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Total Cost Optimization

In the Service Supply Chain (SSC), organizations face constant pressure to meet strict Service Level Agreements (SLAs) while managing tighter inventory budgets. Service and finance teams often struggle with the no-win tradeoffs between high service levels and cost control.

Many planning tools begin optimization using arbitrary service level targets—an approach better suited to just-in-time manufacturing than the just-in-case demands of the SSC.

BaxterProphet, part of the BaxterPredict platform, solves this by applying Total Cost Optimization, which calculates the ideal stock level that minimizes the combined cost of inventory and stockouts.

Unlike traditional MEIO approaches that often prioritize inventory efficiency across echelons, Total Cost Optimization centers on service contract outcomes and financial impact. This makes it better aligned with the urgency and unpredictability of service operations.

This enables customers to align budget realities with SLA commitments—achieving what Baxter Planning calls a Service Experience Advantage.

HOW DOES TOTAL COST OPTIMIZATION WORK?

This proprietary modeling takes qualitative and quantitative cost elements into account to determine optimal target stock levels that yield optimized service levels.

By including the cost of a stockout in the calculation, the system achieves levels of optimization only possible with a solution designed for Service Parts Planning. Stockout costs occur when the required part is not available at the ideal location.

Stockout costs are derived from factors that include, but are not limited to:

- Customer importance
- Downtime costs
- Service contract penalties
- Expedited shipping fees
- Lost technician productivity
- Lost profits
- Decreased Net Promoter Score (NPS)

With Total Cost Optimization, the optimal target stock level is the one with the lowest total costs of combined inventory and stockout costs.

TOTAL COST OPTIMIZATION IDENTIFIES THE TARGET STOCK LEVEL WITH THE LOWEST TOTAL OF INVENTORY AND STOCK-OUT COSTS

INVENTORY COSTS =
part cost + carrying cost

STOCK-OUT COSTS =
downtime + expedited shipping + lost productivity
+ contract penalties + lost profit + others

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OPTIMIZED FILL RATE

A key component of Total Cost Optimization is the ability to differentiate between standard fill rate and optimized fill rate. The standard fill rate metrics commonly used measure only whether the inventory to meet demand is anywhere in the service provider's supply chain, ignoring the SSC costs previously mentioned. Though the reported service level metric may be accurate, the cost of providing this level of service can include hidden expenses that significantly affect your bottom line.

Optimized fill rate is the SSC's ability to not only fill the demand, but to fill it on time from the most efficient site in network, saving on shipping costs or penalty fees and keeping employees from scrambling.

BaxterProphet determines the actual optimized fill rate using Total Cost Optimization to enable continuous improvement. When demand is not filled from the optimal (planned) site, the software provides a root cause analysis and determines if the "miss" was a result of a supplier problem, transportation delays, data issues, or a variety of other potential problems.

This automated analysis of non-optimal fulfillment allows end users and leaders to identify issues and implement corrective action.

RESULTS

Adopting Total Cost Optimization as provided by the BaxterPredict platform shows significant results.

BOOST TEAM PRODUCTIVITY BY 40%

REDUCE CARRYING COSTS BY >35%

INCREASE FIRST-TIME FIX RATES >25%
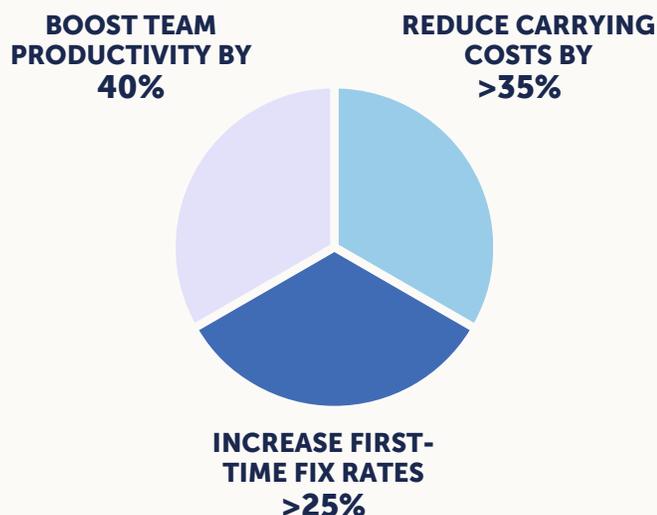
WHY BAXTER PLANNING?

Practitioner Expertise
Decades solving real-world Service Supply Chain problems

Purpose-Built Technology
End-to-end platform embedded with specialized AI and Data Core

Industry-Leading Outcomes
Combination of technology and partnership yield accelerated results

ABOUT BAXTER PLANNING

Baxter Planning is a global leader in Service Supply Chain software, delivering a Service Experience Advantage to the world's most innovative enterprises for over 30 years. The end-to-end BaxterPredict platform empowers organizations to optimize service parts planning, execution, and resolution, driving superior customer experiences, fostering long-term loyalty, and fueling business growth.

By combining purpose-built technology, award-winning AI, decades of practitioner expertise, and a commitment to true partnership, Baxter Planning consistently delivers industry-leading outcomes for its clients.

The company is headquartered in Austin, Texas, United States, with offices around the globe.

For more information, visit www.baxterplanning.com.