

CASE STUDY: MCSC

Clockwork's Asset Performance Management Platform Selected as Enterprise Solution by US Marine Corps

The Marine Corps Systems Command (MCSC) awarded Clockwork the contract to provide predictive analytics in the delivery of product support by the Assistant Commander for Acquisition Logistics and Product Support (AC ALPS).

ABOUT MCSC

MCSC serves as the Department of the Navy's systems command for Marine Corps ground weapon and information technology system programs. MCSC programs equip and sustain Marine forces with full-spectrum, current and future expeditionary and crisis response capabilities.

Over the last several years, MCSC has applied Clockwork predictive life cycle modeling of Marine Corps ground weapon systems to maximize performance of ground fleets and minimize operational and sustainment costs; Clockwork has identified hundreds of millions in future cost avoidance while increasing equipment readiness. Baseline DEMAND models have been completed for the LAV, MTRV, AAV, M777, LVS, M1A1, M9ACE, HMMWV, MPC fleets. Together with Clockwork, MCSC will continue to expand this set of baseline predictive models and to apply existing fleet models in analyses to support the enterprise.



THE CHALLENGE

The burning platform is clearly defined: Reduced budgets, operating in multiple conflicts, and preparing for future challenges complicate life cycle planning across capital intensive programs. Impending sequestration and further budget cuts demand an immediate next-generation solution across Aerospace and Defense.

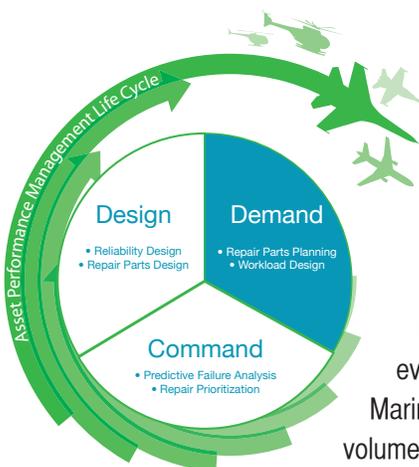
In his guidance to the Department of Defense, Dr. Ashton Carter, Deputy Secretary of Defense, explains that life cycle analysis is not a single point-in-time calculation, but rather an evolving, iterative process that addresses the changing data, environment, and operational outcomes of each system requiring an enterprise solution.

Dr. Carter envisions defense spending that is "respectful of the American taxpayer at a time of economic and fiscal distress." Yet the nation's security strategy calls for a responsive global reach that is effective, agile, and available for worldwide response. For too long, planners have been caught between these two diverging targets, however, predictive analytics as a national core capability clears the path to these two concurrent objectives.

THE DEMAND SOLUTION

Clockwork's technology delivers advanced life cycle support in achieving national objectives while balancing rapidly diminishing budgets and the need to respond across the full spectrum of defense operations. In fact, billions in cost avoidance has already been realized while simultaneously improving performance.

Complete, evolving, iterative, and time-dependent decision analysis must become imbedded in sustainment practices. The Clockwork DEMAND solution allows MCSC to evaluate the best choices in sustainment while leveraging Big Data across the enterprise. The Marine Corps recognizes the value of putting Big Data to work as they collect and store enormous volumes of data through campaigns like RFID and IUID. MCSC ALPS use of DEMAND will apply



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Clockwork's Agile Data Warehouse to convert this Big Data into clear actions that result in effectiveness and efficiency. The DEMAND platform empowers Program Managers and Product Support Managers to stay ahead of the challenges in overseeing capital intensive fleets over their dynamic life cycles. MCSC ALPS is leading the way in DoD predictive analysis by combining the power of Clockwork's DEMAND with their organic analysis capabilities.

Unlike traditional forecasting methods that make predictions based on lagging, general fleet-wide procurement data, DEMAND enables Program Managers, Product Managers and Product Support Managers to develop fleet availability targets that optimize fleet-wide repair parts inventory levels and maintenance workload based on the current condition of individual platforms, their future usage, and intended operating environment; including a location-based analysis of the fleet's performance.

Through rigorous data analysis, Clockwork data scientists establish the condition and age of each platform and its likely reliability in planned operations. Through simulation, Clockwork evaluates several platform availability vs. maintenance cost planning scenarios to determine the best choice. For the selected scenario, Clockwork prepares availability estimates, cost totals, repair part requirements, and projected work force demand. Clockwork designs the sustainment strategy that optimizes availability for each platform, each location, and each maintenance echelon through the planning horizon.

VALUE

Over the past decade, Clockwork has worked with the Marine Corps to deliver predictive analytics to target increased availability of complex, high-dollar cost combat fleets in order to overcome the challenges inherent in a fiscally constrained climate. In the last several years, Clockwork has uncovered a total future cost avoidance for DoD programs in excess three billion dollars:

- The JPO (Joint Program Office) for MRAP (Mine Resistant Ambush Protected) vehicles sought to shape the sustainment of its fleets with both efficiency and effectiveness. With Clockwork, avoidance exceeding \$2B was identified along while improving future fleet performance.
- The Army seeks to put Big Data to use in shaping CBM (Condition Based Maintenance) for its aviation fleets. Clockwork's technology is now being applied to develop this solution.
- The Navy's efforts in balancing cost and performance of the LCS (Littoral Combat Ship) require technology capable of evaluating complex systems with high-resolution across the complete life cycle. Clockwork's predictive analytics have been called into action for the LCS program.
- The Marine Corps is delivering product support to minimize cost while maximizing fleet availability. Clockwork's data scientist teams have identified hundreds of millions in cost avoidance while increasing equipment readiness.
- Maritime repositioning forces seek to optimize responsiveness with a small footprint. Clockwork streamlined inventory to significantly improve availability and reduce costs by hundreds of millions.

To learn more about Clockwork's experience and detailed product information in the Aerospace & Defense industry visit <http://www.clockwork-solutions.com/industry/aerospace-defense.php> or email info@clockwork-solutions.com.

Clockwork is a global leader of predictive analytic solutions for enterprise asset management (EAM) that improve availability and reduce repair parts inventory and maintenance costs of capital intensive assets. The company has years of experience serving the needs of the Aerospace and Defense, Energy, Heavy Machinery and Transportation industries by providing cutting edge solutions to help analyze their data, giving them visibility to each phase of an asset's life cycle, resulting in billions worth of savings.

For more information please visit www.clockwork-solutions.com.

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