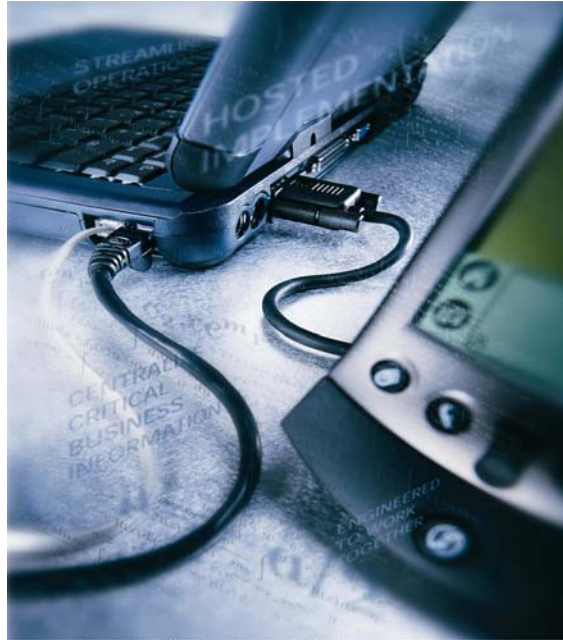


Oracle & Consumer Electronics

*Respond to Channel Demand Variability
in Real-Time*



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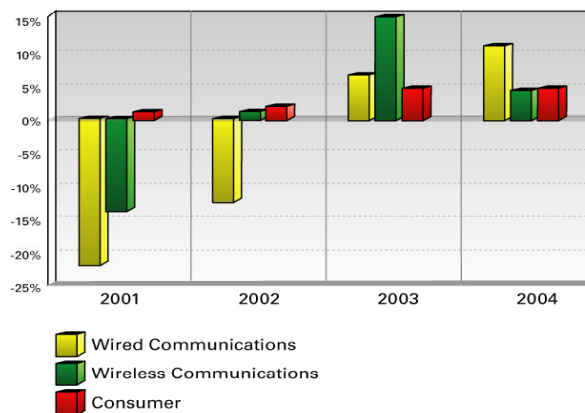
The consumer electronics industry is under pressure. Market conditions and customer demands have drastically impacted bottom-line profitability and fragmented the high-technology supply chain, making it even more difficult to manage a complex and volatile global supply chain. The dramatic downturn over the past two years has resulted in margin erosion, inaccurate backlogs, and diminished sales revenues—leaving many consumer electronics and PC OEMs holding excess inventory and experiencing under-utilized capacity. Aggressive competition on price and feature set, combined with increased product standardization and shorter product lifecycles, pose further threats to company viability. In a desperate effort to improve margins and ensure profitability, consumer electronics OEMs have begun to outsource anything that is non-proprietary. Smart companies know they must fight these battles while positioning themselves for the inevitable upturn.

“As the trend towards outsourcing continues and semiconductor suppliers drive more of the system expertise and technology, OEMs and suppliers will need to rely more heavily on the tools and real-time software that connects and enables both to evaluate and pursue the right efficiencies and time to revenue.”

Shane Rau & Mario Morales, IDC,
September 2002

Consumer Electronics Industry to Gain Traction in Second Half of 2003

WorldWide Electronics System Factory Shipments, Annual Growth
iSuppli Corporation, 2003



The economic downturn makes it even more important for consumer electronics companies and PC OEMs to protect their installed base of direct- and indirect-

channel customers. The competitive landscape today mandates innovative approaches to demand fulfillment that manual systems can't support. Customers expect products tailored to their needs, accurate order promises, visibility to orders throughout the fulfillment process, short lead times, and on-time deliveries of quality product. All this, as margins continue to decline. Firms choosing to go it alone and control each stage of the "Develop-Make-Buy-Deliver" workflow are inevitably driven out of business by competitors nimble enough to maintain competitive advantage by focusing on what they do best.

In addition to these pressures, the consumer electronics industry is one of the industries most prone to fluctuations in demand. New products become "must haves" overnight, and existing products become obsolete just as quickly. Without the ability to respond to these fluctuations in a timely manner, OEMs risk supply shortages, inventory write-downs, and customer dissatisfaction that can jeopardize the business's future viability.

Oracle's supply chain solution for the consumer electronics industry drives bottom- and top-line performance by eliminating communication latency and enabling real-time collaboration among trading partners across the extended supply network. Real-time collaboration and inventory deliver improved customer satisfaction, shorter execution-response times, and overall lower operating costs. Oracle's solution is designed to coexist with other ERP or planning vendors, capturing maximum value from legacy IT investments. With RosettaNet support built in, Oracle is the only vendor that can seamlessly integrate critical business processes with suppliers and manufacturing partners, as well as offer back-end RosettaNet integration to ERP. With Oracle you can truly manage sales-channel demand variability in real time, and incorporate the effects of demand variability into your planning process.

Sony Sees Dramatic Improvements

"Oracle understands the needs of our industry in the 21st century better than any other ERP solutions provider. Collaboration is the key to driving efficiencies and time savings right across the supply chain and being first to market with the products our customers want."

Manel Puig, Director, IT, Sony España S.A.-BCN Plant.

Metric/Capability	With Oracle
Productivity	▲ 15%
Time To Market	▼ 30%
Manufacturing Costs	▼ 5-8%
Planning Cycle (was 3 Days)	4 Hours
Inventory Levels	▼ 40%

Sony España S.A. BCN Plant

Oracle offers a holistic view of the consumer electronics supply chain to help you

- Understand channel demand variability and improve customer satisfaction
- Optimize vendor-managed inventory levels
- Manage strategic inventory points to maximize supply-chain responsiveness
- Drive end-to-end fulfillment using integrated supply chain logistics

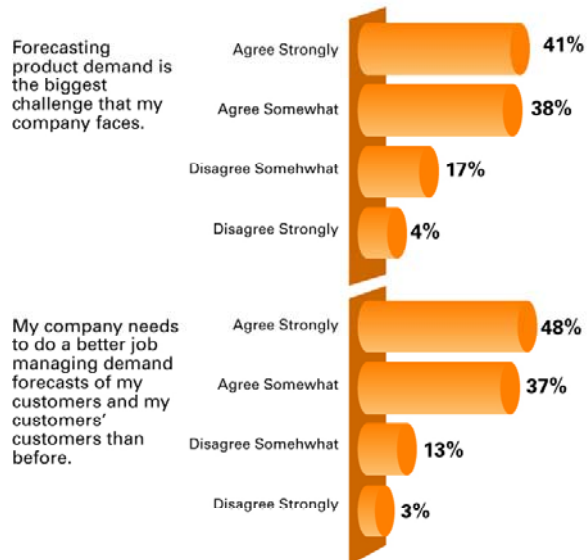
UNDERSTAND CHANNEL DEMAND VARIABILITY AND IMPROVE CUSTOMER SATISFACTION

To remain competitive, consumer electronics organizations need visibility and access to real-time, accurate data upon which they can base their procurement and production-volume decisions. The industry is fraught with multichannel sales requirements, fragmented global supply-chain networks, and shorter product lifecycles. OEMs risk supply shortages and inventory write-downs on a daily basis - particularly when offering several channel-specific configurations of a particular product. Reworking finished-goods inventory due to planning mistakes drains financial performance. Managing demand variability is critical. During the last “boom” cycle, many OEMs believed their own optimistic customer forecasts and engaged in over-ordering and stockpiling of key components. They, along with many of your EMS partners, were adversely affected by the supply-chain bullwhip, caught holding hundreds of millions of dollars in component-level inventory. Beyond the crippling financial impact of these decisions, corporate and personal relationships between trading partners became strained to the breaking point.

“With our new global instance we will have the infrastructure to grow to a \$10 billion company. Oracle systems can take ViewSonic anywhere our CEO and Chairman want to go. And, we can now support them with the information they need to make critical business decisions.”

Robert Moon, Vice president, Information Services, ViewSonic Corporation

Managing Demand Variability Is Critical



Source: EBN 2002 SOS N=677

Oracle's supply chain solution for consumer electronics takes the guesswork out of the demand-planning process. By enabling you to model different variability scenarios, you can answer "what-if" questions before they become planning disasters. Your planning organization gains visibility to multichannel demand, and can begin using unfiltered data without needing to manipulate it. Oracle allows you to actually *use* demand variability to overcome the limitations of deterministic optimization techniques

Oracle's supply chain solution for the consumer electronics industry drives accurate channel forecasts by enabling collaboration across the extended supply chain. When the planning organization incorporates demand variability into the rolled-up forecast, it must be based upon reliable data. Oracle can improve your forecast accuracy by enabling ubiquitous information-sharing among contract manufacturers, distributors, and the supply base. With Oracle, production planning becomes increasingly streamlined, improving execution-cycle times by drawing from necessary stakeholders early enough to make intelligent decisions based upon real-time information.

OPTIMIZE VENDOR-MANAGED INVENTORY (VMI) LEVELS

The demand-planning challenge increases when trying to manage inventory levels in third-party inventory hubs. Consumer electronics suppliers shipping product into consigned inventory hubs often overstock them to compensate for the fact that they either have no visibility into the consumption of product by their OEM customer or they are unable to replenish inventory at the same rate in which product is pulled from the VMI hub. In both cases, the OEM supplier bears the cost of the excess inventory. The value of supply-chain visibility to channel inventory extends beyond your own organization—it also reduces the inventory your suppliers hold. The results are reduced inventory costs, improved operational efficiencies, and ultimately, competitive advantage. Oracle's supply chain solution for the consumer electronics industry drives "win-win" business differentiation such as this, offering visibility into the supply network and the movement of inventory within it.

MANAGE STRATEGIC INVENTORY POINTS TO MAXIMIZE SUPPLY-CHAIN RESPONSIVENESS

Consumer electronics OEMs are moving toward a build-to-order (BTO) or configure-to-order (CTO) model, where the final product is assembled and configured only after receipt of a firm demand signal, or an actual order that triggers final configuration and shipment. In nervous global markets, consumer electronics OEMs struggle with maintaining the right inventory levels of the right product configuration. To execute seamlessly amidst constant volatility in both demand and supply, customer orders must be linked in real time to production orders, matching manufacturing volumes to required materials and capacity. The result is near elimination of finished-goods inventory and a drastic reduction in work-in-process (WIP) inventories.

"Oracle's scalability has taken much of the pain out of QLogic's growth. The integration of Oracle Applications eliminates the overhead associated with building and maintaining custom interfaces between modules."

Dean Anderson, Director, Applications Development, QLogic

Where you hold inventory is as important as how much you hold, so the critical decision is how far forward in the supply chain you can push inventory—and still maintain targeted customer-service levels. Postponement is a supply chain tactic where generic, non-configured inventory is held at the crossover point in the supply chain, where it then can be staged for multiple configuration and routing options. Postponement enables consumer electronics OEMs to drive inventory out of their supply chain, reduce costs, and quickly respond to changes in local demand for configured products.

Oracle's supply chain solution optimizes global postponement strategies, allowing you to model postponement decisions in advance. Beyond sharp reductions in finished-goods inventory, a key benefit of postponement is that an actual purchase order becomes the trigger for configuration. When receivables offset the cost of in-line product configuration, consumer electronics companies regain control of their supply chain—directing properly configured finished goods to originating sources of demand on time.

“We wanted to implement an ERP system that could help us reduce the amount of inventory we were carrying and respond to demand in a just-in-time fashion.”

Lisa Sipe, CIO, American Power Conversion

DRIVE END-TO-END FULFILLMENT USING INTEGRATED SUPPLY CHAIN LOGISTICS

In the current business environment, sales margins are becoming increasingly thin. Customer retention is more important than ever. Customers unhappy over late shipments and out-of-stocks are just the beginning. The damage extends to sky-high inventory carrying costs that can seriously erode revenue and profits. Historically, the consumer electronics industry has viewed customer service as a separate functional area of the business. Now, in a quest to establish the most profitable balance between customer-service levels and supply-chain performance, operations executives in the consumer electronics industry view these processes as inseparable. Today, the question is: “What is the financial impact to our bottom line if we maintain 95-percent on-time delivery? Better yet, how about 96 percent?”

Real-time communication with both your end customers and third-party logistics providers (3PLs) is essential to improving customer service. Customers today want accurate status of deliveries, highlighting any at-risk shipments as well as confirming on-time deliveries. Having channel-configured product arrive, as promised, at the loading dock of your top retailer or distributor across the street seems simple enough. But operating in a global consumer electronics supply chain where the BOM for the device may consist of disk drives produced in Malaysia, a motherboard from Taipei, and a power supply from China, it is virtually impossible to orchestrate delivery of 600 components from 30 suppliers located in 10 countries without seamless business-process integration, secure collaboration, and supply-chain visibility—each linked to core ERP resources. Oracle ties it all together.

True competitive differentiation lies in back-end fulfillment that supports customized configuration ordering capability. Oracle's supply chain solution has built-in execution capabilities—such as warehouse management and logistics—to assure accurate, on-time delivery. Effective control and routing of outbound

shipments allow you to take advantage of consolidation opportunities by using the included shipment-planning capabilities. Customers demand tracking and updates of critical in-transit inventory. Oracle's supply chain solution delivers supply-network visibility by enabling quick and seamless communication with your 3PLs, to provide accurate answers and execute as promised. With Oracle, you can capture, validate, source, fulfill, and settle your customer orders—improving service levels while minimizing inventory and transportation costs.

SUMMARY

With time-to-market and time-to-value cycles increasingly compressed, industry leaders are struggling to find ways to survive the downturn and manage change. Oracle offers a holistic view of the consumer electronics supply chain to help your company achieve accurate consensus forecasts, optimized inventory, faster planning cycles, optimized postponement strategies, increased on-time delivery, and extended visibility across all tiers of the supply chain. Oracle's RosettaNet-enabled supply chain solution helps companies make real business improvements that drive both bottom- and top-line performance, by removing communication latency and enabling real-time collaboration between trading partners across the extended supply chain. With Oracle, you can truly incorporate and manage sales-channel demand variability by integrating your supply chain planning and execution systems.

NEXT STEPS

Oracle's success in the consumer electronics industry is founded upon its ability to help high-tech companies such as ViewSonic, Toshiba, Quantum, Sony, and QLogic (to name just a few) capture value and deliver sustainable results. For more information on Oracle's solution for responding to channel demand variability in real-time, please visit www.oracle.com/industries/high_tech or call your Oracle representative at 1-800-ORACLE1.



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