TACOM LCMC Industrial Base Engineering Support - Board of Directors

US Army RDECOM-TARDEC 6501 E 11 Mile Rd Warren, MI 48397-5000, USA

TACOM/TARDEC/RDECOM

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The original document contains color images.
Provide an overview of the U.S. Army Tank Automotive Research, Development and Engineering Center’s (TARDEC’s) capabilities related to LCMC Industrial Base Support
Agenda

- Purpose
- Industrial Base Environment
- TARDEC Industrial Base Support
- Industrial Base Culture Change
- IBIT/IBET Mission
- TARDEC’s DMSMS Contract
- Depot/Arsenal Support
Ground Equipment Support

Escalating Support Challenges (production & sustainment)

- Increasing O&S requirements (65-80% of Life Cycle Cost)
- Equipment condition due to deployments (Degradation)
- Obsolescence of Army systems due to age (25-40 yrs)
- Loss/change of manufacturing sector for COTS (Support Strategy Risk)
- Inconsistent lifecycle sustainment policy & planning (Organic vs CLS vs TDPs?)
- Inconsistent engineering/design influence for sustainment (Poor Planning)
- Stove-piped industrial base issue investigation & resolution (ILSC & PM versus LCMC)
- Negative economic trends impacting commercial industrial base (Industrial Base Risk)
- Environmental and safety impacts

Result = Increase in Re-active Support Issues
Solution = Pro-active Logistics Engineering Support
Industrial Base Engineering Team (IBET)

TARDEC Engineers:

- Support LCMC Industrial Base requirements
- Provide investigation
- Leverage experience, capability & expertise
- Provide quick response to problems
- Support proactive management
- Improve LCMC communication
- Apply disciplined processes
- Implement LCMC wide solutions (standardization)

TARDEC POC: IBET Team Leader, Mr. Tony Mitek
Industrial Base Culture Change

Past Support = Component or platform focus

- Lack of standardized LCMC strategies
- Separate platform support
- Focus on select STS & OEM supported platforms
- Individual “isolated” platform solutions
- LCMC and experience was not leveraged or shared
- No pro-active Industrial Base or DMSMS management

Current/Future Support = LCMC consideration & application

- Industrial Base Integration Team (IBIT) Process (2007) = LCMC focus
- Leverages & shares common/existing LCMC solutions & capability
- Interfaces with broad commercial industrial base (DMSMS contract)
- Pro-active LCMC Industrial Base monitoring (capability & risk)
- Leverages & cultivates non-traditional sources of capability
- Documents IBIT issues and provides user access (IBIT Console)
IBIT/IBET Mission

Address all Industrial Base issues associated with lack of sources required for production and/or sustainment (technology, materials, manufacturability)

- Capable of addressing all Industrial Base issues
- Quick turn-around capability for problems
- Proactive
- Promotes communication among all members
- Disciplined project management process
- LCMC solutions
- Leverages LCMC experience and capability
- Captures historical data and metrics
- Monitor, identify, and resolve industrial manufacturing risk or non-support conditions.
- Eliminate or minimize impact and/or reduce operating and support costs for equipment supported by the TACOM LCMC
- Identification of current suppliers as well as those who have not historically conducted business with the government.
- Provide TACOM LCMC Managers maximum visibility of support options
- Occupational Safety Health Administration (OSHA), Environmental Protection Agency (EPA), Society Of Engineers (SAE) initiatives
IBIT/IBET Mission

LCMC IBIT Console/Database

- Operational 08/2010
- User has direct access from TACOM LCMC Portal
- Captures LCMC industrial base issues
- User Inputs - Industrial Base Action Report (IBAR)
- Inputs can be either “information only” or “action requested”
- Provides visibility of LCMC wide issues, requirements or data
- Supports shared LCMC investigation/resolution
- Promotes standardization Across LCMC
- Provides LCMC historical data
TARDEC’s DMSMS Contract

TARDEC Contract with Automation Alley (DMSMS Tool)

- DMSMS case investigation, resolution & coordination support
- Database of LCMC relevant commercial industrial capability
- Access and communication with nationwide commercial industrial base
- Industrial base management (capability, health, trend, and risk analysis)
- Pro-active obsolescence avoidance
- Reverse engineering
- Technical Data Packages (TDPs)
- Prototype & emergency replacement parts
- Test Planning and execution
- Partnership capability (commercial and organic)
- Cultivates new non-traditional sources of industrial base support
- Supports commercial economic development

Status

- Contract awarded on 21 September, 2009
- Requirements (Work Directive) based contract
- Currently available to TACOM LCMC community
TARDEC’s DMSMS Contract

Automation Alley, Michigan’s largest technology business association, is currently on contract with TARDEC to provide industrial base support for the TACOM LCMC Diminishing Manufacturing Sources and Material Shortages (DMSMS) program.

The contract with Automation Alley has created a capability to establish commercial industrial base visibility and communicate TACOM LCMC requirements with companies across the United States.

Current Efforts:
- Industrial Base Data & Communication Tool
- TACOM LCMC Industrial Base Health/Risk Assessments
- Sustainment Engineering Risk Assessments (SERA) of TACOM Equipment
- Cadmium/Hex Chrome Replacement (High Purity Aluminum) Capability
- Advanced Aviation Forward Area Refueling System (AAFARS) Tech Data Development
- Common Automotive/TACOM LCMC Industrial Base Sector Study

TARDEC DMSMS Contract Officer’s Representative (COR), Mr. Stan Michener
Depot/Arsenal Support

Depots/Arsenals Liaison Program

TARDEC Engineers:

• Participate in Developmental Assignments
• Have 6 to 24 months experience
• Rotate on-site assignments of 90 to 120 Days
• Are exposed to programs & issue experience
• Attend bi-weekly VTC with LCMC (PEO/PM/TARDEC/ILSC)
• Attend monthly WPU with LCMC & AMC
• Provide communication and collaboration of requirements necessary for the success of the TACOM LCMC mission
• Link experience and expertise between TACOM LCMC and the depots and arsenals
• Provide engineering support to assist with problem investigation, resolution and/or implementation
• Create synergies and standardization opportunities across the TACOM LCMC organizations and platforms
• Support individual and career development
Depot/Arsenal Support  
Liaison Status

**Implemented to date:**

- ANAD, JAN 2009 (On site)
- RRAD, JAN 2010 (On site)
- RIA (As needed)
- SIAD (As needed)

**Example Issues:**

- Hexavalent Chromium/Cadmium (RRAD)
- Common Adhesive (ANAD)
- AVLB Pressure Plate (ANAD)
- Paladin Corrosion (ANAD)
- Abrams Transmission Line (ANAD)

**TARDEC POC: Depot Liaison Action Officer,**  
**Ms. Adrennia Hughley**
Questions
BACKUP
SERA Data Sources

PMR
- P-coded NSNs

OSMIS
- PMR NSNs with order History

FEDLOG
- MATCAT & WSC to ID specific vehicle families

ILAP
- Maintenance Records

LIW / Other
- 60 plus data elements

DATA INTEGRITY CHECKS
- Canceled NSNs identified
- Replacement NSNs added
- Duplicate NSNs removed
- Duplicate company names for same CAGE code scrubbed

Source Identifier and Timestamp applied to each NSN

Clean NSN List

Equipment Support Strategy
## SERA Selection Matrix & Risk Priority Indicator

**NOTE:** Sort Order: 1) Decreasing RPI  2) Decreasing Unit Price

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<th>Normalized RPI (1.000 Scale)</th>
<th>Overall Risk Priority Indicator</th>
<th>FSC</th>
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<th>NOMENCLATURE</th>
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Results from SERA

• Evaluate all known support risk for the forecasted remaining life of the subject equipment

• Document fact-based evidence of risk

• Provide data for platform and / or strategic manager use

• Allow managers to tailor risk factors

• Could support Sustainment health Metrics
Accessing the IBIT Console
Using the IBIT Console – Homepage

- User selects an existing issue or creates a new one.
Issue Data Tab

- User Completes fields to describe the issue and provides pertinent information
IBIT Console

Workgroup Member Tab
Company Search – provides relevant company information
Company Search – provides relevant company information
Company Search – provides relevant company information