



**NUCLEUS
RESEARCH**

RESEARCH NOTE C42

ROI ANALYSIS YOU CAN TRUST™

ROI Profile: Microsoft BizTalk Server — Solutia

THE BOTTOM LINE

Solutia achieved a positive ROI from its BizTalk Server deployment by reducing the employee time needed to support customers while lowering integration development costs.

ROI: 290%

Payback: 4.5 months

THE COMPANY

Solutia, Inc. is an applied chemistry company providing solutions such as glass films, resins and additives, carpet and nylon, and pharmaceutical research and manufacturing services. Solutia was founded in St. Louis, Missouri, in 1901.

The company has more than \$3 billion in annual sales and \$4 billion in assets, and employs more than 10,000 employees located at 35 manufacturing sites in 13 countries.

THE CHALLENGE

Solutia uses SAP to manage its inventory and shipments of products to customers and needed a way to automate the entry of customer orders, product consumption information, and invoice payment information into the SAP application. Because Solutia uses XML and CIDX industry standards for communicating information with customers, the solution had to support those standards. The solution also had to support EDI and other file formats that the company used to communicate with other customers.

In addition to supporting communication in different formats, the solution also had to be reliable and to support incoming orders and other communication from customers even when the SAP solution was off line.

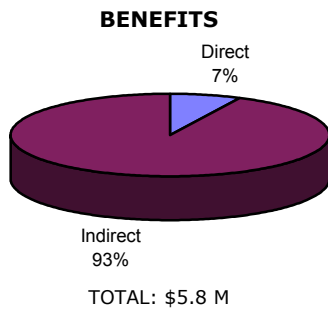
THE STRATEGY

Solutia explored a number of different integration options for its solution, including a custom-built system and building the integration using webMethods. The company decided on Microsoft BizTalk Server for the following reasons:

- BizTalk Server was an open environment that would enable the company to use any form of XML communication.
- The BizTalk Server license price was much lower than webMethods.
- Solutia had already tested a beta version of BizTalk Server for other projects and knew its capabilities.
- The loosely-coupled architecture BizTalk Server supports would enable Solutia to queue orders and communication from customers and then later process them in SAP if SAP was off line when the communication was received.

During a 6-month development period, Solutia's solution architects worked to define the document schemas, mapping, and orchestration as well as to learn and integrate the RosettaNet accelerator and other third-party adapters. The company's internal solution architects were responsible for a large portion of the development and testing efforts. However, Solutia did invest in some Microsoft consulting to support resolution of specific questions and challenges and some other additional consulting in the pre-deployment phase.

Solutia's BizTalk Server deployment is running on servers that are supported by an outsourcing contract with EDS. EDS manages the servers and notifies Solutia's IT department if there is a BizTalk Server application-specific problem.



KEY BENEFIT AREAS

Using BizTalk Server enabled Solutia to automate the flow of information between its customers and its SAP system and reduce the cost of managing customer communication and invoicing. Key benefits the company achieved include the following:

- Reduced IT costs. Using BizTalk Server enabled Solutia to automate entry of customer data into its SAP system at a considerably lower cost than other technology options.
- Reduced customer support costs. Automated entry of information enables Solutia to reduce the employee time needed to read, re-enter, and error check information.

KEY COST AREAS

Personnel made up the largest cost area of Solutia's BizTalk Server deployment, amounting to 77 percent of total project costs over a 3-year period. This is not surprising considering that the company performed much of the development and orchestration work internally. Other costs associated with project included software, hardware, consulting, and training.

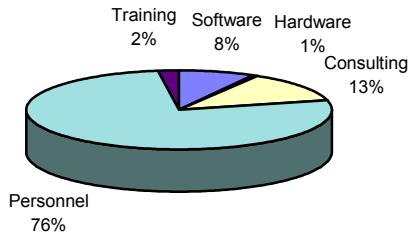
LESSONS LEARNED

In an industry where there are specific standards and requirements for communicating information, Solutia found that understanding the appropriate standards and ensuring that they were adhered to as closely as possible accelerated the initial deployment and reduced the amount of time needed to add new customers.

Solutia also learned the importance of getting organizational buy-in – and the buy-in of partners – for technology projects that complement or replace existing solutions. Helping internal parties understand the value of the project and convincing partners that the new system will add value to their business as well can speed deployment, reduce roadblocks, and ensure that sufficient resources are devoted to the project.

Solutia also found that the investment it made in hardware to support its BizTalk Server environment was more than sufficient to support its reliability and scalability needs. The company invested in separate server environments to support the database, the BizTalk Server, and the development environment, and found that it could have probably spent less on hardware by consolidating some of the servers.

COSTS



TOTAL: \$1.1 M

Solutia’s IT staff has generally found the BizTalk Server to be very easy to use, in part because of its graphical, drag-and-drop mapping tool. However, Solutia is looking forward to the next, upcoming release for two improvements. Currently, mapping especially complex hierarchies to one another can still result in very complicated diagrams; the next release will organize mapping functoids with tabs. Today, developers have to rely on some guesswork when troubleshooting; the next version will provide a true debug mode.

CALCULATING THE ROI

Nucleus Research quantified the initial costs and total costs over a 3-year period to quantify the total cost of Solutia’s BizTalk Server investment.

Direct and indirect benefits were quantified to determine the total returns from the project. Direct benefits included IT personnel not needed that would have been needed to support a different technology strategy. Indirect benefits included time savings for developers as well as a reduction in customer service employee time needed to manage information entry.

SUMMARY

Project:	Microsoft BizTalk Server
Annual Return On Investment (ROI)	290%
Payback Period (Years)	0.39
Net Present Value (NPV)	1,641,711
Average Yearly Cost of Ownership	411,821

ANNUAL BENEFITS	Pre-start	Year 1	Year 2	Year 3
Direct	0	140,000	140,000	140,000
Indirect	0	1,593,333	1,853,333	1,953,333
Total Benefits Per Period	0	1,733,333	1,993,333	2,093,333

DEPRECIATED ASSETS	Pre-start	Year 1	Year 2	Year 3
Software	140,000	0	0	0
Hardware	30,000	0	0	0
Total Per Period	170,000	0	0	0

DEPRECIATION SCHEDULE	Pre-start	Year 1	Year 2	Year 3
Software	28,000	28,000	28,000	28,000
Hardware	6,000	6,000	6,000	6,000
Total Per Period	34,000	34,000	34,000	34,000

EXPENSED COSTS	Pre-start	Year 1	Year 2	Year 3
Software	0	20,000	20,000	20,000
Hardware	0	0	0	0
Consulting	47,000	30,000	30,000	30,000
Personnel	210,000	210,000	210,000	210,000
Training	23,462	0	0	0
Other	5,000	0	0	0
Total Per Period	285,462	260,000	260,000	260,000

FINANCIAL ANALYSIS	Results	Year 1	Year 2	Year 3
Net cash flow before taxes		1,473,333	1,733,333	1,833,333
Net cash flow after taxes		753,667	883,667	933,667
Annual ROI - direct and indirect benefits				290%
Annual ROI - direct benefits only				-15%
Net Present Value (NPV)				1,641,711
Payback (Years)	0.39			
Average Annual Cost of Ownership		715,462	487,731	411,821
3-Year Cumulative ROI	655%			
3-Year IRR	262%			

FINANCIAL ASSUMPTIONS

All Government Taxes	50%
Discount Rate	15%

All calculations are based on Nucleus Research's independent analysis of the expected costs and benefits associated with the application profiled in the accompanying case. Financial modeling tool, format, and methodology copyright Nucleus Research Inc., all rights reserved.