Our DEMAND predictive analytic offerings provide planners the ability to reduce capital and maintenance expense while improving system availability of capital intensive, infrastructure assets. DEMAND offerings predict future repair parts needs, maintenance labor requirements and the optimal way to schedule maintenance. With DEMAND, planners assess varied operational scenarios and determine the best trade-off between cost, availability and production.

Unlike traditional forecasting methods that make predictions based on trending historical generic procurement data (with no references to cause and reason), DEMAND enables planners to develop repair parts inventory and maintenance plans based on the current condition of individual assets, their planned usage, and intended operating environment.

Using DEMAND Pro software, our DEMAND Engage® services analyze various planning scenarios to develop the highest availability approach with the least cost for capital intensive, infrastructure assets. Clockwork data scientists capture current state data in a detailed model that simulates failure events, repair parts requirements, and labor demand up to 25 years into the future.

DEMAND Engage includes a location-based analysis of the asset’s operational performance during the planning period. As part of this service, Clockwork data scientists collect data on each operating asset, associated sub-systems, and its maintenance support network. Through rigorous data analysis, the condition and age of each asset and its likely reliability in planned operational environments. Through simulation, several “asset availability vs. maintenance cost” planning scenarios are evaluated. For the selected scenario, we prepare availability estimates, cost, repair part requirements, projected work force demand as well as a maintenance strategy that optimizes availability and resources for each asset and location through the planning horizon.

As part of DEMAND Engage, Clockwork will acquire and structure performance and specification data, complete analysis for each asset in either a single or networked arrangement, and perform sensitivity modeling to determine the optimal life cycle management solution.

DEMAND Pro® is a client use decision support software service used by planners to reduce costs and improve availability of capital intensive, infrastructure assets. This includes cost and availability analysis of the current configuration, evaluation of proposed changes to asset use and maintenance plans, the impact on costs of engineering changes, and determination of the best method to extend the life of in-use assets. DEMAND Pro is used to predict repair parts and maintenance labor and is used to evaluate planning horizons from 1 to 25 years.

As part of this service, Clockwork collects, cleans and prepares critical performance data used monthly by DEMAND Pro software. The analysis and data is hosted in Clockwork’s secure hosting center and is available to customers on a 7x24 basis. Customers have the ability to change/model key assumptions regarding use and reliability.
DEMAND LCM® is a life cycle management solution that lowers cost and improves asset availability for capital intensive, infrastructure assets. Each month, DEMAND LCM houses monthly snapshots of key performance and delivers specific recommendations on required repair parts, their stocking location, and the best method to procure the parts: buy new, fix, or move from another location. DEMAND LCM analyzes the work force load at each maintenance location to perform the repairs. DEMAND LCM leverages existing ERP and CMMS investments through an electronic interface that converts recommendations made by DEMAND LCM to actions that are managed by the appropriate ERP/CMMS system. Combining our “Big Data” and predictive analytics expertise, DEMAND LCM drives the lowest maintenance cost and maximum asset availability.

Benefits

• A predictive approach to repair parts and maintenance planning
• Determine best approach to reducing cost of fleet operations and sustainment
• Optimize inventory levels across fleet and maintenance depots to control cost while increasing availability
• Improve readiness by ensuring repair parts and work force are optimally placed
• Determine highest readiness and lowest cost
• Increase probability that individual platforms will be available when needed
• Determine best approach to reduce fleet sustainment costs and improve availability
• Conduct cost vs. operating performance tradeoffs for engineering redesign
• Design most cost-effective overhaul and upgrade scheduling strategies
• Reduce platform downtime
• Drive down service contract costs
• Optimize maintenance workload distribution across different echelon
• Reduce repair parts purchasing and inventory costs

Features

• Ability to plan up to 25 years or more into the future
• Constant visibility to changing use, performance, and asset availability requirements
• On demand access to critical management information
• Monthly repair parts recommendations
• Optimal repair parts fulfillment plans (buy, move, fix)
• Optimal geographic positioning of repair parts
• Maintenance work force requirements by maintenance location reports
• Historical and projected fleet availability by platform and location reports
• Pre-Milestone A affordability analyses reports, pre-Milestone B systems engineering trade-off analyses reports, and Should-Cost estimates
• Will-Cost and post-Milestone C sustainment projection reports
• Scheduler to match maintenance demand with labor constraints
• Monthly view of budget of actual vs. forecasted
• Monthly KPI update on availability, cost, & operations
• ERP & CMMS integration

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.