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## **ROI EVALUATION REPORT MICROSOFT BIZTALK SERVER 2004 UPGRADE**

### **THE BOTTOM LINE**

**Interoperability, tool set breadth, and the advantages related to migrating toward Microsoft and .NET for integration solutions allows users of Microsoft BizTalk Server 2004 to achieve improved developer productivity, reduced cost of integration projects, and improvements to business processes and productivity. The 2004 version of BizTalk includes enhancements in the areas of adapters, developer productivity, and business efficiency tools such as business activity management (BAM).**

Microsoft BizTalk Server is a platform for enterprise application integration and business process management (BPM). The product provides visual tools for designing and developing integrations between applications and data sources, and creating and maintaining the business processes that are impacted by the application. A key advantage of BizTalk Server is its ability to separate these two functions, enabling business users to focus on rules and process definition, while developers can focus on the technical details of connecting the data sources that drive the application.

Key functionality areas of the product include the development environment, orchestration, rules engine, and business activity monitoring (BAM).

### **DEVELOPMENT ENVIRONMENT**

The BizTalk Server development environment provides graphical drag-and-drop modeling and mapping tools that are built on Microsoft Visual Studio.NET. Leveraging Visual Studio.NET allows developers to build applications using the same tools with which they are already familiar. BizTalk Server provides a central point for integration design and implementation, enabling developers to design and map processes within BizTalk Server and link applications to the server in a loosely-coupled fashion. This approach enables changes in the integrated applications and data sources without affecting other applications — only the modified component's connection to BizTalk Server is impacted. The key tools in BizTalk Server include the following:

- BizTalk Schema Editor. Developers can create, edit, and manage XML document specifications and schemas using a graphical interface. It also includes document specification templates for standard documents such as invoices, shipping notices, and purchase orders.
- BizTalk Orchestration Designer. Developers can pull from a library of pre-defined process elements to assemble complex business processes. BizTalk Orchestration Designer provides a graphical canvas for visually-defining

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complex, transactional business processes. Business process definitions can be first designed in Microsoft Visio and then imported into Microsoft Visual Studio.

- BizTalk Mapper supports transformation of documents from one format to another as needed. Developers can model and manage data transformations using functional objects and a graphical user interface. Developers can pull from a library of pre-defined transformation functions to assemble complex transformations.
- BizTalk Explorer enables a user to view and manage the configuration details of an integration project. Included in these management tasks are viewing databases and assemblies, deploying and changing business processes, creating and editing ports, roles, and parties, and enlisting parties into roles.

BizTalk Server also includes server administration tools that enable administrators to efficiently and effectively manage and control all installations of BizTalk Server. This includes managing the security configuration, such as managing accounts, certificates, and passwords. Key administrative features include:

- **Orchestration.** Orchestration is the term, and the mechanism, used for automating business processes with BizTalk Server. In addition to implementing a business process through a programming language, BizTalk Server provides business users with a graphical tool set to define and implement business processes and the business rules contained within the processes. Business users with an in-depth understanding of the processes can design the different steps in the process with BizTalk Orchestration Designer. Once the process has been designed, developers can use BizTalk Mapper and Editor to implement the supporting steps necessary to deliver and exchange data in the applications impacted by the process.
- **Rules Engine.** Business users can also create and modify business rules using the Business Rules Composer tool. Once created, the rules are stored in a business rules engine that serves as a central repository. Orchestrations have a programmatic link to the rules engine that enable rules to be invoked as part of an application. One of the benefits of maintaining business rules, and business processes, separately from application code is that changes to business rules can be implemented more rapidly. In addition it makes it easier to share business rules and processes among multiple applications.
- **Business Activity Monitoring.** BizTalk Server contains a BAM framework that enables business users to view and track transactional information. For example, a user may want to track the activity of product shipments to get real-time data to monitor product sales trends. Using the BAM Activity Wizard feature in BizTalk, the user can indicate which process to monitor, which data to collect, and then deliver the information to a Microsoft Excel pivot table.
- **Adapter Framework.** BizTalk Server's adapter framework provides a common means of creating and managing both pre-built and custom adapters that enable communication between applications, and application components. There are more than 200 pre-built adapters available through Microsoft and its partners, including adapters to applications such as SAP, Siebel, Oracle Financials and PeopleSoft, and technology adapters for SOAP, HTTP, SQL, EDI, and SMTP, among others.

### The need for integration

For most companies, there are a number of business reasons to invest in integration:

- Enterprise rationalization. Integrating data from multiple applications and solutions improves visibility into operations and can accelerate decision making.
- Regulatory compliance. Integrating and tracking the circulation and origin of data has become more important as companies have increased concerns about compliance with regulations such as Sarbanes-Oxley and Basel II.
- Merger and acquisition activity. For many companies, expansion by acquisition is a vital growth strategy — but it requires the integration of acquired companies as well as their existing IT systems and data sources. Integration technology can help accelerate the data integration process.
- Strategic partnering. Companies that can integrate their information systems with the systems of partners can form more cost-effective partnerships and reduce the cost of sharing operational information with partners and customers.

### Why Microsoft BizTalk Server 2004?

Users of Microsoft BizTalk Server 2004 have indicated several differentiating factors that caused them to select BizTalk rather than other integration strategies. Differentiators include superior interoperability, migration towards a Microsoft-based integration, toolset breadth, and a fit between BizTalk and the skill set of the IT staff.

### Interoperability in Microsoft BizTalk Server 2004

Interoperability with other programs — including non-Microsoft solutions — is facilitated in Microsoft BizTalk Server 2004 by a variety of adapters that allow for conversion of data among solutions. Adapters are available for Base EDI, SAP, SMTP, SOAP, and a variety of Web services.

- One user stated: *"We chose BizTalk because of ease of integration into the overall Microsoft technologies. We are trying to standardize Web-based application delivery on SharePoint and .NET-based applications. BizTalk gives us more ability to integrate."*
- One user stated that Microsoft: *"Plays nice with both Microsoft and non-Microsoft applications"* and was compatible with previously installed SeeBeyond tools. This user also indicated *"BizTalk is interoperable with a non-Microsoft HL7 tool that we expect will be added to our operating environment."*
- Another user said that BizTalk's superior interoperability was a deciding factor, especially in light of their plans to bring in-house its currently outsourced application of Datagate.

St. Vincent Hospital used BizTalk's interoperability to substantially improve its patient service. In the project, Microsoft BizTalk Server 2004 integrated messaging among applications of the following types: HL7, SQL, XML, InfoPath, and SharePoint. St. Vincent indicated that this could not have been accomplished with SeeBeyond's DataGate. This project, in which St. Vincent adopted Microsoft BizTalk Server 2004 for EAI, generated a 62 percent ROI and had a payback of 1.66 years.

Most users indicated that there were benefits to standardizing its integration practices based on Microsoft products, or at least migrating towards this:

- One user said: *"We are trying to standardize Web-based application delivery on SharePoint and .NET-based applications. BizTalk gives us better ability to integrate."*
- Another user indicated: *"BizTalk has a strategic fit with Microsoft operations manager, applications, and integration solutions. Integration runs all the way through the integration layers and into the specific end user applications."*
- One user indicated: *"The desire to go with Microsoft in order to ensure maintenance of its Microsoft warrantee. Microsoft patches are not necessarily interoperable with third-party integration tools. In the event of such incompatibility, Microsoft's warrantee of the integration environment would be jeopardized."*

While meeting government health care integration standards, Milton Keynes General Hospital accelerated its migration towards Microsoft by adopting Microsoft BizTalk Server 2004 as its integration platform. In the first of a sequence of enterprise rationalization projects, the deployment of Microsoft BizTalk Server 2004 generated an ROI of 61 percent and had a payback of 1.65 years.

#### Functionality

Users indicated they could accomplish more with Microsoft BizTalk Server 2004 because of the breadth of its functionalities such as adapters, accelerators, business activity monitoring, and data transformation services:

- One user indicated: *"With BizTalk, we can deliver integration functionalities, but we can also make custom build applications."*
- St Vincent said that: *"BizTalk provides us the application integration capabilities at EAI level that other products don't. For instance, Datagate moves data from point to point, whereas BizTalk collects data. As a result, we are positioning BizTalk as our EAI flavor of choice."*

#### IT skill fit

A common reason for adopting Microsoft BizTalk Server 2004 was that adoption of a rival solution would have required expansion of the skill set of their IT department:

- One user indicated: *"We have a staff of 15, and they already know how to use Microsoft, not SeeBeyond's Datagate."*
- Another user stated: *"There was a Strategic fit of skills, SeeBeyond is Java-based, and BizTalk is .NET-based. We have .NET skills, but not Java."*

### **THE BENEFITS FROM UPGRADING TO BIZTALK SERVER 2004**

Nucleus Research found that users of Microsoft BizTalk Server 2004 achieved both technological and business benefits. Key IT-related benefits included reduced integration project costs, increased developer productivity, and reduced IT training and maintenance costs. Process management improvements resulted in returns including increased staff productivity and reduced operational costs.

### Reduced integration project costs

Because of BizTalk's interoperability in general and the Adapter Framework in particular, users were able to avoid costs related to custom coding, consulting, and software purchases. This is driven primarily by the robustness of BizTalk in the area of adapters, a key tool category in integration products. Biztalk has eight pre-built adapters, and many more are available through Microsoft and its partners. For the 2004 version of BizTalk, Microsoft has added an Adapter Framework in which custom adapters can be built if none of the existing adapters are appropriate. Additionally, Microsoft has added a base EDI adapter that provides comprehensive EDI messaging functionality to complement the existing XML messaging capabilities of BizTalk Server.

St Vincent, in completing an integration project for its patient admission system, avoided custom coding of several hundred interfaces, and saved approximately \$250K by deploying Microsoft BizTalk Server 2004.

Use of adapters from the Adapter Framework also alleviated the need for one-off purchases of software to achieve interoperability. Additionally, for companies without the internal staff for building custom code, consultant costs were avoided. Finally, to the degree that custom code is avoided, and integration solutions kept simple, subsequent upgrades and modifications become less costly.

### Increased developer productivity

Users of Microsoft BizTalk Server 2004 were able to make their developers more productive. For the 2004 version of Microsoft Biztalk Server, Microsoft has both improved existing developer tools and added new ones. BizTalk Explorer is a new Visual Studio .NET tool window that displays the contents of a BizTalk Configuration database. It displays items such as assemblies, ports, and parties in a hierarchical tree. This tool can also be used to manage or improve business processes. Also new is BizTalk project system design environment for designing, organizing, and building the various elements of BizTalk applications. One user indicated that BizTalk *"Provided an architectural model and recommendations on how to automate the process of sending 'verified' data from its customer facing staff back into mainframe."*

### Reduced IT training costs

Most of the users Nucleus talked to have staff that are more skilled in .NET than other languages. As a result, their selection of BizTalk as opposed to SeeBeyond alleviated the need for additional training for Java.

### Reduced maintenance costs

Microsoft BizTalk Server 2004 users were able to reduce the costs of their existing systems. As a result of the interoperability of BizTalk, and the adapters, BizTalk can be used to rationalize systems that are otherwise disconnected, isolated, or redundant. Additionally, this functionality enables a company to retire obsolete or costly systems. One user stated, *"We used BizTalk to rearchitect an existing system, thereby reducing its maintenance costs from one FTE to less than a quarter of an FTE."* In addition to such benefits from accomplishing integration goals, BizTalk simplifies security tasks. For 2004, BizTalk has been enhanced with

the addition of an enterprise-wide single sign on, and a tool that streamlines tasks necessary to provide message receipt authorization to network users.

#### Increased staff productivity

Microsoft BizTalk Server 2004 has a number of features that assist management in improving process flows. For the 2004 version of BizTalk, Business Activity Monitoring has been added, and can be used to track transaction volume over the integration solution. Business Activity Services is a new feature that enables BizTalk to recommend to managers changes in staffing or business processes based on changes in the level or nature of activity flowing over the network. Additionally, the application enables developers to combine several applications into one in order to reduce or eliminate redundant tasks by using the new Human Workflow Services feature.

St Vincent increased the productivity of its patient admission staff by 30 percent by using BizTalk to both identify inefficient workflows, and redesign them for maximum efficiency and minimal redundancy.

Additionally, the new health and activity tracking feature gives network managers substantial visibility for monitoring the operational state of their integration solutions. With it, managers can identify bottlenecks or view the technical details of a particular orchestration.

#### Reduced operational costs

Users of BizTalk are able to reduce their operational costs because of BizTalk's ability to integrate disparate systems, eliminate redundant tasks, and analyze existing business processes. For example, one user is now able to deploy a self-service feature for its customers that will eliminate redundant tasks performed by customer facing staff. As the net result of both integration and process analysis and improvement, overall costs can be reduced.

### KEY COST AREAS

Nucleus has identified the following key cost categories that should be considered when a company is evaluating the potential return from an investment in Microsoft BizTalk Server.

#### Software

Key software costs associated with Microsoft BizTalk Server will include license fees for the software as well as ongoing maintenance fees. Pricing is based on the number of CPUs in the integration project. Software costs may include additional industry specific tools such as accelerators for HIPAA or SWIFT.

#### Hardware

Hardware costs will consist primarily of servers, and can vary widely depending on the nature and scope of the integration project. Milton Keynes, which consolidated 28 departmental systems, required five servers, while St. Vincent, which completed a smaller project, purchased only two.

#### Personnel

Personnel costs associated with the development and deployment of Microsoft BizTalk solutions should be quantified in the financial modeling tool. This should include all internal development personnel that will be involved with BizTalk development.

### **Consulting**

The level of consulting expenses will depend on the scope of the integration project, the degree to which the applications within it are heterogeneous, and the level of internal expertise in these applications.

### **Training**

Both the cost of training your IT staff to develop and support BizTalk Server and the ongoing training classes, conferences that they will attend to keep current on the platform, should be included in the financial modeling tool.

### **Other**

Costs such as travel and entertainment associated with offsite training, along with any other expenses not captured in the above categories should be included in the "other" section of the financial modeling tool.

## **CONCLUSION**

Microsoft BizTalk Server provides a competitive advantage to companies through its open standards-based technology that delivers a repeatable platform for building integration solutions for customers. Companies deploying Microsoft BizTalk Server 2004 instead of other integration technologies found Microsoft BizTalk Server 2004's interoperability, adapter framework, and match with IT skills enabled them to deliver integration projects more rapidly and at a lower cost than previously possible.