Introduction to Business Objects Suite of Technologies

Summary

As SAP's acquisition of Business Objects comes to a close and you begin looking at the vast array of products and bundles Business Objects has to offer you many find yourself wondering: what functionality do all the products and tools provide? which ones should I choose? where do I start?

Kuhan Milroy, Director of Developer Ecosystem at Business Objects will help answer some of these questions by providing an introduction into the Business Objects suite of technologies.

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Created on: 21 January 2007

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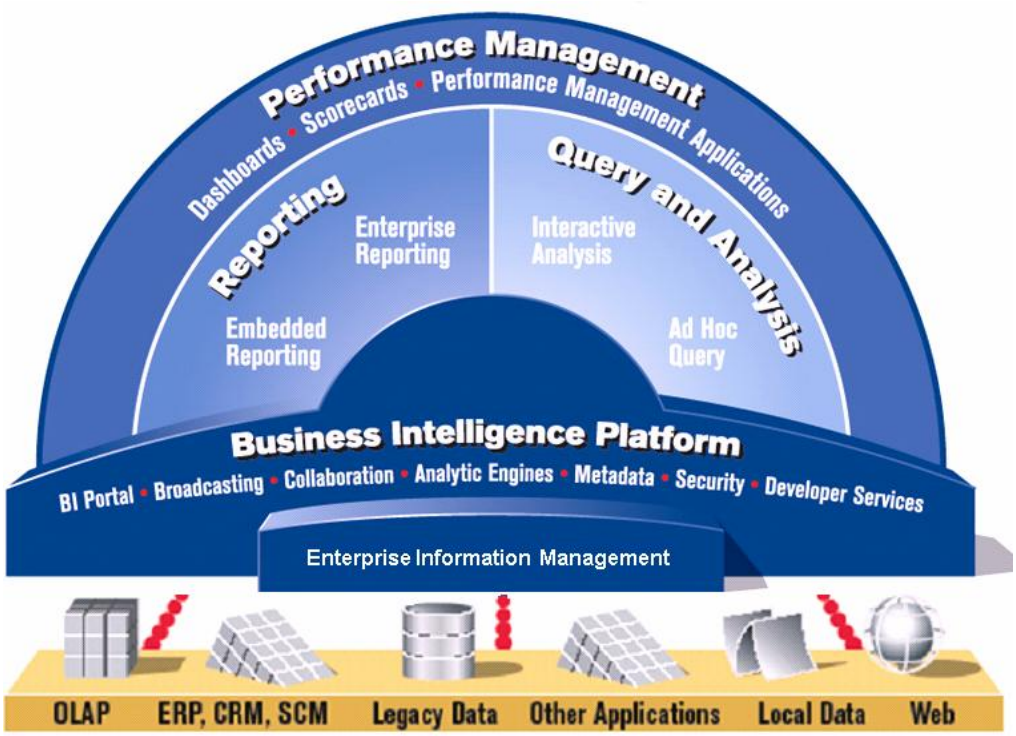
Introduction

Since the days of childhood I have loved Lego, the beauty being that once I understood how all the parts work, I could assemble them into a car, plane, transformer or whatever I so desired. I have carried this philosophy of understanding the parts on in life and found it particularly beneficial when working to understand enterprise software. If I can understand all the parts that make up the system, the tools, servers and services then I can get an understanding of not only what a product offers but also how. I would like to apply this tact to explaining the Business Objects products. I do not intend to answer all the questions about the bundles and the products but the hope is to remove the complexities that bundles and products contain by describing the aggregate technology that make up the Business Objects offerings. But before that, let's step back to the broader Business Objects suite view.

Business Objects delivers Business Intelligence(BI) and Business Optimization Applications(BOA) software solutions. In a simple sense the software works with an existing systems be it SAP, MSFT, IBM, Oracle or others to consume data from various data sources, analyze and present it in a way that enables people, businesses and information to connect to enable making better business decisions. Your company may have all this useful information hidden in your data and BI+BOA will help release it. The result, you can use the information to improve your business, where you will get new useful information to improve your business, where…and so on.

To describe the collection of technology parts I will focus on the premium enterprise product suite as it contains the largest set of Business Objects technologies and solutions. Once you understand the complete suite then all other bundles and products will be easier to understand as they are composed of pieces of the suite.

Below, you'll see a diagram of the Business Objects suite of technologies. This diagram may be a little out of date (plus I hacked it a little and the marketing police may come after me) but what I want to highlight here are the parts and I believe this diagram does a good job at it today. In general there are 5 big parts, Enterprise Information Management(EIM), the Business Intelligence Platform(BIP), Content Technologies (Reporting, Query and Analysis, +more), Enterprise Performance Management(EPM) and Governance, Risk and Compliance(GRC).



Though the GRC component is not depicted in the above diagram I will mention it later.

Following the flow of data from the source to presentation, let's start our journey with EIM.

Enterprise Information Management (EIM)

This is the data handling tier. The EIM suite of technologies provides tools and services that allow building a consistent, trusted view of data from multiple disparate data sources. Part of the process on building this view can be integrating data, cleansing data, managing metadata about data, analysis of text (unstructured data) and much more. The resultant data can be stored in a data warehouse or the processes can compliment a data warehouse by allowing business rules to dynamically cleanse and integrate data while ensuring the data is compliant to standards. The data can then be consumed for analysis & presentation or migrated to other systems. A part of the process could be validating company names against the known list of US registered companies or validating postal codes against the US postal services list. Not only can data be cleansed and standardized, third-party information can be appended and then combined by relationships matching with the resultant records being consolidated to build corporate repositories for end user consumption.

Note: not all data is required to travel through EIM services. For example Crystal Reports can consume data directly from an Excel file, ODBC data sources, web services and pretty much anything else. EIM offers data services for environments where the business requirements & technical complexities make it too difficult to work with one off scenarios.

More details about EIM here http://www.businessobjects.com/products/eim/

Business Intelligence Platform (BIP)

The Business Intelligence Platform is the backbone for the Business Objects enterprise system. The core responsibility is to manage content and access in an enterprise environment. To that end the BIP comes with all the goodies that are required by enterprise software environments including:

- scaling on one machine
- clustering across other machines
- document management system
- archiving
- monitoring
- auditing
- portal integration (.NET, Java, NetWeaver, + many more)
- publishing/broadcasting
- scheduling
- administration
- security for authentication and authorization

Internally the BIP provides a bus that technologies can 'plug into'. Once a technology is plugged into the bus it can begin to benefit from all the services the BIP has to offer. For example, adding Crystal Reports to the bus, extends the basic reporting engine's functionality to have reports managed in the enterprise repository where security can be applied to report objects and actions, allows users to view reports through a portal (Infoview) and automatically allow scaling across multiple machines when the load gets to high for the report engine.

Developer Alert!

The BIP provides APIs for all the above services and all technologies plugged into the bus. A developer could integrate the BIP into their enterprise portal, allowing LDAP, Windows or other authentication then viewing a document from a viewer included in the JSP file. Check out the developer documentation library on the Diamond community site to see all the .NET, Java and Web Services calls available for the enterprise platform. http://diamond.businessobjects.com/developer/library

As an aside, you'll find the BIP in products like Crystal Reports Server, Business Objects Edge and Business Objects Enterprise products

Content Technologies

You won't see Content Technologies referred to in any Business Objects literature. I am using the term to define a group of data tools and services that allow users to work & massage data for presentation. Though the BIP can host many types of content including PDF, Excel and Word documents, the main Business Objects technologies hosted are listed below:

- Crystal Reports – powerful, robust, easy to use reporting that allows end-user construction and viewing of reports. Though designing reports can be trivial to very difficult the end report can be shared with any business user. Reports can be as simple as telephone statements to complex as highly interactive, parameter driven documents that allow drill down into different views of the data.
- Web Intelligence – ad-hoc tool to allow end-users the power to easily build queries on data and choose how to graphically display data. Users can dynamically build tables, charts and other views without requiring in-depth knowledge of the underlying table structures. The simplicity of Web Intelligence is in part due to the Semantic Layer which simplifies the view of data intro a format business users can understand.
- Semantic Layer – A tool and service that can build a data abstraction layer on top of your database. Provides a simplified view of the data that a business user can understand for Web Intelligence and other tools. A main advantage of the Semantic Layer is that the DBA's approval is not required to build one, though DBAs are typically the ones who start to create them so users will stay out of their database. ☺
- Dashboard builder – Provides ability to easily pick and choose favourite report, ad-hoc documents parts combined with visual widgets to be displayed together in a collected views.
- Voyager – OLAP analysis tool. More advanced analytical analysis beyond ad-hoc and reporting. Where ad-hoc and reporting are tools help answer a question, Voyager is a tool to answer questions and to help discover trends and anomalies within the data. Features include data mining, navigation of multidimensional data sets and analysis of data leveraging statistical and other functions.
- Xcelsius – CEO friendly, data visualization tool. Consume data from Excel, Crystal Reports or web services to build a visual dashboard then deliver the results as flash content to be embedded in a web page or even a Microsoft PowerPoint while still retaining flash interactivity.
- Polestar – Another CEO friendly visualization tool. Leveraging the Semantic Layer, Polestar interprets the data to determine common dimensions to display. End-users can easily navigate data, compare different dimensions, drill down and chart. You do not need to be a BI tools expert to use Polestar.
- Live Office – A connectivity tool that allows a live link from the Content Technologies hosted in the BIP to Microsoft Office documents. Drag and drop data or a chart from Crystal Reports into Excel and then maintain a live data connection to the report file.
- Mobile – Take existing content hosted in the BIP and view it remotely with your mobile device. Including text, charts and drill down.

Enterprise Performance Management (EPM)

Enterprise Performance Management is an addition to the BIP. Though depicted in the picture above as on top of the BIP, the platform is not required for each EPM solution. The EPM set of technologies offer higher end solutions to solve a set of corporate problems. Aimed at the CEO, EPM provides:

- faster performance cycles—to increase the speed of decision making within the organization
- greater insight and understanding—to make better business decisions
- a trusted foundation for performance management—to believe the numbers in front of you
- a link from strategy to execution— to close the execution gap from operations to execution
- the ability to maximize profitability and achieve operational excellence

Leveraging an integrated data model to ensure trustworthiness of the data, the solutions bring together many of the BI technologies previously mentioned with specific content and structure catered to improving enterprise performance. If EIM, BIP, Content Technologies are the tools then EPM is the application. Solutions bring together data via EIM then integrate scorecards, reporting, analytics and other means to provide a packaged solution.

This is perhaps one of the most powerful pieces of the suite and I honestly cannot do it justice in a light introductory article. I recommend getting more details on the benefits of these solutions.

http://www.businessobjects.com/solutions/epm/

Governance, Risk and Compliance (GRC)

One item not included in the diagram is the Governance, Risk and Compliance suite of technologies. The majority of this functionality is being added to the new Business Objects suite of functionality from the existing suite of SAP products. Thus I would recommend reviewing existing material on the SAP, SDN or BPX sites for this technology and how to leverage it.

http://www.businessobjects.com/products/grc/

In this article I give an introduction to the majority of Business Objects technologies. There is a lot of technologies and detail to add but my hopes are that as you begin your self-discovery path of Business Objects bundles and products that it will be easier to understand the capabilities of the enterprise, mid-market, developers and OEMs offerings.

For more details I encourage you browse the Business Objects community site on SDN/BPX and the Business Objects technical community, Diamond. http://diamond.businessobjects.com

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