Achieving Supply Chain Visibility for Business Agility and Performance

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In today’s competitive manufacturing environment, it is critical to efficiently manage the variances between supply and demand to determine the best balance among customer service, operational productivity and financial performance. Traditionally, this supply/demand balancing process has been manually managed by the sales, marketing, and manufacturing groups within an organization in an ad hoc manner. However, global competition is driving manufacturers to look into their service offerings to differentiate themselves. As costs equalize around the globe, manufacturers are continually looking at ways to improve supply chain visibility across all groups and drive collaborative planning to balance critical resources against performance goals.

This IDC Solution Spotlight examines how manufacturers can improve their sales and operations planning process through supply chain visibility to differentiate themselves in a highly competitive environment. It also takes an in-depth look at cross-functional alignment, collaborative planning and performance management, and how such offerings position IBM’s Cognos products in this important strategic market.

Supply Chain Visibility as a Competitive Strategy

As supply chains mature across the region, IDC Manufacturing Insights is seeing a shift in focus away from pure cost-based decisions, with supply chains now having to work together to drive the next level of efficiency improvement. According to a recent IDC survey, it is evident that there is increasing need to improve supply chain visibility, which is one of the key drivers for manufacturers looking to improve supply chain management (Figure 1). Visibility is important for gaining insight into the supply and demand chain and it is a cornerstone for improving collaboration and responsiveness across the supply chain.

The need for visibility is driven by both the desire to improve the supply chain and the need for compliance from the customer and legislative requirement, especially for those who want to export to western countries. Visibility of the supply chain also improves the responsiveness to audits in a timely manner and enables manufacturers to improve the collaboration across different departments. This improves the responsiveness and quality of the supply chain and shortens the lead time as well.

The volatility that emerged worldwide during the global financial crisis has remained, and manufacturers must ensure that their processes are able to cope with the work within such an environment. Manufacturers need to be flexible and better informed to deal with any unforeseen events that may have a negative impact on its performance. Visibility within the supply chain can help manufacturers eliminate or avoid problems, and also provide a competitive advantage over their competitors.
Challenges of Sales and Operations Planning

Using supply chain visibility information effectively across the organization can help improve the responsiveness and readiness of manufacturers in coping with disruptions in their supply chain. However, it is not uncommon for the sales, marketing, and manufacturing groups within an organization to operate in silos with different objectives, which threatens the overall enterprise goal. This also results in the waste of valuable time and resources within the organization. Thus, planning the use of this visibility information to link strategy and execution towards a common goal is a critical step.

Sales and Operations Planning (S&OP) is the process to leverage this information for the alignment of demand, supply and finance plans. Figure 2 shows an S&OP process with periodic review to align the demand and supply planning. This allows executives to see the financial impact on changes in the variances between supply and demand, which helps identify supply constraints and align actual results with financial and operational targets. This enables decision makers to fine-tune plans and improve business agility and financial performance.

Increasingly, manufacturers are seeing the need for a robust S&OP process that helps the groups to jointly address operational issues that will otherwise have adverse impact on corporate performance – excess inventory, short orders, overtime, inter-plant transfer, expediting, reduced order fulfillment and poor resource utilization.
Opportunities to achieve Business Agility and Performance

IDC Manufacturing Insights has identified several opportunities where manufacturers can work on their S&OP process to adapt rapidly and cost efficiently in response to changes in the business environment.

**Collaborative Planning**
The main driver for collaborative planning is the requirement to improve the ability of all groups in the organization to collaborate with and respond to one another. This can be in the areas of planning for new product introduction, distribution of manufacturing operations, third-party sourcing, and delivery channels to customers.

In view of the effect of globalization on increasing competition, companies are faced with the dual requirement of meeting customer demand while running optimally efficient operations. Thus, a collaborative S&OP process is important to help decision makers create an actionable consensus plan with an operational blueprint for profitability matching supply and demand. This will drive increased market share and balance critical resources to meet the business performance goals.

**Cross-functional Alignment**
One of the key impediments to collaborative planning is cross-functional alignment. Although information sharing between various functions in an organization can be improved through the use of the right information management tool, true integration requires the alignment of cross-functional strategies and operating plans. This involves:
- Defining the common standards and values in the organization, and demonstrating commitment to the long-term process
- Measuring these standards and values through observable and tangible behaviors
- Accounting for the delivery of promised performance and demonstrating that valued behaviors are paramount
- Ensure buy-in from all staff through involvement in the process to help define and commit to what is expected of them in their roles

With cross-functional alignment and enterprise information visibility, the company can achieve business agility though the rapid deployment of new business capabilities in a well orchestrated manner.

**Performance Management**

Managing employee or system performance facilitates the effective delivery of strategic and operational goals. There is a clear and immediate correlation between performance management and improved business and organizational results. Performance management will ensure that these goals are consistently met in an effective and efficient manner.

Performance measurement is the tool to help managers control the outcomes of their organization. If it cannot be measured, then it cannot be managed. Hence, it is important to define the tangible standards and values for which performance can be managed and measured against.

**Benefits of Integrated Performance Reference Models**

An integrated performance reference model provides the standardized language and relational connectivity for processes, activities and their dependencies throughout the entire organization with respect to a business function, which in this case is the S&OP process. An S&OP performance reference model is the cornerstone for business agility and performance, which includes:

- A developed model of best practices
- Pre-defined performance metrics database
- Framework that links business process, metrics and best practices
- Roadmap that links strategy to execution
- Representation of metrics ownership and responsibility to drive accountability and collaboration
- Strategy management and score carding processes

Through the deployment of this reference model, manufacturers can achieve cross-functional alignment through a coherent set of best practices and metrics. With the process framework, impact diagrams and roadmap, visibility is achieved to enable effective collaborative planning. Finally, performance can be measured and managed through metrics ownership, responsibility and score carding processes.
Profile of IBM's Cognos Products

Best practices in S&OP have matured over the past two decades and information technology to support enterprise-wide S&OP has also improved in recent years. IBM's Cognos software is one such solution that enables collaborative planning through supply chain visibility in order to drive business agility and performance.

IBM Cognos Sales and Operations Planning Performance Blueprint

The IBM Cognos S&OP Performance Blueprint offers an integrated performance management model – integrated with ERP system – to effectively plan sales and operations across production plants:

- Track forecast and demand modeling for key customers, geographies, channels and products. New product introduction is factored in to help align sales and operations around one picture of total demand.
- Model capacity, cost and throughput of multiple products across numerous plants to determine the right combinations.
- Manage the supply plan across the entire organization. Supply plans can be allocated across multiple plants or contractors with full visibility into the cost and constraint implications of these decisions.
- Track the products or product lines specific to each plant, including labor, material and capacity constraints, plant production costs and potential bottlenecks that might jeopardize the supply plan.
- Attain revenue and margin goals. Plant-specific costs are considered in finalizing the supply plan. Plant-specific P&L statements can be generated to achieve the optimum balance between meeting customer demand and profitability.

IBM Cognos SCOR Performance Blueprint

The IBM Cognos SCOR Performance Blueprint offers an integrated performance management model to effectively plan, measure and monitor supply chain operations. It provides more than 400 pre-defined metrics that link to the performance attributes of the Supply Chain Operations Reference (SCOR) model, developed by the Supply Chain Council. The SCOR model is a framework that links processes, metrics, best practices and technology to improve supply chain management. The capabilities enable organizations to:

- Identify and make improvements in supply chain processes to drive down costs and improve service.
- Provide calculated metrics, exception alerts, linkages to scorecards and reports to measure supplier, production and delivery performances based on industry standards.
- Track issues such as capacity constraints, delivery performance and potential bottlenecks that might jeopardize the supply plan.
- Extend beyond ERP systems by exploring and analyzing supply chain performance at any level of detail.

The IBM Cognos S&OP Performance Blueprint and the IBM Cognos SCOR Performance Blueprint can help manufacturers align sales, marketing, finance and operations to drive better informed and more effective planning; react quickly to changes in demand, supply, capacity and product; and measure their progress against key performance objectives.
Conclusion

With globalization and the lengthening of supply chain, any global economic, political and environmental event would have far-reaching effects on the performance of manufacturers in the chain. Manufacturers must optimize their supply chains and respond to constant supply/demand variances to minimize any form of disruption to their customer, caused by their supply chain. Visibility within the supply chain provides updates into current situations so that companies can response quickly to unforeseen course of events to negate the impact on its performance.

A collaborative S&OP process can leverage this information visibility to help decision makers jointly address operational issues and align to common corporate financial and operational targets. With an integrated performance reference model in place, manufacturers can achieve cross-functional alignment through a coherent set of best practices and metrics to efficiently improve business agility and performance.

In the view of IDC Manufacturing Insights, solutions such as IBM's Cognos SCOR Performance Blueprint provides a cross-industry de facto standard for supply chain management processes to help company benchmark and improve its supply chain performance against industry best practices. This makes the company better informed about its performance gaps as compared with industry standards to drive more effective planning.

The IBM Cognos S&OP Performance Blueprint extends the ERP system's capability beyond transactional management system to include product and process management within the enterprise. This provides a high level of details into enterprise-wide operations, enabling visibility into the cost and constraint implications of decisions and drive effective collaborative planning. IDC Manufacturing Insights believes that these solutions will help provide the best practice and information technology required to support enterprise-wide S&OP for business agility and performance.

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