



**RDECOM**



**GROUND VEHICLE POWER & MOBILITY**

DRIVING THE ARMY FORWARD



## Power Train Modeling and Simulation (M&S) Team

The TARDEC Ground Vehicle Power and Mobility Power Train M&S Team **MISSION** is to:

- Provide customers with characterization, evaluation, functional assessment and analysis by developing and utilizing our current and future M&S capabilities.

**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**



## Application Areas

The TARDEC Ground Vehicle Power and Mobility Power Train M&S Team works in the following application areas:

- Automotive Performance Evaluation.
- Advanced Propulsion System Research and Development (R&D).
- Technology Insertion Evaluation.
- Performance Specification Definition.

## Services

In the areas of Power Train M&S, the Team provides propulsion system modeling, simulation and analysis to provide data and information in support of R&D and integration of advanced propulsion systems and/or propulsion components for ground vehicle systems throughout the life cycle.

- Technical Expertise:
  - Conduct trade studies and parametric analyses.
  - Baseline/validate legacy vehicle performance using M&S.
  - Evaluate hybrid propulsion system architectures.
  - Evaluate power demands (mobility, accessory, PFN).
  - Virtual Duty Cycle Development.
- Program Management:
  - Administer/coordinate software purchases, code development and academic collaboration.
  - Administer development and integration of M&S tools to enhance TARDEC analysis capabilities.
  - Coordinate M&S activity with Ground Vehicle Power and Mobility.

## Major Programs & Initiatives

The TARDEC Ground Vehicle Power and Mobility Power Train M&S Team is currently engaged in the following major programs and initiatives:

### Programs

- Power & Energy Hardware-in-the-Loop System Integration Laboratory.
- Joint Light Tactical Vehicle Acquisition.
- Future Tactical Truck System Advanced Concept Technology Demonstrator.

### Initiatives

- Virtual Duty Cycle Experimentation and Development.
- Power and Thermal Management M&S Integration.
- Fuel Savings for the Office of the Secretary of Defense.