# Operational business intelligence

Providing decision-makers with up-to-date visibility into operations

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Information Management

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## Abstract

This paper provides an overview of IBM Cognos® Now!, an operational business intelligence solution that helps companies manage and analyze data to make better, more effective business decisions. This paper outlines some barriers to corporate performance management that organizations face and, in turn, the challenges to accurate and successful performance management solutions. The paper concludes with a summary of the features and benefits of the IBM Cognos Now! performance management solution.

## Overview

### What is operational business intelligence?

Operational business intelligence (BI) is a system of reports, metrics, and dashboards designed to drive decisions that optimize a company's performance in the present.

It provides line workers with an always up-to-date view of performance against the key metrics within their responsibility, so they can take corrective action when performance outcomes exceed pre-set thresholds.

There are two common approaches to building an operational BI system. The first is to combine and/or integrate components from existing BI infrastructure. This approach is expensive and time-consuming, and comes with additional limitations that often don't reveal themselves until significant resources have already been spent.

The second approach is to leverage a pre-packaged solution that addresses all the functionality requirements to accelerate deployment and time to value.

**Differences between enterprise BI and operational BI**

Large companies use enterprise BI to analyze and report against company-wide information stored in a data warehouse or data mart. In most cases, the data warehouse/data mart is fed from multiple operational systems and other sources via a batch process on a regular and pre-set (daily, weekly, etc.) basis. With operational BI, speed is critical. The system accesses data from operational systems as it is generated and presents it in real time to provide front-line workers and decision-makers with a continuous, up-to-date view of performance against key metrics.

While the two approaches are very different, they are also highly complementary. The data warehouse used by an enterprise BI system serves as a historical source for operational BI. The operational BI system is then able to put historical knowledge from the data warehouse into an event-based information delivery framework.

This paper briefly outlines the problem of corporate performance management, and the IBM Cognos Now! business intelligence solution, which provides at-a-glance, up-to-date information on day-to-day operations, allowing organizations to quickly detect exception cases and formulate strategies to deal with them, improving the decision-making process at low cost and high value.

## Business problems

**The need for operational BI**

Ask business executives how they assess corporate performance, and they will give you at least 10 key metrics they need to track on a regular basis. Plant floor managers, retail merchandisers, risk managers, and many others responsible for monitoring and managing day-to-day business operations will also tell you that timely access to continuously updated information is a pressing business need. However, in most cases, this information has typically been available only to senior executives and analysts due to both cost and problems with IT resources.

## Business drivers

The need for corporate performance management has multiple business drivers. The following are a few examples:

• **Technological limitations of current business intelligence tools on the market:**

  – Many of the business intelligence tools currently on the market impede efficiency, requiring users to contact IT each time they need to modify their dashboards or create new ones, which creates bottlenecks in IT and delays decision-making.

  – For many traditional BI tools, there exists high latency between the operational data source and the metrics being updated in the dashboard, precluding both efficiency and productivity.

• **Financial cost of current BI tools on the market:**

  – For many organizations, the total cost of ownership (TCO) of deploying traditional BI tools to a large number of operational users is too high, effectively preventing organizations from finding successful performance management solutions.

# The solution

**Key criteria for operational BI**

Companies that overcome traditional barriers can improve their performance management capabilities through better-informed and faster decision-making. To be successful, their operational BI deployment must meet the following criteria:

- Provides self-service dashboards that display performance against business indicators, enable drill-down, and that can be easily modified.

- Presents and continuously updates information in a variety of graphs, charts, tables, and indicators.

- Delivers a memory-based business activity monitoring (BAM) engine for real-time complex event and data processing from operational and historical sources, business rules execution, and advanced analytics processing.

- Allows users to create and apply sophisticated business rules to detect key exception conditions.

- Allows users to initiate action/workflow for problem resolution.

## Common use cases for operational BI

*In Financial Services*

**General**
- Check Clearing
- Customer Notification
- Portfolio Optimization
- Fraud Detection

**Credit Risk**
- Counter Party Risk Exposure
- Credit Limit Exposures
- Portfolio Exposure

**Market Risk**
- Real-Time Value-at-Risk (VaR), VaR Trend
- Market Risk Limit
- Market Stress Test

**Financial Performance Management**
- Intra-Day P&L Market Crosses
- P&L Limit Violation
- Risk Metrics by Division
- Divisional Market Value

*In Manufacturing*

**Quality Management**
- Yield
- Production vs. Schedule
- Repair and Returns
- DPPM

**Plant Visibility**
- Asset utilization/uptime
- Labor utilization
- Production cycle times
- Yield/scrap tracking

**Operational Efficiency**
- Equipment Utilization
- Case per labor hour

**Fulfillment/Logistics**
- Order fill rates
- On Time Delivery
- Perfect order tracking
- Pick/pack/ship efficiency
- Transportation cost/efficiency

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*In Retail*

**Inventory/Supply Management**
- Critical component receiving
- Supplier VMI execution
- In-transit movements

**Demand Management**
- Forecast consumption tracking
- Channel inventory/POS activity
- Promotions activity tracking

*Departmental Applications*

**Finance**
- SOX Alerts
- Shipping/Billing
- Track/monitor order to cash

**Supply Chain**
- Demand to Supply Balancing
- Transportation Status

**Customer Support**
- Support Center Scheduling
- Spike in complaints
- Detect multiple channel requests

**Sales**
- Account representative alerting
- Discover rep behavior changes
- Competition watch

**Introducing IBM Cognos Now!:
The industry's first BI appliance**

IBM Cognos Now! is the industry's first BI appliance designed to monitor business operations and provide immediate visibility to operational users and managers at the lowest possible total cost of ownership (TCO).

As a single product that contains Operational Dashboards, reports, analysis, alerting, ETL, and data integration, IBM Cognos Now! eliminates the key barriers to delivering operational BI at a cost that can finally make it a reality.



*IBM Cognos Now! is an operational BI solution that delivers highly visual and self-service interactive dashboards, data integration, analysis, and reports, all prepackaged in a hardware appliance.)*



*IBM Cognos Now! includes easy-to-use Operational Dashboards that continuously display up-to-date information in an intuitive, graphical format.)*

### Self-service

While enterprise BI solutions were designed for use by corporate analysts and power users, operational BI requires a straightforward interface that can be used by anyone. IBM Cognos Now! includes easy-to-use Operational Dashboards that continuously display up-to-date information in an intuitive, graphical format. Any user can immediately see what is happening in the key areas of their business operations.

These dashboards can also be personalized to contain the up-to-the-second metrics, graphs, and indicators. And, because the dashboards are designed to be self-service, users can modify or create new IBM Cognos Now! Operational Dashboards without help from IT, dramatically reducing the cost of user maintenance.
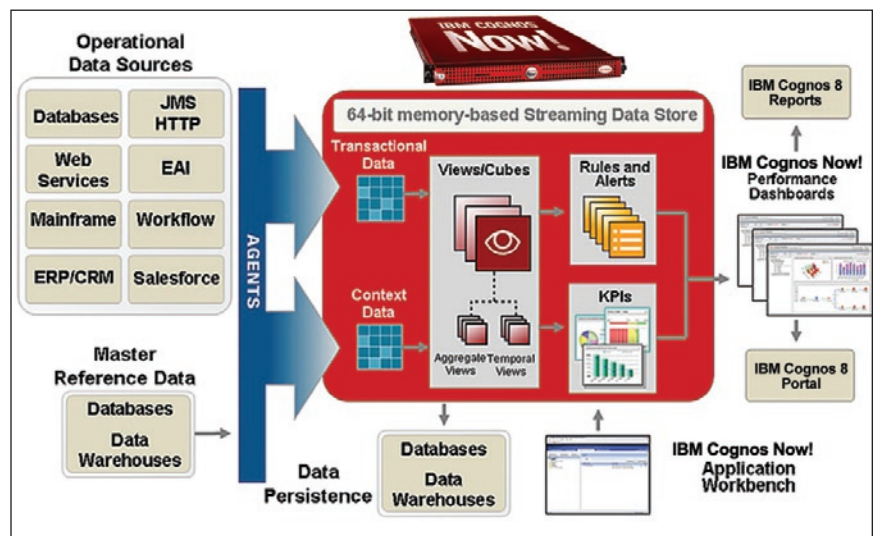
### Rapid deployment

Hardware appliances are the perfect delivery model for line managers who need continuous visibility into their operations yet have limited IT resources to help deploy and manage a software application. Choosing a prepackaged appliance means there is no wasted time procuring hardware and installing and maintaining software. Simply plug the appliance into a power source and connect it to your network and users have instant visibility into their business operations.

### Scalable

The IBM Cognos Now! architecture supports large data volumes while consistently delivering information in a few seconds — regardless of query volume or the number of users accessing the system. This capability is driven by the in-memory complex event processing architecture, which uses a patent-pending streaming data store engine to cache data and analytical information in memory and stream it to large numbers of users, ensuring uniform query response times as more users are added.

**Low TCO**

With IBM Cognos Now!, a single, low-cost appliance can support a large user base and includes unlimited seat licenses and support for unlimited dashboards and data sources. In addition, its single product architecture and plug-and-play compatibility means you can deploy a complete operational BI solution in days, not months.



*The IBM Cognos Now! architecture supports large-scale operational BI deployments with a streaming data flow engine that provides continuous updating of metrics integrated from operational and historical data, time-based calculations, business rules processing, and event-driven alerting.*

**IBM Cognos Now! in action**

### Logistics management

The largest U.S. frozen dessert manufacturer and distributor is using IBM Cognos Now! operational BI to provide a wide range of operational workers, managers, and executives with instant access to the information they need to monitor and manage business performance at every level. To better manage delivery operations, frontline warehouse and freight managers are using

Operational Dashboards to access operational data and performance metrics that help guide their immediate logistics decision-making. Secondary dashboards — aligned with the same metrics as the front-line dashboards — then summarize and display regional performance data for warehousing directors. This summary is further consolidated at a national level into dashboards used by company executives. As a result, the entire delivery and logistics operation works in lock-step to support on-time product delivery, high customer satisfaction, and better company profitability.

### Operations management

One of the world's largest lodging franchisors recently implemented a new system to handle the increased volume and complexity of hotel availability searches across its many channels, including travel sites, hotel Web sites, and travel agents. In this environment — where a few seconds of downtime can add up to significant lost revenue — the company realized it they would need a way to continuously monitor the new system. The company is using IBM Cognos Now! to give the company immediate visibility into system performance and provide front-line decision makers with instant access to the information they need to continuously track customer demand and maintain service levels across all of their channels.

**Operational BI benefits**

By empowering operational workers and decision makers with up-to-the-minute BI information, you can realize several important benefits:

• Receive early-warning indicators of service-level agreement (SLA) violations, risk exposure, compliance issues, or problems with specific products, customers, services, or sales channels.

• Provide a consistent view of performance throughout the organization and present understandable results with key performance or risk indicators.

• Uncover opportunities for cost reduction, as well as performance and productivity improvement across business units, operations, or product lines.

## Conclusion

IBM Cognos Now! is an operational business intelligence solution that improves the decision-making process by helping organizations manage and analyze information. IBM Cognos Now! features dashboards that provide at-a-glance information on data in a user-friendly, accessible format, and can be deployed quickly and easily with a prepackaged appliance, meaning that IT resources are conserved and no additional time and money is wasted on procuring hardware and installing and maintaining software. IBM Cognos Now! offers an integrated business intelligence solution that is easy-to-use and efficient, enabling companies to make well-informed and strategic decisions.

## About the author

Shelley H. Metzenbaum is a Visiting Professor at the University of Maryland's School of Public Policy, where she leads a consortium that brings state agencies together to develop better ways to measure and manage compliance and enforcement programs. Dr. Metzenbaum holds a Ph.D. in public policy from the Kennedy School of Government, Harvard University, and is the former head of that school's Performance Management Project. She writes, teaches, and consults on performance management and the use of performance goals and measures as powerful management tools for government.

## 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.

For further information or to reach a representative: **www.ibm.com/cognos**

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