



# Overview

Tank Automotive Research,  
Development & Engineering Center



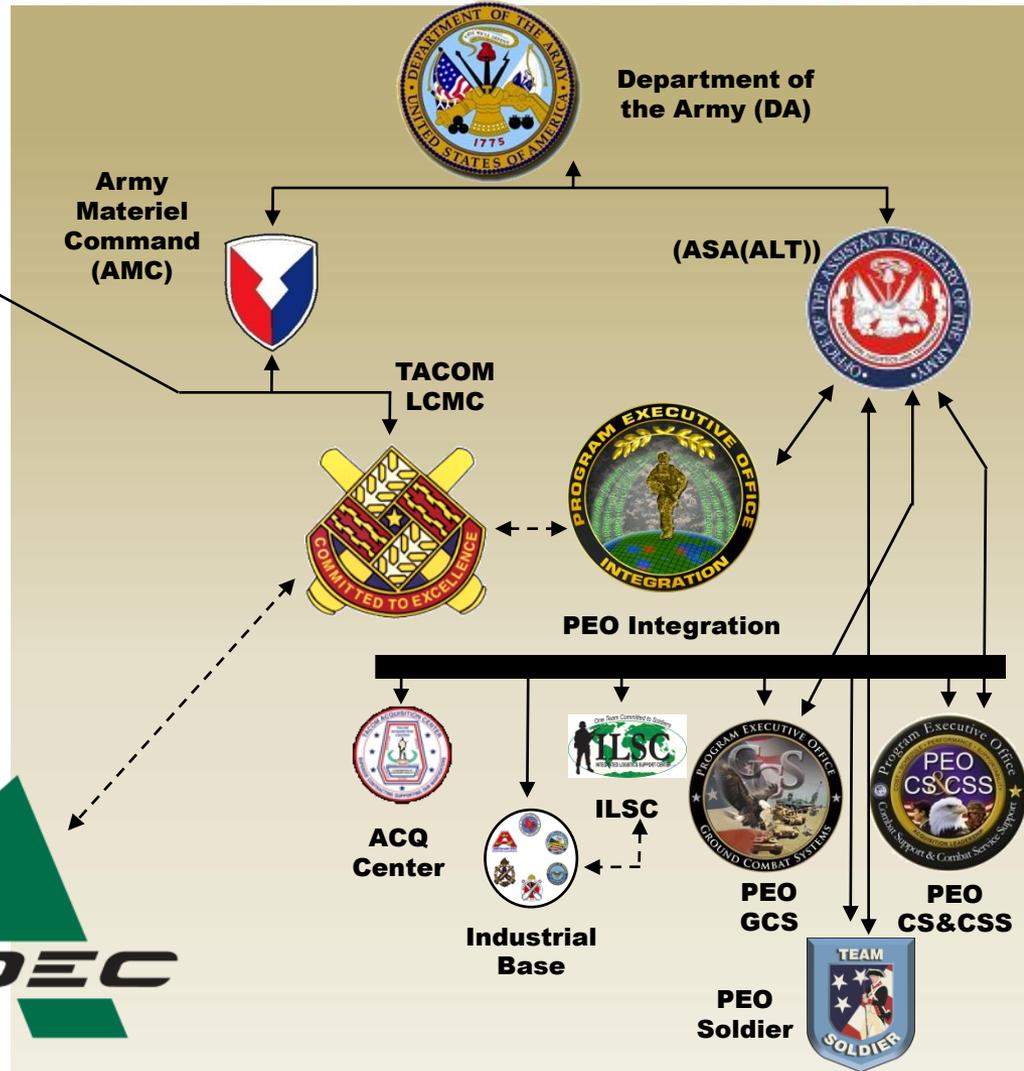
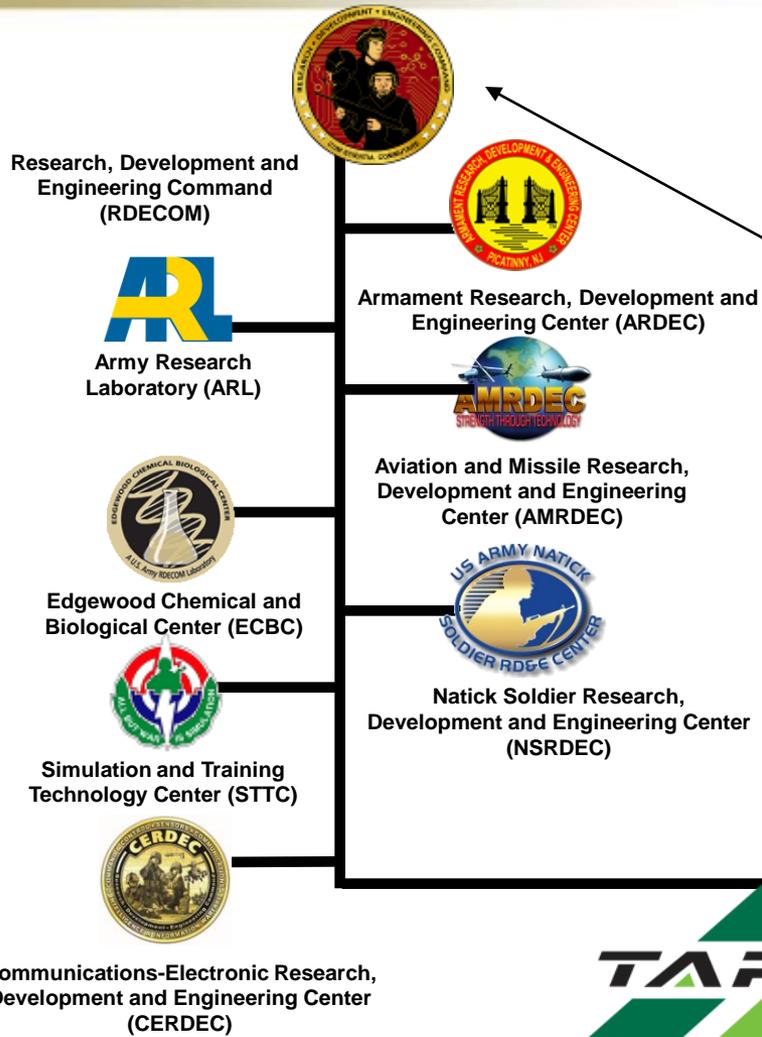
UNCLASSIFIED: Dist A. Approved for public release

- Provides full life-cycle engineering support and is provider-of-first-choice for all DOD ground combat and combat support vehicle systems.
- Develops and integrates the right technology solutions to improve Current Force effectiveness and provide superior capabilities for the Future Force.

*Ground Systems Integrator  
for the Department of Defense*

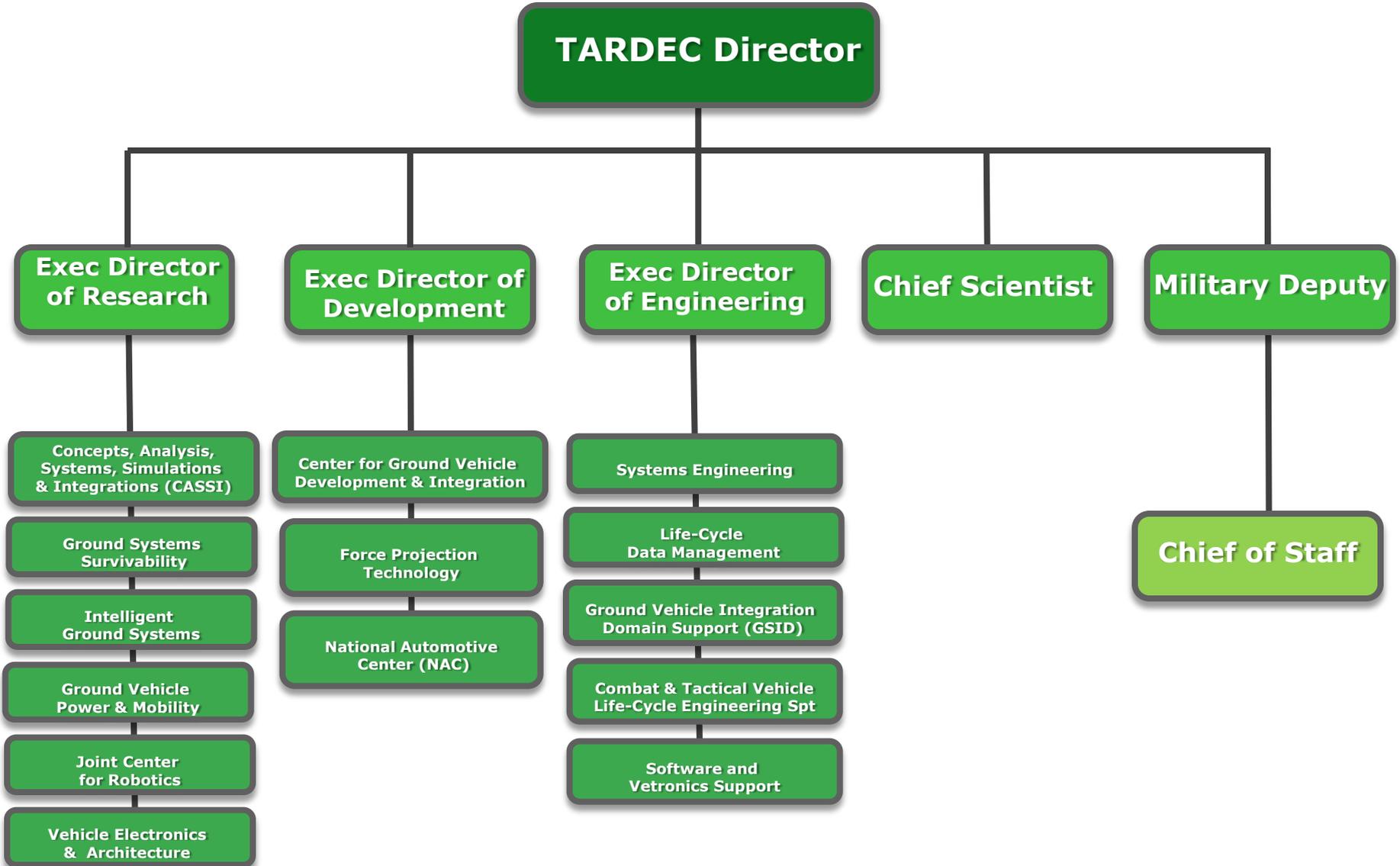
Responsible for Research, Development and Engineering Support to **2,800** Army systems and many of the Army's and DOD's Top Joint Warfighter Development Programs

**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**



Reach back to over 8,500 Scientists and Engineers

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.





## Force Projection

- Fuel & Water Distribution
- Force Sustainment
- Construction Equipment
- Bridging
- Assured Mobility Systems

## Combat Vehicles

- Heavy Brigade Combat Teams
- Strykers
- MRAPs
- Ground Combat Vehicles (Future)



## Tactical Vehicles

- HMMWVs
- Trailers
- Heavy, Medium and Light Tactical Vehicles

## Robotics

- Technology Components
- Demonstrators
- Military Relevant Test & Experimentation
- Transition & Requirements Development

**TARDEC Engineers Provide Cradle-To-Grave Engineering Support**



### Ground Vehicle Power & Mobility Integration

- Prime Power (Powertrain)
- Non Primary Power
- Power & Thermal Management
- Energy Storage
- Track & Suspension
- Alternative Energy



### Ground Systems Survivability Integration

- Integrated Vehicle Protection Systems
- Active Defense
- Signature Management
- Laser Vision Protection
- Ballistic Protection
- Crew Survivability



### Tactical Movement of Force Projection Technologies

- Water Generation, Purification, Storage, Distribution & Quality Surveillance (QS)
- Petroleum Storage, Distribution & QS
- Material Handling Equipment
- Mechanical Countermine Equipment
- Tactical Bridging

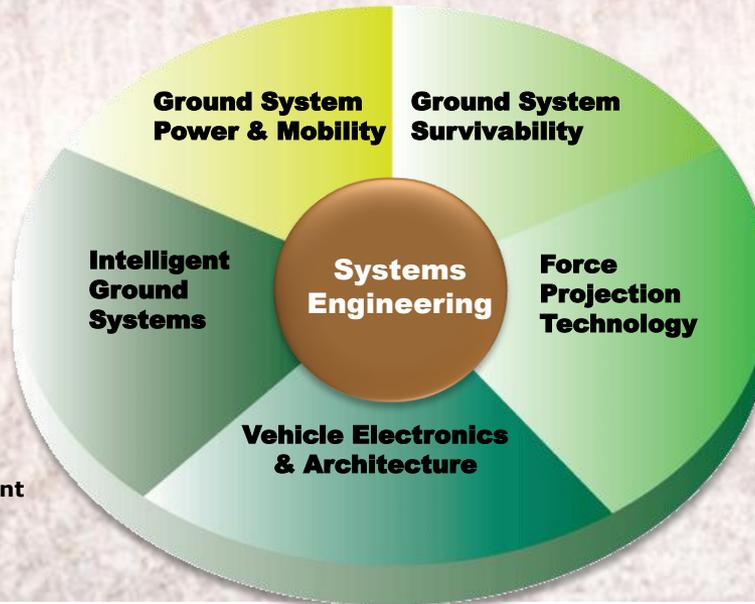
### Specification Development of Force Projection Technologies

- Petroleum, Oils & Lubricants Technology
- Alternative Fuels



### Maturation of Intelligent Ground Systems

- Autonomous Robotics Systems
- Safe Operations Technologies
- Indirect Vision Technologies
- Unmanned Systems Technology Development
- 360° Situational Awareness Technologies
- Soldier Machine Interfaces
- Connected Vehicles

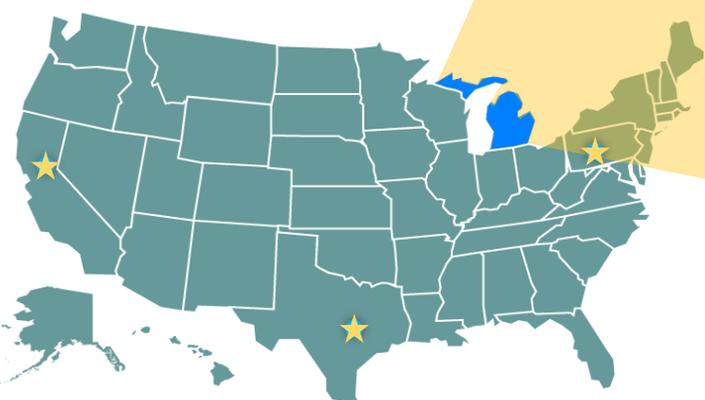


### Vehicle Electronics & Architecture Integration

- Electronics Integration
- Data Architecture
- Condition-Based Maintenance (CBM+)
- Power Architecture/Management

## Geographic Benefits

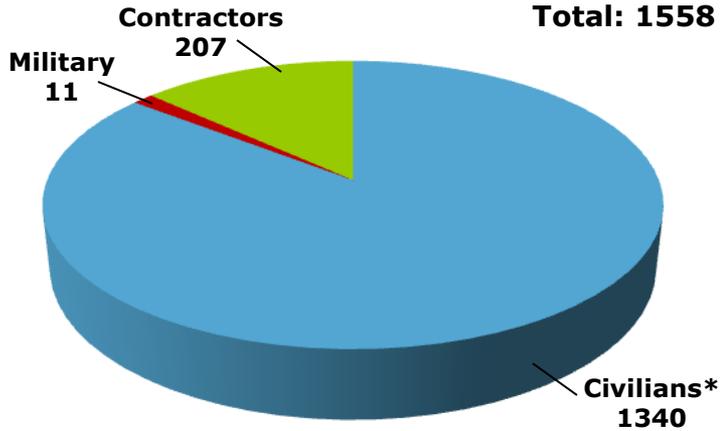
- Direct Linkage to World-Class Automotive Research and Development Centers
- Strategic Engagement with 2nd and 3rd Tier Automotive Supplier Network
- Connected to World-Class Universities



**Additional Facilities in California, Texas, & Pennsylvania**

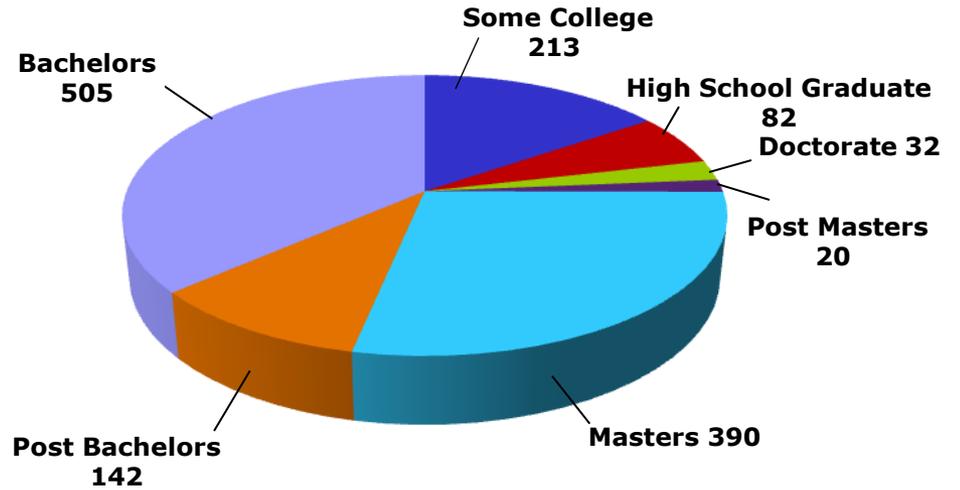
## Total Workforce

Total: 1558



\*Includes permanent/term employees, local interns, STEPs, and local SCEPs (in a pay status).

## Education



**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**

## Advanced Concepting



Future Force



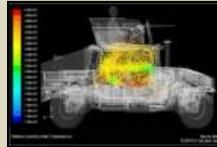
JLTV

MRAP

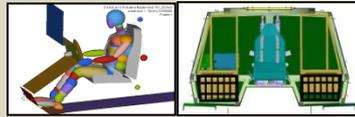


FTTS

## Analytics



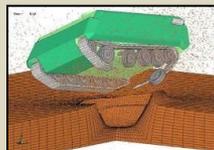
Thermal / CFD



Crew Safety



Structures/Durability



Blast



Dynamics

## Hardware & Man-In-The-Loop Simulation



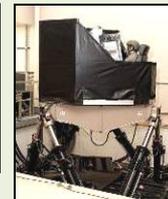
Characterization



Durability



Turret Testing



Human Dimension

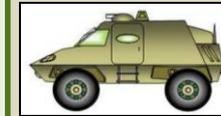


Virtual Environments

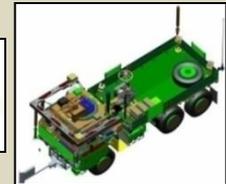
## Prototype & Demonstrators



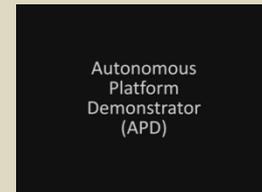
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FED



TWWS



APD

## HPC & Data Management

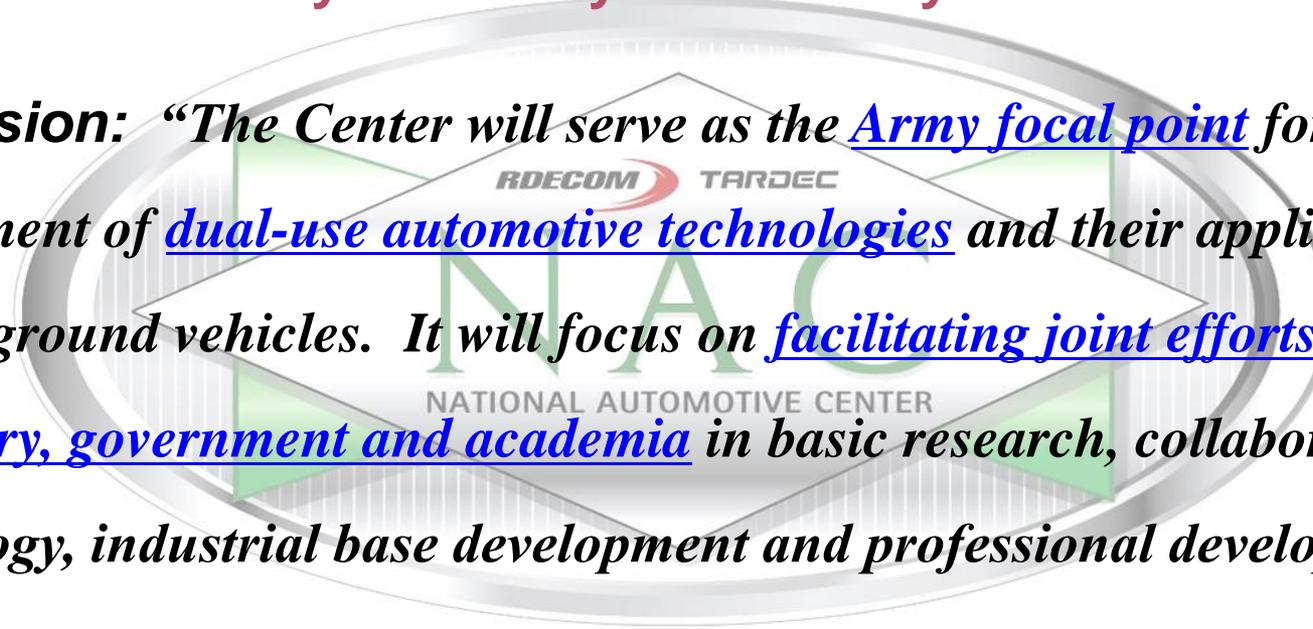


HPC



To provide rapid assessment and integration services throughout the Life Cycle of both Technology and System/Platform Development Programs.

Chartered by Secretary of the Army 21 June 1993



**Mission:** *“The Center will serve as the Army focal point for the development of dual-use automotive technologies and their application to military ground vehicles. It will focus on facilitating joint efforts between industry, government and academia in basic research, collaboration, technology, industrial base development and professional development.”*

***“Leveraging Opportunities to Fill Technology Gaps.”***



TARDEC's  
Ground Vehicle Gateway  
is YOUR entry point!

Submit your technology  
for review

<https://tardec.groundvehiclegateway.com/>

<http://peocscss.tacom.army.mil/EMIP/index.html>

## Expedited Modernization Initiative Procedure (EMIP) Component Technology Demonstrations

- **EMIP is:**
  - Multi-phased, continuous process designed to improve capabilities on current/ future tactical wheeled vehicles for the war fighter
  - Identifies & leverages Industry's investment in advanced technologies at the component, and subsystem level
  - Educates Government representatives about demonstrated technologies and provides contractors a single point of contact
- **EMIP is not:**
  - A source selection, but instead a means to identify and leverage Industry's investments through the Market Research process
  - A Program
  - Does not solicit
  - Does not have a funding line, to field demonstrated technologies
- **EMIP can:**
  - Refer technologies to other Government departments that may make an internal acquisition decision, based on program priorities
  - Provide contractor written feedback (Referral Letter), within 30-60 days upon completion of EMIP demonstration
  - Vendors information will be maintained in a government only accessible data base for future use

## Expedited Modernization Initiative Procedure (EMIP) Component Technology Demonstrations

<http://peocscss.tacom.army.mil/EMIP/index.html>

- April 2010 Demo is full & July's 2010 demo (26-29) is filling up fast.
- Next Demonstration: 26-29 April 2010 at Selfridge Air National Guard Base, MI
- **Now accepting starter packages for 26-29 July 2010 at Selfridge Air National Guard Base, MI**
- 40 Technology Application Ideas (TAIs) have been successfully demonstrated in 2009

- **Society of Automotive Engineers World Congress** 13-15 April; (Cobo Center)
- **Dual Use Technology Briefings**
  - 20 April (Flint); 22 April (Macomb PTAC at MCC);
  - 5 May (Automation Alley); 12 May (Kalamazoo PTAC);
  - 19 May (Downriver/WSU PTAC); 20 May (Schoolcraft)
  - 9 June (Lansing)
- **Renewal Energy Rodeo and Symposium** 8-10 June (Fort Bliss, TX)
- **TACOM Small Business Fair**, 16 June  
John Lewis Center, Macomb Community College (Warren)
- **Ground Vehicle Systems Engineering & Technology Symposium (GVSETS)**  
17-19 August (Dearborn) (in conjunction with NDIA)
- **Hybrid Truck Users Forum** 28-30 September (Dearborn)
- **TACOM APBI** 10-11 November (Dearborn)

**Publications**

*accelerate*

*accelerate* Magazine profiles the people, events, products and services that comprise the ground systems integration hub. TARDEC's engineers and scientists are rapidly developing solutions to ensure that the Ground Vehicle Enterprise remains at the forefront of technology development and engineering and systems integration. Our research and development (R&D) community is dedicated to enhancing the lethality, survivability and sustainability of our Soldiers wherever the battlefield or mission takes them. *accelerate* Magazine will bring you inside the R&D community to provide insight into several innovative programs, product developments and partnerships.

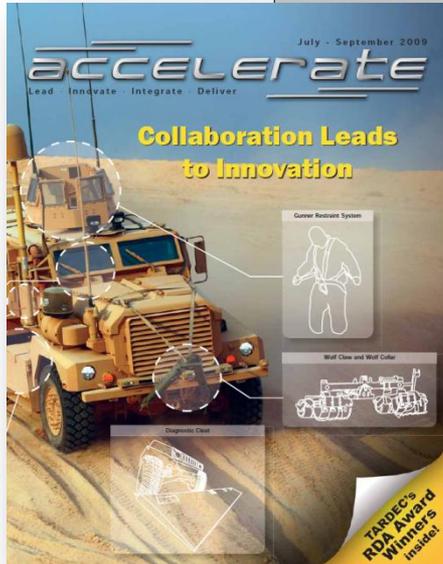
**Past Issues**  
[April - June 2009](#)  
[October - December 2008](#)  
[April - June 2008](#)

[View Current Issue](#)

**GVSET News**

TARDEC's monthly online newsletter, *GVSET News*, informs members of the ground systems enterprise and its partners about TARDEC's activities, events, awards and technological developments in systems engineering, robotics, survivability, vehicle electronics and architecture, force projection, and power and energy. With a subscriber base of more than 4,000 individuals, *GVSET News'* readership includes TACOM Life Cycle Management Command, Program Executive Office (PEO) Combat Support and Combat Service Support, PEO Ground Combat Systems, PEO Integration, members of Congress and their staffs, military and non-military government personnel and other members of industry and academia.

[Click here to go to GVSET News](#)



# QUESTIONS

