



CUSTOMER STORY

# Thule

Increases service levels and reduces inventory with improved planning

## Introduction

Founded in Sweden in 1942, Thule is a premium brand used globally for a wide assortment of products, predominantly focused on outfitting cars to transport cargo and equipment (roof racks, roof boxes, bike and watersport carriers, etc.). Highly seasonal and intermittent demand drove the company to seek a centralized, automated solution to combat plummeting planner productivity and service levels that dipped below 80%.

## Industry

- Consumer Goods

## Solution

- Demand Forecasting & Planning
- Inventory Optimization
- Replenishment

## Results

- Increased service levels from 80% to 92%
- Lowered inventory investment / Freed up working capital
- Regained control of complex network during a period of growth
- Enabled more effective reporting

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## Challenges

Thule was facing a multitude of obstacles to managing its supply chain effectively. First, the nature of Thule's inventory left it highly susceptible to both the pendulum of seasonal demand and the intermittent demand that plagues "long tail" items. For instance, ski carriers might fly off the shelves

in winter, only to lie gathering dust in warehouses over the summer. And with nearly a thousand different part numbers with unique fittings for different cars, the company struggled with slow-moving spare parts. This problem was compounded by a growing catalog of about 75,000 SKU/locations.

Thule serves approximately 28,000 customers across 20 locations and has up to five network tiers. Within this network, the company uses various methods to distribute its products to 140 countries globally. In some locations, Thule sells to retailers, e-tailers, or directly to customers. In others, its distributors may assume full responsibility for the market. "To make things even more complex," said Rickard Andersson, vice president of supply chain for Thule, "we have a

mix depending on product assortment in some countries, so we can have a distributor for bags but use retailers for rooftop boxes in the same country. It all depends on what best serves the customer in the market."



**As our assortment continues to grow, we are moving into new categories and I am confident that our current demand planning team will be able to manage it successfully now." —Rickard Andersson, vice president of supply chain**

The complexity of this network, coupled with the volatility of demand, overwhelmed Thule's planners, who were operating in a decentralized planning system, using a manual forecasting tool. According to Andersson, "We had reached a point where the demand planners were spending too much time filling out reports instead of drawing conclusions and making decisions to improve, for example, service or inventory reduction."

Eventually, the problems caused by seasonality, intermittent demand, an increasing number of SKUs and an inefficient planning process led to deteriorating planner productivity and service levels that dipped below 80%.

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## Solution

Faced with these supply chain quandaries, Thule reassessed its manual planning process and decided to adopt a more automated planning solution that would help them achieve four goals:

- Implement centralized demand planning
- Improve productivity
- Raise service levels from below 80% to 92%
- Reduce inventories by 15%

Thule's Outdoor segment called upon Optilon to implement an automated forecasting system that delivered a more efficient and accurate demand planning process.

Thule's Demand Planner, Michael Wolfsteiner, explained the uniqueness of the solution, based on ToolsGroup's SO99+ software, "Traditional demand planning considers demand history in terms of

quantity only, ignoring customer order lines. ToolsGroup's SO99+ on the other hand analyzes the demand history both in terms of quantity and customer order lines, in order to better model the shape of the demand. The close connection between desired service level and inventory level is very positive."

The solution included inventory optimization. Thule's old safety stock routine was based on a seasonally dependent coverage rate (e.g., number of days' average demand). The new optimization instead starts from an aggregated service level target and defines service levels for each SKU, taking advantage of a wide variety of variables, such as demand variation, average demand, order frequency, costs and lead time. It modifies service and coverage to maximize the overall use of the capital within a pre-defined "service group". Minimum service levels are set for business critical items.

The system also included rough cut planning to identify requirements to pre-build stock due to capacity limitations. The actual replenishment is still done in the ERP system.

Thule's Outdoor segment called upon Optilon to implement an automated forecasting system that delivered a more efficient and accurate demand planning process. Enter ToolsGroup's Service Optimizer 99+ (SO99+), boasting a powerful and unique approach to inventory optimization. By aggregating inventory items and assigning specific target service levels to each family of products, ToolsGroup could enable Thule to achieve significantly higher overall service levels while maintaining reasonable inventory levels. As Thule's Demand Planner Michael Wolfsteiner explains, "Traditional demand planning considers demand history in terms of quantity only, ignoring customer order lines. ToolsGroup's SO99+ on the other hand analyzes the demand history both in terms of quantity and customer order lines, in order to better model the shape of the demand. The close connection between desired service level and inventory level is very positive."

SO99+ also employs a proprietary probability-based approach to forecasting for improved accuracy, as well as a Demand Collaboration Hub (DCH) that provides planners with visibility across teams.

Thule began transitioning to this new planning solution in 2010, with ToolsGroup's partner Optilon leading the implementation. By summer 2011, Thule's European enterprises were up and running on the new system. In the spring of 2014, Thule extended its use of SO99+ to its Asian markets, followed closely by its implementation throughout the U.S. in the summer of 2015.

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## Results

Armed with this centralized and highly automated solution, Thule soon began seeing results. According to Andersson, "We took [service levels] from below 80% to 92% in two years' time. That's a very good improvement. And we actually lowered inventories on quite a few SKUs. We achieved

those higher service levels with lower inventories—and are moving to our goal of 15% reduction. And we achieved all that during a period of considerable sales and SKU growth using our existing team.

SO99's reporting tools are also improving Thule's process by enabling planners to run "what-if" scenarios. Andersson says, "Being able to analyze assortments is very important for us because we're investing money to be able to sell much more. So we're using the system to help us analyze, for example: if we increase the service level in an assortment, will it drive sales? And what impact will it have on inventories?"

Andersson also credits Thule's willingness to embrace forward-thinking strategies for the company's success, claiming that "it's generally positive to make these kinds of changes and continually question the status quo. In my experience, when you improve your processes, you get to put your best practices into action." To this end, Thule intends to explore more of SO99's capabilities, such as its promotion mapping, its ability to assess and recommend making items to stock or to order, and its functions pertaining to lot and batch sizes.

With the help of SO99's automated system, Thule tackled its formidable supply chain challenges. Andersson asserts, "The results we've achieved prove the merits of an automated, centralized planning approach rather than a manual, decentralized process. We are managing successfully during a period of high growth and still have control over our inventories."

This article has been supplemented by the article appearing on the CGT Path to Purchase website on August 9, 2019, entitled "Case Study: Supply Chain Planning at Thule."

## + About ToolsGroup

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