

CASE STUDY

RIGHT-SIZING STOCKING LEVELS TO INCREASE SPARE PARTS AVAILABILITY FOR EQUIPMENT UPTIME



CLIENT PROFILE

A medical equipment company that develops, manufactures and sells innovative tumor treatment solutions looking to improve fulfillment of spare parts from its regional warehouses. The sporadic and geographically disperse demand and the high criticality of equipment downtime created a complex system where the growing inventory investments hadn't been successful in achieving the fulfillment targets.

DESIRED OUTCOMES

- Avoid unscheduled equipment downtime.
- Obtain evidence-driven prescriptions for spare parts stocking levels by warehouse.
- Understand the implications of incumbent business rules on the stocking levels, in order to inform the inventory right-sizing journey.



KEY ACTIONS TAKEN

- Uncovered part-location pairs with inconsistent policies, e.g., parts with observed and forecasted demand, but zero stocking level.
- Highlighted the misalignments between the system's stocking levels and the inventory on-hand.
- Recommended stocking levels to minimize network inventory investment, given the part availability targets.
- Provided visibility of the financial and operational impact of implementing incumbent business rules when driving stocking levels.
- Prescribed a range of risk-based journeys to right-size stocking levels.
- Provided a prioritized implementation journey for right-sizing on-hand inventory by burning down excess, and increasing inventory with highest combined score for (highest) probability of demand and (smallest) unit cost.



KEY RESULTS



Identified over a third of part-location pairs with either:

- Positive On-hand inventory, but Zero optimal Stocking Level;
- Positive optimal Stocking Level, but Zero On-hand inventory.



51-75% of part-location pairs identified for stocking level right-sizing, with the range depending on the chosen level of risk-aversion.



10% or higher (depending on risk-level scenario) inventory value reduction relative to on-hand inventory, equivalent to \$1.13M or higher.