

**NUCLEUS
RESEARCH**

RESEARCH NOTE C36

ROI ANALYSIS YOU CAN TRUST™

ROI Case Study: Microsoft BizTalk Server Emery Forwarding

THE BOTTOM LINE

Emery achieved a positive ROI from its Microsoft BizTalk Server investment by translating information from its legacy systems into customer shipping alerts at a lower cost than other technology options.

ROI: 97%

Payback: 4.2 months

THE COMPANY

Emery specializes in time-definite transportation services for business-to-business shippers of heavyweight cargo. A \$2.6 billion company, Emery provides global air and ocean freight transportation, logistics management, and customs brokerage services to manufacturing, industrial, retail, and government customers. Based in Redwood City, California, Emery operates through a network of more than 500 service centers and agent locations around the world.

THE CHALLENGE

Because Emery often manages time-critical shipments for global customers, it needed a way to provide those customers with information about the status of their shipments beyond just pickup and expected delivery dates. Proactive delivery of information on delays to customers — for example, notification that a shipment was waiting in customs or in a certain city — could enable customers to better manage delivery or pickup depending on their specific needs. However, the data about shipment status at each point was stored in various legacy and mainframe systems and transported internally at Emery via IBM MQSeries messages.

Emery needed a cost-effective means to extend delivery information in local systems out to key customers while preserving its legacy and MQSeries infrastructure investments.

THE STRATEGY

Emery began looking at how it could integrate business logic into its core system to provide more detailed alerts to customers but then determined that it would be too expensive to develop and maintain. Because the company was already beta testing BizTalk Server for another project, it considered using BizTalk Server for the customer delivery alert project. Although Emery considered other integration solutions, it rapidly decided on BizTalk Server to support the project for the following reasons:

- **Rapid development.** After review of the BizTalk Server technology Emery determined it could develop a customer alert application much more rapidly and cheaply than it could through internal custom development.

- BizTalk Server support for MQSeries. MQSeries is the primary transport mechanism across Emery's worldwide infrastructure. BizTalk Server could rapidly retrieve queued MQSeries messages and translate them into customer alerts, which was key to scalable, reliable application performance.
- Microsoft relationship. Emery had had a positive experience with Microsoft in the past and felt that Microsoft and its partners would devote the necessary resources to ensure that the customer-alert project and other future integration projects were successful.

Emery developed a pilot with a Microsoft partner to test the concept of the system in early 2002, and after a successful pilot, the company launched the application in June 2002. Development took approximately 130 days. The company's internal development team managed the process and used Microsoft consultants to guide the orchestration design.

In Emery's application, BizTalk Server receives a status message in MQSeries data format from a server in Emery's core application framework each time a package passes an execution point in one of the company's local systems. Depending on the customer's profile and demands, that information is then sent from BizTalk Server to the customer via e-mail, telephone, or another medium.

KEY BENEFIT AREAS

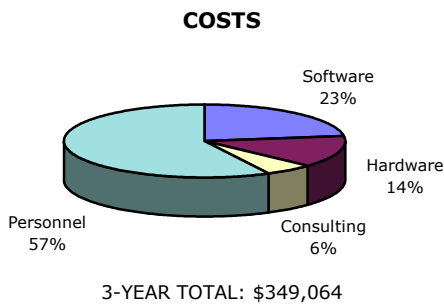
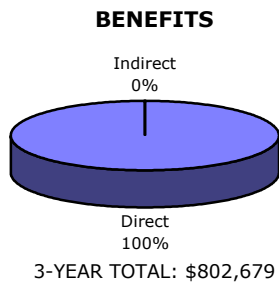
Using BizTalk Server to deliver proactive shipment delivery information to customers enables Emery to leverage its existing legacy infrastructure while providing its customers with a higher level of service. As customer adoption of the application grows, Emery will likely reduce the cost of managing customer inquiries while providing its clients with a higher level of personalized service.

Key benefits Emery has achieved from its BizTalk Server deployment include the following:

- Reduced internal development costs. Developing the solution using BizTalk Server and BizTalk Server orchestration enabled Emery to rapidly develop a solution at a much lower cost than if it had done custom development.
- Reduced maintenance costs. Using BizTalk Server to support the project enables Emery to continue to maintain and evolve its infrastructure without the additional maintenance costs that would have been incurred to support a custom development project.

KEY COST AREAS

Personnel made up the largest cost area of Emery's BizTalk Server investment, at 57 percent of total costs. Other cost areas associated with the project included software, hardware and consulting.



LESSONS LEARNED

Emery chose to use BizTalk Server to support its customer alert project because it determined it would be a more cost-effective solution than internal development. It also found that it could use BizTalk Server as the backbone for a number of enterprise application integration projects while leveraging its developers' existing skill base.

The need to effectively manage the transfer of information between MQSeries and BizTalk Server was critical to the success of the application, and Emery found that understanding how to feed data between the two applications was the greatest development challenge of the project. In such integration projects, careful review of best practices documents and various integration strategies in the early stages of design and development will reduce the amount of time and effort spent correcting development missteps.

CALCULATING THE ROI

Nucleus quantified the costs of software, hardware, personnel, consulting, and training associated with the project over a 3-year period to calculate Emery's total investment in Microsoft BizTalk Server. In this case, the direct benefits from using BizTalk Server instead of another technology strategy drove a 97 percent ROI — simply from savings in IT development and maintenance. Indirect benefits that were not quantified in this analysis include the reduction in costs associated with notifying customers of shipment progress and answering customer queries as well as potential increased revenues derived from greater customer satisfaction.

Emery Forwarding

SUMMARY

Project:	Microsoft BizTalk Server
Annual return on investment (ROI)	97%
Payback period (years)	0.36
Net present value (NPV)	179,481
Average yearly cost of ownership	116,355

ANNUAL BENEFITS	Pre-start	Year 1	Year 2	Year 3
Direct	49,124	682,305	35,625	35,625
Indirect	0	0	0	0
Total per period	49,124	682,305	35,625	35,625

DEPRECIATED ASSETS	Pre-start	Year 1	Year 2	Year 3
Software	0	0	0	0
Hardware	0	0	0	0
Total per period	0	0	0	0

DEPRECIATION SCHEDULE	Pre-start	Year 1	Year 2	Year 3
Software	0	0	0	0
Hardware	0	0	0	0
Total per period	0	0	0	0

EXPENSED COSTS	Pre-start	Year 1	Year 2	Year 3
Software	79,510	0	0	0
Hardware	49,124	0	0	0
Consulting	20,000	0	0	0
Personnel	136,680	21,250	21,250	21,250
Training	0	0	0	0
Other	0	0	0	0
Total per period	285,314	21,250	21,250	21,250

FINANCIAL ANALYSIS	Results	Year 1	Year 2	Year 3
Net cash flow before taxes		661,055	14,375	14,375
Net cash flow after taxes		330,528	7,188	7,188
Annual ROI - direct and indirect benefits				97%
Annual ROI - direct benefits only				97%
Net present value (NPV)				179,481
Payback (years)	0.36			
Average annual cost of ownership		306,564	163,907	116,355
3-year cumulative ROI	252%			
3-year IRR	183%			

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.