

IBM WebSphere Information Integration platform delivers information you can trust.



Information is everywhere

In a perfect world, your business information would be neatly organized in a single, coherent information infrastructure, easily accessible by the right people, processes and applications at the right time throughout the organization. Your business would be enabled to deliver information on demand. Unfortunately, your situation probably looks very different. Many business environments today have grown through change: reorganizations, mergers and acquisitions, tactical “quick fix” projects and new system implementations. New data and content sources are continually being added to the enterprise by departments or business units

deploying their own applications with their own databases and repositories. These information sources are often isolated from the users and applications that may need them the most but are outside of the originating department or business unit. For the data that can be shared, it can be of questionable value as companies struggle to ensure the consistency, quality and meaning of this data as it is passed around.

As today’s global enterprises extend their boundaries to encompass suppliers, partners and customers, the need to integrate and access disparate information sources becomes even more critical.

In a recent study of 1,800 global business executives,¹ the most anticipated benefit for the top three IT initiatives was “information availability.” However, a different study² found that only 25% of CFOs feel that they have adequate access to customer information across the business. The bottom line is that businesses expect better information from their investments, but IT projects are not always delivering on these expectations.

Eradicating information barriers positively impacts businesses

Think about how your organization could enhance revenues, control costs and streamline operations by eradicating barriers to information – barriers that prevent your employees from accessing and working with all of the information in the enterprise

when they need it and in the form they need. These barriers can be overcome by effectively managing the complexity of your organization's information infrastructure through information integration. Information integration can be loosely defined as unifying data within an enterprise

and surfacing it to end users and applications as trusted information.

Whether you're loading source data into a data warehouse or

establishing an intermediate data services layer to virtualize data to end users, your users will have easier access

to better information through information integration. Data integration projects have similar requirements that can be addressed by the same infrastructure. They require the trusted marriage of information across disparate sources and formats. This similarity

By providing information as a service, businesses can dramatically improve the availability and consistency of information and remove the traditional barriers to information sharing.

of requirements drives the case for a service oriented platform that can provide information as a service to the business, regardless of the complexities of sources, formats, or processing requirements. This is the essence of information on demand. By providing information as a service, businesses can dramatically improve the availability and consistency of information and remove the traditional barriers to information sharing. Information services can be reused across the enterprise, dramatically improving the productivity of IT resources. Once in place, this information integration infrastructure provides great downstream leverage, allowing IT to address new challenges with more flexibility and gain better control over information in terms of quality and accessibility.

The business value associated with six critical business initiatives addressed by the IBM WebSphere Information Integration platform:

- **Master Data Management –**
Reliably synchronize all important business information dimensions such as customers and products across multiple systems
- **Business Intelligence –**
Take the guesswork out of important decisions by consolidating trusted information in whatever form is needed, whenever it is needed
- **Business Transformation –**
Transform companies into on demand businesses by isolating users and applications from the underlying information complexity
- **Infrastructure Rationalization –**
Streamline corporate information access and reduce costs through an optimized information infrastructure
- **Risk and Compliance –**
Deliver a dependable information management foundation to improve corporate visibility, ensure regulatory compliance and lower operational risk
- **Corporate Portals –**
Provide information on demand while isolating users from the complexities of multiple data sources and application interfaces

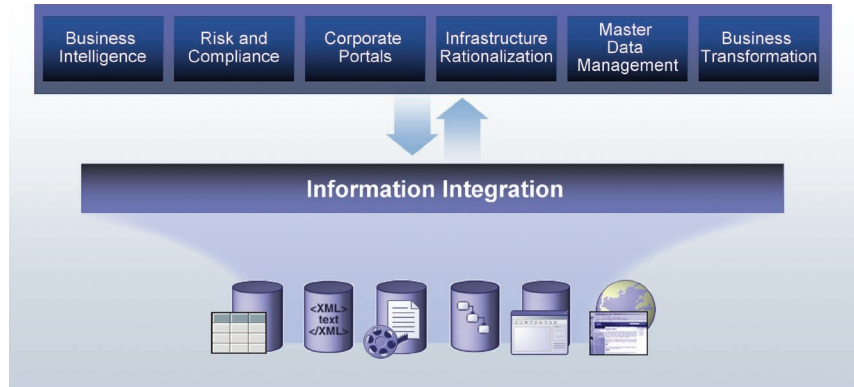


Figure 1: Critical Information Integration Initiatives

An information integration platform to address critical business initiatives

To fully realize the benefits of information on demand to address critical business initiatives, today's enterprise needs an information integration platform with the breadth and flexibility to enable you to access and work with information wherever, whenever and however it is needed across and beyond the enterprise. The delivered information must not only be accessible, authoritative, consistent, timely and complete, it must also be in context in order to gain insight and make better business decisions.

A comprehensive information integration platform must provide five fundamental capabilities in order to deliver information you can trust across a full range of business requirements.

- 1) The ability to connect to relevant sources – whether structured or unstructured, mainframe or distributed, internal or external.
- 2) The ability to gain insight into the content, quality and structure of data sources in order to completely understand data before it is integrated and proliferated throughout the enterprise.
- 3) The ability to standardize and cleanse the data so that companies gain access to authoritative and consistent views of any individual or business entity and its relationships across the extended enterprise.
- 4) The ability to effectively and efficiently collect, transform and enrich high volumes of data from the original data source to the target.
- 5) The ability to federate information, enabling applications to access and integrate diverse data and content as if it were a single resource, regardless of where the information resides.

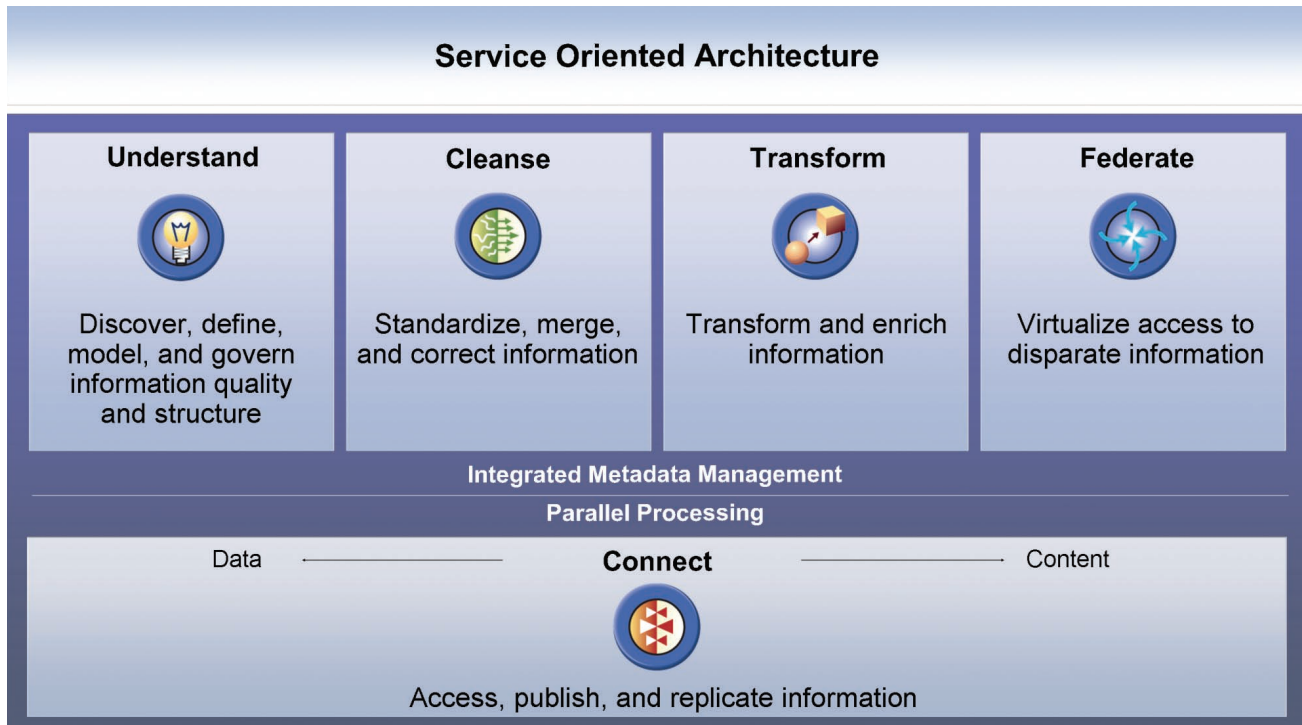


Figure 2: The IBM WebSphere Information Integration Platform

These five fundamental capabilities are provided by the IBM WebSphere® Information Integration platform. The WebSphere Information Integration platform integrates and transforms any data and content to deliver information you can trust, providing breakthrough productivity, flexibility and performance, so you and your customers and partners have the right information for running and growing your business.

This unified platform:

- *Delivers accessible, authoritative, consistent, timely and complete information*
- *Provides leverage for businesses by allowing multiple types of business problems to be solved in an integrated manner, with a high degree of reuse and standardization*

- *Supports validation, access and processing rules that can be reused across projects, leading to a high degree of consistency, control over data, and efficiency in IT projects, both in the initial development and over time as these rules need to be adjusted to meet changing business requirements*

IBM WebSphere Information Integration capabilities



CONNECT to any data or content, wherever it resides.

With businesses more distributed than ever, consolidating, synchronizing, and distributing data across disparate databases is a core business requirement. The WebSphere Information Integration portfolio meets these emerging business demands, enabling businesses to connect to all their information.

WebSphere Information Integration solutions provide:

- *Direct, native access to relevant sources bundled with each product for both mainframe and distributed computing environments*
- *Consolidation, synchronization, and distribution across disparate sources*
- *Support for a wide range of information sources, such as databases, files, content repositories and packaged applications*
- *Changed data capture and event-based publishing of data*

WebSphere Information Integration products can be used standalone to support specific application requirements or in conjunction with the other products in the platform to provide integrated composite solutions.



UNDERSTAND and analyze information, including its meanings, relationships and lineage.

Businesses today deal with massive volumes of data – often without much insight into the content, quality and structure of that data. Complex business transactions from customers and partners plus operational information moving within the enterprise are often the basis on which key business decisions are made. These decisions are often undermined by the lack of insight and understanding of the data.

WebSphere Information Integration solutions provide the necessary automated data profiling analysis and monitoring capabilities to unlock the mystery of source data content, quality and structure.

WebSphere Information Integration solutions provide:

- *Table and column data-driven analysis and reporting to help identify missing, inaccurate, redundant and inconsistent data*
- *Data quality monitoring to help maintain the health of data throughout its lifecycle*
- *Automated discovery, and relationship and dependency analysis to establish the true metadata of the source systems*
- *The ability to define, annotate, and report on fields of business data*

WebSphere Information Integration products share a common metadata foundation, allowing metadata to be shared and tracked across products. This flexible approach to integration development results in faster implementation times, better collaboration between IT and business users, and higher quality results.



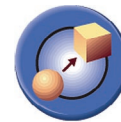
CLEANSE information to help ensure its quality and consistency.

More and more, the combination of customer, partner, and operational information provides the foundation for key business decisions made across the enterprise. The more error-laden these data streams and the more prolific the data, the less confident the decision makers are in using this information to drive the business. Business information needs to be clean: identified, standardized, matched, reconciled, and free of redundancies to ensure quality and consistency. Data cleansing enables the establishment of a single, logically correct view of core business entities across the enterprise, the foundation for master data management.

WebSphere Information Integration solutions provide:

- *Standardization of source data fields, helping establish consistency in information*
- *Validation, certification, and enrichment of common data elements, using trusted data like postal records for name and address information*
- *Matching together of records across or within data sources, providing assurance that duplicate data is removed and enabling common entities from different sources to be identified and linked together*
- *The ability to allow a single information record to be survived from the best information across sources for each unique entity, resulting in the creation of a single comprehensive and accurate view of information that spans across source systems*

These functions can be applied to any type of business entities, including customers, products, suppliers, employees, and chart of accounts. The functions are vital to improving information quality and enabling a comprehensive view of information on your most important business assets.



TRANSFORM information to provide enrichment and tailoring for its intended use.

Business information today moves in, through, and out of business systems and processes like a living organism. To succeed, businesses need to tap into that data flow to transform and deliver data of any complexity; from the right sources - to format it as required, and to deliver it to the right targets, within or outside the enterprise, at exactly the right time. Transformation technologies increase productivity, by meeting the most demanding information integration requirements for business intelligence, infrastructure rationalization, master data management, regulatory compliance and other initiatives.

WebSphere Information Integration solutions provide:

- *High-volume, complex data transformation and movement functionality that can be used for standalone ETL or as a real-time data transformation engine for applications or processes*
- *Embeddable in-line validation and transformation of complex data types, like EDI, SWIFT, HIPAA, and other semi-structured data formats*

WebSphere Information Integration products for data transformation can be used alone, together, or in combination with the other products in the portfolio to provide the flexibility to address nearly any integration challenge.



FEDERATE information to make it accessible to people, processes, and applications.

In enterprise environments today, there is an unavoidable requirement to enable applications to access integrated data and content while retaining the autonomy and integrity of the data and content sources. The WebSphere Information Integration platform provides federation capabilities that allow applications to access and integrate diverse data and content – structured and unstructured, mainframe and distributed, internal and external – as if it were a single resource, regardless of where the information resides, while maintaining source integrity and autonomy.

WebSphere Information Integration solutions provide:

- *Virtual views to end users, shielding them from the complexity of the underlying data structures*
- *An open, standards-based approach that leverages existing information assets and avoids the need to “rip and replace” systems to realize gains*
- *A flexible and extensible integration approach to address dynamically changing environments*

- *Real-time access to and integration of a wide range of structured and unstructured sources including databases, files, packaged applications, content repositories and collaboration systems*

Business initiatives driving information integration

Information availability is at the heart of the most critical business objectives facing companies today. Companies are investing heavily in initiatives focused on managing information complexity and providing better information across the enterprise. Six of these initiatives are most frequently listed as top priorities. Within each of these initiatives, information integration is a foundational component.

**Master data management:
single view of the enterprise**

Every business has elements of core reference data that are used in multiple types of applications and business processes.

They represent the business' understanding of its most important business information, including customers, suppliers, products, inventory, bills of materials, or parts. This type of data, known as master data, comprises any company's most important information assets, although its importance is not always fully understood. For example, customer reference data is vital to understanding customer buying patterns, identifying up-sell opportunities, providing a higher level of customer service, tailoring and

As a result of master data integration at Taikang Life Insurance, it now takes one person—rather than a staff of more than 10 employees—to compile real-time, consolidated business reports.

optimizing marketing activities and predicting and addressing business

triggers such as renewals, recalls, and upgrades.

Master data management (MDM) focuses on leveraging a single

logical representation of this data that can be shared across multiple applications and processes. This is achieved through master data integration (MDI). Rather than creating separate copies of master data with no way to tie them together, MDI establishes linkages between separate instances of this data, allowing businesses to maintain a consistent and complete view of it at all times.

Comprehensive information integration makes it possible for MDM to deliver authoritative master data across any industry, function and scope of business data.

The State of New Jersey saved an estimated \$500,000 in IT development costs and expects to save as much as \$8 million dollars overall by automating the information integration of data from four disparate systems into agency-specific data marts.

**Business intelligence:
driving business decisions**

The discipline of business intelligence and data warehousing is being used by organizations to build analytical applications that answer key strategic and operational business questions. Unfortunately, the lack of data transparency and data quality across the sources that feed these analytical applications inhibits the success of every initiative. Data used by analytical systems must have several characteristics in order to provide value above and beyond anything that can be found in a single operational system. Data stored in data warehouses or data marts forms the basis of the analytical application, and needs to represent a superset of data available across multiple applications. The source and definition of the data must be easily understood by the business user of

the analytical application.

To be useful for strategic decision making, data must be of the highest quality and validated for adherence to business rules and data standards. Internal data can be enriched by combining it with data from external sources to provide even greater value to end users. For example, enrichment is typically associated with customer data, where external data services can provide verification and enhancement of individual and company data, providing valuable context for marketing purposes.

**Business transformation:
becoming an on demand business**

The simple fact that businesses need to respond faster to the information demands placed on them is fueling a reconsideration of what is required to make this work. In many cases, this means the removal of any inhibitors to the timely flow of information. Once information is available in a timely, accurate and reliable manner, it can enrich organizations' operational processes and decisions.

For example, making a detailed historical market trend analysis available to an automated demand planning process can produce better decisions and lower costs. This process enables "closed loop"

interactions between systems and people to report on as well as automate and continuously fine tune operational processes. The result is a reduction in the latency of information as each business process and decision benefits from the most accurate and up-to-date view of data.

An on demand business competes by using up-to-date information to accelerate the management and execution of its critical business processes, enabling businesses to respond to opportunities faster than the competitors.

**Infrastructure rationalization:
saving money through simplification**

Driven by the need to increase shareholder value, companies seeking to reduce their business complexity are looking at their IT infrastructure in order to cut costs. IT departments are discovering a proliferation and fragmentation of separate regional, departmental or business unit systems, making their enterprise expensive to maintain and inflexible to change.

In order to achieve cost reductions, many companies are simplifying their information infrastructures using two distinct solutions or a

Zhejiang Transportation Bureau dramatically increased customer satisfaction through the integration of over 100 ticketing agencies.

combination thereof. Using the first solution, companies are undertaking instance or application consolidation- reducing the number of separate copies of a single enterprise application being utilized by an organization. The second solution involves the federation of disparate sources across and beyond the enterprise – making it appear to the end user as if there were a single source.

Companies move toward infrastructure rationalization because they may have multiple legacy systems as well as many different enterprise systems deployed by country, business unit, or department. Aside from being very costly to maintain, these disparate application instances leave companies with no easy way to harness the enormous amounts of information they contain.

The companies that rationalize their information infrastructures experience process simplification and standardization, improved resource utilization from process efficiencies and shared services, and better management of assets.

Risk and compliance: reduce exposure and consequences

The information required to both manage and regulate businesses continues to grow at an unprecedented rate. The management of this information has increasingly come under the scrutiny of industry regulators. All organizations must comply with literally thousands of regulations that involve the management of information. IT managers must comply with a wide variety of government standards and regulations, many recently enacted, that specify how to handle information. Some more recent regulations have a dramatic effect

Mazda improved access response times by 93% and implemented its system in under 2 months without infrastructure changes.

on a whole industry and the way businesses operate.

Examples of these types of regulations include:

- *Public corporations: Sarbanes-Oxley*
- *Pharmaceutical and life sciences: 21 CFR Part 11 FDA regulation*
- *Healthcare: HIPAA*
- *Financial services: SEC 17a-3, 17a-4 and Basel II*

Regulations that govern the creation, flow and retention of data pose a great challenge for the CIO and IT organizations overall in their role as the stewards of corporate information. Compliance is particularly challenging because the information that needs to be managed cuts across the usual operational boundaries.

This information requires special treatment as it is drawn

Banque Populaire solved Basel II requirements across 23 different retail systems from over 2500 branch offices.

from applications, documents and analytical data stores. Compliance

with these regulations is forcing executives to take a more strategic approach to managing their information.

Corporate portals: on demand access to the enterprise

As companies continue to drive for higher revenues and greater operational efficiency, IT leaders frequently seek better ways to access, integrate and act upon critical business information. Corporate portals have become the standard way of delivering information to business users. The primary mission of a corporate portal is to allow users to personalize how and when they receive information as well as what information they receive.

This growing use of portals is forcing many users to confront a decades-old technology challenge: how to present business users with

a coherent and integrated view of critical business information that is dispersed throughout their enterprise.

This challenge is magnified due to the very short development cycle in a portal environment.

The simplest option – using different areas of a Web

page to display content from different sources – isn't always sufficient because it can place the burden of correlating and aggregating this information on the end user. Programmatic interfaces to the portal can help personalize content through hand coding, but hand-coded solutions are costly to implement and often not flexible enough to meet the changing needs of a dynamic organization. Increasingly companies are adopting information integration strategies

Wachovia achieved a 64% return on investment in first 2 years of deployment of their content integration solution which resulted in a \$2.3M savings.

that leverage integration solutions to provide federated views of both

structured and unstructured information.

Conclusion

In summary, businesses that effectively use information

consistently outperform competitors, create innovation, and build shareholder value. IBM provides an integration information platform to help you deliver information that is authoritative, consistent, timely, complete and accessible. The IBM WebSphere Information Integration platform integrates and transforms any data and content to deliver information you can trust, providing breakthrough productivity, flexibility and performance, so you and your customers and partners have the right information for your critical business initiatives.

For more information on the IBM WebSphere Information Integration platform and its portfolio of products, please visit <http://ibm.ascential.com>.

The WebSphere Information Integration Portfolio

Connect

- *IBM WebSphere Information Integration Portfolio*
- *IBM WebSphere Information Integrator Replication Editions*
- *IBM WebSphere Information Integrator Event Publisher Editions*

Understand

- *IBM WebSphere ProfileStage™*

Cleanse

- *IBM WebSphere QualityStage™*

Transform

- *IBM WebSphere DataStage®*
- *IBM WebSphere DataStage TX*

Federate

- *IBM WebSphere Information Integrator Standard Edition*
- *IBM WebSphere Information Integrator Classic Federation for z/OS®*
- *IBM WebSphere Information Integrator Content Edition*



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¹ IBM On Demand Business Marketing-
Attributes and Capabilities Study 2005

² IBM Global CFO Survey 2004

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