The Business Value of Business Intelligence

While Business Intelligence (BI) continues to be closely aligned with sales analysis and reporting, more and more companies are evolving in their use of it to not only understand, predict and influence the behavior of their customers, but to plan, evaluate and monitor their supply chains with the ultimate goal of driving performance improvements across their businesses.

This paper focuses on the influence of BI on manufacturing and distribution organizations, although much of what’s covered in it can apply to businesses in non-related industries, as well. To kick it off, the chart below illustrates the primary value propositions of business intelligence and the types of business analytics (e.g., Sales, Inventory, Supplier Performance analysis) that support each value area. The effect of BI on each of these business value areas are then discussed in more detail in the following sections.

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<th>BI Value Proposition</th>
<th>Sales Analysis</th>
<th>Inventory Analysis</th>
<th>Marketing Analysis</th>
<th>Supplier Analysis</th>
<th>Customer Analysis</th>
<th>Manufacturing Analysis</th>
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BI & Enterprise Performance Management

All manufacturing and distribution businesses today are driving for better performance: higher returns on invested capital, lower product and overhead costs, better asset utilization, faster delivery, greater customer retention, higher perfect order rates, reduced working capital needs, faster product innovation, greater sales and marketing productivity … the list goes on.

But it’s difficult to achieve these goals without having Enterprise Performance Management (EPM) processes and applications in place. More manufacturers and distributors are adopting EPM to help them tie execution to strategy by controlling and managing the full lifecycle of business decision-making.

EPM crosses departmental boundaries to embrace supply chain, customer management, and production-based performance management. It drives operational changes and performance improvements through continuous business planning, real-time performance analysis against objectives (presenting performance indicators to managers in scorecards or dashboards), guidance on what should be done when performance variances occur, and continuous response to changing business conditions.
At a high level, Business Intelligence fosters Enterprise Performance Management through technology and applications that are designed to help companies:

- better understand, predict and influence the behavior of their customers
- better plan, evaluate and monitor their supply chains (or operational areas).

**The Customer Side of BI**

- **Understand Customer Behavior & Profitability**: BI can offer numerous analytical capabilities for measuring customer profitability and for ranking and scorecarding customers across a number of areas. This can help companies ensure that their most profitable clients remain satisfied and their sales and marketing efforts are aimed at retaining and optimizing the right customers and attracting the right prospects.

- **Predict Customer Demand**: Business Intelligence can help business planners improve forecast accuracy and the overall sales & operations planning process. This is accomplished through collaborative forecasting and demand planning applications, open order analysis, and sales performance measurements.

- **Influence Customer Behavior**: Customer-focused business intelligence can also help organizations segment their customer bases for cross-selling and up-selling opportunities. And when integrated with marketing-focused analytics, they can help users better allocate and manage their trade funds and promotions in order to influence customer (retail partner) participation and ultimate end-consumer purchases.

**The Supply Chain (or Operational) Side of BI**

- **Plan What the Supply Chain Should Do**: Today’s more advanced, predictive analytic applications additionally offer statistical forecasting down to the product SKU level. This enables companies to determine safety stock and re-order points more accurately by optimizing customer service levels and measuring supplier variability with inventory optimization as the bottom-line result.

- **Evaluate Supply Chain Performance**: By leveraging operational analytics once a forecast has been generated, supply chain performance can be evaluated in a number of areas such as Inventory, Purchasing and Manufacturing. Operational analytics also allow organizations to drive cost reductions on the sourcing side, reduce sourcing cycle time and decrease assets on the balance sheet by helping them cross-functionally manage spending and their supplier networks. Plus, the analytics can be used to assess and optimize assets in the areas of cash, inventory and both warehousing and manufacturing capacity.

- **Monitor Supply Chain Variances**: Because of the increased velocity of the supply chain, companies are recognizing that planning and analysis must be tightly integrated. As a result, there’s a growing use of event management (or exception management) to monitor operational performance against planned performance in real-time with the goal of proactively identifying and addressing any variances that may arise.
Using BI to Identify New Sales Opportunities

The success of the sales organization largely depends on how well they know their customers and can react to changing customer needs and business conditions. Understanding profitable customers and products, together with pinpointing customer buying patterns and requirements, is key to closing profitable deals faster, balancing the right product variety, and identifying the best targets for new product introductions.

Business intelligence can offer a 360-degree view of customers to help decision makers better understand who they are, what they need and what they may do in the future. It can help to examine customer and channel “value” from multiple perspectives; and by understanding the relative value of each customer, focus is placed on marketing efforts to those with the most profit potential.

Such customer-focused analytics can also profile, segment and rank customers based on propensity to buy, order frequency, and overall purchasing behavior to build specific promotions or sales efforts around select customer groups. Plus, these analytics can help to better understand the impact of order fulfillment, returns and call-center activity on actual sales performance.

Integrating customer analytics with marketing-related intelligence can yield even greater benefits in the area of category management. It answers questions about which products are selling the least and costing the most, who is buying these products, and whether there is a substitute item. It helps discover which categories and SKUs offer the best growth potential. And, it reduces the level of risk related to new product launches by easily segmenting market data, performing “what if” scenarios to forecast new product performance, and analyzing a new product’s profitability and its impact on category revenue.

Using BI to Improve Sales Effectiveness

Accelerated customer life cycles, increased customer service requirements, underutilized or unfocused sales teams, informal sales budgeting processes and ineffective use of promotional monies are some of the biggest challenges facing sales organizations today.

To meet these challenges and improve overall sales effectiveness, today’s demand-driven enterprises require:

- Detailed insight about when, how often and which products customers are purchasing
- Real-time knowledge of sales rep performance to plan
- A collaborative framework from which sales plans and budgets can be easily created and managed
- The ability to plan and accurately monitor trade funds and promotional programs

Business intelligence satisfies these requirements; and for organizations that sell their products through retail channels, it can additionally allow them to analyze point-of-sale (POS) data to keep a pulse on what products are selling in the market and where inventory still exists. The detailed analysis of sell-thru data also enables consumer goods manufacturers and distributors to assess consumption performance by product, category, store and chain. The insight gleaned from this analysis can be shared with retailer accounts and leveraged to improve service levels, to help them better merchandise and sell items, and to increase the overall value provided by our customers to their retail accounts in their respective product categories.
Leveraging BI to Better Match Supply & Demand

- **Demand Forecasting:** Industry analysts estimate that collaboration can improve the accuracy of plans and forecasts by as much as 30%, resulting in less variability across the supply chain, lower inventories and improved customer satisfaction. Predictive Business Intelligence applications can be used to produce an accurate, statistics-based demand forecast that leverages current, historical and external information like point-of-sale from a single, enterprise-wide data repository. In addition, they can be used to publish plans or forecasts on the web so that other people can view them and suggest changes based on real-time information related to supply and demand variances.

- **Demand Management:** Business Intelligence solutions can also be used to manage demand through the use of pricing what-if scenarios to better understand the impact of forecasted demand on sales revenue. Plus, event schedules can be added to the mix to better assess the potential impact of promotions, calendar events and other activities on demand projections.

- **Supply Planning:** On the supply side, BI can provide a better understanding about how the Sales and Operations Plan will be covered in terms of supply. This is accomplished by pulling all sales plans, demand forecasts, open orders, shipments, production plans and inventory into a single repository and using analytics and alerts to gain the visibility needed to determine the supply required to meet both projected and actual demand.

Using Business Intelligence to Improve Inventory/Service Levels

A significant cost to manufacturing, distribution and retail organizations is the inventory carried to support customers and sales, which can represent 40-50% of a company’s capital investments. Right-sizing inventory without compromising service levels provides a beneficial way to increase the “return on inventory investment.” But accomplishing this can be challenging if there is not complete visibility for the products on hand, or the right planning and optimization tools in place for segmenting inventories and building optimal plans that take demand variance, supply reliability and product obsolescence into consideration.

Business intelligence allows businesses to effectively classify their products based on ABC analysis, which can then be used to set inventory targets based on classification schemes and to identify excessive or outdated inventories that need to be addressed. In addition, companies can leverage BI to accurately plan and optimize inventory based on historical sales, shipment, point-of-sale and other performance data such as trends in inventory turns. This real-time visibility, performance monitoring and automatic alerts when unexpected variances or occurrences take place give managers the insight they require to make better operational decisions that can ultimately drive down safety stock, reduce lost sales and minimize the costs and time related to inventory management.

Driving Manufacturing Efficiencies with BI

Manufacturers today are facing more complex business challenges than ever before. A global marketplace is demanding production of higher quality goods and faster response times at lower costs. Mass customization, outsourcing, and leaner margins are increasing competitive pressures. Labor and machine resources often continue to be underutilized. And many businesses still have limited insight to the production costs they actually incur.
On any given day production managers, shift supervisors and business managers are faced with numerous questions relating to manufacturing processes:

- How are overtime costs impacting overall profitability on a per product basis?
- What are the production efficiency rates by plant, product or shift?
- What resources or operations takes the longest and are the highest in cost?

Production (or manufacturing) analytics answers these questions by enabling companies to analyze the effectiveness of their lean manufacturing efforts, assess the efficiency and utilization of their production operations, and pinpoint any variances that may occur relative to labor, material and overhead.

**Using BI to Improve Sourcing Abilities**

Organizations are spending as much as 60 percent of their revenue acquiring the goods and services needed to support their business. Such large procurement budgets and a reliance on numerous suppliers and hundreds to thousands of products can make business goals increasingly complex, particularly when there is limited visibility to procurement expenses or the actual performance of vendors.

Supplier-focused analytics offers the visibility and insight required to achieve corporate sourcing goals through detailed analysis of the purchasing operation, including vendor activity and both current and future inventory positions based on expected receipts. These types of analytics can help to improve supplier relationships by tracking, evaluating and flagging vendor delivery and fill rates that fall below acceptable levels. They can used to measure the performance of buyers by lead times and pricing variances. Plus, they can assess procurement budgets to ensure that purchase prices are not trending upward.

**Relying on BI to Align Enterprise Strategy with Operational Performance**

To take their organizations to the next level, the corporate finance office is becoming a more active partner in business processes throughout the organization, helping to make the performance of their enterprises more measurable and predictable.

Today's business intelligence solutions are designed to help both financial and operational executives better align strategy with operational performance by allowing them to link corporate financials with operational analytics. Activities and costs associated with processes across and within departments can be evaluated to help them better manage budgets and expenses and to monitor their financial performance on a more proactive basis. Plus, business intelligence enables the financial executive to gain a comprehensive understanding of costs tied to all activities within the business, including product manufacturing, distribution, customer service, marketing and sales. This information can be leveraged into strategic decisions that improve business performance and profitability, such as pricing strategy or resource allocation.
About Silvon Software, Inc.

Silvon Software is a supply chain-focused business intelligence solutions provider headquartered in Chicago with more than 1,800 customers worldwide. The Silvon Stratum™ solution suite enables businesses to plan, analyze and manage operational performance through the use of pre-defined analytic reports, KPI metrics, scorecards, dashboards and performance alerts. Stratum also features integrated applications for sales planning, demand forecasting and inventory optimization. For more information, visit www.silvon.com.