

Linksys sends a clear signal of profitability through more efficient manufacturing planning processes.

Overview

■ **Business Challenge**

While Linksys was poised for rapid growth, its operational efficiency was hindered by gaps in the processes that linked product demand to manufacturing plans. Because each part of the business made decisions based on its own “off-line” and untested information, its operations planning was erratic, reactive and inefficient.

■ **Solution**

Linksys teamed with IBM and Symphony Metro to deploy an integrated sales and operations (S&OP) solution that provided a common, collaborative platform for operational decision making. This enabled Linksys to create new S&OP processes that have radically improved operational efficiency.

■ **Key Benefits**

- 35 percent reduction in inventory
- 60 percent reduction in backlog
- 40 percent reduction in excess and obsolete inventory
- 90 percent reduction in expedited shipping costs
- 30 percent increase in supplier fill rate



Linksys®, a division of Cisco, founded in 1988, is a global leader in networking for home, SOHO and small business users. Based in Irvine, California, Linksys has sales offices in 23 countries serving more than 80 countries in Europe, the Middle East, Asia, Africa and the Americas. Linksys employs more than 900 employees around the world.

One of the most visible technology trends among consumers and small businesses is a sharp and steady increase in the amount of sharing going on. Whether it's multiple PCs sharing a broadband Internet connection or consumers sharing digital music or photos, the degree of connectedness in the consumer and small-business segment is on the rise—and a new generation of networking products is making it happen. Once unique to business environments, networking devices such as routers, switches and wireless devices are fast becoming a staple of consumer and small business computing environments, and no company has done more to shape and drive the market than Linksys.

“The solution IBM put in place is giving us the visibility and collaborative capability we need to make the best possible decisions. It’s helping us bring Linksys to the next level of operational excellence.”

— Mark Payne, vice president,
Worldwide Operations, Linksys

Optimizing supply and demand management through collaborative planning

Business Benefits

- Inventory reduced by 35 percent
- Customer inventory reduced by 30 percent
- Backlog reduced by 60 percent globally
- Increase in gross margin through improved manufacturing efficiency
- 90 percent reduction in expedited shipping costs (from 35 percent to 3 percent)
- 40 percent reduction in excess and obsolete inventory
- From 30 percent to 70 percent forecast accuracy at SKU level
- 30 percent increase in supplier fill rate
- Reduction in overall freight costs
- Reduction in future operating expenses resulting from improved productivity
- Reduction in the number of SKUs experiencing retail stock-outs

“The fact that Linksys was constantly changing the production plan was causing a ‘whiplash’ effect among our suppliers. It kept them in reaction mode and caused us to spend far too much on the air-freighting of components.”

– Mark Payne

A division of Cisco, Linksys® (www.linksys.com) is well-positioned to thrive in the steadily growing consumer networking market, having excelled in adapting to the industry's short product cycles. The key ingredient of its success was an entrepreneurial culture that rewarded fresh thinking and innovation. While this mix served the company well in the first stage of its development, the market's growth and evolution raised the strategic importance of operational efficiency. As the company's product line grew and entered additional countries and markets, Linksys had increasing difficulty balancing demand, inventory and manufacturing capacity. Intensifying this challenge were the market's short and rapidly changing technology cycles—which can quickly render a product line or forecast obsolete—as well as sales volatility caused by retailers' product promotions, such as sales or rebates, which can alter in-store sales patterns.

Growing pains

As the Linksys portfolio grew to over 1,000 unique consumer and small business products, the operational risks resulting from demand volatility—namely, making too many or too few of each product—increased exponentially. That made it all the more essential for Linksys to optimize its sales and operations planning (S&OP) processes that translated demand forecasts into production plans. Although Linksys had evolved into a global operation with over a billion dollars in annual revenues, it retained some of the operational characteristics of a startup—most notably the separation of key functional areas like demand planning, supply chain management and logistics and the siloing of different product areas. As a result, business unit managers tended to make far-reaching decisions on matters such as production, pricing and promotions with little regard to their impact on the rest of the business.

Poised for growth under its new ownership, Linksys realized it needed to fundamentally change its S&OP processes. It began by hiring Mark Payne as the vice president of Worldwide Operations. A veteran of successful S&OP transformations at other companies, Payne realized that for Linksys to optimize its S&OP processes as a company, it needed to foster collaboration and coherent decision making across the entire company. His previous experience had taught him that a common base of information to drive the Linksys planning efforts was an essential ingredient to success. To implement the framework, Linksys turned to IBM Global Business Services and its Business Partner Symphony Metreo (www.symphony-metreo.com), whose S&OP solution would serve as the new platform.

A major part of the problem was in the data on which these decisions were based. As a rule, it resided in standalone spreadsheet models that each part of the business used to calculate its part of the overall production requirements.

In effect, each part of the business was formulating production requirements based on its own numbers. That was the root of the problem. What made matters worse was the tendency for each part of the business to layer in its own assumptions, such as the levels of inventory “safety stock” it should maintain or the likely impact of new product introductions. As a by-product of this less than rigorous approach, different parts of the business tended to pad their forecasts to ensure adequate stocks. For the company as a whole, imprecision on a small scale tended to snowball into planning inaccuracy on a large scale, producing wide swings in production plans from one month to the next. Suppliers, compelled to adapt to this volatility, bore the brunt in the form of frequent production changeovers as well as higher costs that ultimately were passed on to Linksys. These swings also made it necessary for Linksys to frequently expedite parts shipments from suppliers, significantly increasing the company’s logistics costs.

Bringing it together

Under the Linksys initial architecture, the generation of a demand plan and a master production plan were essentially separate. The key attribute of the Symphony Metreo Finance, Sales & Operations Planning (FS&OP) platform is that it integrates demand and production planning. The power of the new solution is that it provides a robust framework for the business process and organizational transformations that will deliver the real results. On a systems level, the fact that different parts of the business were working off different information pre-disposed Linksys to erratic and suboptimal S&OP practices. But it was also a lack of accountability between the demand and production planning functions that *enabled* it on a process level. Payne’s plan was to bridge this gap by joining the demand and production planning functions and making them more interdependent. In addition to being able to “look forward” more than 100 weeks into the future in constructing a demand and product plan, the Symphony Metreo solution also inputs changes to the plan directly in the system, and propagates it to the operational MRP system for execution. This built-in integration provides a solid platform for this process change.

Perhaps the most fundamental process change enabled by the new solution was the establishment of a collaborative, coherent and disciplined planning process across the entire company. By integrating demand planning data from all functional areas and brands into a single forward-facing decision-making system, the Symphony Metreo solution simplifies the S&OP process and enables every part of the business to work off the same numbers. IBM’s role in the deployment of the solution was critical to making this happen. As part of the requirements definition stage of the project, IBM needed to define the information hierarchies that would be needed for different parts of the company to work from a common set of information. This required IBM to map out future

Key Components

Software

- Symphony Metreo Finance, Sales & Operations Planning

Services

- IBM Global Business Services

IBM Business Partner

- Symphony Metreo

Timeframe

- Full deployment: 2 months

Transformation at a glance

Linksys transformed its S&OP by joining the demand and production planning processes and making them more interdependent—enabling all parts of the business to work off the same numbers—so that the true impact of business decisions can be seen instantly. This dramatic increase in business intelligence and efficiency has positioned Linksys to strengthen its market leadership in the fast-growing consumer networking market.

processes under the new S&OP scheme and to present the information in the right context. IBM also optimized the design of the solution architecture to minimize its infrastructure investments and maintenance requirements.



Because the new S&OP solution fully reflects the financial and cost interdependencies across functional areas, such as logistics, marketing or new product development, the true impact of business decisions can be seen instantly. Where a business unit may have decided—unprofitably—to expedite a parts shipment under the old regime, the new system and process has reduced expedited shipments from 35 percent globally to 3 percent, and can flag a flawed action before it's executed. In this way, the solution has enabled Payne to more closely align the company's operations with its corporate strategy and goals.

By harmonizing its S&OP processes across the company, Linksys has begun to achieve strong operational improvements. One of the most important—and a calculated goal of Payne's transformation program—is a leveling of manufacturing orders made possible through an improved precision in its reading of demand signals and vast improvements in the validity of data. By greatly reducing the volatility of its orders flow to suppliers, Linksys has enabled them to optimize their manufacturing operations and utilization levels, which in turn has reduced its own cost of goods sold significantly. Reduced volatility has also resulted in a 90 percent reduction in expedited deliveries and a significant reduction in overall freight charges.

The simplification and consolidation of its S&OP processes has also enabled Linksys to achieve significant internal efficiencies. For instance, the fact that the new solution provides a planning view at the SKU level (as opposed to the product category level) means Linksys managers can spend less time gathering and validating information, and more time on value-added activities and strategy. As the company grows, this improved efficiency is expected to significantly reduce the company's future operating expenses. With a more rigorous S&OP solution in place, Payne sees Linksys as better equipped to handle rapid growth and intensifying competition in a cost-efficient way. "The solution IBM put in place is giving us the visibility and collaborative capability we need to make the best possible decisions, says Payne. "It's helping us bring Linksys to the next level of operational excellence."

For more information

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