Micron Achieves Planning Excellence With Blue Yonder

Result

- Streamlined consumption of excess inventory
- Increased fill rate by 4% in one day after go-live
- Achieved best in class accuracy with 5% improvement in original promise date (OPD)
- Reached best in class accuracy for entitled customer request date (eCRD) with a 25% increase in performance

"Micron is pleased with the performance of our Blue Yonder solutions, and how they've brought innovation into our planning processes, and we reap the benefits every day. We couldn't ask for more from our partnership and they are very receptive to our ideas for innovations, for instance, we think AI can make a real impact in the future, taking us towards a more 'lights off' scenario where problems get identified and fixed automatically. We truly have a super-powered supply chain and with that we are now rated as preferred vendor for most of our high-tech customers."

— Gaurav Tyagi, Director, Supply Chain Planning Solutions, Micron

The Company

Micron is the world's fourth largest producer of semiconductors, with average annual revenues of around $25 billion since 2021. As a public company headquartered in Boise, Idaho, its operations span 17 countries and include 11 manufacturing sites, 12 customer labs, and 20 design centers. With 56,000 patents, Micron's semiconductor solutions are found in smart watches, tablets, PCs, desk top computers, data centers, and smart automobiles. It is currently experiencing significant growth due to global demand for artificial intelligence (AI) server memory in 5G data centers and high bandwidth memory (HBM) solutions.

The Business Challenge

Faced with extreme cyclical demand volatility, long lead times, materials shortages and multinational operations, Micron's supply chain planners were challenged to balance inventory levels, customer service and costs. They had to move from a "push-based" long-term planning model and transition to "pull-based," demand-driven supply planning, strategic allocation, and order promising. Micron also needed to replan dynamically as conditions changed. This required an investment in people, processes, and technology.

The Solution

Micron implemented Blue Yonder Supply Planning solution to accelerate and optimize its end-to-end planning process, manage constraints, identify exceptions, and run simulations to resolve them. This ensured that capacity, raw materials, and other resources are aligned with near real-time demand, balancing costs, service levels, and sustainability objectives. Micron has also implemented Blue Yonder Order Promiser to ensure that supply was strategically and profitably allocated to customers worldwide.

How Micron Transformed Its Supply Chain Planning With Blue Yonder

Micron operates in a very complex, manufacturing-based industry where demand changes quickly and products must move across the world just as fast. This means the company needs to make a series of complex decisions about what wafers to produce, where they will be produced, then tested, and where they will be promised. Adding to this complexity are silicon supply shortages, production constraints, high transportation costs, environmental concerns, and disruptions such as political escalations, extreme weather, and natural disasters.

Dynamic Planning Increases Fill Rates by 4% and Streamlined Consumption of Excess Inventory on Day 1

With Blue Yonder, Micron transformed its processes from a long-term planning horizon and high levels of buffer inventory to daily planning, dynamic inventory movements, and rapid production shifts. On the first day of implementation of Supply Planning, Micron increased its fill rates by 4% and quickly repurposed excess inventory to support it.

Optimized Planning Leads to Best in Class Customer Conformance Metrics

Blue Yonder Order Promiser helps the company strategically allocate scarce inventory to high-priority customers to provide them with a commitment and then internally track the churn based on four criteria: frequency, consistency, magnitude, and stability. The solution's optimization engine ensures that inventory is accurately and profitably promised and can be delivered on time. Order Promiser has helped Micron achieve best in class customer conformance metrics, where original promise date (OPD) performance went up by 5% and entitled customer request date (eCRD) performance went up by 25%.

Consequently, Micron has become preferred vendor for an additional 45% of its customers.

Increasing Accountability to People and the Planet With Data and Generative AI

Blue Yonder's cloud-based solutions have made Micron's worldwide supply chain more agile, more adaptable, and more aligned with demand. They help drive its sales and operations planning (S&OP) processes with autonomous, data-driven decisions that maximize service, while minimizing costs and the distances traveled by products.

Micron is actively co-innovating with Blue Yonder on generative artificial intelligence use cases for supply chain planning. The focus is on how generative AI can assist human decision making and, in some cases, automate resolutions to improve planner experience and increase the ability to react to market shifts as they happen.

"We need to be accountable to the planet and to our own associates, so by deploying effective processes, we make sure their work life balance is intact. Working with Blue Yonder, while generating our master production schedule, we have an objective to minimize the miles traveled by our chips. As much as possible a chip is planned to get assembled, tested, packaged, and shipped from a single physical location. Earlier chips were moving across geographies for different manufacturing stages, for example from Malaysia to China, from China to Singapore, and from Singapore to Taiwan. With Blue Yonder Supply Planning, we create more stable and vertically integrated plans and save a lot of carbon emissions," says Tyagi.

Micron has become a supplier of choice in the competitive global semiconductor industry, thanks in part to its adoption of advanced technology and dynamic planning practices.