IBM Cognos Supply Chain Analytics

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software

Contents

Abstract

Monitoring your supply chain performance means combining insights from across your accounts payable, inventory, production, and procurement data to gain a clearer picture of process effectiveness.

Overview

Many companies use business intelligence (BI) to monitor, analyze, and report on their performance. This enables them to answer such questions as:

• What is in inventory? What is it worth? Where is it?

• Which vendors are the most reliable?

• Are we carrying overstock?

Effective, high-performing supply chains involve constant change and a fluid transfer of information and materials from one stage to the next. To optimize production and to generate maximum efficiencies, companies need a BI solution that can provide insight across the entire chain, that can respond to changes, and that can show how performance at one stage can affect outcomes further down the line. Supply chain managers need a BI solution that can provide answers to such questions as:

• Where can I consolidate suppliers and leverage my spend?

• Where are the bottlenecks in my procurement process?

• Which products cost the most to make?

IBM Cognos® Supply Chain Analytics can answer all of these questions, and more. These applications make BI ready-to-use with hundreds of pre-defined scorecards, metrics, and reports based on the best practices of successful global companies and industry experts. IBM Cognos Supply Chain Analytics is an integrated set of reporting and analysis functionalities that draws critical insights from your accounts payable, inventory, procurement, and production data to give you better visibility into core supply chain processes. Understand operational effectiveness, quantify inefficiency, and identify where you can optimize to achieve goals faster and improve your bottom line.

IBM Cognos Analytics Applications

Key benefits of using IBM Cognos Supply Chain Analytics include:

• Increased efficiency, revenues, and profits

• Improved demand planning and inventory turns

• Reduced costs

• Reduced carrying costs, overstock, and obsolete inventory

• More predictable logistics

• Refined and optimized sourcing efforts

• Ability to rationalize suppliers.

IBM Cognos Supply Chain Analytics provides the insights to develop supply chain strategies that reduce costs yet increase reliability of supply. It will help to make procurement predictable and repeatable, enlighten supplier partnership decisions, and provide leverage over suppliers in negotiations. It comprises the best practices needed to establish strategic relationships with suppliers of the products and services that are important to your organization's profitability.

Business problems

Perform cross-functional analysis of key supply chain processes

IBM Cognos Supply Chain Analytics features reports and key performance indicators that enable cross-functional analysis of your inventory, procurement, production, and accounts payable data. Supply chain decision-makers gain a single view that extends across the supply chain. This view delivers insights and understanding that can drive optimization and action.

Powerful pre-built metrics and reports answer critical business questions and track and analyze supply chain key performance indicators in the following areas:

• Supplier Relationship Management

• Material Handling

• Inventory Management

• Demand and Fulfillment

• Production

Business drivers

Supplier Relationship Management

Most companies rely on multiple suppliers for one or all of their key components. Yet few suppliers can consistently offer the best price, the shortest delivery times, and the highest quality. Your objective is to refine and optimize your material sourcing efforts, increase the reliability of your supply, quantify supplier relationships, and reduce costs through increased efficiencies. These capabilities will lead to better supplier partnership decisions and give you leverage over suppliers in negotiations.

Supplier Relationship Management analysis gives you visibility into your suppliers' performance to identify trends and opportunities to increase your buying power and to help you manage your supplier relationships more effectively. Supplier scorecards compare and rank supplier performance by responsiveness, cost, quality, accuracy, and other factors to identify those that provide the highest value.

Supplier Relationship Management analysis lets you

• Know what you're buying, from which vendors, and identify trends

• Segment purchases by individual vendors and groups

• Rank vendors by volume and spend

• Leverage company buying power

• Consolidate suppliers for more effective spend

Materials Management

A critical part of managing your supply chain processes is understanding the flow of goods through your organization. Materials Management analysis gives supply chain managers the ability to measure, track, and optimize the movement of raw materials, semi-finished goods, and finished goods across internal supply chain processes – from purchasing through inventory to production. And it allows managers to quantify and analyze how effectively the organization is managing its material assets. Users can better understand the material flows throughout the organization and coordinate material movements more efficiently. It also helps them to manage purchasing activities more effectively through a greater understanding of material usage. With insights into the rate a material is used and why, users will be able to identify and address raw or finished product material shortages before they impact production, and material overages before they cause the company to incur additional carrying costs.

Materials Management analysis lets you

• Track and optimize movements of material by size, value, employee, plant, or vendor

• Measure and track materials usage over time

• Relate material usage to inventory levels and inventory turns

• Relate material usage to demand and forecasts

• Optimize inventory levels and smooth out purchasing activities

Inventory Management

Any number of factors can have a dramatic effect on your inventory stock levels. Internal factors can include plant production and efficiency and product quality. Outside factors can include fluctuations in demand, or increased efficiencies. Your challenge is to ensure an optimal level of stock to meet usage requirements with the least impact on operating capital. You also need to understand where stock is, how much is available, how much it is worth, and who is using it. This enables you to evaluate your potential for overstock or stock-outs, identify obsolete materials with no usage, compare reservations against withdrawals, and plot turns against coverage.

Inventory Management analysis helps you to understand, validate, and align all the variables that impact inventory performance. This helps you reduce costs by developing inventory allocation strategies that improve your return on assets, inventory responsiveness, and inventory turns.

With Inventory Management analysis, you can

• Compare summary and detail information on inventory investments currently and over time

• Compare inventory velocity, ability to meet demand, average stock and min-max levels across plants and warehouses

• Analyze inventory by material hierarchies and by status (for example, restricted stock or on consignment)

Demand and Fulfillment

One of the key drivers of supply chain management is to achieve the "perfect order" for customers at every opportunity. Managers need to know where the demand is coming from, where it is greatest, who is buying the goods, and how these factors change over time. This information enables them to understand actual demand versus forecasts, and relate that to the performance of the internal supply chain. Also critical is the ability to quantify and analyze the effectiveness of the fulfillment process – the ability to fulfill customer orders efficiently and in a timely manner.

This means finding out how any measurement compares to previous years, how it has changed over time, and so on. Demand and Fulfillment analysis enables you to quantify and analyze your ability to fulfill customer orders efficiently and in a timely manner. Fulfillment performance analysis also combines information on inventory reservations (such as consignment or promised), out-of-stock events, and product backlogs to enable you to thoroughly analyze your ability to meet demand as and when promised.

With Demand and Fulfillment analysis, you can

• Identify where demand is coming from and analyze trends

• Analyze zero stock situations by frequency and duration

• Analyze stock-outs by warehouse or material

• Track distribution performance

Production

Production analysis provides decision-makers with a detailed understanding of production capacity, order and inventory management, quality, and costs. It also provides them with the ability to monitor, analyze, and report on issues related to scheduling, forecasting, and minimizing lead-time to order fulfillment. It can apply to discrete or repetitive manufacturing environments.

Production analysis lets you

• Analyze yield and yield variance by plant and by shift

• Guide and monitor quality improvement programs within or across plants

• Identify trends in product quality

• Compare actual material costs to planned costs

Analyze scrap numbers in terms of quantity, cost, and lost profit. Correlate quality measures with respect to yield and time-to-delivery. Evaluate individual plant performance against standard costs. Compare plant-to-plant costs and cycle times for all product groups from all plants. All measures can be trended over time.

The solution

Using IBM Cognos Supply Chain Analytics

Deploy IBM Cognos Supply Chain Analytics to leverage the pre-built scorecards, more than 100 reports and more than 300 metrics from hundreds of business questions to resolve three common customer issues:

- **Visibility** – achieved through enabling managers at any stage of the supply chain to analyze performance data

- **Accountability** – achieved through sharing metrics and reports and distributing accountability for performance across the entire supply chain

- **Reliability** – achieved through turning unconnected data into actionable information

Visibility – Greater efficiency and higher output

More and more companies are making the switch to on demand manufacturing. This approach replaces stockpiling inventory in favor of having just enough inventory to meet current demand. Successful on-demand manufacturing requires that supply chain managers can analyze performance issues the moment they arise and quickly drill down through the data in greater detail to understand the factors that may cause slowdowns in production. They also need to monitor, analyze, and report on production trends and anticipate future demands. IBM Cognos Supply Chain Analytics gives managers performance data at any stage, delivering critical information that enables quick decisions. Pre-defined, guided analytic pathways ensure that the right questions are always asked and the right information is always returned.

Accountability – Operational metrics for all

Supply chains achieve maximum efficiency when performance and production targets are aligned across each stage. Even minor slowdowns can cause expensive excess inventory to build up or delay delivery of finished goods. Decision-makers at every stage need to understand how performance in their area of accountability affects the overall performance of the chain and how accountability for performance in other areas is distributed among suppliers, partners, customers, and other stakeholders. IBM Cognos Supply Chain Analytics comes with pre-defined scorecards that display metrics and key performance indicators. Internal and external decision-makers at any stage of the supply chain can access this information easily to monitor performance, adjust their production or activity levels in response to changes in other stages, identify potential roadblocks, analyze the causes, collaborate on solutions, and take immediate action. Problems are identified and solved almost as soon as they arise to keep the entire chain working smoothly.

Reliability – Turn data into action

The thousands of tables in an operational or enterprise resource planning (ERP) data system are built to store data, not to analyze it. Answering just one query may require joining a significant number of tables, resulting in processing time and frustrated users. Most companies need at least 100 different metrics and KPIs to analyze the performance of their supply chain. Some companies need even more. Typical supply chain analysis solutions are a mix of prebuilt and custom metrics from a mix of custom-built and purchased solutions. Critical performance data is spread across different regions and time zones and may not be consistently or universally refreshed at regular intervals. This means decision-makers may be working with outdated or inaccurate information, leading to the possibility of expensive excess inventory, delays in production and/or delivery, and frustrated customers at the end of the chain.

IBM Cognos Analytic Applications

IBM Cognos Analytic Applications offer solutions for three core business processes: Financial Analytics, Supply Chain Analytics, and Customer Analytics. These suites integrate for a complete picture of how your organization is performing.

Integrating IBM Cognos Analytic Applications across supply chain, finance, and customer domains means that report users can share a common business language and understanding of performance and strategy. Such concepts as customer, product, and region are defined consistently in every report, making communication and collaboration among different departments easier and more effective.

IBM Cognos Analytic Applications let companies communicate and reach strategic goals through key metrics that employees at every level across the organization can understand and follow in their own responsibilities. Metrics and KPIs can be displayed by function, by role, or by accountability. Users can quickly identify positive and negative performance trends and analyze the driving factors from a high-level summary down through levels of increasing detail. They can share the resulting insights using a variety of built-in communication and collaboration tools.

Conclusion

Benefits for IT

IBM Cognos Analytic Applications provide a cost-effective alternative to the expensive, difficult, and risky proposition of building a performance foundation on your own. Following best business and technical practices developed through work with thousands of successful companies and industry experts worldwide, IBM Cognos solutions are founded on complete, out-of-the box corporate performance management. IBM Cognos Analytic Applications come with a foundation of more than 650 metrics, more than 250 packaged reports, and more than 35 OLAP (online analytical processing) data cubes. Using built-in IBM Cognos BI, users can generate an array of additional reports — OLAP, time trending, comparative, summary, and transaction detail — to meet information requirements for all positions throughout the organization. IBM Cognos Analytic Applications come with built-in business value, include a production-ready architecture, and are easily extensible to accelerate your time to results.

Build versus buy – the IBM Cognos Analytic Applications advantage

Why accept the risk, cost, and time investment needed to build a corporate performance management foundation when IBM Cognos Analytic Applications provide an out-of-the-box solution that gives you:

- **Accelerated time to result** – all the steps for building an enterprise performance solution have been completed and put in the box. This drives value in and time out at every step: modeling the problem, preparing the data, analyzing and delivering insights. Pre-packaged components for IT and business people ensure fast implementation and data integrity, quality, reliability, and accuracy.

- **Built-in business value** – IBM Cognos Analytic Applications combine market-leading IBM Cognos BI tools with best business practices, resulting in a unique value for customers. The built-in business knowledge is based on years of analytic applications expertise. It leverages Cognos' more than 15 years of business intelligence experience with more than 22,000 customers worldwide. The breadth and depth of BI ensures that you have the right lens for every role.

- **Production-ready architecture** – IBM Cognos Analytic Applications are purpose-built for J.D. Edwards, Oracle, SAP, and other operational systems on top of a single enterprise data model. This allows the solution to rapidly integrate into enterprise environments with a minimum of IT effort. IT can easily customize to reflect unique ERP customizations. It also benefits from built-in best BI practices and best data warehousing practices, including the automation of incremental data updates and slowly changing dimensions.

- **Extensible for competitive advantage** – IBM Cognos solutions and services provide tools to ease customization or extension. Add additional ERP and non-ERP data, an open data warehouse model, new areas for analysis, customer-specific metrics, new/changed reports and analyses, or new BI pieces for new views into the content. Start anywhere, knowing that incremental applications will combine seamlessly into an integrated whole.

About IBM Cognos BI and Performance Management

IBM Cognos business intelligence (BI) and performance management solutions deliver world-leading enterprise planning, consolidation and BI software, support and services to help companies plan, understand and manage financial and operational performance. IBM Cognos solutions bring together technology, analytical applications, best practices, and a broad network of partners to give customers an open, adaptive and complete performance solution. Over 23,000 customers in more than 135 countries around the world choose IBM Cognos solutions.

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