



Overview

Tank Automotive Research,
Development & Engineering Center



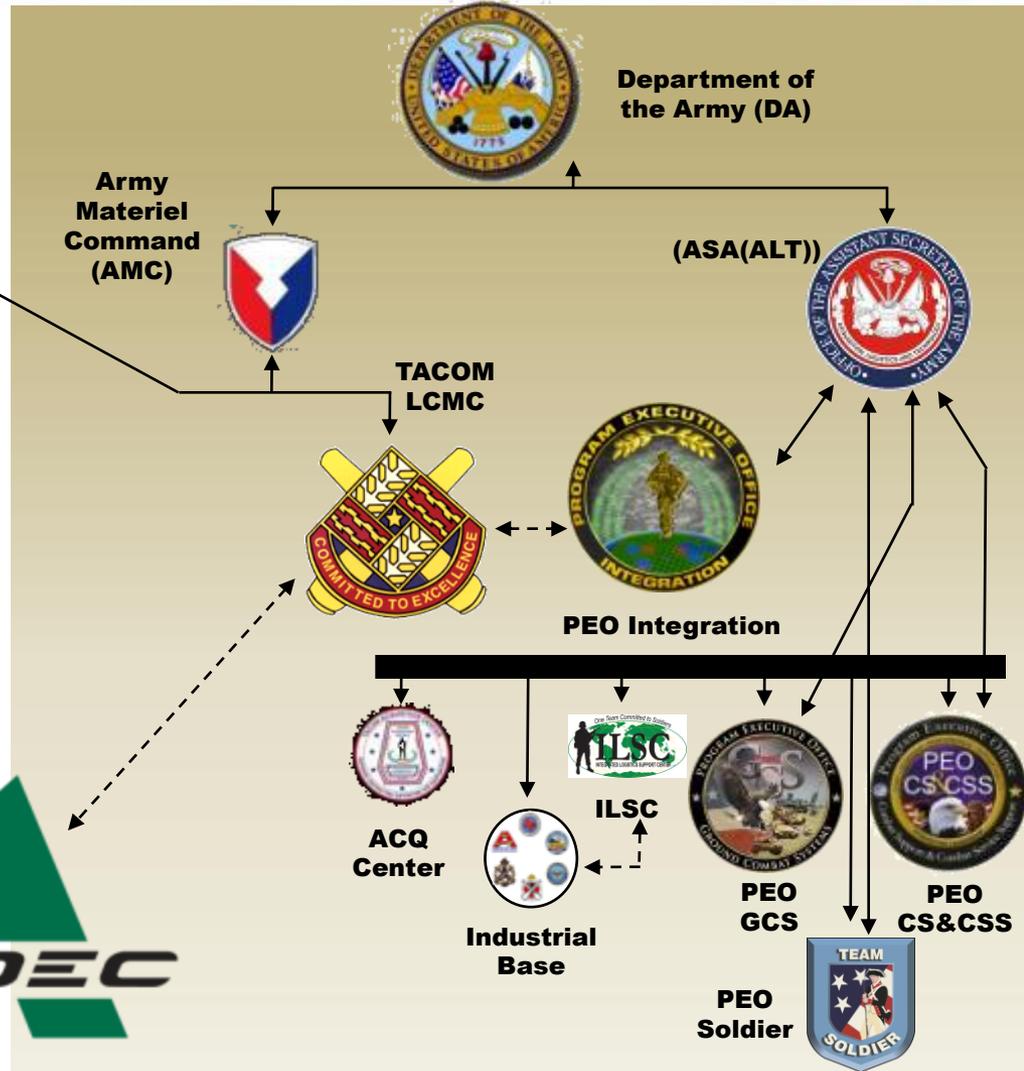
UNCLASSIFIED: Dist A. Approved for public release

- 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*

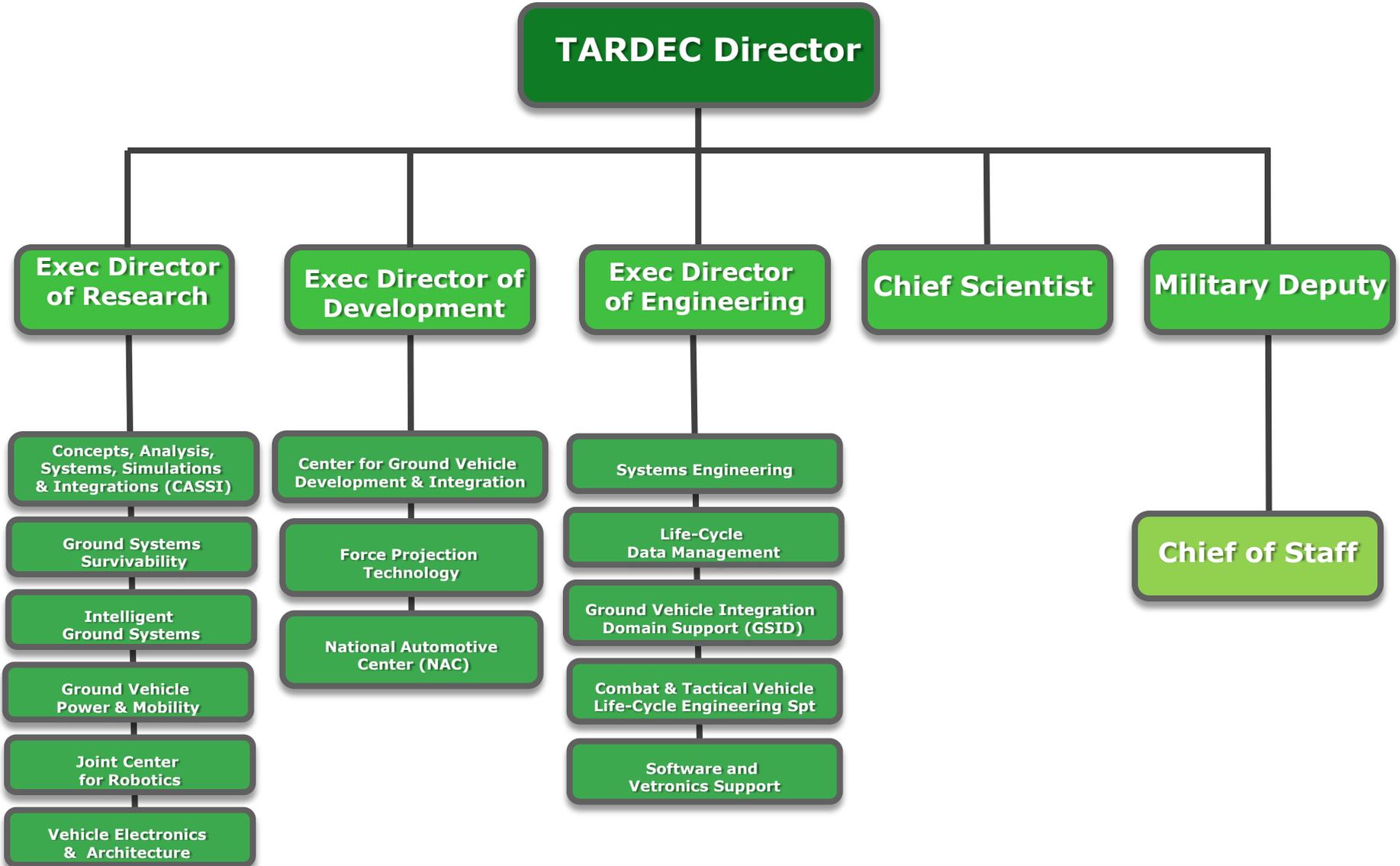
Responsible for Research, Development and Engineering Support to **2,800** Army systems and many of the Army's and DOD's Top Joint Warfighter Development Programs

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

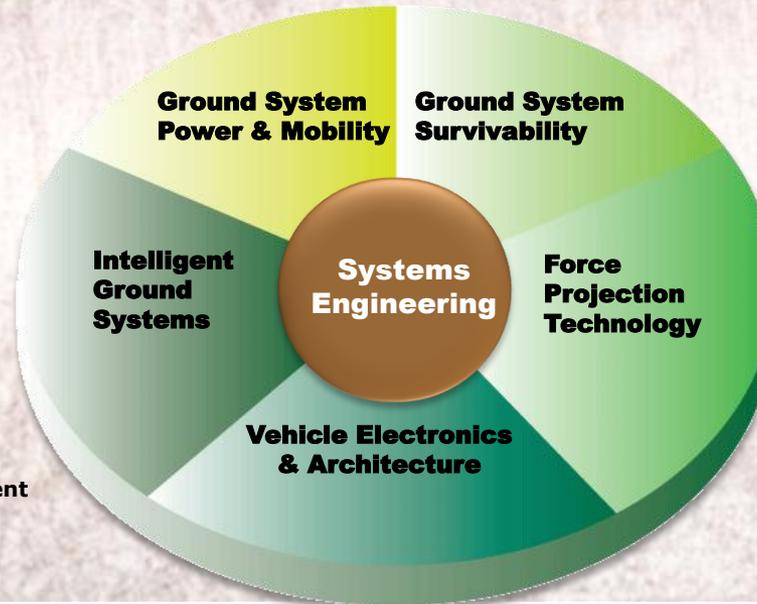
Specification Development of Force Projection Technologies

- 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

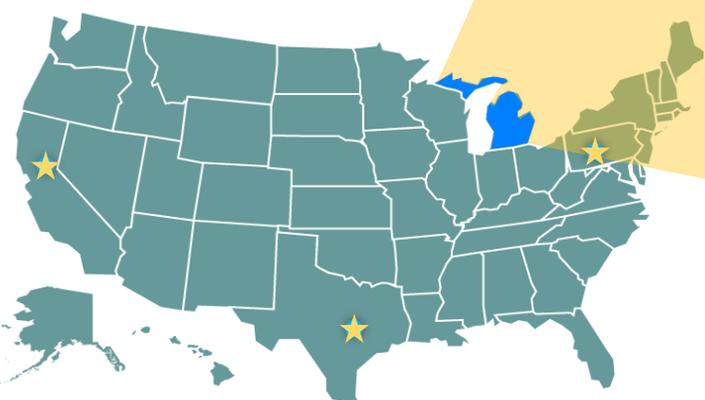


Vehicle Electronics & Architecture Integration

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

Geographic Benefits

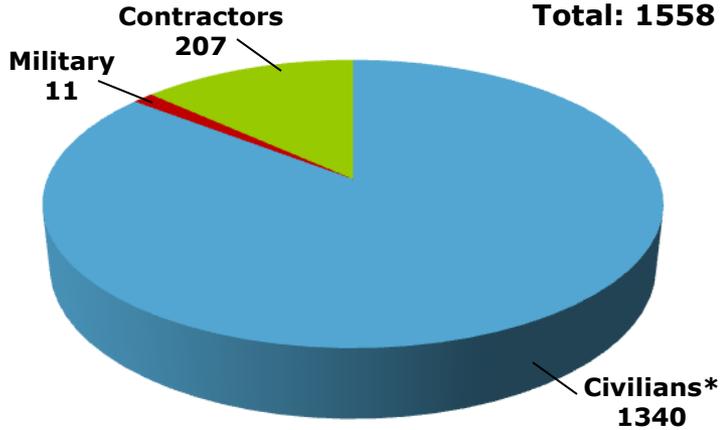
- Direct Linkage to World-Class Automotive Research and Development Centers
- Strategic Engagement with 2nd and 3rd Tier Automotive Supplier Network
- Connected to World-Class Universities



Additional Facilities in California, Texas, & Pennsylvania

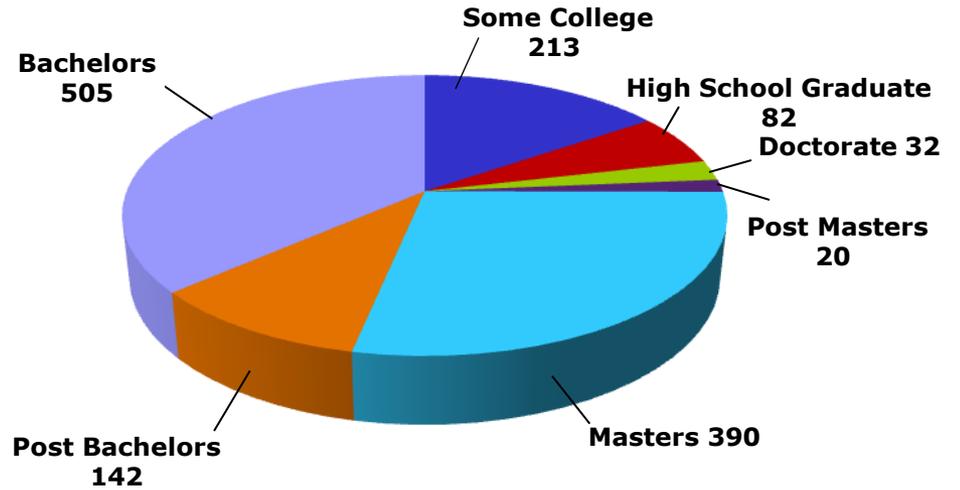
Total Workforce

Total: 1558



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

Education



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Advanced Concepting

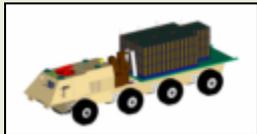


Future Force



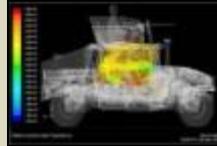
JLTV

MRAP

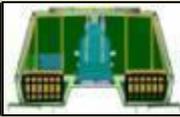


FTTS

Analytics



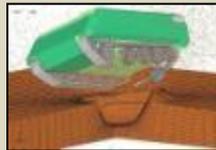
Thermal / CFD



Crew Safety



Structures/Durability



Blast



Dynamics

Hardware & Man-In-The-Loop Simulation



Characterization



Durability



Turret Testing



Human Dimension



Virtual Environments

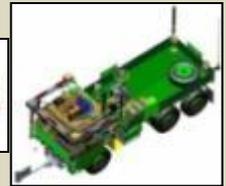
Prototype & Demonstrators



FTTS



FED



TWWS

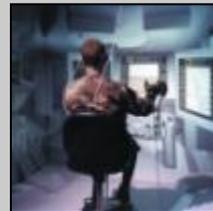


APD

HPC & Data Management



HPC



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

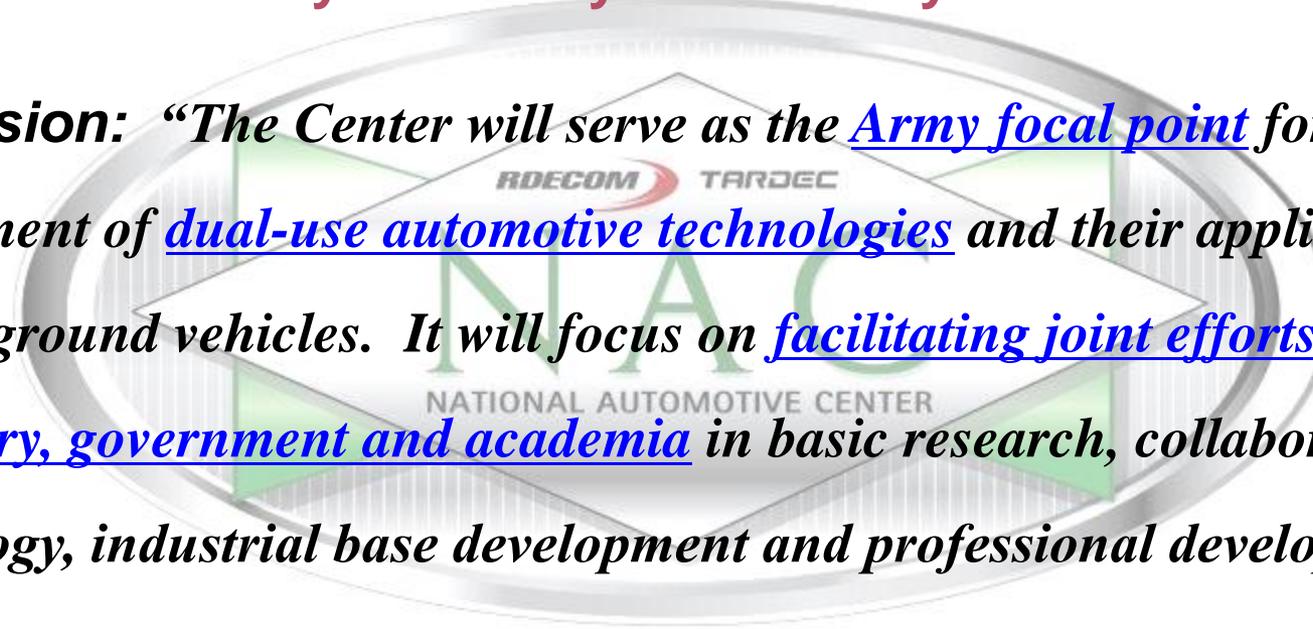
GSPEL Provides Superior Testing Capabilities for Army, Partners

GVSET NEWS



The GSPEL is a 30,000-square-foot laboratory complex with eight state-of-the-art labs in one building.

Chartered by Secretary of the Army 21 June 1993

The background features a large, semi-transparent watermark of the National Automotive Center (NAC) logo. The logo is diamond-shaped with 'RDECOM' and 'TARDEC' at the top, 'NAC' in large letters in the center, and 'NATIONAL AUTOMOTIVE CENTER' at the bottom.

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.”



We're Open for Innovation!

**TARDEC's
Ground Vehicle Gateway
is YOUR entry point!**

- **Submit your technology for review**
- **Request Testing Services**

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

The screenshot shows a web browser window displaying the TARDEC Ground Vehicle Gateway submission form. The page header includes the TARDEC logo and the text "GROUND VEHICLE GATEWAY U.S. ARMY TANK AUTOMOTIVE RESEARCH, DEVELOPMENT AND ENGINEERING CENTER". Below the header, there is a section titled "TARDEC Technology Submissions" with a paragraph of text and a link: "For all other inquiries, click on this link: <http://tardec.army.mil/contact.asp>". The main section is titled "Your Submission" and contains several input fields: "Submission Title", "Submission" (a large text area), "Documents" (a list of fields with "Browse" buttons), "Business Name", "Industry" (a dropdown menu), "Name", "Job Title", "Address I:", and "Address II:". The browser window title is "Ground Vehicle Gateway - Windows Internet Explorer".



Component Technology Demonstrations





Enterprise Market Investigation Process (EMIP)



□ EMIP is:

- A **selective market research** approach “collecting and analyzing information about capabilities within the market to satisfy agency needs” (FAR Part 2.101) focused on requirements, safety, and / or innovation for Soldier and Ground Systems.
- An **education of government representatives** on industry’s investment in advanced technologies at the component (not end item) level through physical demonstrations.
 - Government representatives are subject matter experts from a variety of disciplines such as engineering, logistics, testing, and training, and include user representatives.
 - Advanced technologies are those with a **technology readiness level of 7, 8 or 9.**

□ EMIP is not:

- A request for proposal, a source selection, a program, or an acquisition office.
- Funded apart from the demonstrators’ application fee.



- ❑ EMIP can:
 - **Refer technologies to other government departments** that may make an internal acquisition decision based on program priorities and other considerations.
 - **Provide the demonstrator written feedback** within 30-60 days upon completion of the EMIP demonstration.
- ❑ Demonstrations are scheduled **three times a year**, typically in April, July, and October.
- ❑ The EMIP process applies primarily to vehicles that the PEO CS&CSS manages (<http://peocscss.tacom.army.mil/>).
- ❑ The Starter Package and further information are available at the EMIP website: <http://peocscss.tacom.army.mil/EMIP/index.html>

- **Ground Systems Power & Energy Lab grand opening**
11-12 April (TARDEC GSPEL)
- **Dual Use Technology Briefing**
18 April (Sterling Heights)
- **Society of Automotive Engineers World Congress**
24-26 April (Cobo Center)
- **Michigan Defense Industrial Base Expo (NDIA) / TACOM Small Business Fair**
15-16 May (Macomb Sports & Expo Center in Warren)
- **Automotive Research Center (ARC) Conference**
21-22 May (University of Michigan, Stamps Auditorium, Ann Arbor)
- **Dual Use Technology Briefing & How to do Business with Primes**
7 June (NW PTAC in Houghton)
- **Ground Vehicle Systems Engineering & Technology Symposium (GVSETS)**
14-16 August at Dearborn Hyatt (in conjunction with NDIA)
- **Society of Automotive Engineers Commercial Vehicle Congress**
2 - 3 October in Rosemont, Illinois
- **AUSA Annual Meeting and Expo**
22 - 24 October in Washington DC

SAE 2012 World Congress, Cobo Center
April 24-26, 2012



- One-day conference passes are available.

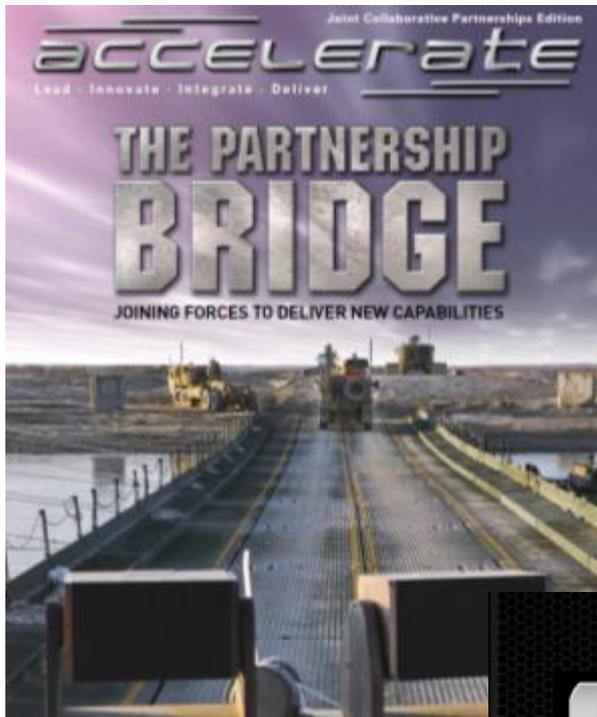
Hyatt Regency Dearborn
8/14/2012 - 8/16/2012

Ground Vehicle Systems Engineering and Technology Symposium (GVSETS)



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<http://tardec.army.mil/publications.aspx>



GVSET News



TARDEC's bi-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 the latest issue of *GVSET News*](#)

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QUESTIONS

