4.00 PEO LS S&T Focus Areas

PEO LS S&T Focus Areas have been developed through the evaluation and identification of High Priority Technologies, driven by the most significant technical challenges of each program. The Focus Areas in 2012 were vetted, scrutinized, and developed in coordination with the S&T Representatives, Lead Engineers, Deputy Program Managers, and the PEO LS Program Managers. The S&T Focus Areas are meant to highlight mission essential, cross-cutting, and actionable areas of focused S&T investment and engagement. These operationally relevant technology focus areas will inform and influence high priority S&T technology investment decisions, resolve technical issues, and support the transition of warfighter capability. These S&T Focus Areas include: Power and Energy, Fuel Efficiency, Survivability and Mobility, Modeling and Simulation, and Fuel Containment/Fire Suppression. New/Updated Focus Areas added in 2012 are Open Plug and Play Communications Architecture, Intelligent Power and Thermal Management, and Weight Reduction.

These new focus areas reflect the significance in communications architecture, the growth in demand for power and thermal management, and the challenge in reducing the size and weight of current and future expeditionary warfighting units.

Figure 4 – PEO LS S&T Focus Areas

S&T Focus Areas

4.1 Power and Energy: Technologies that expand the overall capability of the MAGTF by increasing the availability and capability of battlefield power while decreasing the logistic footprint.

4.2 Fuel Efficiency: Technologies that can enhance vehicle performance and capability while reducing fuel consumption on the battlefield. Gains in this area may also have significant impact on the logistics footprint of the MAGTF.

4.3 Survivability and Mobility: Technologies that increase survivability of both the Marine and the vehicle. These technologies include advanced lightweight armor concepts and upgraded drive and suspension systems.

4.4 Modeling and Simulation: Tools to facilitate a Systems Engineering approach to platform design and evaluates potential design and technology trade-offs for tactical wheeled vehicles. These trade-offs will address performance, payload, crew protection, life cycle costs, survivability, and Reliability, Availability, and Maintainability (RAM).

4.5 Fuel Containment/Fire Suppression: Technologies that safely extinguish internal and external vehicle fires without adversely affecting the crew; preferably a system of systems approach providing fire suppression and/or containment for the vehicle cab, crew, tires, fuel tank, and engine compartment.

4.6 Open Plug and Play Communications Architecture: The development of an affordable, scalable, and interoperable feasible C4ISR for use on legacy platforms. The development of an open source, open architecture for tactical vehicles.

4.7 Intelligent Power and Thermal Management: The development of an integrated system managing power utilization on vehicle platforms in order to improve fuel efficiencies, manages heat properties in the cab and other areas on the platform in order to maintain equipment and crew comfort. An effective power and thermal management system will improve electrical system efficiency and heat rejection.

4.8 Weight Reduction: The development of modular, scalable, and lightweight armor packages tailored to the mission, providing greater flexibility to the Combatant Commander. As well as development of lightweight materials to reduce vehicle weight and increase payload.

Sections 4.1 - 4.8 provide summaries specific to each of these eight areas.