Business Intelligence for Manufacturing

Panorama Necto
Maximize operational performance, adapt to customer demand, and accelerate the supply chain.

In this competitive world, making a great product isn't enough anymore. That means manufacturers can no longer rely on low prices, high quality and on-time delivery alone to keep them on top. These attributes — competitive advantages a decade ago — are now just requirements to stay in the game. And the rules of the game are constantly changing. Manufacturers face increasing globalization, more competition than ever, and customers whose demands reflect their own knowledge and expectations of a global market.

Manufacturing companies today have extensive inventories to track and move, a greater number of products to generate, numerous suppliers to negotiate with and quality standards to maintain. They also have an ever-increasing need to acquire, satisfy and retain additional customers to remain profitable.

Every day, manufacturers receive volumes of data that could help them move into a more competitive position. This data flows from all directions – the boardroom, the assembly line, customer contacts and all points in between.

Capturing key customer information can help identify business opportunities and anticipate customer demand. Yet, many companies can't even tell how much was sold, what was shipped or what production levels are. This information is critical to planning and forecasting efforts, which can determine the success or failure of a business. But unless you know what to do with the information you capture, all that valuable data is useless.

Business intelligence (BI) solutions help to improve your current ability to capture, analyze, warehouse and mine customer information. This delivers a critical advantage by helping companies turn data into knowledge, enabling them to develop unique demand, supply, operational and customer insights. As a result, companies improve the efficiency and effectiveness of their supply chain, manufacturing process and after-sales service network, thus maximizing profits at optimal levels of customer satisfaction.

Panorama® Necto™ enables decision-makers to work more effectively, efficiently and proactively by dissolving information silos, and increasing collaboration between the back office, front office, warehouse, customer service and more. By transforming the ever-increasing flow of data generated by disparate systems into actionable information, manufacturers can improve tactical and strategic decision making.
Business intelligence from Panorama can address such issues as: maximizing operational performance, anticipating and adapting to customer demand, and accelerating the supply chain.

**Maximize operational performance**

Managers of today’s manufacturing companies receive tons of data: data about equipment, products, orders, deliveries, conditions, quality and customers. But for most plant managers, it is a challenge to make well-informed decisions based on the fragmented view of plant operations they garner from these traditional, stand-alone manufacturing systems. To act effectively, managers and other key decision makers need visibility into the entire plant floor operations. They need data that is online, available in real time, and in a format that can be readily understood and applied to real business problems.

That’s why a growing number of companies are moving to powerful BI solutions like Panorama Necto that help to integrate isolated silos of information residing in existing systems. This allows manufacturers to consolidate data from multiple sources to improve production planning, scheduling, and schedule adherence, and then monitor key operational metrics using dashboards and scorecards.

Even after products and services have been delivered, quality must still be monitored and problems anticipated. Managing the multitude of factors that affect quality can prove difficult considering the complex nature of most production processes, which involve multiple departments within and across lines of business and globally dispersed suppliers, production facilities and customers. Panorama’s BI solutions give you the intelligence you need to maintain quality throughout the complete lifecycle of your products and services. They do it by offering world-class predictive analytics and reporting to help companies identify emerging issues, determine their root cause, and resolve issues before they become customer problems.

**Anticipate and adapt to customer demand**

Customers in the global marketplace have high expectations, but the truth is that many companies have difficulty understanding and connecting with their customers. And manufacturers must quickly respond to customer needs to remain competitive. Although the value of providing a more customer-centric experience is evident, manufacturers struggle with implementing this concept in their organizations. Using BI, customer retention solutions can enable companies to quickly gain an understanding of the variables that influence customer churn, allowing them to determine not only which customers are likely to leave, but why.
Unacceptable return on marketing investment is potentially the biggest challenge organizations face as they strive to interact profitably with customers. With real-time, accurate intelligence from Panorama BI solutions, campaigns and programs implemented across channels will be effective, consistent and timely. And with the power of predictive analytics, actual results will match predicted ones, even before spending a dollar on a new campaign.

**Accelerate the supply chain**

Predicting every market change is impossible. Now more than ever, managers need tools that generate the insight that leads to smarter decision making and results in a more efficient supply chain. When Panorama’s BI solutions are applied to the supply chain, they deliver a critical advantage to manufacturers by generating actionable insights; anticipating customer demand; deriving financial insights across the extended supply chain; improving product quality, yield and time to market; and optimizing supply strategies.

BI enables these insights through market-driven planning, accurate demand forecasting and optimal inventory replenishment planning by understanding demand, inventory costs and product delivery lead times. Additionally, by collecting, analyzing and leveraging all aspects of supplier data and purchasing history, manufacturers can optimize strategic sourcing. This leads to significant cost savings through strategy alignment and scorecarding, opportunity exploration and detailed spend analysis with decision support.

**Improve Operational Performance and Maintain Competitive Advantage**

It isn’t easy to maintain efficient operations in today’s manufacturing environment. The typical manufacturing plant includes multiple vendors, multiple interfaces, complex information flows, and asynchronous processing, all of which can make it difficult to get visibility into orders, materials, and production.

To achieve operational performance and maintain their competitive edge — that is, to buy and manufacture at the lowest cost, and ship as expeditiously as possible — manufacturers must systematically identify and eliminate inefficiencies.

Quality control is also critical to the success of any manufacturing operation. High-quality products lead to improved reputation of the organization within its industry and help to drive sales. In addition, profitability improves through the reduction of returns and field service calls.
Managing manufacturing data assets is key to maintaining and improving operating efficiency. However, data sources are typically dispersed across a vast enterprise, while supply and demand management requires timely access to relevant information. As a result, it is a challenge to make well-informed decisions based on the fragmented view of plant operations garnered from traditional, stand-alone manufacturing systems. To act effectively, managers and other key decision makers need visibility into the entire plant floor operations. They need data that is online, available in real time, and in a format that can be readily understood and applied to real business problems.

Leading manufacturers such as Philips Consumer Electronics and Texas Instruments are using Panorama BI Solutions to streamline information flow across the organization and provide decision-making support that helps them reduce costs, maximize resources, and increase productivity. Powerful BI software allows manufacturers to consolidate data from multiple sources to improve production planning, scheduling, and schedule adherence, and then monitor key operational metrics using dashboards and scorecards. Panorama can also conduct defect analysis to identify sources of quality issues and support initiatives such as Six-Sigma, and report on performance by department, employee, machine, customer, product, and operation.

Texas Instruments, the Dallas-based producer of technology products ranging from calculators to semiconductors to sensors and controls, is using Panorama BI Solutions for production yield analysis and improvement. Prior to implementing its BI solution, production personnel — engineers, managers and technicians — were spending a great deal of time preparing Excel-based static reports. Additionally, when users needed to change reporting parameters to investigate anomalies in the data from the production floor, they had to go back to the IT department and commission a new SQL report — a time-consuming and labor-intensive process.

But with the Panorama solution, users across the organization are free to view, download, and send reports whenever they need to. The web implementation reduces the need for hardcopy, and the automation of the reporting process cuts down the workload for the IT department. Standardization also lowers costs and enables a rapid, corporate-wide deployment of the reporting tools. Users appreciate the new freedom and the greater flexibility and availability of information.

**Achieve Sales and Marketing Superiority**

Manufacturers have in the past focused primarily on operational excellence as a critical dimension of competitive success. Today the race is on to achieve sales and marketing superiority through selling models that are cost-effective and that create real value. For manufacturers, achieving channel control requires unique business insight that can only be gained from real-time transaction analysis coupled with deep analysis of developing business trends.
In recent years, manufacturers have increasingly struggled to gain control over the distribution channel. Without insight into demand fluctuations, manufacturers cannot determine appropriate inventory levels in the channel. This issue of channel control has really emerged as a core challenge for the industry today.

At the most basic level, the best way to achieve channel control is to have visibility into all channel activity, and the key to gaining visibility across the channel is having timely, consistent, and complete data.

But beneath this wave of available channel data, manufacturers are struggling to do even the most basic analyses. To truly take control of the channel, manufacturers must evaluate channel data and transactions upon arrival, analyze them in real-time, and optimize decisions on those transactions against key business policies. Manufacturers also need the ability to identify trends to derive deep insight to anticipate changes in their business environment. The optimal solution for channel control must capture, validate, and analyze channel data and orders at the line item level — in front of the point of decision, and continuously in real-time. The manufacturer that can do these types of analyses will gain a competitive advantage.

This holistic view of the channel is necessary to determine wholesaler compensation, reveal secondary market activity, and assess overall channel performance. And that is where a powerful business intelligence (BI) solution can help. With timely, consistent, and accurate results gleaned using Panorama’s BI tools, the manufacturer can extract previously unavailable business insights, apply corrective action immediately back into the transaction stream, close the loop between policies and transaction decisions, and anticipate changes in business conditions.

For instance, reports can be developed that show secondary sourcing, sideways movement of products, excessive returns, and even the true cost of distributing product through the channel. It’s also possible to continuously monitor sales performance by product, brand, customer, and channel. The next step is to analyze sales trends and customer buying behavior, and report on product margin performance, customer satisfaction and campaign effectiveness.

Because of the complexity involved in performing these analyses in the pre-BI era, it was usually analysts who interfaced with the data. With Panorama dashboards, managers no longer have to rely on analysts and can make proactive decisions based on information parameters that they define.

At San Jose, Calif.-based Altera Corporation, a pioneer of system-on-a-programmable-chip (SOPC) solutions, the company wanted greater visibility across functional areas to manage pipeline, inventory
and design wins more effectively. In fact, since analysts had to pull sales data from one model, billing information from another model, and inventory information from yet another model, determining inventory trends became such a complicated process that analysts could only source the numbers once per month.

The answer was a Panorama BI solution where all users, not just analysts, could have information at their fingertips. Customer service, point of sale and inventory sales are a few of the areas that have been impacted significantly by Panorama’s introduction, including customer service managers who now have dashboards that enable them to monitor resolution times and exception cases.

**Maintain a Comprehensive View of the Customer**

In today’s global economy, the manufacturing industry is much more competitive and manufacturers are often focused on optimizing processes, coping with compliance, or dealing with globalized supply chains. Consumers, however, have more options, so they can afford to be picky about where they spend their money. And price and quality are no longer sufficient differentiators, making the way customers are treated before, during, and after the sale more important than ever.

To build customer loyalty, people who work in the manufacturing industry need a customer-care framework that gives them immediate access to the resources and information they need to best help their customers. Manufacturers must develop a focused marketing and sales strategy that includes enhanced customer care, improved order management, and product and service customization.

That requires what Yankee Group analysts call “strategic customer resources management,” an integrated approach for identifying, acquiring, and retaining customers — and for presenting a unified face to them whenever they encounter the organization. But this is precisely where many manufacturers fail. They may optimize pushing out product, but they don’t connect informational silos very well. Customer information often is captured, stored, managed, and maintained in several legacy systems — each accessed by different functions and used for different purposes — impeding the flow of information and the ability to make good decisions.

Furthermore, effective application of analytics to the gathered customer data is just as important as integration. Despite this, most respondents to a Aberdeen Group survey said they lacked effective customer data analysis processes and were unable to establish meaningful performance metrics, yet this is where much of the value in CRM resides.
With Panorama Necto, manufacturers can dramatically improve data collection and data mining capabilities and offer customized customer interactions at a lower cost. With a “single view” of a customer across the organization, decision makers are able to identify the true value of a customer, and can greatly improve customer service.

Additionally, by determining what sold well at different times, or to different customer profiles, sales and marketing teams can make predictions about what might sell well in the future. This enables them to tailor marketing campaigns for products that might sell well with a certain group of customers, or at a certain time of year. Sales and marketing teams can also easily target the right customers with the right value proposition, based on specific product and feature requests. They can also use this data to coordinate follow-up activities, such as customized special promotions.

**Supply Chain Intelligence**

The development and manufacturing of products has become increasingly complex in today’s global economy. Typically, multiple communities of suppliers are involved, and these communities are geographically dispersed. To work together effectively, manufacturing partners must have tools for managing inventory across the supply chain. With a closely-managed inventory, the delivery of products can be automated based on predicted rates of end-customer sales and achieve greater efficiency and profitability.

Ideally, executives, managers and even front-line staff should be able to monitor and report on the actual productivity and business value of vendor and partner engagements, and implement appropriate course corrections. In turn, an organization can practice consistent, efficient quality control over the fulfillment of vendor commitments, and record findings in such a way that it is easy for business managers to evaluate vendor performance, negotiate terms, or initiate new business alliances. Reliable demand-planning capabilities also help to control costs and align vendors firmly behind a manufacturer’s business goals.

However, when planning systems are decentralized, it can be difficult for staff, from executives to floor supervisors, to identify problems in the production line or respond quickly to a change in customer demand. Without global visibility, it is extremely challenging to track stock volume accurately and deliver shipments on time. The results are high costs to house and manage overflow stocks and poor customer satisfaction in delivery execution.

In fact, according to the Aberdeen Group, more than 50% of all supply chain problems originate with poor decision-making when orders are received. At the point of decision, the manufacturer must bring to bear all related contextual enterprise intelligence and business policies — all order history, near-
term forecasts, regulatory conditions, and channel agreements, among other information. And when a single batch of orders can dramatically alter inventory levels in the channel, the optimal solution for must capture, validate, and analyze channel data — in front of the point of decision and continuously in real-time.

A powerful business intelligence solution, however, can give people across your supply chain visibility into customer demand and the delivery of goods — helping them make faster, better business decisions and take the best course of action when adjustments are necessary. With features such as automatic notification, they easily can keep tabs on inventory, helping sustain optimal item levels without tying up funds in the warehouse. Your team can plan purchasing at favorable terms and in a timely manner, controlling costs and ensuring that your organization meets its customer commitments. And they can connect closely with operations to make sure manufacturing has the materials it needs to deliver products on time.

With decentralized planning systems, it was difficult for Philips Consumer Electronics division, a global leader in connected displays, home entertainment networks and mobile infotainment, to attain a global view of its supply chain. Without that visibility, Philips was unable to gauge product overflow correctly and had difficulties tracking customer shipments and meeting delivery deadlines.

As part its supply chain transformation, Phillips chose Panorama’s BI Solutions business intelligence solution to measure targeted performance improvements within the supply chain and facilitate greater visibility into each step of the process.

Philips can now measure how well it executes operations against forecasts and planning. The overall supply chain transformation program, in which BI played a crucial role, has resulted in significant financial and performance gains for Philips: an increase in Income from Operations from 2.1 MIO Euro to 3.6 MIO Euro; a decrease in Net Operating Capital from 46 MIO Euro to 161 MIO Euro; and a change in Comparable Sales from a 4% decrease to 11% growth two years later.

“We’re using Panorama to facilitate successive improvements in the supply chain,” said Aart Joppe, Program Director, Data Warehouse at Philips. “With visibility into issues, we can determine whether we need to change business processes or [use] IT to correct them. Being able to take action proactively ensures supply chain issues never progress to the point of becoming a missed customer delivery deadline.”
Panorama Software

Panorama Software helps companies grow revenues, reduce costs and improve corporate performance by enabling social decision making and unlocking actionable insights contained within their data.

Leading the Business Intelligence 3.0 revolution, Panorama Software offers a new generation of BI solutions that introduces a unique way to connect data, insights, and people in the organization. Panorama Necto™ is the first BI solution that leverages Social Decision Making and Automated Insights to enable users gain insights more quickly, more efficiently, and with greater relevancy.

Necto end-to-end BI suite includes Analytics, Social BI, Automated Relevant Insights, Smart Reporting, Dashboards/Workboards and integration with Microsoft Office/SharePoint. Necto is designed to work on top of any data source - OLAP, Relational, Spreadsheets or In-Memory.

Founded in 1993, Panorama Software is the original developer of the OLAP technology that was acquired my Microsoft in 1996, which was rebranded as SQL Server Analysis Services and integrated into the SQL Server platform. Since that sale, Panorama has been a close and strategic Microsoft partner, delivering the only Business Intelligence application that is specifically designed for the Microsoft platform.

Panorama streamlines business operations through a Software-as-a-Service (SaaS) and on-premise BI solution for over 1,600 customers worldwide, including some of the world’s largest financial services, retail, manufacturing, healthcare, telecommunications and media companies. Panorama has a wide eco-system of partners in 30 countries, and maintains offices throughout North America, EMEA and Asia. To learn more about Panorama Software, please visit www.panorama.com.