



VMetric

The Inventory Optimization Tool

VMetric's optimizing engine applies marginal analysis techniques to system-based models to optimize spares selection, by selecting the parts that most increase availability for least cost. By balancing cost and system performance for the entire system, VMetric delivers results that ensure optimization where parts are modelled independently, and performance is limited to metrics such as 'Off-the-Shelf' and 'Overall Satisfaction' rates.

Leading the world in capability and flexibility, the VMetric optimizing engine models are unique in their abilities to deal with the complex interactions of multiple systems deployed at multiple operating locations. Operational availability targets can be global, system-specific or location-specific, as well as a range of other options for measurement of performance effectiveness.

BENEFITS OF VMetric

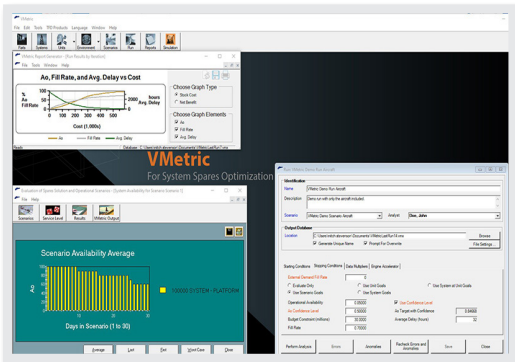
- Generate optimum spares scales to meet fleet availability targets
- Identify inadequate or expensive spares recommendations
- Ensure achievement of target fill rate or system availability levels
- Optimise spares packages against constraints other than cost

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The aim of spares provisioning is to choose the spares that maximise Operational Availability (Ao) for an affordable cost, or minimises the cost for a required Ao. To preserve system availability, the spares stock must be sufficient to cover the time taken to replenish the stock with a serviceable item. The main drivers are the failure rates, the repair turn-round times, if appropriate, and both the purchase and repair costs. Reducing repair turn-round times will minimize the need to hold spares to stock the pipeline.



Spares Optimization Approaches

- Engineering judgement based on previous experience. This approach is often flawed leading to shortfalls or expensive stock holdings.
- Single Item Modelling works at the item level treating each part independently. Typical measures of performance are Off-the-Shelf and Overall Satisfaction Rates which, in effect, describe the confidence of having a specific part available when required. These measures are also called Fill Rates.
- System-based modelling works at system level addressing all parts simultaneously with overall system availability the key performance metric. By choosing to hold the spare with the largest impact on system availability, at a cost, the overall risk or shortage is reduced for the overall system. Multi-Indenture Multi-Echelon (MIME) modelling incorporates these principles for complex environments where spares are required at multiple locations, with partial or full repairs at various levels.

VMetric can free up to 50% of capital frozen in inventory while maintaining improving performance levels

