Information Management software

Performance management with trusted information

How IBM InfoSphere software can enhance your investment in IBM Cognos

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Introduction

Most of the IT investments made over the past 15 years have focused on automating the business—ensuring that transactions flow seamlessly between applications. Organizations are now realizing that the information in their systems is a strategic asset that can be used to optimize their businesses. With business intelligence (BI) and performance management solutions like IBM® Cognos 8, organizations are leveraging business information to innovate, find new customers, better serve existing customers, make better decisions and drive sustainable competitive advantage.

Business leaders face many challenges when they try to leverage enterprise data as a strategic asset. In a perfect world, information would be organized into a simple, coherent infrastructure that performance management solutions could draw from to deliver meaningful information on demand. In reality, the information that defines customers, channels, products and business is often fragmented, siloed and inconsistent—making it difficult or impossible for reporting and analysis tools to deliver reliable information how, when and where it is needed for each front-line manager and executive.

Information must be trusted before it can become the basis for key business decisions. The information must be accurate, complete, in context, insightful and delivered on time so that it is relevant and easily analyzed for hidden or emerging trends and opportunities. Unstructured information—estimated by some analysts to represent 80 percent of all data—must be managed so businesses can quickly extract insight from sources such as digital media, e-mail messages and unstructured text. Building trusted information also requires processes for managing data governance and building an IT-business partnership. Finally, the quality of data that has been created or acquired over the years must be assessed and improved enterprise-wide.

According to industry studies from AIIM and Accenture, information quality and accessibility issues continue to cause problems for enterprise users.[1]

- *47 percent of users don't have confidence in their information*

- *42 percent of managers use wrong information at least once a week*

- *59 percent say they missed information they should have used*

This white paper will show how IBM can help Cognos users enhance their performance management strategies by transforming enterprise data into trusted information using IBM InfoSphere™ Information Server and IBM InfoSphere Warehouse. Along the way, it will answer four basic questions that are critical to any trusted information initiative:

1. How do companies avoid dirty data?

2. How do companies overcome data fragmentation, datamart fragmentation, latency and consolidated reporting challenges?

3. What is information middleware?

4. How do I get started?

How do companies avoid dirty data?

As BI and performance management implementations help companies use enterprise information to strategically increase their competitive edge and grow their business, data quality becomes crucial. Respondents in a survey from The Data Warehouse Institute (TDWI) reported that poor-quality data can cause inaccurate reporting (81 percent), and inappropriate data can spark arguments between IT and business (78 percent).[2]

Avoiding dirty data is now a business problem, as improved data accuracy can help increase top-line revenue growth or cut bottom-line costs. An organization's leadership needs to take responsibility for the governance functions necessary to identify data quality issues, establish minimum acceptable levels for data quality and facilitate data quality improvement initiatives. IT can support, deploy and manage the final data quality solution with business involvement to monitor the results.

Using proven best practices, technologies and methodologies advocated by IBM, organizations can take the first steps toward establishing a data quality management program by:

- *Taking ownership and responsibility for data quality, including the initial assessment and continuous monitoring*
- *Understanding enterprise data, its meaning, its sources and its history*
- *Ensuring that data in various repositories, including data warehouses, datamarts, master data management systems, operational data stores and transactional applications, is accurate and trusted*
- *Cleansing data by removing duplicates and rectifying misinformation to make accurate information accessible for reporting, analysis and other purposes*
- *Resolving inconsistencies in disparate data sources and data coming into the organization*
- *Maintaining the accuracy of information over time and through all cycles: as it is acquired, when it is moved or while it is stationary*

How do companies overcome data fragmentation, datamart fragmentation, latency and consolidated reporting challenges?

As with most investments in data warehousing, the information feeding an IBM Cognos performance management solution often comes from a patchwork of inconsistent, siloed datamarts, applications and operational data stores. The task of ensuring that this framework represents a consolidated, reliable analytical resource is often too complex to overcome because of the plethora of data sources, the data volumes involved or the types of integration styles required.

This situation is driving best-of-breed organizations to rethink their information architectures. They are focusing on their multiple information stovepipes, which are unnecessarily expensive and complex to build and maintain. These stovepipes also contribute to the rampant data quality, data redundancy and data latency challenges that inhibit a single analytical view of the business.

Healthcare organization overcomes integration challenges

The tipping point: *A healthcare organization wanted to improve healthcare delivery by making patient information available at the point of care. It also wanted to respond to market opportunities by rapidly consolidating and standardizing information from multiple partners.*

The hurdle: *Manually coded data integration and quality checks dramatically increased the time required to add new sources of information. Existing solutions were not uncovering missing, inaccurate and inconsistent data, further impacting project timeframes and the quality of information delivered to consumers.*

The result: *IBM InfoSphere Information Server enabled the organization to deliver trusted information to its clinician portal and health record repository. The organization has seen a 50 percent increase in the number of patients supported, which translates to significant revenue growth.*

IBM recommends establishing an information architecture that can respond to an information delivery scenario no matter the velocity or volume of information involved. Using proven best practices, technologies and methodologies advocated by IBM as a guideline, organizations can take the six steps to establish a data integration center of excellence:

1. *Rigorously map internal and external information stovepipes to collapse redundancy and establish data quality standards, thereby ensuring that existing and new data sources conform to corporate standards for consistency, accuracy and reliability.*

2. *Evaluate existing reporting needs against information supply and look for opportunities to consolidate data warehouses and datamarts into trusted information sources that align with operational master data across applications.*

3. *Examine opportunities to exploit continuous business monitoring techniques that could enhance the visibility of critical alert conditions by capturing and propagating business events as they happen.*

4. *Use a common blueprint to foster collaboration between business and IT and optimize existing reporting solutions and data.*

5. *Create a single data integration hub and data exchange format using business-defined rules for integration, quality and governance to minimize reporting and data warehouse consolidation costs; harvest and reuse data integration assets across projects to eliminate redundancy and accelerate deployment of new information feeds.*

6. *Reduce storage costs by archiving data to cut duplication and redundancy, and by assessing data quality and monitoring best practices.*

What is information middleware?

Achieving trusted data across the enterprise requires a different kind of information infrastructure, one that allows information to be integrated and managed holistically. Information middleware is a category of techniques, disciplines and technologies that delivers trusted data. It enables four key benefits:

- *Insight: Derive meaning from information changes*
- *Context: Real-time delivery of relevant information when and where it's needed*
- *Completeness: Related information reconciled into a single and holistic view*
- *Accuracy: Complex and disparate data transformed, cleansed and delivered*

IBM has assembled an information middleware portfolio specifically designed to help organizations deal with the challenges of fragmented information. This portfolio, called IBM InfoSphere, helps accelerate the delivery of trusted information and reduce risk in critical information-based projects.

The InfoSphere portfolio has four primary parts. The foundation is IBM InfoSphere Information Server, which specializes in integrating data across a heterogeneous landscape and delivering complete and accurate information when and where it is needed. A common target of this data is IBM InfoSphere Master Data Management (MDM) Server, which manages a master view of key data elements—such as customer, product, account and location—over time. IBM InfoSphere Warehouse provides a platform for enormously scalable data warehouses, with key partitioning, mining and cubing features to maximize the value of information. Accelerating all of these are the IBM Industry Models, which contain industry-centric domain knowledge to help organizations achieve better results faster.

Building a robust information agenda and architecture

IBM InfoSphere addresses the information integration challenge and helps increase the breadth, accuracy and timeliness of information available to IBM Cognos 8 business intelligence-based performance management solutions. The combination of IBM Cognos and IBM InfoSphere software creates a robust architecture that helps simplify implementation, accelerate business adoption and power better business outcomes. When coupled with an information agenda, this architecture becomes a foundation for short- and long-term business optimization.

Cognos and IBM InfoSphere have strong product synergy; the two portfolios complement each other with no overlap. Cognos users can tap into a wide range of IBM offerings to support their performance management and BI investments (see Figure 1).

IBM Information Agenda Guides identify the key tasks necessary in business transformation, like discovering and governing trusted information, and provide industry-specific best practices and a roadmap to help organizations navigate and perform key transformations. These agendas complement the Cognos Business Intelligence Competency Centers.

InfoSphere Information Server is an integrated data integration platform composed of multiple modules that share a consistent foundation of platform services, such as parallel processing and connectivity. For IBM Cognos 8 BI users, it delivers auditable data quality and governance; continuous data quality reporting; massive volumes of data integrated in batch or real time; and the ability to trace data back from IBM Cognos reports to its source. In addition, IBM InfoSphere Information Server manages corporate business terms accessible from within IBM Cognos 8 BI and augments the use of IBM Cognos 8 Data Manager with industrial-strength data integration, scalability and data quality.

InfoSphere Federation Server and InfoSphere Classic Federation Server provide middleware that enables end users to simultaneously access disparate sources as if they were a single relational database. When used to augment the built-in capabilities of IBM Cognos 8 BI, they deliver data from mainframe and enterprise content management sources seamlessly.

InfoSphere Change Data Capture provides real-time data integration and synchronization, enabling customers to respond to business events and critical information changes as they happen. Cognos clients interested in continuous business monitoring can immediately leverage this solution through IBM Cognos 8 BI and IBM Cognos Now!

IBM Industry Models are proven portfolios for banking, financial markets, insurance, telecommunications, retail, consumer products and healthcare organizations. These "business-centric blueprints" foster business and IT collaboration on requirements design and IT standardization, and offer expertise in financial, regulatory, risk and revenue enrichment, and in performance management reporting. IBM Industry Models can be immediately deployed with IBM InfoSphere Information Server, InfoSphere Warehouse and IBM Cognos 8 BI.

InfoSphere MDM Server and InfoSphere MDM Server for Product Information Management (PIM) reconcile operational master data into a single trusted source by orchestrating master data across multiple business applications. They complement IBM Cognos 8 Business Viewpoint, which engages business users to maintain, govern and share the viewpoints they need to drive business performance management. Together, these systems help ensure that employees and operational applications are working from common business hierarchies and attributes.

InfoSphere Warehouse and InfoSphere Balanced Warehouse is a complete off-the-shelf data warehousing solution comprised of pretested, scalable and fully integrated system components designed and optimized to accelerate warehouse deployment for your IBM Cognos BI 8 investment. It features embedded data mining, built-in scalability and is available both as an appliance and fully integrated with IBM Cognos 8 BI. With InfoSphere Warehouse, you can access, analyze and act on real-time and historical information—structured and unstructured, operational and transactional—to help generate new opportunities, contain costs and satisfy customers with minimal business risk.
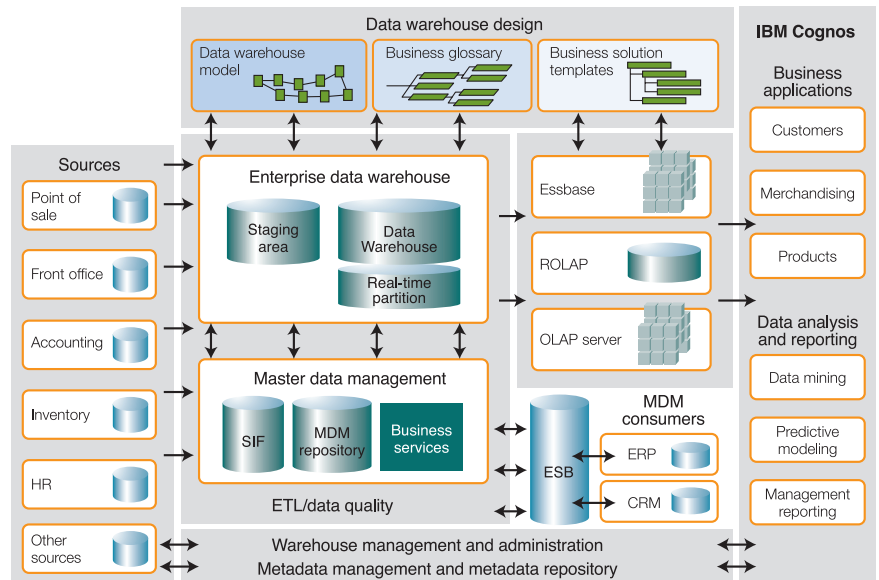
Figure 1: IBM Cognos and IBM InfoSphere platforms work together to help enterprises develop and use trusted information.

How do I get started?

When tackling a large information management project, it's important to look for high-priority information challenges that are tied to the key business objectives. IBM recommends considering the following five questions:

1. *Are your current information agenda and priorities sufficient to meet the needs of the business?*

2. *Is the information supplied to the business complete, accurate and timely?*

3. *Are there expensive, inflexible information stovepipes that can be replaced to save money and increase corporate visibility?*

4. *Is the way the organization uses information inhibiting the organic growth of the business or impeding compliance efforts?*

5. *Have you identified the five key performance metrics the business needs to achieve the largest top-line growth?*

If your answers to any of these questions raise concerns, IBM can help. Companies wishing to explore the benefits of combining the InfoSphere portfolio with Cognos and addressing data quality in their organization can do so by participating in one of two programs:

- *__The Information On Demand Introduction__ offers an in-depth look at the IBM vision for business optimization, called Information On Demand (IOD). IBM will share the principles of IOD as well as case studies in your industry. You can discuss high-priority projects and the IBM team can suggest areas where its products and services can add value. After this introductory briefing, you can work with IBM to develop your own information agenda from a near-term or long-term perspective.*

- *The Data Quality Assessment is intended for customers who want to quantify the impact of data quality on their business. Over a period of about five days, IBM consultants work with your business and IT staff to help identify and analyze some representative data to develop a report to support a data quality initiative. Many clients find this process very revealing, and it invariably leads to a strategy to realize their businesses' most critical data-intensive IT initiative.*

For more information

To learn more about how IBM InfoSphere Information Server, InfoSphere Information Warehouse and the rest of the InfoSphere portfolio can benefit your IBM Cognos system, please contact your Cognos or IBM marketing representative, your IBM Business Partner, or visit the following Web sites:

- **ibm.com**/infosphere
- **ibm.com**/software/data/info/cognos
- **ibm.com**/software/tivoli/governance/servicemanagement/data-governance.html

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