



Project Lead Integration Overview and Challenges



Mr. J. Steven Roberts
Project Lead
Integration



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Integration (PL I) – Overview & Challenges



Steve Roberts
Project Lead

Project Lead Integration (PL I) Organization



Project Lead
Mr. James (Steve) Roberts

Arctic Integration Officer
Mr. Eric Predmore (CTR)

MISSION

Provide a spectrum of technology integration expertise & services in support of the PEO CS&CSS portfolio, linking PMs with industry and the S&T community.

VISION

Link the R&D enterprise, industry, government and academia to programs of record, rapidly delivering improved capabilities while reducing logistics demands and supporting Army Strategies.



Network Integration Lead
Ms. Pam Brown



Predictive Logistics Lead
Mr. Mike Satchfield



Director of Engineering
Ms. Dawn Packard



Director of Logistics
Ms. Celina Parisi



Director of Operations
Mr. Mohamed Mawari

Network Engineering Support (APG)
Mr. Adam Champine (CTR)

Predictive Logistics System Engineer
Mr. Louis Mancuso (CTR)

Science & Tech Engineer Non-Traditional Funding
Ms. Amanda Osborne

Science & Tech Engineer Electrification/Arctic
Mr. Dustin Gascho (CTR)

Logistics Manager
Ms. Suzanne Vermeulen

Program Analyst
Ms. Nicole Driver

Network Engineering Support
Mr. Nicholas LaFave (CTR)

Predictive Logistics TACOM Matrix
Mr. Kyle Bruns

Science & Tech Engineer Emerging Tech
Vacant

Science & Tech Engineer E2S2 Support
Mr. Kevin Brown

Logistics Manager
Mr. Ryan Walter

Operation Officer Under Recruit (CTR)

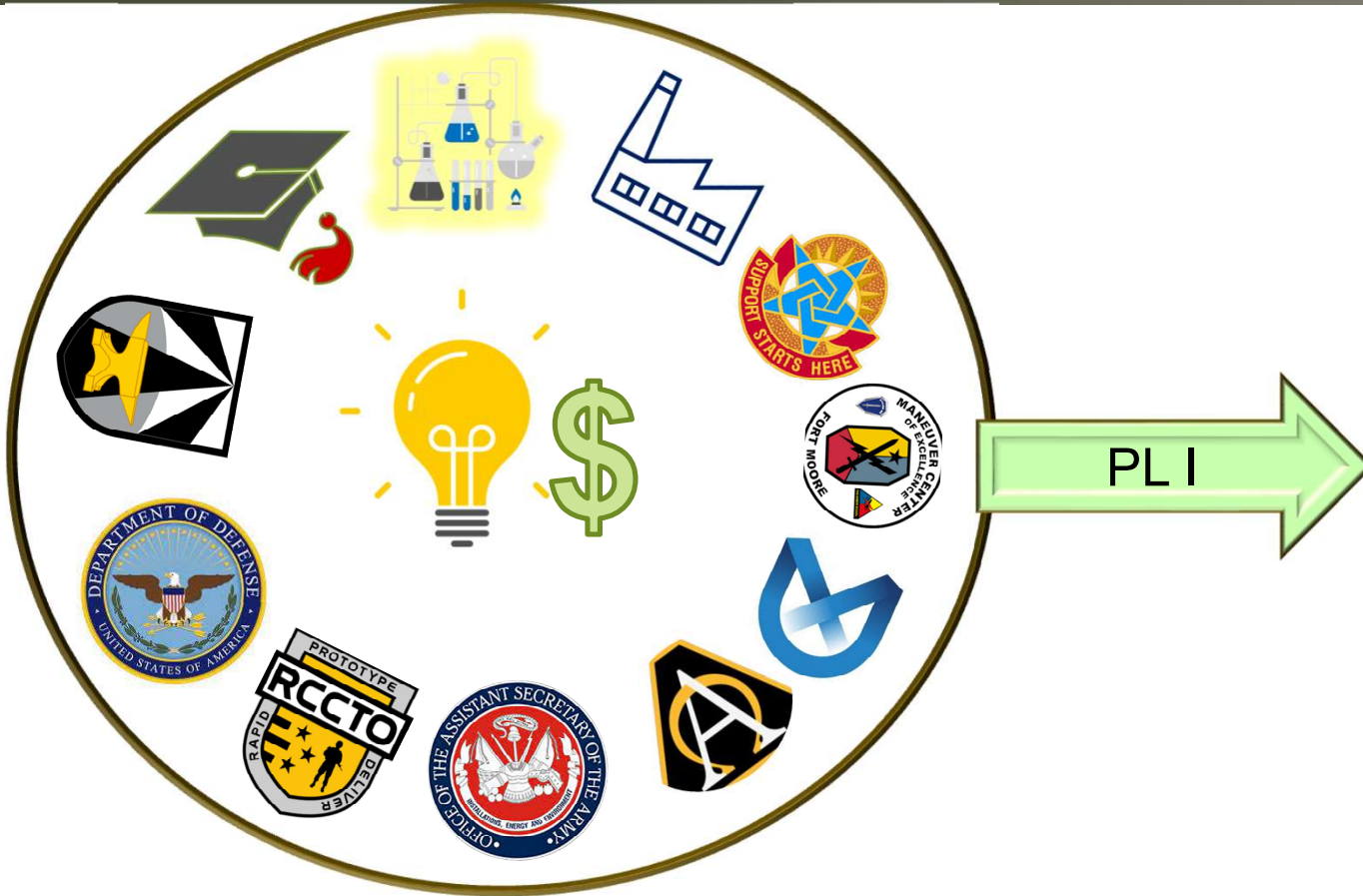
Science & Tech Engineer Experimentation
Mr. Kevin Westover (CTR)

20 Personnel
4 states

Core - 6
DS Matrix - 7
Contractors - 7

PL Integration Mission and Focus

Mission



Focus



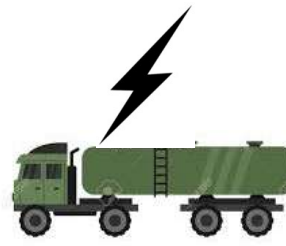
Electrification



Network



Arctic



Predictive Logistics



Strategies



Experiments



Transition Agreements

Setting Conditions For Modernization

Modernization



INTERIM NATIONAL SECURITY STRATEGIC GUIDANCE
 MARCH 2021



Budget

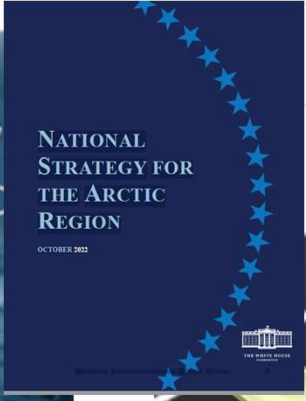
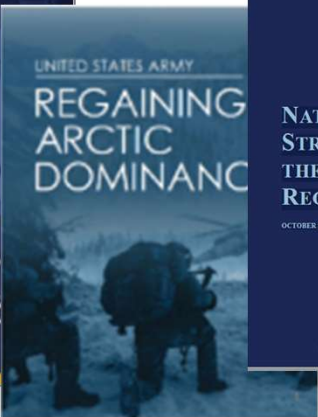
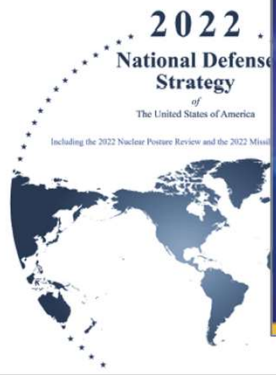
SPAR & POM Process

Requirements

Strategy

Technology

Commercial and Organic Base



Guidance and Strategies to Implementation

Tactical Vehicles – Path to Electrification

- Current requirements support mild-hybrids (e.g. anti-idle)
- Emerging requirements enable greater freedom in meeting climate change/demand reduction initiatives

Current Requirements

Emerging Requirements

FMTV
Capability Production Document
For
FAMILY OF MEDIUM TACTICAL VEHICLES, Increment 3
Sponsoring Organization: US Army
Signature Authority: LTJG James Haggard, Jr., OLC 61537
Date: 10 Feb 2014

Proposed Validation Authority: JROC
Proposed Milestone Decision Authority: AAE
Proposed User Working Component: JROC Interest
Proposed ACAT: IC
Approved: 10 September 2014
CAGRA # 91987

JLTV
CAPABILITY PRODUCTION DOCUMENT (CPD) FOR
JOINT LIGHT TACTICAL VEHICLE (JLTV)
VERSION 3.5D (JROC-Approved)
Headquarters: Materiel Corps, Combat Development and Integration (MDCI)
CDEI
US Army Combined Arms Support Command (USA-CASCOM)
JROC-Approved Date: 23 November 2014
Endorsed by: Deputy Commandant Combat Development and Integration (DC
CDEI) United States Marine Corps

Validation Authority: JROC
Milestone Decision Authority: Office of the Undersecretary of Defense
JOINT Staffing Directorate (JROC Interest)
ACAT: ID

CTT
Advanced Capability Development Document (ACDD) for Mobile Tire Logistics
For
C31 Common Tactical Truck (CTT)
Sponsoring Agency: US Army
Signature Authority: LTJG James Haggard, Jr., OLC 61537
Date Substantiated: 10 August 2007

eLRV
Advanced Capability Development Document (ACDD)
For
C31 Electric Light Reconnaissance Vehicle (eLRV)
Sponsoring Agency: US Army
Signature Authority: GEN John M. Murray, CG AFM
Date Substantiated: 17 June 2011

Validation Date: 10 Aug 2011

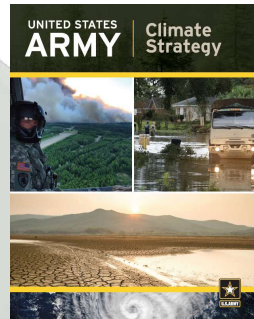
TaCV-E
Initial Capability Document
for
C31 Tactical and Combat Vehicle Electrification (TaCV-E)
Sponsoring Organization: US Army
Signature Authority: GEN John M. Murray, CG AFM
Date Substantiated: ...

Proposed Validation Authority:
Proposed MDA:
Proposed ACAT:



Long-Term:
Full Electrification (FY31-35)

- Electric Platform Identification
- Charging System Deployment



Mid-Term:
Hybrid Applications (FY27-FY31)

- Legacy Platform Hybridization
- JLTV Hybrid Program
- Microgrid
- eLRV Production
- Export Power

Near-Term initiatives within PEO CS&CSS will be used to mitigate hybrid and electric technological barriers to entry and inform future requirements.

Near-Term:
Kits and Commercial (FY23-26)

- Anti-Idle kits
- JLTV/HMMWV HEV Demonstrators
- HEV Decision Point for Tactical Vehicles



- Legend**
- eLRV – Electric Light Reconnaissance Vehicle
 - FMTV – Family of Medium Tactical Vehicles
 - HEV – Hybrid Electric Vehicle
 - HMMWV – High-Mobility Multipurpose Wheeled Vehicle
 - JLTV – Joint Light Tactical Vehicle
 - TaCV-E – Tactical and Combat Vehicle Electrification

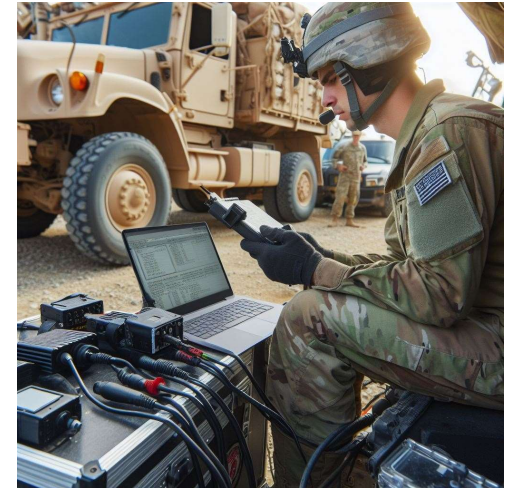
Predictive Logistics (PL)

- **Requirements Development**

- Abbreviated Capability Development Document (A-CDD)
- Information Systems Initial Capability Document (IS-ICD)
 - Adds Class III (Fuel) & Class IV (Ammo)

- **Focus Areas:**

- 2/3ID Demonstration: 130+ CS&CSS assets
- PL technology part of Anti-Idle prototypes at Ft. Cavazos
- Operational Energy Capability Improvement Fund (OECIF) project: Sensing HEMTT Fuelers and Tank Rack Module (TRM)
- Development and Sustainment of Digital Logbook (DLB) software; Collection of sensor data and automation of forms/updates into Army enterprise systems
- Data Analysis and Cost Benefit Analysis to determine value of PL data
- Use of PL sensor data to improve vehicle safety
- Support of Contested Logistics (PACOM)



Other People's Money

Stack of four boxes representing OEPF/OECIF projects:

- Blue box: OEPF/OECIF
- Yellow box: OEPF/OECIF
- Green box: OEPF/OECIF
- Purple box: 10 Projects

Stack of four boxes representing SBIR projects:

- Blue box: SBIR
- Yellow box: SBIR
- Cyan box: SBIR
- Purple box: 9 Projects

Other Sources:

- Xtech
- Project VISTA
- TMI
- VERTEX
- RDER
- APFIT
- DIU
- Thunderstorm

ManTech: 1 Project

NDCEE: 2 Projects

REFORM: 2 Projects

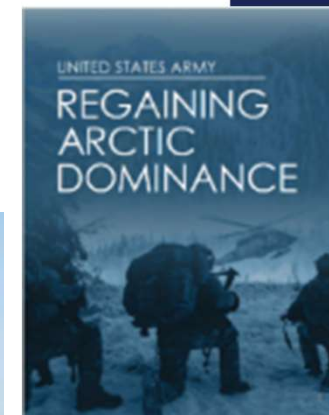
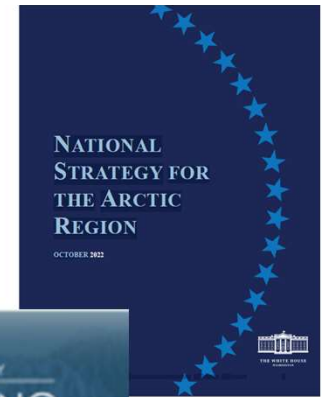
Legend for project categories:

- Electrification
- Predictive Log
- Aerial Delivery
- Demand Reduction/Other

TMI: Technology Maturation Initiatives
 OEPF: Operational Energy Prototype Fund
 OECIF: Operational Energy Capability Improvement Fund
 SBIR: Small Business Innovative Research
 ManTech: Manufacturing Technology
 RDER: Rapid Defense Experimentation Reserve
 APFIT: Accelerate the Procurement and Fielding of Innovative Technologies
 DIU: Defense Innovation Unit
 NDCEE: The National Defense Center for Energy & Environment

Arctic Mission (Extreme Cold Weather)

- On-Site Support to 11th Airborne Division at Joint Base Elmendorf-Richardson
- Fielding of Existing Systems
- Arctic Temperature Requirement: AROC
- Challenges:
 - Smog from idling vehicles
 - Material properties in Extreme Cold Weather (ECW)
 - Mobility (Snow, Ice, Melting Terrain)
 - Batteries
 - Touchscreens
 - Maintenance
 - Liquid Logistics



- **Multiple areas of interest across the PEO/Enterprise**
- **Strategies to requirements**
- **Electrification (Crawl...Walk...Run)**
 - Support of Climate Strategy BUT....
 - Supports emerging mission requirements
- **Predictive Logistics**
 - Sensor to enterprise
- **Funding opportunities – other people’s money**
- **Arctic and ECW**
 - Temperature being established
 - Unique challenges