



Future Tactical Truck System: Taking Tactical Wheeled Vehicles to the Next Level of Jointness and Efficiency

The Army's role as part of a joint force and in particular joint logistics operations is expanding, while its Tactical Wheeled Vehicle (TWV) fleet is aging rapidly. Currently, the Army does not have a single transport system in its inventory that will perform a multifunctional role to move supplies on land without pause. It will require a system that can keep pace with the speed and agility of the Future Combat Systems (FCS) and the streamlined sustainment requirements of its sister services.



Shortfalls of Existing Systems

The Army today uses multiple types of distribution vehicles to move equipment and personnel across the battlefield. The transloading of cargo causes numerous delays in the passage of supplies—impacting on the overall speed of operations. The lack of equipment commonality requires multiple lines of repair parts, specialized tools and support equipment, greater storage space and tremendous overhead at the wholesale and retail levels.

The time is right to break that paradigm and take advantage of technology to design a single, versatile truck family to reduce the logistics burden while meeting the operational requirements of the Objective Force (OF). The answer is the Future Tactical Truck System (FTTS). **It is a prime example of how a prudent investment in new equipment will generate savings in structure, manpower and dollars for the long term.**

FTTS Concept and Capabilities

The FTTS is a family of trucks comprising two variants: the Maneuver Sustainment Vehicle (MSV) and the Utility Vehicle (UV). The MSV, with a capacity of 13 tons, replaces the 2½-ton Light Medium Tactical Vehicle, the 5-ton Medium Tactical Vehicle, Heavy Expanded Mobility Tactical Truck (HEMTT) and Palletized Load System (PLS) vehicle in the Unit of Action (UA). The UV, with a payload of up to 3 tons, will replace the 2½-ton and below Light Tactical Vehicles in the UA. Both systems provide organic support to FCS UA brigades for the distribution of cargo, equipment and personnel, as well as for command and control (C²) operations.

FTTS CONCEPTS

The Future Tactical Truck System-Maneuver Sustainment Vehicle (FTTS-MSV) is a multifunctional, multiproponent single tactical truck family based on a common chassis design. FTTS-MSV provides direct support to Unit of Action (UA) brigades transporting and distributing cargo, equipment and personnel.

- 150 FTTS-UV &
- 204 FTTS-MSV per UA

Two fleets promote:

- reduction in logistics footprint
- commonality among fleets

The Future Tactical Truck System-Utility Vehicle (FTTS-UV) is a multipurpose tactical truck family based upon a common chassis design. FTTS-UV provides light support to the UA and the Unit of Employment (UE) with C², system support platforms and mobility.

Emerging Objective Force capabilities and concepts focus on a nonlinear battlefield where versatile and highly maneuverable fighting units are operating autonomously with largely nonexistent or indefensible lines of communication. Prosecuting warfare under these conditions will require mobility capabilities that match those of the combat platform. To ensure both continuity of distribution and the ability to rapidly redirect sustainment to conform to the changing operational requirements, combat service support forces will require the same battlefield reach, flexibility and responsiveness as the Objective Force combat platforms.

Future Tactical Truck System (continued)



The FTTS is the key enabling element of the future distribution-based sustainment concept. As the FTTS is developed and built, the capabilities must be incorporated into the system design principles called for in the Army Vision—**deployability, responsiveness, versatility, agility, survivability, sustainability and lethality.**

FTTS REQUIREMENTS

DEPLOYABILITY

- Arrives from C-130 fully loaded and operational

RESPONSIVENESS

- Greater fuel efficiency & range than current fleet
- Integrated C4ISR & tracking

SURVIVABILITY

- Designed for time-definite, assured delivery

AGILITY

- Higher mobility rated speed than current fleet

LETHALITY

- Networked sensors contribute to battle picture

SUSTAINABILITY

- Reliability, maintainability

VERSATILITY

- Advanced load handling, power & water generation



The Path Forward

Cutting-edge acquisition tools will be combined with the leveraging of FCS technologies. The program does not focus on the development but on the integration of OF-enabling technologies. Ultimately, the success of the effort will hinge on pooling the best of industry, academia and the government into a cohesive team. The Advanced Concept Technology Demonstration (ACTD) provides a powerful means of teaming these elements. In the ACTD, vehicle concepts will be explored through modeling and simulation, produced and then demonstrated in an operational environment. Besides producing seven FTTS-MSVs and two FTTS-UVs for a demonstration, the ACTD will jump-start industry by embracing OF concepts, assessing the military utility of various innovative technologies and, most important,

propelling the refinement and validation of the requirements documentation. The models and data developed from the ACTD will help reduce risk for the Systems Development and Demonstration phase. **Emphasizing the contributions the FTTS will make to joint operations, both the Marine Corps and the Air Force have expressed interest in the FTTS and have become partners in the requirements process.**

(Note: Current combat and combat support systems, with appropriate modernization or recapitalization enhancements, can certainly remain effective throughout the evolution of the Objective Force. It remains to be seen whether these systems can achieve the satisfactory level of performance required to meet the full spectrum of OF requirements. In the event they cannot achieve the minimum capabilities, the need for the FTTS will be affirmed.)

FTTS PARTNERS INCLUDE:

- U.S. Army – Lead Service
- U.S. Army National Automotive Center (NAC) & Tank Automotive Research, Development and Engineering Center (RDECOM TARDEC)
- U.S. Army Training and Doctrine Command (TRADOC) & Combined Arms Support Command (CASCOM)
- Program Executive Officer, Combat Service & Combat Service Support (PEO CS & CSS)
- U.S. Pacific Command (PACOM)
- U.S. Air Force
- U.S. Marine Corps



Because of these increased capabilities, the initial per-unit acquisition cost of the FTTS is anticipated to be substantial. However, the value of the improved operational capability and reduced logistics footprint should far outweigh this potential concern. Providing optimal sustainment support to the UA requires a system that has been designed with the unique requirements of the Objective Force in mind. **The FTTS will be such a vehicle.**

**Future Tactical Truck System: Not merely a truck
but the joint sustainment system for the Objective Force**