

Seagate Builds Supply Chain Driven by Customer Demand



Challenges

Create a more responsive supply chain that will support business practices such as vendor-managed inventory, JIT hub replenishment, and build-to-demand manufacturing.

Solution

E2open multi-enterprise integration and multi-enterprise business process management capabilities enable Seagate to automate and manage intercompany order, inventory, and forecast processes.

Results

- Seagate has moved from 30 logistics carriers to just two, cutting costs and improving efficiencies.
- Request-to-commitment turnaround time shrank from three days to 24 hours, opening up new upside opportunities.
- End-to-end order and inventory visibility — and true vendor-managed inventory capabilities — were enabled throughout the supply chain.

E2open Solution Helps Synchronize Demand and Supply

As the largest global supplier of hard disk drives, Seagate® competes in a market in which next-generation products arrive quickly, and are without fail cheaper and more powerful. In such a hyper-competitive business, where short product shelf life is the rule, manufacturing and supply chain processes must be accurate, lean and flexible.

Deliver the right product but underestimate customer demand, and you miss out on a big opportunity. Reach the market at the wrong time with the wrong product, and the news is even worse. But line everything up correctly — the right product, at the right time, at the right volume — and you've scored a winner. To succeed in such an environment, Seagate needs to be in tune with the needs of its customers and the capabilities of its supply base.

To achieve those goals, Seagate has implemented state-of-the-art e-business and supply chain practices — such as vendor-managed inventory (VMI), customer-facing just-in-time (JIT) hubs and build-to-order manufacturing — that are truly responsive to market changes. These practices are driven by customer demand — measured by actual drive pulls from the hub, rather than forecasts from OEM customers. That helps keep costs low and excess inventory to a minimum up and down the supply chain.

“Our top priority is customer responsiveness,” says the executive director of Supply Chain Management, Asia at Seagate. “When an opportunity with a customer arises, we want to satisfy their needs, quickly and flexibly. To be able to accomplish that, our logistics and supply chain coordination has to be just superb.”

Seagate's Supply Chain Initiatives

Third-Party Logistics (3PL) VMI Hub Management

Goal

- Increase inventory turns
- Decrease inventory management costs
- Decrease logistics costs

Process

- Deploy a common VMI process
- Transition focus from forecasting to execution

Customer Hub to Replenishment

Goal

- Allocate capacity/materials to demand
- Increase inventory turns and service levels
- Decrease process costs

Process

- Transition from build-to-forecast to build-to-demand execution process
- Streamline demand forecasting process steps

Challenge: Delivering End-to-End Process Synchronization

To achieve its business goals, Seagate wrestles with two fundamental industry trends, the combination of which drive the company's need to integrate business processes across divisions, geographies and trading partners:

- **Short product life cycles:** The competitive storage industry requires fast time-to-market and fast time-to-volume strategies to achieve profitability.
- **Highly volatile demand:** As actual demand for products such as PCs and servers fluctuates, forecasted demand for hard drives fluctuates at a far greater rate because of inaccurate or latent supply chain information and gaps among planning and execution processes between Seagate and its suppliers. This so-called "bullwhip effect" can doom build-to-forecast manufacturing strategies.

Indeed, the ultimate goal, according to Seagate's technology team in Asia — which is spearheading the company's supply chain transformation — is to build an industry leading supply chain, evolving it from a build-to-forecast model to a true build-to-demand model.

"By better synchronizing with our trading partners, we can build a demand-driven supply chain that is more responsive to the needs of our customers and better able to react to changing market conditions,"

says the director of Supply Chain, Asia at Seagate. "Our vision is to create a true, multi-tier supply chain with global visibility and synchronization of supply and demand replenishment signals."

Although build-to-order and vendor-managed inventory practices are becoming more widely used in the high-tech industry, Seagate executives stress that the success of VMI rests wholly on the quality of information provided by trading partners.

Too often today, a manufacturer sends out their requirements and suppliers simply respond "yes" to the entire order (concerned that anything less would lose the deal), whether or not their response represents a true commitment underpinned by actual, available inventory. Trading partners simply deal with the product shortfalls and exceptions later — usually offline via last-minute, costly and inefficient faxes and phone calls.

Since MRP systems are driven by time-phased orders that are assumed to be actual commitments, the difference between a supplier promise and a supplier commitment is anything but academic. Indeed, an unfilled or late delivery can throw a manufacturing line completely off-schedule.

The supply chain challenge is exacerbated by the fact that in the past few years the electronics industry has been in an oversupply market. However, when the cycle reverses and industry supply becomes constrained once again, manufacturers relying on VMI models with inadequate supply chain process visibility will find their supply chain breaking down as the bullwhip effect exposes gaping holes in supply, and as trading partners begin allotting available inventory on a first-come, first-served basis.

By crafting a supply chain driven by real customer demand — rather than simply by web-committed forecasts, as most VMI programs do today — Seagate can counter such inventory shortfalls and build a “more resilient, fault-tolerant supply chain,” says the director of Supply Chain, Asia at Seagate.

Seagate’s supply chain thought leadership aims to fundamentally change how the company managed its supply chain in a number of key ways, including:

- Providing actual demand data to suppliers, 3PLs and feeder plants, enabling all parties to plan and respond to the best possible supply chain information
- Gaining the ability to respond to unforeseen upside opportunities — perhaps a potential new customer win — by engaging in fast replenishment planning as needed; also, by using new collaboration tools to manage supply chain exceptions/problems when they arise
- Defining new ways to measure available inventory; for instance, by giving equal status to inventory already in a hub, inventory in transit, and work in progress — in essence, replacing held inventory with better supply chain information

It’s no small task moving to such a build-to-order model. To succeed, the Seagate team realized it had to open up a synchronized two-way, closed-loop communications channel between Seagate and its trading partners — not to mention between its own plants and inventory hubs. In addition to the technical challenge of creating those links, Seagate knew it needed to focus its supply chain on the importance of passing on solid, actionable, “single version of the truth” supply chain data.



“Trust is a critical element in a collaborative supply chain — all parties need to be able to trust the data and the underlying supply forecasts and delivery commitments,” says the executive director of Supply Chain, Asia at Seagate. “Achieving this level of trust requires a robust system providing visibility to the supply chain process for all suppliers and customers alike.”

Indeed, Seagate’s state-of-the-art supply chain vision delivers benefits for trading partners as well. For instance, a supply chain with better end-to-end visibility and synchronization enables suppliers to significantly decrease their inventories and associated safety and cycle stock costs. Suppliers also benefit from reduced inventory and forecast processing costs, and their strong participation contributes to overall improvements in customer service and SLA metrics across the Seagate supply chain.

Solution: E2open Enables Multi-Company Process Management

With its strategic requirements mapped out, Seagate deployed E2open’s multi-enterprise business process management, including E2open’s demand-supply network applications for managing intercompany workflows and multi-enterprise integration for enabling trading partner onboarding and any-to-any integration.

For Seagate, E2open’s applications propagate actual demand data through the Seagate supply chain. With that data in place, E2open’s business process applications calculate and provide a recommended replenishment order quantity that helps Seagate and its trading partners respond to upside demand opportunities. E2open also helps Seagate check all of its inventory positions, including on-hand inventory across its sites, finished goods and work in progress at supplier sites, and in-transit inventories. That inventory check provides Seagate with greater flexibility in managing inventories and enables the company to be much more responsive to customer requests.

In Asia, Seagate’s 3PL provider manages five VMI hubs supporting six Seagate manufacturing facilities. Seagate sends demand pull signals to the 3PL via E2open. The real-time supply chain visibility enables the 3PL to send a current inventory report each day to Seagate and each of its suppliers, as well as a hub receipt report four times each day.

In addition, the E2open solution — which today spans 10 countries, includes more than 180 suppliers (all of Seagate’s direct material suppliers) and handles in excess of 66 million parts per day — delivers many-to-many web- and RosettaNet®-based messaging for Seagate and its trading partners. Seagate sites and backend systems are synchronized with E2open using RosettaNet Partner Interface Processes (PIPs), and suppliers have access to supply chain information through web-based or business-to-business (B2B) integration interfaces. Regardless of integration method, all of Seagate’s suppliers send their order-commit status to Seagate via E2open.

“ Now suppliers can see all the inventory sitting ahead of them and have full visibility to judge what our real customer demand is. This information is flowing to them in a more accurate and timely fashion, so they can plan their business better. Overall, inventory in the supply chain has gone down as well. ”

Goh Yong Chew
Executive Director of Supply Chain
Management, Asia, Seagate

“Using E2open, we’ve been able to integrate trading partners of all sizes and capabilities, a requirement for the supply chain transformation we are undertaking,” says the director of Information Technology, Seagate. “The E2open solution enables trading partners to integrate to only one platform, and we can be assured that their messages will be transformed and managed to Seagate’s specifications.”

The impact of this improved supply chain visibility and synchronization, powered by E2open, has been tremendous. Seagate has moved from 30 logistics carriers to just two, cutting costs and improving efficiencies. Request-to-commitment turnaround time shrank from three days to 24 hours, opening up new upside opportunities. In short, Seagate now has end-to-end order and inventory visibility — and true vendor-managed inventory capabilities — throughout its supply chain.

Seagate’s trading partners benefit from their integration to Seagate via the E2open platform as well. Suppliers have gained new process synchronization and management capabilities that help them to provide more accurate forecast and inventory information to Seagate, thus deepening the supplier-customer relationship.

With E2open delivering a ready-to-deploy technical infrastructure, suppliers can focus on business — rather than IT — issues, speeding compliance with key Seagate supply chain initiatives, such as VMI.

In addition to the solution’s any-to-any translation capabilities, E2open also provides testing and monitoring tools to ensure trading partner connectivity.

“Managing supplier integrations can be a complex and time-consuming activity,” says the manager of Information Technology, Seagate. “E2open’s testing and connection monitoring tools make it easier for trading partners to get on board by enabling both Seagate and its suppliers to monitor network transaction throughput and test customer endpoint availability.”

Seagate suppliers generally integrate with the solution via a web-based interface. Seagate has also begun to aggressively provide options for suppliers to integrate via B2B server-to-server connections, enabling end-to-end business process integration. Suppliers will achieve even greater benefits, Seagate believes, via such server-to-server connections into E2open, including faster time-to-value numbers and lower total cost of ownership compared with point-to-point integration options.



Results: Data Synchronization and Visibility Across the Demand-Supply Network

Today, Seagate and its trading partners are collaborating on order, forecast and inventory data using E2open's process workflows and integration software platform. The applications that E2open provides go a long way toward enabling Seagate to move to a true build-to-demand environment.

The ultimate goal is to move to a "pull" model, in which customers pull product from Seagate JIT hubs based on real demand. If those hubs can't meet the demand, they signal back to Seagate plants to produce more product. Thus rather than building to often-inaccurate forecasts, Seagate is able to reach its goal of building to actual customer demand pulls instead.

The pay-off for Seagate from its supply chain transformation is potentially enormous. Already, Seagate has improved inventory turns, provided better visibility to suppliers and moved to more automated, standard processes across its entire value chain.

"Now suppliers can see all the inventory sitting ahead of them and have full visibility to judge what our real customer demand is," says the executive director of Supply Chain Management, Asia at Seagate. "This information is flowing to them in a more accurate and timely fashion, so they can plan their business better. Overall, inventory in the supply chain has gone down as well."

Helping to drive these business process improvements is E2open's software on demand for multi-company process management. With E2open's help, Seagate has been able to meet its supply chain and business goals, and establish itself as a manufacturing leader in the electronics industry — now and into the future.

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About Seagate

Seagate is a worldwide leader in the design, manufacture, and marketing of hard disk drives, providing products for a wide range of enterprise, PC, notebook, and consumer electronics applications.

About E2open

At E2open, we're creating a more connected, intelligent supply chain. It starts with sensing and responding to real-time demand, supply and delivery constraints. Bringing together data from customers, distribution channels, suppliers, contract manufacturers and logistics partners, our collaborative and agile supply chain platform enables companies to use data in real time, with artificial intelligence and machine learning to drive smarter decisions. All this complex information is delivered in a single view that encompasses your demand, supply and logistics ecosystems. E2open is changing everything. *Demand. Supply. Delivered.* Visit www.e2open.com.

