Integrated Logistics Architecture
  - Energy
  - 360 Degree Logistics Readiness Business Intelligence

Logistics Innovation Agency Strategy Map 2010-2014

Vision: To be the logistics innovation leader

Innovative Solutions

- Logistics data visibility, synchronization and interoperability
- Decision support and knowledge management
- Logistics process assessments & recommendations
- Technology transition

Demonstrate, assess and transition innovative solutions to address logistics gaps

Exploration & Discovery

- Conduct operational sensing
- Research & evaluate leading edge science & technologies
- Research & apply innovative business processes
- Conduct high quality demonstrations

Aggressively explore new and emerging technologies & processes to improve logistics responsiveness

Enabling Innovation

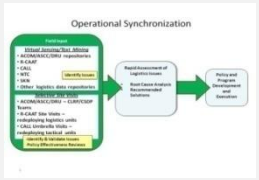
Financial	*Internal Processes*		*Learning & Growth*		*Outreach*
Simplify/streamline budget planning & execution processes	Optimize the portfolio management process	Enhance information & knowledge management	Attract and develop a high quality workforce	Provide educational & training opportunities	Execute effective Strategic Communications
Diversify the funding strategy	Enhance analytical capacity and capabilities	Embrace a cost culture supporting efficient business operations	Foster a culture of innovation & creativity	Develop project management and action officer skills	Build, maintain and leverage Strategic Partners

Optimize resources, people and processes to enable logistics innovation

Mission: To provide innovative solutions for improved logistics readiness

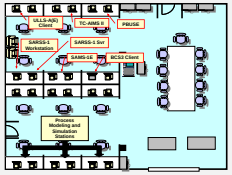
Current Projects

Operational Sensing



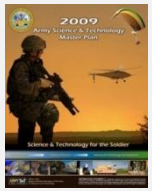
Approach to using sensing research methods to study the needs and requirements of the force in order to ascertain areas for G4 Policy and Program modification or Agency effort

Logistics Assessments



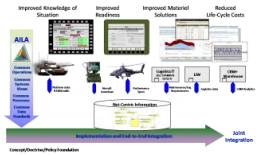
Provides a cost-effective, agile capability to assess the End-to-End (E2E) logistics process by utilizing mapping, simulation, and modeling tools

Science & Technology



Identify new and emerging technologies with the potential to significantly improve future logistics readiness, and represent logistics equities in Army S&T processes

Common Logistics Operating Environment



Initiative to guide the Army-wide implementation of self-diagnosing /self-reporting platforms that interact with a networked sustainment system to improve logistics situation awareness, maximized operational availability, and reduce system life cycle costs

Current Projects

Energy

Coordinate G-4 efforts supporting Army strategic energy goals, explore high-impact innovative operational fuel and energy solutions, and make the business case for Army investment

Anti-Corrosion Nanotechnology Solutions – Logistics

Establish framework and strategy for the application of nano-engineered coatings and/or materials designed to mitigate corrosion

Unmanned Aerial Systems

Clearly articulate the concept for integrating a Cargo Unmanned Aerial System (CUAS) capability into a future Integrated Logistics Aerial resupply (ILAR) concept

Agile Robotics

Enables agile, semi-autonomous robotics capabilities for identification, manipulation and movement of sustainment commodities

Current Projects

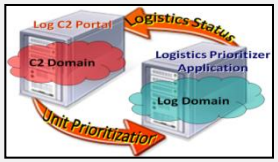
Mobile Apps

EPIC Mobile App

360 dLR Mobile App

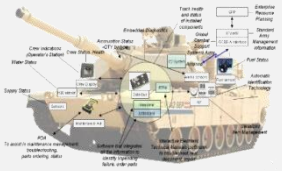
Web based mobile apps that provide Soldiers fast and easy mobile access to logistics information so they can do their job more efficiently, effectively and improve Army readiness

Enterprise Based Approach to Logistics



A logistics decision support suite of services that uses Intelligent Agents to provide logistics planners and analysts a view of the operational environment in order to make critical decisions ensuring responsive mission based sustainment

Condition Based Maintenance Plus



A proactive equipment maintenance capability that uses system health indicators to predict failure and take appropriate action

360 Degree Logistics Readiness

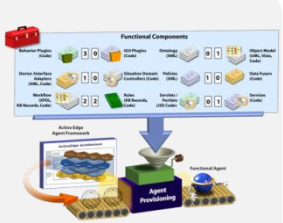
Tools that provide visibility of Army level materiel readiness to assist in effectively shaping Army readiness and influence budget processes

Current Projects

Next Generation Wireless Communications

Leverages a cutting edge wireless mesh networking protocol, GPS, and sensors to enable continuous, near-real-time contact with DoD assets throughout the distribution enterprise from depot into the last tactical mile

Adaptive Logistics



Demonstrates the use of Intelligent Agent (IA) technology and cognitive decision support tools to achieve asset and event visibility, and to bind logistics decisions with operations plans through the use of IA

Smart Containers

Integrates state-of-the- art communications, tracking and sensing technologies with an innovative twenty foot equivalent intermodal shipping container made from light-weight, polymer material providing RF transparency

Freedrop Packaging Concept

An effort to demonstrate an innovative packaging system whereby supplies can be dropped from very low altitudes with no parachutes and land with no damage and in a condition that facilitates quick and easy recovery

Enterprise Policy Process Interactive Capability

Web-Based Army logistics policy search tool, providing Army logisticians with precise and focused quick access to all G-4 Army regulations, pamphlets and the Defense Transportation

Sample of Completed Projects

CSS Automated Information Systems Interface (CAISI)

Capability that allows CSS automation devices to exchange information via tactical and commercial communications networks.

TRANSITIONED TO:

ODCS, G-4; AMC; CASCOM; TRANSCOM; PM, FCS; PEO EIS; USMC

Low Cost Low Altitude Aerial Resupply

A low velocity aerial resupply capability for the delivery of small quantities of supplies In support of operations in remote locations.

TRANSITIONED TO:

ODCS, G-4; NSRDEC; PM FSS; CASCOM

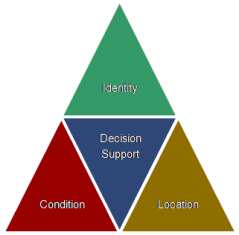
Micro Electrical Mechanical Systems (MEMS) with RFID

MEMS sensors integrated with RFID enhance asset visibility with near-real time environmental condition monitoring of life-limited assets.

TRANSITIONED TO:

ODCS, G-4; PM J-AIT; Army Medical Department

Army Total Asset Visibility

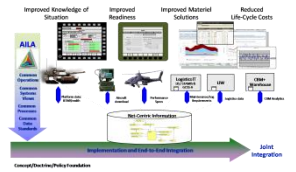


Integrated information from numerous Automated Information Systems to provide logisticians visibility of stocks in use, in storage, on hand, and in transit.

TRANSITIONED TO:

ODCS, G-4; LOGSA

CLOE SBCT and Aviation Proof of Enablers



Demonstrated the technical and operational feasibility of enablers required to implement/support CBM+ as documented in the AILA.

TRANSITIONED TO:

PEO Aviation; PEO GCS; PEO CS&CSS; PEO EIS; CASCOM; ODCS, G-4; TACOM

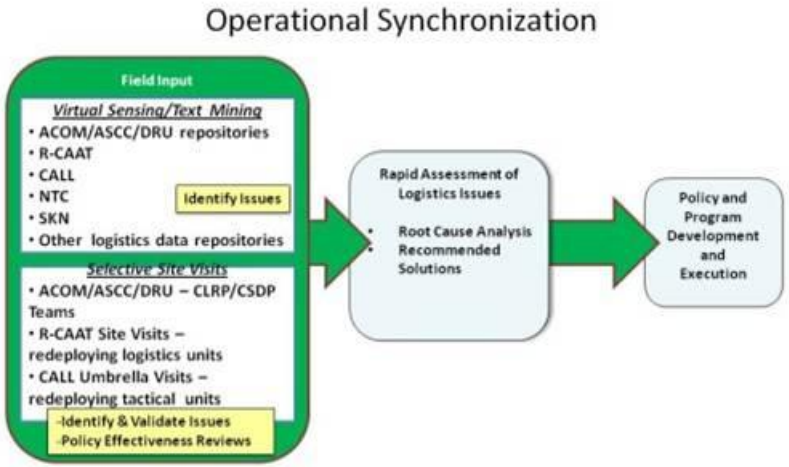
LIA
INNOVATION

Delivering innovative solutions for improved logistics readiness

"…to boldly go where no man has gone before"

For More Information:
https://lia.army.mil/

Operational Sensing Project



DESCRIPTION

Systematic process to collect & synthesize qualitative & quantitative logistical information that's being generated by the Army Logistics Enterprise, resulting in actionable issues that impact Logistics policies and programs across the Army. This will be accomplished for the operational forces by conducting interviews with redeploying commanders and staff and reviews of lessons learned libraries using a text mining program. A review of institutional forces will be completed by creating a system under the Command Logistics Review Program to conduct a virtual review of ACOM/ASCC/DRU logistical data repositories.

Stakeholders:

MILESTONES

✓Complete and Vet Methodology and Procedures	30 Sep 09
✓Field Sensing Team Fully Operational	13 Oct 09
✓Initial visits to CLRP Teams	30 Mar 10
✓Analysis and Verification Team Fully Operational	30 May 10
✓Capstone Training for IBM SPSS Complete	18 Jun 10
✓Text Analytics Team Fully Operational	30 Jun 10
✓Create collaboration portal for Virtual CLRP	15 Jul 10
✓Update AR 11-1	30 Sep 10
❑First Analysis Products Completed	15 Oct 10
❑Develop FY 11 Interview Schedule	15 Oct 10
❑ Run Text Analysis on GSA and AAA docs	30 Oct 10
❑Begin work with Rand on SSA Cross walks	30 Oct 10
❑First products vetted and posted to Web	30 Nov 10

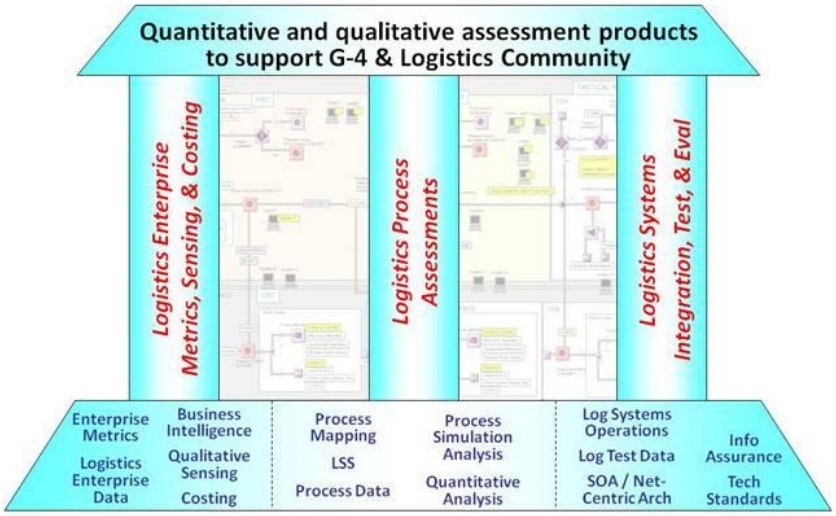
WAY AHEAD

❑ Field Sensing Team
- •Develop and Confirm R-CAAT interview schedule and CALL Umbrella Visits
- •Work with RAND to document issues and lessons learned from SSA Crosswalks

❑ Text Analytics Team
- • Develop additional Input Sources for Text Mining
- • Text Mine GSA and AAA document archives
- • Complete Transfer of Virtual CLRP to Project Portal
- • Complete Development of Operational Sensing Website

❑ Analysis and Verification Team
- • Complete Verification of Issues and Best Practices from R-CAAT Documents
- • Complete Issue Papers on Questions designated by DCS G4

Logistics Assessments



DESCRIPTION

LIA's logistics assessments provide the DCS, G-4 and the Logistics Community with the capability to conduct cost-effective, non-disruptive, quantitative and qualitative assessments of Army logistics policy, processes, & programs. This capability is used to:

❑explore & develop logistics metrics & HQDA-level decision support tools to improve the strategic monitoring & evaluation of Army Logistics Enterprise performance

❑provide cost effective & responsive assessments of "As-Is" processes and impact of potential "To-Be" improvements

❑integrate & assess the capabilities of new logistics enablers in a relevant environment through the operation of a logistics process test & demonstration laboratory

Stakeholders: ODCS, G-4; AMC HQ; LCMCs; LOGSA; CASCOM; Army Analysis Community

KEY ACCOMPLISHMENTS

- ✓ Deployed the BI Dashboards to the LIW (360° Log Readiness, MySSA, My Retrograde)
- ✓ Completed quantitative & process assessments:
  - ✓ Ft. LCLA BCA; CLS Effectiveness Study; C-E Battery Study; PATF Process Assessment; Ft. Bragg pRFID Demo Assessment; Army Equip. Loss LSS; Total Package Fielding LSS; Operational Sensing Issue Analysis
- ✓ Completed systems / enabler assessments:
  - ✓ STAMIS Web Services Assessment; WMMS / SAMS-I(E) Comparison; Digital Arms Room Policy and Process Assessment; CBM+, AMLID, and EBAL Demo Support; SMP Fully Burdened Cost of Fuel Analysis Capability

WAY AHEAD

❑ Continued BI Dashboard Enhancements for 360 – JAN11

❑ Completion of the following quantitative Assessments:
- Smart Container BCA – NOV 10
- FPCP BCA – DEC2010
- TWV Sustainment Assessment – DEC10
- Repair Cycle Float (RCF) LSS – DEC10
- pRFID CBA – MAR11

Science and Technology (S&T)

* This is not a comprehensive depiction of the S&T enterprise or partnerships

DESCRIPTION

LIA has a broad and enduring role in S&T:

✓**To investigate advanced research and technology across many sources (e.g., government, national labs, industry, academia, international) and leverage/adapt promising technologies to enhance logistics readiness.**

✓**To represent the Army G-4 and logistics equities in Army S&T processes and provide guidance and oversight through the Army Science & Technology Working Group (ASTWG).**

Stakeholders:
G-4, ASAALT, TRADOC/ARCIC/CASCOM, AMC/RDECOM, SBIR PM

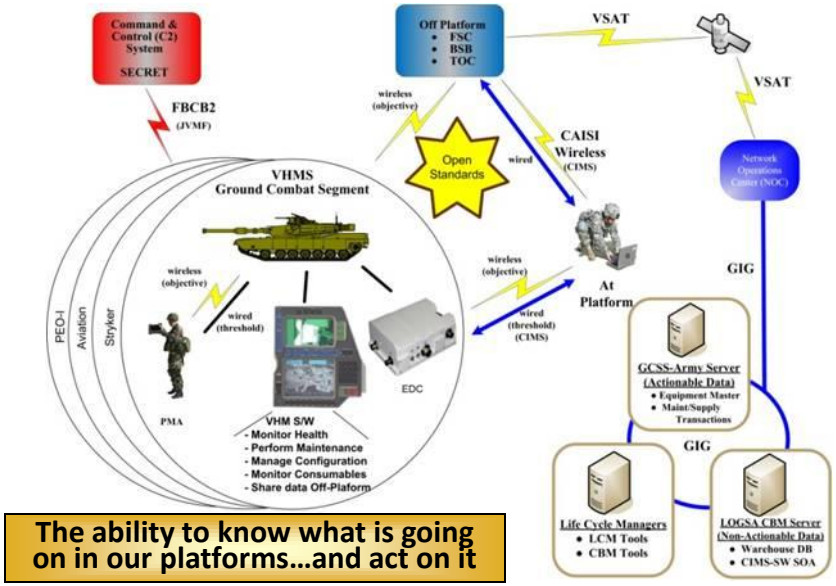
KEY ENGAGEMENTS

- **Army Science & Technology Advisory Group (ASTAG)/ASTWG – provide oversight and guidance to the S&T enterprise**
- **Army Small Business Innovation Research (SBIR) – lead multi-agency LOG stakeholder reviews of solicitation topics & proposals**
- **RDECOM Technology Focus Teams (TFTs) – primary member of Power & Energy TFT and Mobility & Logistics TFT**
- **TRADOC/ARCIC/CASCOM – collaborate on capabilities, concepts and doctrine that enable the Sustainment Warfighting Function**
- **Army Science Board (ASB) – G-4 advisor to FY10-11 ASB study "Strengthening Sustainability and Resiliency of a Future Force"**
- **National Laboratories – Integrate research into LIA projects**

STATUS

- **Efforts to Date:**
  - **ASTWG meeting, 20 Oct 10**
  - **ARCIC-RDECOM Home-on-Home, 9 Dec 10**
  - **M&L TFT Business Meeting, 23-24 Feb 11**
  - **P&E TFT Business Meeting, 10 Mar 11**
  - **SBIR Evaluations/Endorsements (multiple cycles)**
- **Current Efforts:**
  - **S&T Exploration/Outreach/Coordination**
- **Next Actions:**
  - **Power & Energy TFT Roadmaps (3QFY11)**
  - **Mobility & Logistics TFT Roadmaps (3QFY11)**
  - **CASCOM Seminars (3QFY11)**
  - **Logistics S&T Collaboration (3QFY11)**

Common Logistics Operating Environment (CLOE)



The ability to know what is going on in our platforms…and act on it

DESCRIPTION

CLOE is an Army-wide approach to guide the development and application of information technology to achieve an Army equipped with self-diagnosing/self-reporting platforms interacting with a networked sustainment system, with result being improved logistics situation awareness, maximized operational availability, and reduced system life cycle costs. CLOE capabilities represent a unique blend of equipment configurations, interfaces, and data standards designed to integrate platform level equipment and consumable status information with the Army's logistics enterprise environment.

Stakeholders: Army G-44(M); Army G-46; ASA (ALT); HQ AMC; CASCOM; TACOM; AMCOM; CECOM; LOGSA; PEO Aviation; PEO GCS; PEO Integration; PEO EIS/ PM GCSS-Army & PM AESIP; PD TMDE; SEC LEE; ATEC/AEC

MILESTONES

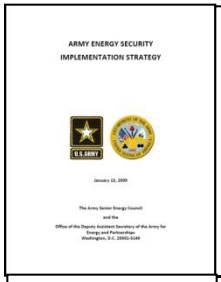
✓ Stryker Brigade Combat Team Demo	Nov 04
✓ Aviation Proof of Enabler Demo	Aug 07
✓ Dev Army Integrated Logistics Architecture	On-going
✓ Published U.S. Army CBM+ Roadmap	Dec 07
✓ HBCT Condition Based Readiness Analysis	Aug 08
✓ Establish CLOE TCI Initiative	Feb 09
❑ Integrate GCSS-A System Views s into AILA	Mar 11
❑ Complete PM Guidebook to CLOE	Dec 11
❑ Complete and validate GCSS-Army interface and data standards for use by platform log sys.	Mar 12
❑ Transition Tactical Bulk Fuel Mgt Enablers	Oct 13
❑ Transition Tactical Ammo Mgt Enablers	Nov 14

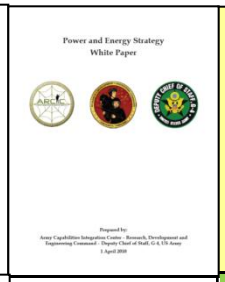
PROJECT STATUS

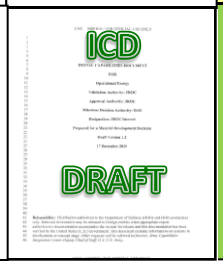
(as of: 18 Aug 10)

- ❑ Efforts to Date:
  - ➢ TRADOC designated the AILA as the Logistics portion of the Current Modular Force Architecture
  - ➢ SBCT Cost Benefit Analysis concludes implementing CLOE Enablers will save $75M if implemented
  - ➢ Established CLOE TCI IPT to guide Army stakeholders toward common solutions
- ❑ Current Efforts:
  - ➢ Supporting PM GCSS-Army with Architecture Support
  - ➢ Providing a an information integration framework to standardize interfaces between platform & enterprise log systems
  - ➢ **Developing a PM guidebook for CLOE compliance**
- ❑ Next Action/Date: Complete and validate interface design description and software libraries for log data information integration

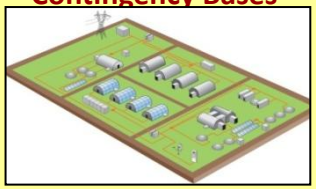
Energy Summary





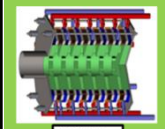


Contingency Bases



Micro Grids & Renewable Energy

Soldier



Thermoelectric Generator

Solar Battery Chargers

DESCRIPTION

U.S. Army Logistics Innovation Agency coordinates G-4 efforts in support of Army strategic energy goals and explores high-impact innovative operational energy solutions. Our mission is to pursue innovative energy solutions through the assessment of operations, requirements, processes, and technologies associated with Power & Energy (P&E)—a key component of Army Readiness and a major logistics and financial issue. The objectives which support our mission are:

- Integrate operational energy-related issues, initiatives, policies, and programs on behalf of the DCS, G-4
- Identify and evaluate energy technologies and solutions that will improve energy efficiency and/or reduce fuel and energy demand at the operational and tactical levels
- Assess and analyze technologies and solutions to make the business case for implementation within the Army

Partners: HQDA G-4, ASA(IE&E), ASD OEPP, ASA(ALT), RDECOM, CASCOM, ARCIC, ARCENT, DLA Energy, APC, AMSAA, DOE

MILESTONES

✓ Power & Energy Strategy White Paper	1 Apr 10
✓ Participate in Army Science Board (ASB) Summer Study	Jul - Aug 10
✓ Present Battlefield Fuel Consumption Analysis to the G-4	12 Aug 10
✓ Begin Thermo Electric Generator project	Sep 10
✓ Begin Smart and Green Energy for Base Camps project	Sep 10
✓ AR 5-5 TFEIP Study completed	24 Sep 10
✓ Complete management of G-4 FBCF Contract	26 Sep 10
✓Senior Energy & Sustainability Council (SESC) Advisory Board	2 Feb 11
✓ Participate in 4-Star SESC	11 Feb 11
✓ Brief Congressional Staffers on Operational Energy	28 Feb 11
✓ CASCOM Fuel & Energy Seminar	Apr 11
✓ Support ASB Summer Study	1-11 Aug 11
➢ SESC Advisory Board (2-star) & SESC (4-star) Meetings	8 & 15 Sep 11
➢ SAGE Demonstration Begins	Oct 11
➢ TEG Project Complete	Sep 12

STATUS

❑ **Efforts to Date:**

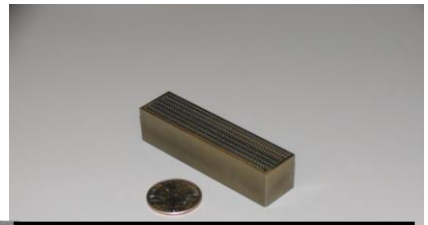
- ➢ Provided input to Army strategic documents and policies (e.g., DoD Operational Energy Strategy)
- ➢ Assumed membership in Senior Energy & Sustainability Council (SESC) O-6 WG and the Joint Expeditionary Basing WG
- ➢ Completed technology "Quick Looks" such as Lighting Kit Motion Detector , bio-fuel generators, air-ground heat exchangers, spray foam insulation, Solar Re-Generator, etc.
- ➢ Completed draft Operational Energy Initial Capabilities Document ICW ARCIC
- ➢ Responded to Congressional, DoD IG, and GAO inquiries and taskers
- ➢ Completed Fully Burdened Cost of Fuel (FBCF) software tool; provided training sessions
- ➢ Supported CASCOM Fuel & Energy Seminar (Apr 11)
- ➢ Completed SAGE design document (Mar 11)

❑ **Next Actions:**

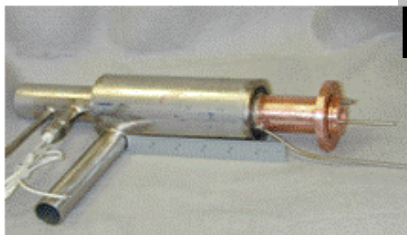
- ➢ SESC Preparations w/focus on consolidating metrics (WG/Advisory Board/SESC)
- ➢ OASD OEPP DoD Operational Energy Strategy Implementation Plan
- ➢ Operational Energy Campaign Plan ICW ARCIC and CASCOM
- ➢ Supporting ASB Summer Session, "Strengthening the Sustainability and Resiliency of a Future Force"
- ➢ Continue to support Contingency Basing Community of Practice
- ➢ TEG Preliminary Design (Sep 11)

Advanced Thermoelectric Generator (TEG) Power Source

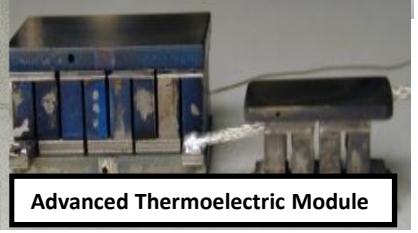
Critical Components



Micro-technology Heat Exchanger



Diesel Fuel/JP-8 Combustor



Advanced Thermoelectric Module

DESCRIPTION

A two-year, three-phase effort to deliver a lightweight modular power source for use in austere environments at the dismounted squad and platoon level. Provides a squad/man-portable, JP8-powered prototype TEG system capable of recharging squad batteries nearly silently. A modular design allows TEG components to be transported separately and assembled in the field, minimizing the load to the individual Soldier. Project integrates DOE and NASA expertise to deliver a government-owned TEG system, data and design specifications to Army transition partners who will perform prototype evaluation and productization.
Payoff: minimize or eliminate use of primary batteries; lighten the Soldier's load; reduce the Army's total cost of battery procurement, storage, transport, and disposal.

Army Transition Partners: PM Soldier Warrior (SWAR), CERDEC, PM MEP
Stakeholders: CERDEC, PM MEP, MSCoE

MILESTONES

✓ Brief Director	Jul 10
✓ Brief G-4	Aug 10
✓ Phase 1 Funding Decision	Sep 10
✓ Begin Phase I: Design/Develop Components	Sep 10
✓ Phase II Funding Decision	Jul 11
❑ Begin Phase II: Subscale Prototype	Oct 11
❑ Phase III Funding Decision	Mar 12
❑ Begin Phase III: Full-scale Prototype	Apr 12
❑ Prototype Demonstration/Transition	Sep 12

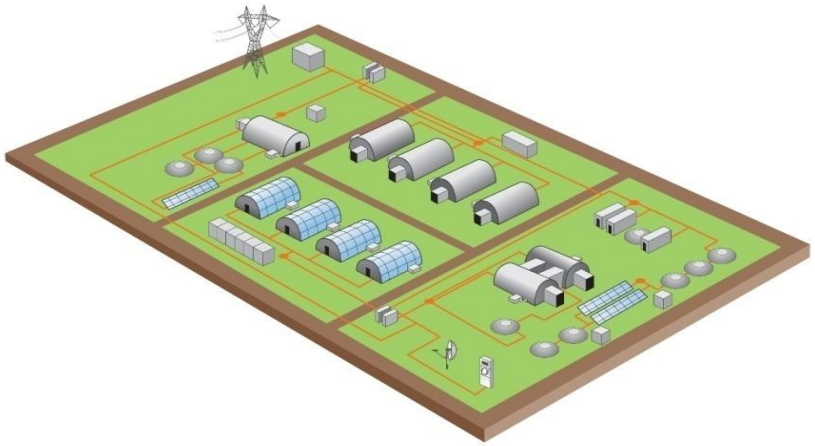
STATUS

❑ **Efforts to Date:**
- ➢ TEG Proposal Brief/White Paper - Aug 10
- ➢ Briefed Joint partners (USAF, SOCOM, USMC) - Oct 10
- ➢ Completed TEG User Conference - Oct 10

❑ **Current Efforts:**
- ➢ TEG Phase I: Investigate, apply, and evaluate critical components - Oct 10-Sep 11

❑ **Next Actions:**
- ➢ Stakeholder design review – Jul 11
- ➢ Evaluation of Phase I Results – Sep 11
- ➢ Begin Phase II – Oct 11

Smart and Green Energy for Base Camps (SAGE)



Customers: ARCENT and USFOR-A Engineers
Stakeholders : PM-MEP, PM Force Provider, USACE

DESCRIPTION

SAGE is an LIA/G4 demonstration of a COTS-based smart micro-grid design/standard for medium-sized Forward Operating Base (FOB) camps within the operational camp spectrum (scalable within the 150 -2,400 person range). The smart micro-grid represents an integrated, open-source approach for improving the generation, storage, transmission, distribution and consumption of electrical power at deployed locations, which typically rely on generator sets for electricity. The smart micro-grid will combine existing COTS technologies (e.g., communications and control systems, energy storage, energy-efficient structures and renewable sources) into an intelligent power management system that will reduce fuel consumption by ~30-60% versus the current baseline. Deliverables are design specifications and contract language suitable for LOGCAP or other contract vehicles.

MILESTONES

✓ Brief G-4	3 Aug 10
✓ Begin Phase I: Design (6 months)	Sep 10
✓ Conducted User Conference	3 Dec 10
❑ Begin Phase II: Build & Demonstrate	Aug 11
❑ Complete System Assembly	Sep 11
❑ Begin Demo	Oct 11
❑ Initial Testing & Data Collection	Jan 12
❑ Initial Data Analysis	Mar 12

STATUS

- ❑ Efforts to Date:
  - ✓ User Conference Executed
  - ✓ Initial base camp design completed
  - ✓ Site selection completed
- ❑ Current Efforts:
  - ➢ Purchase and integrate H/W & S/W
  - ➢ Setup camp
  - ➢ Collect actual usage data for analysis (BCA/ROI)

Anti-Corrosion Nanotechnology Solutions - Logistics (ACNS-L) Phase-3

DESCRIPTION

- ❑ A structured approach for the application of nano-engineered coatings and/or materials to mitigate corrosion on Army materiel
- ❑ Observation Helicopter (OH-58D) Kiowa Warrior Phase-3 testing of a potential nanotechnology solution for common 7075-T73 Aluminum Alloy with cross-platform application
- ❑ Facilitate a Product Manager Kiowa depot level repair program for applying a verified nanosolution to counter pitting corrosion on the OH-58D Torquemeter Support

Stakeholders: G-44(M), PEO Aviation, PM Kiowa, AMCOM Aviation Engineering Directorate (AED) and Corrosion Office, Aviation & Missile Research, Development and Engineering Center, Bell Helicopter

MILESTONES

- ✓ Phase-3 Contract Award & Kick-off Meeting — Sep 10
- ❑ Nanotechnology Solution Test & Evaluation (NSTE) Plan — Nov 10
  - Analysis Report Outlines
  - In Process Review (IPR) Q1
- ❑ Interim Nanotech Corrosion App Transfer (NCAT) Report — Feb 11
  - IPR-2
- ❑ Testing & Analysis — May 11
  - IPR-3
- ❑ Final Nanotech Implementation Plan (NIP) — Aug 11
  - NCAT
  - NSTE
  - IPR-4

STATUS

- ❑ Efforts to Date
  - ➢ Contract Awarded, 7 Sep 10
  - ➢ Coordinated with AED and Naval Air Systems Command on Aviation MilSpec qualification and testing, 15 Sep 10
  - ➢ Kick-off Meeting with Key Stakeholders, 29 Sep 10
- ❑ Current Efforts:
  - ➢ Coordinate with Corpus Christie Army Depot
  - ➢ Develop NSTE Plan
  - ➢ Research DoD effort to streamline process for new coatings
- ❑ Next Action / Date: Finalize NSTE Plan / 30 Nov 10

Cargo Unmanned Aerial Systems (Cargo UAS)

Current Cargo Unmanned Aerial Systems Platforms & Future Concept

DESCRIPTION

- The terrain and weather combined with counter insurgency operations in Afghanistan constrain traditional logistics resupply methods and have presented significant operational challenges that frequently place Soldiers and equipment in extreme high risk.
- The Cargo UAS project is tasked with developing a business case that assesses the technical, operational and fiscal viability to acquire, operate and maintain a cargo UAS capability for resupply to augment existing cargo delivery systems.

Stakeholders: G-44D, G-43, G-3/5/7, CASCOM, TRADOC/ARCIC, UAS CoE, USMC, Joint UAS CoE, Air Mobility Command

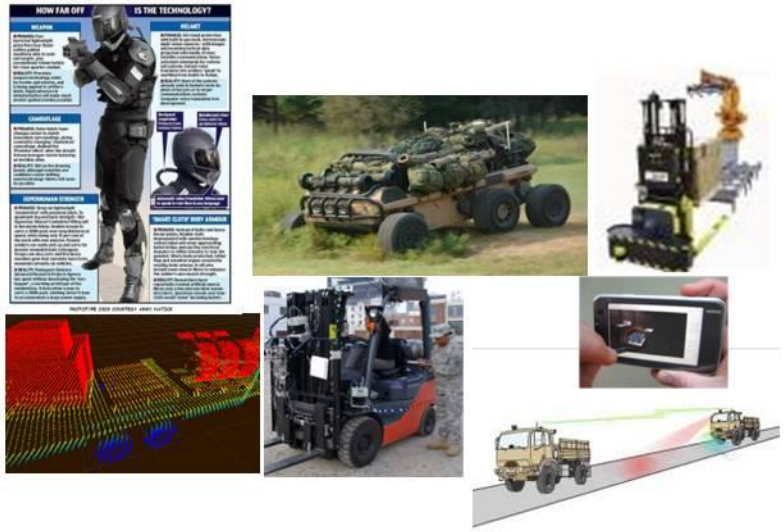
MILESTONES

✓ Joint Urgent Operational Needs Statement (JUONS)	Dec 09
✓ K-MAX USMC Demonstration	Jan 10
✓ Army UAS Roadmap	Feb 10
✓ A-160 USMC Demonstration	Mar 10
✓ DG-4 & Asst. Mil. Dep. to ASA ALT Briefing	Aug 10
✓ G-4 In-Process Review	Aug 10
✓ UAS Requirements Analysis	May 10
▪ Business Case Analysis (BCA)	Oct 10
▪ White Paper	Nov 10

STATUS

- ❑ Efforts to Date
  - ➢ Developed Analysis Study Design
  - ➢ Developed Distribution Analysis
  - ➢ Develop BCA Data Matrix
  - ➢ Developed Courses of Action (COA)
- ❑ Current Efforts:
  - ➢ Developing Sensitivity Analyses base on COAs
  - ➢ Developing Business Case Analysis (BCA)
  - ➢ Vetting/Validating Process, Methodology and Approach
- ❑ Next Action / Date: Complete BCA - 30 Oct 10

Robotics for Logistics



DESCRIPTION

ICW CASCOM and other stakeholders, conduct analysis and exploration with ground robotics capabilities to improve logistics speed, minimize exposure to dangerous operations, and support future unmanned capabilities per ACP requirement. Current focus is on material handling capabilities. Successfully demonstrated an initial unmanned robotic forklift that can operate in an unstructured military environment and interact with humans in a natural way using voice, gesture and other multimodal command capabilities.

Stakeholders (T): ARL, DDRE, CASCOM, RS JPO, TARDEC, ARDEC, JGRE, and PMs

MILESTONES

✓ Robotics Strategic Assessment White Paper	Aug 06
✓ Robotics White Paper Experiment	Oct 07
✓ Exoskeleton Analysis	Sep 08
✓ TRADOC/TARDEC Robotics White Paper	Mar 09
✓ Agile Robotics Year 1 Demo	Jun 09
✓ Draft Unmanned Systems ICD	May 10
✓ Agile Robotics Capability Demo	Jun 10
✓ Business Case Analysis for Robotic Forklifts	Jul 10
❑ Robotics Rodeo and CAST Demo	Oct 10
❑ Joint Ground Robotics Integration Team Plan	Mar 11
❑ Appliqué Kit Specification	Oct 11
❑ Integration into Requirements	Dec 11

PROJECT STATUS

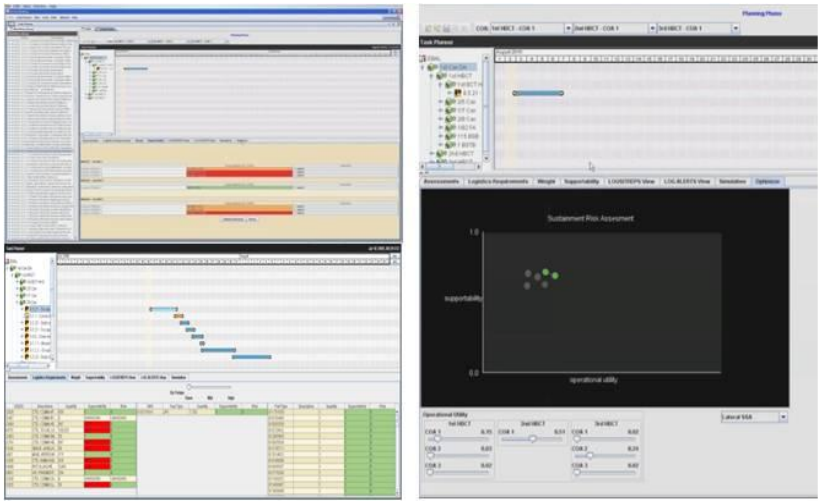
❑ Efforts to Date:
- ➢ Analysis, development and demonstration of advanced robotics capabilities for logistics
- ➢ Development of plans, white papers, roadmaps and participation in robotics COI working groups

❑ Current Efforts:
- ➢ Working with OSD and other Stakeholders to gain resources to allow for refinement of logistics robotics capabilities, demonstration and validation
- ➢ Working robotics requirements and participating in ground robotics working groups and roadmap development

❑ Next Action / Date: Work follow-on funding actions

Enterprise Based Approach to Logistics

PROJECT SCREENSHOTS



DESCRIPTION

A suite of services which provides a decision support tool set that is scalable from the tactical to strategic levels. The tool set allows the sustainment planners to dynamically influence the Military Decision Making Process (MDMP) by developing multiple sustainment courses of support for each commander's operational course of action. The EBAL process incorporates the Mission Command elements of Who, What, When, Where, and Why into a relative priority of mission/task information. As a result, commanders at all levels see the operational environment, understand what is needed, track what is requested, and make critical decisions ensuring responsive mission based sustainment.

Customers (T): Commander's and Logisticians
Stakeholders (T): CERDEC, PEO-EIS, PEO-C3T, USTRANSCOM, CASCOM
Transition Partners (T): PEO-EIS, PEO-C3T, USTRANSCOM

MILESTONES

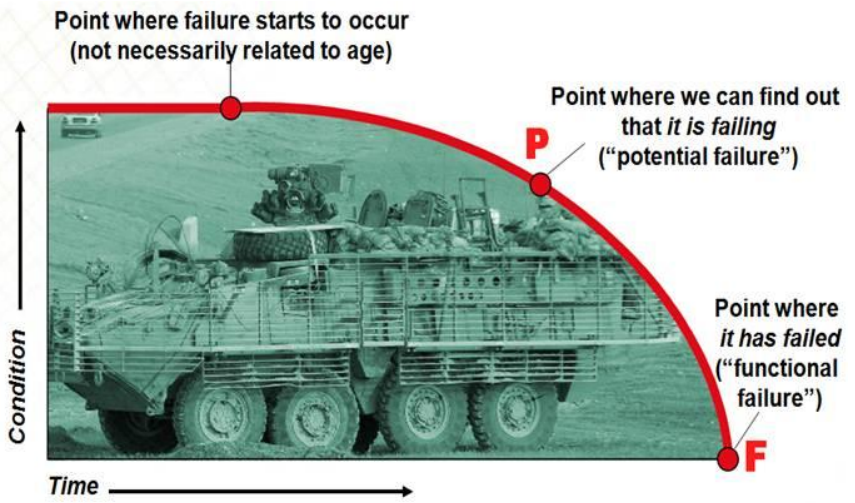
✓ Brief Director	27 Jul 10
✓ Brief DG-4	6 Aug 10
✓ Brief G-4	16 Sept 10
✓ Begin Phase IV (8 -12 months)	1 Oct 10
✓ CERDEC TITAN/EBAL LOE	Sept/Oct 10
✓ Start Work Meeting	25 Oct 10
❑ Cross Domain Solution Analysis	Mar 11
❑ EBAL/ ALCT Integration	Mar 11
❑ EBAL/ BCS3 Functional Analysis	Mar 11

PROJECT STATUS

(as of: 29 Dec10)

- ❑ Efforts to Date:
  - ➢ Phase I - Requisition visibility and modification
  - ➢ Phase II - Decision Support Services
  - ➢ Phase III - Optimization of Class IX
- ❑ Current Efforts: Phase IV
  - ➢ EBAL / TITAN LOE
  - ➢ EBAL/ALCT Integration
  - ➢ EBAL/BCS3 Functional Analysis
  - ➢ EBAL Cross Domain Analysis
  - ➢ GCSS-A Touchpoint Investigation
- ❑ Next Action / Date:
  Quarterly Technical Status Meeting Jan 2011

Condition Based Maintenance Plus (CBM+)



DESCRIPTION

CBM+ is the maintenance component of the Common Logistics Operating Environment (CLOE). It is the application and integration of appropriate processes, technologies, and knowledge-based capabilities to improve the reliability and maintenance effectiveness of DoD systems and components. At its core, CBM+ is maintenance performed based on evidence of need provided by Reliability Centered Maintenance (RCM) analysis and other enabling processes and technologies. CBM+ uses a systems engineering approach to collect data, enable analysis, and support the decision-making processes for system acquisition, sustainment, and operations. The Army G-4 has designated LIA as its executive agent for guiding the Army wide implementation of CBM+.

Customers: The U.S. Army including any Combatant Command (ASCC) or ACOM requiring. CBM+ is a DoD mandated effort and an essential element of Reliability Centered Maintenance.
Stakeholders: ASA (ALT) Product Managers, G-44(M), AMC and CASCOM
Transition Partners: ODCS G-4

MILESTONES

✓ CBM+ Roadmap Completed	Dec 07
✓ CBM+ Implementation Strategy Completed	Aug 08
✓ CBM+ Execution Council Charter Developed	Aug 08
✓ Initial CBM+ Execution Council Meets	Sep 08
✓ CBM+ Data Demonstration Completed	Feb 09
✓ Develop a framework for a CBM+ Cost Benefit Analysis	Jun 09
✓ Support G-4 development of POM Resource Guidance	Oct 09
✓ Support the CBM+ Weapon System review	Jan 10
✓ Draft CBM+ Implementation Guide (CBMIG) to the G-4	Apr 10
✓ Submit the NASA CDF Standard to the DISR	Jun 10
✓ Begin Work with AMC on codifying the ABCD Standard	Jul 10
❑ Complete CBMIG	Oct 10

STATUS

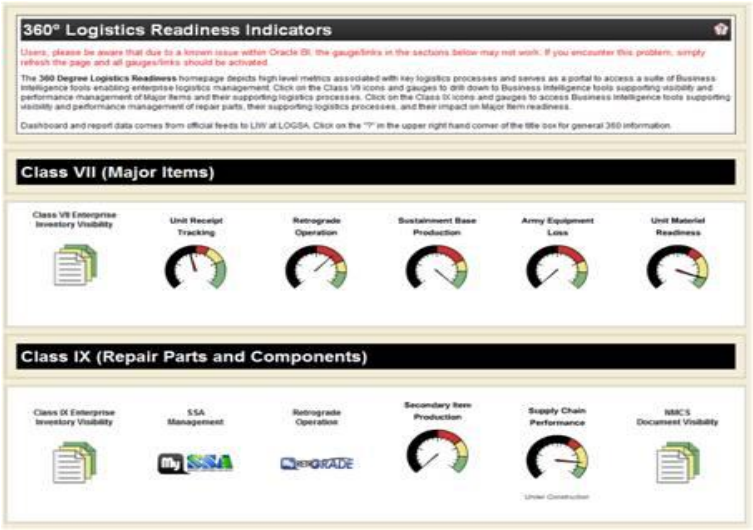
❑ **Efforts to Date:**
- **Completed the CBM+ Roadmap in Dec 07**
- **Established an initial CBM+ Governance construct as a component of the Depot Maintenance Corporate Board May 08**
- **Completed the CBM+ Implementation Strategy Aug 08**
- **CBM+ Demonstration Completed Feb 09**
- **Draft Implementation Guide to the Army G-4 Oct 10**

❑ **Current Efforts:**
- **Staffing the CBM+ Implementation Guide**

❑ **Next Steps:**
- **Forward the completed CBM+ Implementation Guide to the G-4 – Oct 2010**

360 Degree Logistics Readiness Suite of Tools

PROJECT PICTURE



DESCRIPTION

- A suite of BI tools providing:
  - Visibility of assets across the Army enterprise
  - Metrics and summary reports supporting performance management of key logistics processes
  - User friendly access and analysis of information managed in the Logistics Information Warehouse (LIW) – the Army's authoritative logistics database

Customers: Active, Reserve and NGB
Stakeholders: ODCS G-4; HQ AMC; LOGSA and CASCOM

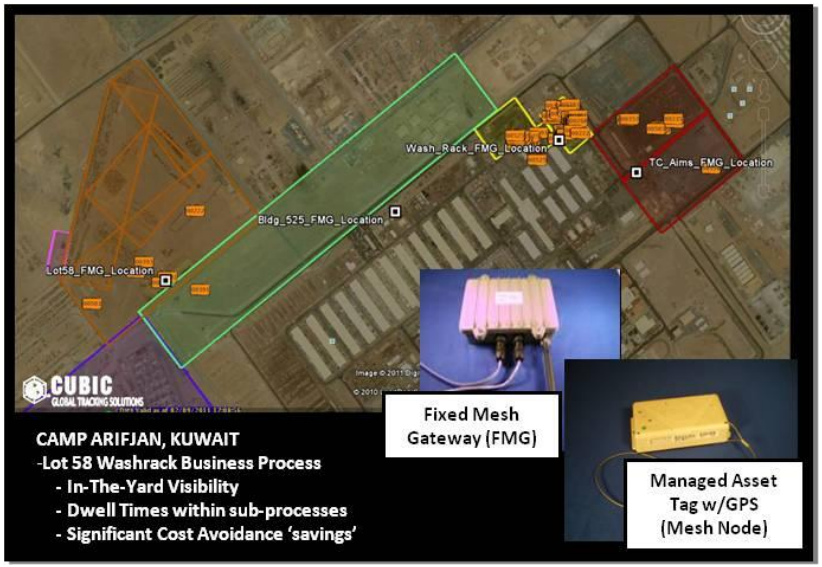
MILESTONES

- **BI Dashboard Rapid Prototyping Paradigm**
- **BI Dashboard Generation & Transition Process**
- **Class VII Tool Release: 2nd Qtr FY10**
- **Class IX Tool Suite Release: 4th Qtr FY10**
- **Code Upgrade, RSP and Enhancements: 2nd Qtr FY11**

PROJECT STATUS

- **Efforts to Date:**
  - **BI Dashboard Rapid Prototyping Paradigm**
  - **BI Dashboard Generation & Transition Process**
  - **Class VII Tool Suite in Production**
  - **Class IX Tool Suite in Production**
  - **Socialization / Training**
- **Ongoing Efforts:**
  - **Code Upgrade**
  - **Class VII Enhancements**
  - **Readiness Supply Performance**
  - **Socialization**
  - **Training**
  - **Full Transition to LOGSA Jan 11**

Next Generation Wireless Communications (NGWC)



DESCRIPTION

NGWC provides a secure, ultra-low power, wireless mesh network protocol to collect and route logistics information to approved/supported automated information systems (AIS). Harnessing mesh network technology, LIA is integrating sensors, GPS, and state-of-the-art software-defined radio technologies to enable an architecture for collecting and routing data off platforms. NGWC will enable near-real-time, continuous asset visibility at a fraction of the cost of the current nodal aRFID capability. Further, NGWC enables continuous 'in the yard' visibility and visibility in the last tactical mile. While the NGWC mesh protocol will revolutionize asset and in-transit visibility across the entire distribution enterprise, the NGWC mesh protocol will support a significant number of applications both within and beyond logistics to include CBM+ and Sense & Respond Logistics. In collaboration with Army Materiel Command (AMC) and the PM J-AIT, LIA is vetting the NGWC mesh networking protocol through the PEO-EIS to determine optimal acquisition/transition strategy for NGWC.

Stakeholders: CERDEC, AMC, USTRANSCOM, SDDC, USMC, G44D
Transition Partners: PEO-EIS (PM JAIT)

MILESTONES

✓ Project Start	Apr 2006
✓ SatCom Demo (Pakistan)	Feb 2007
✓ Capstone Mesh Demo	Apr 2007
✓ Spiral 2 Mesh Demo/testing	Sep 2008
✓ Spiral 3 Mesh Demo/testing	Mar 2009
✓ JLOTS 2009 (Mesh Operational Test)	Jun 2009
✓ Spiral 4 Mesh Demo/testing	Sep 2009
✓ CWID 2010	Jun 2010
✓ Kuwait Lot 58 Washrack PoP (Start)	Feb 2011
✓ PoP Expansion Decision (SWA-wide)	Mar 2011
❑ NGWC BCA Delivery to LIA	Apr 2011
❑ Expand AMATS throughout Kuwait	Jul/Aug 2011
❑ FY12 OSD JCTD Acceptance	Oct 2011

CAPABILITIES & WAY AHEAD

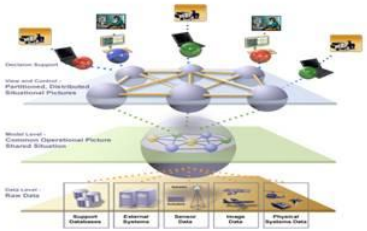
❑Key Capabilities
- ➢Secure Mesh network protocol, GPS, Sensors
- ➢Continuous, near-real-time, secure enterprise-wide networking architecture
- ➢Significant applications both within and outside logistics

❑Way Ahead
- ➢Complete and publish the BCA – April 2011
- ➢Complete Washrack Implementation PoP
- ➢Expand PoP capability throughout Kuwait
- ➢Identify owning DAA/Transition Partner
- ➢FY12 OSD JCTD to complete the NGWC protocol's full capability
  - ➢CBM+
  - ➢CLOE
  - ➢S&RL
- ➢Test and Certify the Mesh Network Protocol
- ➢Transition the capability to the appropriate PM

Intelligent Agents for Decision Support

PROJECT PICTURE

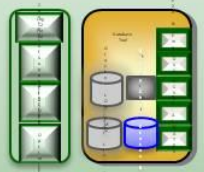
Adaptive Logistics



Enterprise Based Approach to Logistics

EBAL Phase III

- 1DIV - 3HBCT-6 BN each
- Optimization of Class IX (repair parts)



Net-centric Decision Support Environment

DESCRIPTION

Net-centric Decision Support Environment (NDSE) is the umbrella project and the end state for Intelligent Agent (IA) technology. At the end state, it is believed that a complete Common Operating Picture will be provided through application services. Data from the platforms will be available on a regular basis, along with digitization of all orders so that Commander's intent can be the determining factor in prioritization and movement throughout the Distribution network. The IAs have the capability to quickly monitor the entire network for information, analyze the information, and provide Courses of Action for the human being to choose from. Adaptive Logistics (AL) is the Logistics applications that have and are being demonstrated and transitioned. Enterprise Based Approach to Logistics (EBAL), is an effort to achieve integrated Log/C2 decision making and situational understanding, and is currently being demonstrated.

Customers: G44 (D, M, S), G43, PM-TIS, PdM-BCS3, USTRANSCOM, ASC
Stakeholders: CERDEC, AMC, PEO-EIS, PEO-C3T, SDDC, USMC
Transition Partners: PM-TIS, PdM-BCS3, ASC, USTRANSCOM

BENEFITS

"It's Adaptive Logistics and all the goodness that comes from artificial, learning networks, that help us think through problems faster, and do all the nug work for us." LTG Stevenson

- IAs have the capability to rapidly mine and fuse data from a multitude of sources, provide analysis of the data and recommend courses of action to facilitate decision making at all levels
- An increased efficiency and effectiveness in the Military Decision Making Process (MDMP) through automation with an estimated reduction of 50% in decision cycle times
- Leads us to a full NDSE capability in the future as communications and sensor technologies are promulgated over all platforms

PROJECT STATUS

(as of: 31 Aug 10)

- **Efforts to Date:**
  - **Completed and demonstrated Adaptive Logistics Capability Tool for PdM-BCS3 – Sep 2007**
  - **Completed and transitioned Maintenance application to ASC – Oct 2009**
  - **Completed and demonstrated 360 dLR application for G43 – Mar 10**
  - **Completed and demonstrated Phases I & II of EBAL – Mar 09 & Apr 10**
- **Current Efforts:**
  - **Completing PM-TIS application for TC-AIMS II – 2Q FY11**
  - **Completing Phase III of EBAL – 1Q FY11**
  - **Starting Phase IV of EBAL – Kickoff meeting scheduled for 25 Oct 10**
- **Next Action / Date:**
  - **TC-AIMS II demonstration – Jan/Feb 11**
  - **EBAL demonstration with CERDEC to tie C2 data into Logistics decision making process – Sep/Oct 10**

Smart Container Project

DESCRIPTION

The U.S. Army Logistics Agency's Smart Container project integrates state-of-the-art communications, tracking and sensing technologies with an innovative twenty-foot-equivalent (TEU) intermodal shipping container made from light-weight, polymer material providing radio wave penetration. This integration effort seeks to alleviate past problems encountered with active RFID-only applications by providing "infrastructure free", near-real time tracking and monitoring of a TEU container moving anywhere in the world. Advanced sensors integrated with the satellite tracking device provide intrusion detection and send an auto alert with location data to appropriate military authorities in near- real time. The capstone event for the project is to successfully test and evaluate the prototype smart container in a Proof-of-Principle (PoP) demonstration supporting OEF.

Customers: USCENTCOM; Any Combatant Command (ASCC) or ACOM requiring advanced container tracking/security
Stakeholders: USTRANSCOM, USJFCOM, DLA, FORSCOM, AMC (AIDPMO, JMC), PM J-AIT and CASCOM
Transition Partners: AIDPMO (ICW DLA, TACOM and possibly GSA)

MILESTONES

✓ Start Work Meeting	Oct 08
✓ Polymer Shell Production Line Completed	Sep 09
✓ Container Tracking/RF Transparency Test	May 10
✓ Container ISO/CSC-certification	Aug 10
✓ Twelve Prototypes Delivered (1st Contract Ends)	Sep 10
✓ New Contract Award (PoP: 30 Sep 10 – 29 Sep 11)	Sep 10
✓ CONUS "Test Runs" with DDC/DDSP	Nov 10
❑ Limited Objective Experiment (LOE) in Afghanistan	Mar-Jun 11
❑ Test/Certify New Container Configurations	
▪ CSC Certification (Stoughton, WI)	Jun 11
▪ Ammunition Grade Testing (McAlester, OK)	Jul 11
❑ Twenty-four Containers and Repair Kits Delivered	Aug 11
❑ Demonstration of Enhanced Capabilities	Sep 11

STATUS

- ❑ **Efforts to Date:**
  - ➢ Conducted RF transmission analysis and testing of polymer material and proved no decrease in power or transmission loss when the electronics package was placed inside the container
  - ➢ Passed ISO and International Convention for Safe Containers (CSC) testing and obtained American Bureau of Shipping's (ABS) approval
  - ➢ Validated prototype's design and functionality by successfully conducting "test runs" at DLA Distribution Susquehanna, Pa (DDSP)
- ❑ **Current Effort:**
  - ➢ Partnering with USCENTCOM, USJFCOM, USTRANSCOM, FORSCOM and 4ID to conduct a PoP in Afghanistan during 2nd/3rd QTR, FY11
- ❑ **Next Steps:**
  - ➢ Continue to optimize the container design and add more capability to the electronics package
  - ➢ Integrate capability to read passive RFID tags on assets being shipped (i.e., track/monitor container contents … not just the container)

Freedrop Packaging Concept Project (FPCP)

FDS OT at ATC

DESCRIPTION

The FPCP is a proof-of-concept effort to demonstrate through a series of test activities and events that the unique capabilities of the freedrop packaging concept and system can be exploited to provide sustainment support in the difficult and challenging operational environments of the 21st century. The FPCP is one facet of LCLA aerial resupply. Freedrop (no parachutes) requires an innovative packaging system whereby supplies can be dropped from very low altitudes and, because of the structural attributes and characteristics of the package itself, land with no damage and in a condition that facilitates quick and easy recovery (no MHE) and distribution. Once completed and transitioned, the FPCP FDS will improve support by enabling rapid and precise aerial delivery of small, tailored support packages to units operating in austere, remote and hard-to-reach locations.

Stakeholders: LOGSA PSCC, Aberdeen Test Center (ATC), Rutgers, ATEC, Airborne and Special Opns Test Directorate (OTC ABNSOTD), CASCOM, G-44(D), DLA, REF, Quartermaster Center & School, 82nd Sustainment Brigade (SB) and other operational units
Transition Partners: PM FSS, CASCOM and possibly others

MILESTONES

- ✓ Project Charter Signed by Director — 29 Jun 07
- ✓ Completed FPCP Demonstration Plan — 4 Oct 07
- ✓ Conducted Event 1 at LOGSA PSCC — 31 Oct 07
- ✓ Signed FPCP Transition Agreement with PM FSS — 31 Jan 08
- ✓ Conducted Events 2-12 (DT/OT) — Apr 08 – Aug 10
- ✓ Attained ATEC Safety Release for FDS 1 — 31 Mar 09
- ✓ Conducted OT with XVIIIth ABC and ABNSOTD — 13 Oct 09
- ✓ Conducted New Equipment Training w/ 82nd SB — 5 May 10
- ✓ Shipped 40 FDS 1 to 82nd SB in Afghanistan — 19 Aug 10
- ❑ Conduct Testing of FDS 2 — Oct 10 – Feb 11
- ❑ Publish Final Draft of Business Case Analysis (BCA) — May 11
- ❑ Coordinate/Complete Transition — Mar-Jun 11

PROJECT STATUS

- ❑ Key Success to Date:
  - ➢ Designed, developed and successfully tested the FDS 1 to freedrop a variety of key supplies, to include 5.56 mm and .50 cal ammo, selected repair parts, MREs, batteries and bottled water.
- ❑ Current Efforts:
  - ➢ Operational testing in theater of FDS 1 with 82nd SB.
  - ➢ Investigate production capability for new cushioning material.
  - ➢ Support USARAF in ATLAS Drop 11 exercise.
  - ➢ Development and testing of FDS 2 to integrate "softer" cushioning pads to better protect more fragile types of supplies.
  - ➢ Completion of draft BCA and other transition reports.
  - ➢ Explore testing of chevron for other aerial delivery uses.
- ❑ Next Action/Date: Event 14 at Aberdeen Test Center (Dec 10)

Enterprise Policy and Process Interactive Capability(EPIC)

DESCRIPTION

- Web-Based Army logistics policy search tool, providing Army logisticians with precise and focused quick access to all G-4 Army regulations, pamphlets, ALARACTS and the Defense Transportation Regulation (DTR)
- Provides users with relevant portions of a regulation based on a particular problem or issue being worked Integrates logistics policies with logistics business processes and doctrine
- Provides a cross-functional view of policy, showing inter and intra discipline (Maintenance/Supply/Distribution) relationships of policy

Stakeholders: G4, NDU, ALU, Logistics Community
Transition Partners : Pending

MILESTONES

✓ Imported 109 G-4 Army policy	Apr 09
✓ Imported Defense Transportation Regulation	Jun 09
✓ Imported 1500 ALARACTS	Nov 09
✓ Article published in Army Sustainment Magazine	Jan 10
✓ Transitioned to LIA	Apr 10
✓ Information Assurance Certification	Jun 10
❑ Mobile Application	Dec 10
❑ Article published in PS Magazine	Dec 10
❑ Multi-view capability	Mar 11

STATUS

❑ Efforts to Date
- ➢ Imported all G4 policy and Defense Transportation Regulation
- ➢ Developed an automated import tool for ALARACTS
- ➢ Modified GUI to allow users to search ALARACTS only
- ➢ Completed IA certification June 2010

❑ Current Efforts:
- ➢ Developing multi-view capability
- ➢ Developing mobile application for smart phones

❑ Next Action / Date: EPIC becomes an all-Army tool