

**NUCLEUS
RESEARCH**

RESEARCH NOTE D137

ROI ANALYSIS YOU CAN TRUST™

ROI Case Study: Microsoft BizTalk Server Anonymous

THE BOTTOM LINE

The company's engineers and compliance managers had to look through dozens of systems whenever they needed to find old parts specifications or new regulatory guidelines. Using BizTalk and .NET to deploy integrated portals for the two groups has allowed the company to rein in personnel costs, fostered significant productivity gains, and helped reduce orders for incorrect materials.

ROI: 64%

Payback: 1.93 years

THE COMPANY

The company was charged with designing, constructing, operating, and maintaining a pipeline system in Alaska. It has a large employee base, and independent contractors working for the company employ many more people.

THE CHALLENGE

To support its operations, the company maintains numerous applications across disparate platforms. Redundancy and reconciliation of data across the systems was an ever-growing problem for database and application administrators. For end users like engineers and regulatory specialists, looking for data had been a difficult, time-consuming, and sometimes fruitless effort. Just to locate pricing information and specifications for material requisitions, engineers and mechanics often had to search in several different locations and applications; searches would occasionally turn up conflicting information that then led to the purchase of incorrect materials. And although many employees need to conduct projects in compliance with regulations, most could not find the necessary regulatory information and documentation without calling one of the company's specialists.

THE STRATEGY

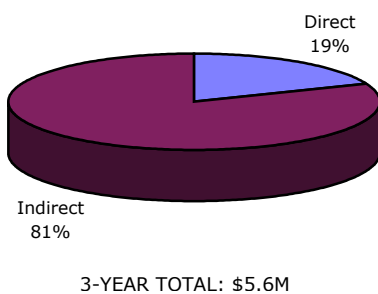
As early as 1998, the company's strategic planning group made improving data access a core objective of its long-term plans. In 2000, the company turned to regional systems integrator Equarius for advice; in late 2001, Equarius presented solution prototypes for centralized, integrated information portals. In the course of this process, the company identified Microsoft's .NET technologies and BizTalk Server as the tools that it would use to support the creation of its new information portals. The company based this decision on several factors:

- BizTalk and .NET provided a development environment that could support the creation of portals that met the company's requirements.
- BizTalk and .NET provided an integration architecture that the company could use to satisfy future projects, beyond the ones that had already been defined.

- The company's internal staff had more experience using Microsoft technologies than any other platform, and Equarius brought especially deep competency in the deployment and use of BizTalk and .NET.
- The company's project team felt that using alternative technologies would lead to higher initial and ongoing costs.

In the first quarter of 2002, Equarius and the company began working together on a series of projects. In October, the deployment team completed installation of BizTalk. In December, the team completed work on the company's information portal, giving employees broad access to regulatory information and compliance methods. In January, another portal — for engineering and maintenance — went live to all of the company's employees.

BENEFITS

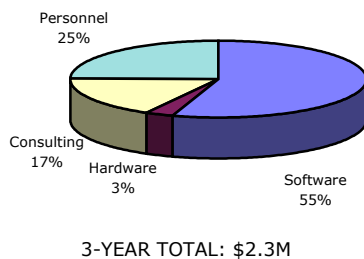


KEY BENEFIT AREAS

The company has realized several benefits through its deployment of BizTalk and .NET and the building of RCI and EMIS. The most significant returns have come in the following areas:

- Increased engineer productivity. In the past, engineers and technicians spent about 30 percent of their time looking for information. Now, the company estimates that they spend no more than 25 percent, and perhaps less. The resultant annual time savings is equivalent to three person-years.
- Increased regulatory specialist productivity. For the company's 51 regulatory specialists, giving compliance guidance and updating regulatory information used to take up 40 percent of their time. The deployment of RCI will cut their burdens by at least 10 percent this year and is expected to lead to further efficiencies in subsequent years.
- Decreased compliance and audit costs. Based on the costs associated with its last audit before deployment, the company estimates that RCI could have saved approximately \$500,000. Though future audits will be more modest in scope, the company hopes to save \$50,000 per year through its improved ability to respond to audit requests. Beyond the periodic audits, the company will save on a more constant basis, too, by having improved its ability to comply with federal and industry regulations.
- Decreased cost of incorrect materials. EMIS helps ensure that engineers and technicians order the right parts at the best price. This saves approximately \$300,000 each year.

COSTS



KEY COST AREAS

The largest part of the company's budget was devoted to software and capitalized software development costs, which made up 55 percent of total project costs. Personnel time devoted to deployment and ongoing support of BizTalk, EMIS, and RCI amount to 25 percent of the total expense. Consulting made up 17 percent of the total project. Acquiring new hardware accounted for the final 3 percent. The company's staff used an online training module as

needed; because of its ad hoc nature, the cost of time devoted to training has been included in the overall personnel cost above.

LESSONS LEARNED

The company's project team reports that this series of deployments — including the performance of BizTalk and .NET within these projects — has been as successful as hoped. Skills gaps, however, created some unexpected challenges. Learning the new development paradigms associated with BizTalk and .NET necessitated special precautions; in one case, the team had to create replicated environments while doing its work to avoid impact on the production environment. The team also discovered, when implementing a search engine for its databases, that it did not understand the database technology as well as it had believed. To avoid similar issues, companies should try to base project schedules and training assignments on a conservative yet fair assessment of current skills.

CALCULATING THE ROI

Nucleus quantified the costs of software, hardware, consulting, and personnel over a 3-year period to determine the company's total investment in BizTalk and .NET technologies and the development of RCI and EMIS. The company made a significant investment in software development, which it capitalized and depreciated — making for a large initial software cost that significantly impacted the ROI.

Direct benefits calculated included reduction of costs associated with compliance and audits and avoidance of incorrect materials purchases. Indirect benefits including increased productivity of employees were calculated based on the average fully loaded cost of employees.

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SUMMARY

Project:	Microsoft BizTalk Server
Annual return on investment (ROI)	64%
Payback period (years)	1.93
Net present value (NPV)	586,179
Average yearly cost of ownership	777,254

ANNUAL BENEFITS	Pre-start	Year 1	Year 2	Year 3
Direct	0	200,000	425,000	425,000
Indirect	0	750,000	1,755,000	2,010,000
Total Benefits per Period	0	950,000	2,180,000	2,435,000

DEPRECIATED ASSETS	Pre-start	Year 1	Year 2	Year 3
Software	1,100,000	100,000	0	0
Hardware	70,000	0	0	0
Total per Period	1,170,000	100,000	0	0

DEPRECIATION SCHEDULE	Pre-start	Year 1	Year 2	Year 3
Software	0	220,000	240,000	240,000
Hardware	0	14,000	14,000	14,000
Total per Period	0	234,000	254,000	254,000

EXPENSED COSTS	Pre-start	Year 1	Year 2	Year 3
Software	0	28,400	28,400	28,400
Hardware	0	0	0	0
Consulting	400,000	0	0	0
Personnel	201,563	125,000	125,000	125,000
Training	0	0	0	0
Other	0	0	0	0
Total per Period	601,563	153,400	153,400	153,400

FINANCIAL ANALYSIS	Results	Year 1	Year 2	Year 3
Net cash flow before taxes		696,600	2,026,600	2,281,600
Net cash flow after taxes		415,300	1,140,300	1,267,800
Annual ROI - direct and indirect benefits				64%
Annual ROI - direct benefits only				13%
Net present value (NPV)				586,179
Payback (years)	1.93			
Average annual cost of ownership		2,024,963	1,089,181	777,254
3-year cumulative ROI	40%			
3-year IRR	34%			

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.