

## Right-Sizing Repair and Maintenance Inventory

Service level adherence requires inventory management strategies and policies framing the anticipated and unanticipated demand for spare parts. Successful management of a fleet’s components requires managers to determine how to have the right parts available, at the right place, at the right time while minimizing the carrying costs.

Successfully predicting demand for spare parts requires knowledge of the component failure rates, scheduled maintenance plans, component geographical penetration, past usage patterns, demand variability and available substitutes. Mitigating the risk of carrying obsolescence requires market insight and periodic reviews of procurement strategies. Understanding how to act upon the variables that determine the proper stock levels can reduce working capital while mitigating stock-out conditions.

Starr and Associates’ approach to right-sizing spare parts inventory is a three-step process of operational discovery, future state design, and solution implementation.

**Operational Discovery** of the objectives, requirements, constraints, and existing pain points begins at the leadership level before probing the management teams’ established policies, methods and practices.

Operational Discovery		
Executive Level	Inventory Management	Supply Chain Management
<ul style="list-style-type: none"> <li>Review vision, mission, goals and objectives</li> <li>Assess service level agreements and norms</li> <li>Map boundary partner escalations and interactions</li> <li>Analyze reporting methods</li> <li>Identify pain points</li> </ul>	<ul style="list-style-type: none"> <li>Characterize demand and inventory strategies</li> <li>Measure inventory turn rates, movement and demand variability</li> <li>Evaluate stock precision and accuracy</li> <li>Review obsolescence removal practice</li> <li>Study modules, submodules, or component strategies</li> <li>Identify storeroom geography and logistics</li> <li>Analyze allocation strategies</li> <li>Observe Kanban system</li> <li>Review criticality hierarchy</li> <li>Survey item attributes</li> <li>Evaluate accounting method(s)</li> <li>Evaluate shared inventory and vendor consignments</li> <li>Examine handling and storage of hazardous materials</li> </ul>	<ul style="list-style-type: none"> <li>Examine planned vs. unplanned requisitions</li> <li>Document escalation parameters and response methods</li> <li>Evaluate organizational structure</li> <li>Explore nomenclature method(s)</li> <li>Analyze stock level determinations</li> <li>Investigate batch quantity determination and delivery lead times</li> <li>Research commonalities, availability, rareness, stock-outs and shortages</li> <li>Evaluate repair management; turnaround time and quality tracking methods</li> <li>Appraise logistics expediting processes</li> </ul>
Field Service Management		
<ul style="list-style-type: none"> <li>Identify vehicles, fleet size and constraints</li> <li>Benchmark level of standardization</li> <li>Outline replenishment process</li> <li>Review component failure rates</li> <li>Examine schedule maintenance plans and requisition methods</li> <li>Survey communication of approved substitutions</li> </ul>		

Deliverables: Operational analysis of the aftermarket system, metrics, processes, and policies.

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**Future State Design** requires documenting current practices, envisioning a future state, navigating the turbulence of change management, and effectively communicating with stakeholders.

Future State Design		
Current State	Future State	Communications
<ul style="list-style-type: none"> <li>• Interview stakeholders involved in workflow</li> <li>• Document current workflow of products and information</li> <li>• Gather and define key metrics</li> <li>• Discover process failure points and inefficiencies</li> <li>• Identify challenges and opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss opportunities for improving workflows with stakeholders</li> <li>• Prioritize opportunities within each workflow</li> <li>• Gain buy-in of goals</li> <li>• Update current state workflows</li> <li>• Construct and finalize future state workflow</li> <li>• Define success metrics</li> </ul>	<ul style="list-style-type: none"> <li>• RACI Matrix</li> <li>• Status Reports</li> <li>• Status Meeting Minutes</li> <li>• Executive Briefings</li> <li>• Project Schedule</li> <li>• Risk Management</li> <li>• Issue Management</li> </ul>

Deliverables: Value stream maps, flow diagrams, go and see insights, opportunities for improvement, opportunity impact analysis, and root cause analysis.

**Solution Implementation and Control** requires proper planning, change management controls and vigilant monitoring to ensure success.

Solution Implementation and Control		
Rollout	Control	Communications
<ul style="list-style-type: none"> <li>• Alignment of roles and responsibilities</li> <li>• Develop project plan for solutions and confirm prioritization</li> <li>• Develop training plan and materials</li> <li>• Conduct training and phased implementations</li> <li>• Right-size the inventory</li> </ul>	<ul style="list-style-type: none"> <li>• Standardize methods</li> <li>• Schedule periodic reviews</li> <li>• Track success</li> <li>• Socialize success stories</li> <li>• Enhance decision making with increased data awareness</li> </ul>	<ul style="list-style-type: none"> <li>• Dashboards</li> <li>• RACI Matrix</li> <li>• Check-in meetings</li> <li>• Status Reports</li> <li>• Status Meeting Minutes</li> <li>• Executive Briefings</li> <li>• Project Plan</li> <li>• Project Budget</li> <li>• Risk Management</li> <li>• Issue Management</li> </ul>

Deliverables: Implementation solutions and plans

Making good decisions and taking the appropriate initiatives can significantly impact the spare parts inventory level while adhering to the required level of service. Inventory reductions can be achieved by applying simple measures, but significant results require more challenging measures. Starr and Associates has the knowledge and skill to develop the vision and strategy, implement solutions, and ensure the sustainability of success. We stand by our Partners to maximize their return on their investment in us.