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Critical Business Intelligence Platform for the Agile Enterprise

White Paper

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Introduction

To succeed in a competitive marketplace, an agile enterprise requires critical business intelligence (BI) to quickly anticipate, adapt, and react to changing business conditions. Unfortunately, many organizations striving to improve their agility soon discover that their legacy BI systems are not up to the challenge of the agile enterprise. As a result, their BI systems provide incomplete, unreliable, and outdated information to a limited group of analysts.

Where legacy BI systems fail to meet the broad and deep BI demands of the agile enterprise, a new evolution of critical BI systems provides superior flexibility, accuracy, availability, and timeliness. This new evolution of BI systems empowers BI stakeholders throughout the organization and enables them to act and respond more quickly to the immediate needs of the business.

Critical BI systems provide sustainable success in a dynamic environment by empowering information workers at all levels of the enterprise and enabling them to use actionable, real-time information in their day-to-day tasks. Critical BI systems also empower application developers and IT professionals, enabling them to continuously and effectively create and manage BI solutions for the global marketplace. From a business perspective, critical BI not only translates into more cost-effective solutions, but also results in improved productivity and agility across the enterprise.

When agile enterprises design critical BI systems, they use the Microsoft® SQL Server™ 2005 BI platform as the standard. Recognized in the marketplace for providing cost-effective BI solutions for the enterprise, the SQL Server 2005 BI platform delivers industry-leading BI technologies that uniquely satisfy the broad and deep demands of information workers, application developers, and IT professionals.

Information Workers

The Microsoft® SQL Server™ 2005 BI platform provides information workers at all levels of the organization with a single version of the data truth while also delivering data in a flexible, accessible format.

Single Version of the Truth

From managers to analysts to front-line staff, a critical BI platform must be flexible enough to provide each information worker with the necessary information to anticipate and respond to the needs of the business. The BI platform must also be robust enough to ensure that the information is consistent and accurate throughout the enterprise. Consider the following examples of information workers who each use similar data in different ways:

A marketing manager working to improve the company's bottom line investigates the return on investment (ROI) of recent marketing campaigns to uncover opportunities for streamlining costs and improving overall marketing effectiveness.

Heeding the manager's recommendations, a marketing analyst examines recent customer buying patterns to identify those specific customers who will likely take advantage of a newly launched product.

With the new targeted marketing campaign in effect, a front-line sales representative recommends the new product to a targeted customer after perusing the customer's online profile and purchasing history.

Even though each information worker requires a different data view, the behind-the-scenes data must still be consistent and complementary to ensure that they are all looking at the same version of the truth. For example, the customer profile that the sales representative examines must to be in sync with the list of customers that the marketing analyst has identified for the campaign. In addition, the buying patterns that the analyst views to produce the list of targeted customers have to be consistent with the data that the manager is examining to determine the overall ROI of their marketing campaigns.

Without a single version of the truth, an organization will be mired in data conflict and will be forever arguing about which numbers are correct. This conflict not only creates general confusion, but it also slows down operational efficiency and may even result in legal ramifications if data quality standards violate compliance laws. From a business perspective, synching the data across the enterprise may seem basic. However, many organizations really struggle with establishing a single version of the data truth and thus face large obstacles as a result of trying to bring together disjointed data systems and apply inconsistent business rules.

To help organizations remove these data obstacles, the SQL Server 2005 BI platform empowers information workers across the enterprise, from finance, sales, marketing, and executive management, with dynamic, consistent data views that support a single version of the data truth.

Accessible Information

Flexible data views are only valuable if they are presented in an easy-to-use format that is customized for each information worker. Consider the following examples of information workers with distinct data access requirements:

A factory manager reviewing assembly line performance requires a dashboard that displays key performance indicators (KPIs) and also uses easy-to-understand graphics, such as stoplights and gauges that quickly identify problem areas.

An analyst spending a large part of the day crunching numbers to investigate the cause of declining assembly line efficiency requires powerful report authoring tools to interact with the data quickly and efficiently without calling IT each time a new report is needed.

Instead of using a specialized BI tool, a front-line support representative who wants to efficiently manage her time in responding to customer concerns about late shipments prefers to have customer data integrated into the applications that she uses on a daily basis.

From dashboards to self-service reporting to integrated reporting, the SQL Server 2005 BI platform empowers information workers and enables them to increase organizational agility by delivering relevant data in the format that provides them with the most value.

Application Developers

The SQL Server 2005 BI platform provides application developers with the ability to effectively integrate data from heterogeneous data sources, assemble that data into a meaningful analytic model, and then deliver the data in a variety of reporting scenarios.

Integration

When application developers build critical data integration solutions, they are challenged with assimilating large volumes of heterogeneous data in a short amount of time. To enable application developers to do their jobs effectively, the SQL Server 2005 BI platform provides the following capabilities:

Heterogeneous Data Access. Application developers can quickly access data from enterprise data systems, including mainframes, traditional databases, and external data providers.

Smart Data Cleansing. Data cleansing can be one of the most difficult and time-consuming tasks in data integration. Application developers require a variety of tools to cleanse and assemble the data for the business users. In addition, as part of data cleansing, application developers must ensure that any transformations are performed in an auditable manner to validate data quality.

Fast Data Processing. Across the enterprise, data volumes continue to increase as organizations accumulate large amounts of data about their customers, suppliers, employees, and products. To handle these volumes, application developers require a data integration technology that can scale in volume complexity.

The SQL Server 2005 BI platform provides application developers with a full-featured data integration engine and development environment to build high performance data integration solutions. With access to a variety of data providers and smart data cleansing routines, the Microsoft BI platform enables the application developer to quickly solve simple and complex data integration problems for data sets of all sizes.

Analysis

When application developers create critical data analysis solutions, they are responsible for creating the backend analysis architecture that provides information workers with a single version of the truth. To enable application developers to do their jobs effectively, the SQL Server 2005 BI platform provides the following capabilities:

Centralized Business Logic. To provide consistent data views to information workers, the SQL Server 2005 BI platform enables application developers to create a centralized data model that translates raw data into business terms, stores calculations, security rules, and any other business logic relevant to the organization. Within the model itself, data can be flexibly organized in a variety of ways to support the needs of sales, finance, marketing, and other areas of the enterprise. By using a common model, one information worker can analyze customer data by geography, while another information worker can analyze customer data by demographics with confidence that their results can be reproduced consistently.

Flexible Data Structures. Many application developers struggle with creating one analysis solution that efficiently supports both highly summarized data as well as detailed data views. With the SQL Server 2005 BI platform, application developers can easily combine aggregated and detailed data in the central data model. This integrated model will not only satisfy the information worker who wants to slice and dice sales data by geography,

product, and time, but it will also provide the ability to transition from high-level analysis to a detailed analysis. For example, this could include qualifying a list of the 10,000 customers for a new marketing program.

Advanced Analytics. To solve common business problems, application developers require a powerful modeling language that can efficiently handle the complexities of the business to produce meaningful financial, time series, variance, and statistical calculations. In addition, application developers may also need the ability to incorporate advanced data mining logic into their analysis architecture to locate meaningful patterns in the data that users cannot find through traditional reports.

The SQL Server 2005 BI platform empowers application developers with a robust analysis engine to help them provide the central business layer to organize data. Within this central business layer, the application developer can create flexible user perspectives, rich calculations, and advanced data mining solutions.

Reporting

When application developers create critical data analysis solutions, they are responsible for creating the backend analysis architecture that provides information workers with a single version of the truth. To enable application developers to do their jobs effectively, the SQL Server 2005 BI platform provides the following capabilities:

When application developers create critical reporting solutions, they are responsible for customizing report delivery based on the specific needs of each information worker. To enable application developers to do their jobs effectively, the SQL Server 2005 BI platform provides the following capabilities:

Rich Report Design. Application developers require a rich report authoring environment to create reports against multiple heterogeneous data sources, to organize data and calculations into tables, charts, and matrices, and to add report interactivity as necessary.

Flexible Information Delivery. Using the SQL Server 2005 BI platform, application developers can provide a wide range of reporting experiences to the enterprise. Information workers can slice and dice data in Microsoft® Excel® spreadsheets, interact with parameterized reports online or through e-mail, and even view reports in the native business applications they prefer. In addition, by fully integrating with the Microsoft® .NET Framework, the SQL Server 2005 BI platform provides the capabilities to deliver information to any type of device, from desktops to laptops to handheld devices.

Self Service Reporting. Self-service reporting provides information workers with the ability to create reports on their own without understanding the underlying database structures. Although self-service reporting provides a great amount of agility to information workers, application developers are responsible for assembling the data into a user-friendly reporting layer against which information workers can build reports.

The SQL Server 2005 BI platform empowers application developers with a flexible reporting architecture that provides self-service reporting as well as standard report delivery by using the format, device, and delivery schedule that is most appropriate for each business information worker.

IT Professionals

A critical BI platform empowers IT Professionals with the ability to quickly deploy integration, analysis, and reporting solutions, and to effectively manage these solutions over time with the utmost availability, reliability, and security.

Deployment

After application developers complete their data integration, analysis, and reporting solutions, IT Professionals are responsible for preparing the solutions for information worker access. IT Professionals must not only ensure that all necessary components are successfully migrated to the production environment, but they must also ensure that all required software is installed on information worker computers. The more efficient the deployment process, the quicker the turnaround time for new BI solutions and the easier to roll out periodic solution upgrades.

Through strong integration with Microsoft® Visual Studio®, the SQL Server 2005 BI platform empowers IT Professionals with a centralized deployment architecture to effectively release data integration, analysis, and reporting solutions by using automated and auditable procedures. In addition, to reduce the burden of installing reporting software on information worker computers across the enterprise, the SQL Server 2005 BI platform provides zero footprint reporting solutions that only require browser software on the client devices of choice.

Manageability

After deployment is complete, the IT Professional is responsible for the ongoing management of BI solutions. To enable IT Professionals to do their jobs effectively, the SQL Server 2005 BI platform provides the following capabilities:

Scalability. Microsoft provides a robust BI platform to provide integration, analysis, and reporting solutions that can scale in volume, complexity, and usage.

Availability and Reliability. A critical BI system must provide continuous BI to the global enterprise. With increasing demands for real-time BI solutions, the batch windows for processing data updates are becoming increasingly smaller at the same time that data volumes are increasing. Because critical BI is deeply integrated into the operations of the business, a BI system that is unavailable either because of system failure or because of standard offline data refreshing can seriously reduce the agility of the enterprise.

Security. IT Professionals are also required to administer the security of BI solutions. BI solutions often involve security at the data and report levels to ensure that each information worker only sees the subset of data for which he or she has been approved. Maintaining security is also a critical objective for IT Professionals who must adhere to data compliance standards as well as uphold the data privacy of the enterprise.

Critical BI for the Enterprise

The SQL Server 2005 BI platform sets the industry standard in providing critical BI solutions in the following ways:

Uniquely empowers BI stakeholders: information workers, application developers, and IT Professionals.

Provides a comprehensive, robust, and scalable BI platform to continuously create and manage data integration, analysis, and reporting solutions.

Maximizes ROI by providing the lowest total cost of ownership when compared with competitive platforms.

With SQL Server 2005 BI solutions, information workers at all levels of the organization can effectively anticipate, adapt, and respond to the changing needs of the agile enterprise.

Conclusion

For more information:

http://www.microsoft.com/sql/

http://www.microsoft.com/bi

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Elizabeth Vitt has ten years of business development, project management, consulting, and training experience in business intelligence. Her industry experience includes BI implementations in retail, manufacturing, and financial services. She has specialized experience as an educator in data warehousing, ETL, and OLAP design and implementation. Ms. Vitt is an author of Microsoft Official Curricula courses for Microsoft Business Intelligence product offerings as well as the MSPress, *Business Intelligence: Making Better Decisions Faster*. In anticipation of the launch of SQL Server 2005, Ms. Vitt has successfully implemented SQL Server 2005 for early adopter customers.

Hitachi Consulting

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Hitachi Consulting is a Microsoft Certified Gold Partner for Business Intelligence and an exclusive provider of curriculum and instructors for the Microsoft SQL Server 2005 Business Intelligence Ascend training program. Hitachi Consulting is also an experienced systems integrator and has successful SQL Server 2005 BI implementations at companies participating in Microsoft's Technology Adoption Program (TAP).

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