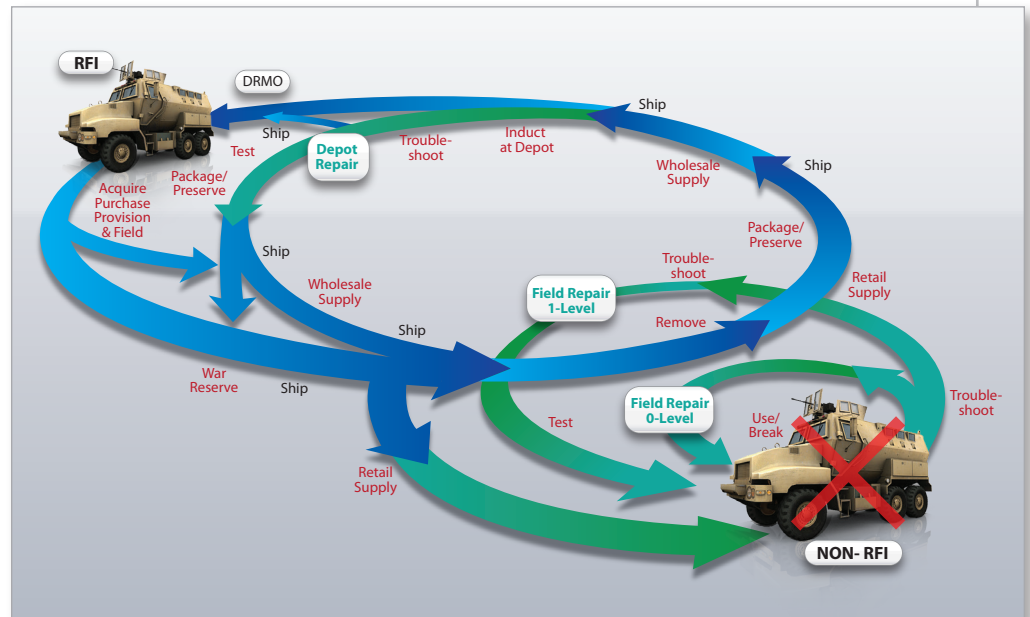


Supporting Program Managers with Rapid Prototyping of Life Cycle Sustainment Models

Using commercial off the shelf M&S development software, CTC developed the Total Life Cycle Systems Management (TLCSM) ExtendSim Logistics Analyzer (TESLA) Discrete Event Simulation tool. This tool enables rapid prototyping of life cycle sustainment models, providing both a strong foundation and the flexibility to adapt the model to many specific questions regarding reliability, availability, maintainability, and cost metrics.



This TLCSM simulation provides decision makers with insight into the implications associated with different operational, supply chain management and business case decisions. Initially implemented to support decisions as they relate to the MRAP vehicle fleet throughout the remainder of its life cycle, the tool has been extended to additional analyses including Business Case Analyses for Program Manager, Engineer Systems and Prognostic Forecasting for the Army Material Command's Condition Based Maintenance directorate. Modular design and automated data import features enable rapid and flexible analysis of TLCSM issues for a multitude of Army and Marine Corps acquisition programs throughout their life cycles.

Since implementation of the new tool, CTC's analysts have maintained involvement with the Naval Postgraduate School's Simulation Experiments and Efficient Designs (SEED) Center, enabling them to employ the state-of-the-art in experimental design and analysis of simulation output. In addition to this Discrete Event Simulation tool, CTC analysts are familiar with other techniques, employing both continuous (system dynamics) and agent based models in a variety of logistics, disaster preparedness, and health care process improvement projects.

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