

**NUCLEUS  
RESEARCH**

CASE STUDY E20  
March 2004

ROI ANALYSIS YOU CAN TRUST™

## ROI Case Study: Microsoft BizTalk Server Virgin Entertainment

### **THE BOTTOM LINE**

Virgin Entertainment deployed Microsoft BizTalk Server 2004, SQL Server 2000 Analysis Services, and Windows SharePoint Services to replace an existing solution to reduce transaction fraud.

**ROI: 39%**

**Payback: 2.64 years**

### **THE COMPANY**

Virgin Entertainment is a multichannel music and entertainment retailer, providing consumers with entertainment products including music, DVDs, videos, and books. With 23 Virgin Megastores in North America as well as stores in Europe and Japan, Virgin differentiates itself by catering to knowledgeable entertainment enthusiasts to encourage repeat business and foster long-term customer relationships.

### **THE CHALLENGE**

Increasing competitive pressures continue to drive retailers to look for new ways to improve and protect profits. Virgin was using a hosted service to analyze its point-of-sale data, but the time delay in receiving the data limited Virgin's managers' ability to act on it effectively. In particular, loss through employee theft was difficult to track because it often required store managers to analyze data after the fact, integrate it with information from other sources, and then intervene with employees — sometimes weeks after the initial suspicion of a problem.

Virgin suspected that only 15 to 20 percent of total losses — less than the ongoing cost of the service — were being recovered by its monitoring system. It also knew that employees' perception was that management didn't have effective visibility into sales operations, potentially encouraging dishonest behavior because the likelihood of detection was low.

Virgin needed to increase the percentage of recoveries and the efficiency of investigation surrounding employee theft by implementing real-time monitoring of point-of-sale activities.

### **THE STRATEGY**

Virgin's loss-prevention team and IT staff collaborated on finding an appropriate solution. They considered a number of technology options, including Aspect. Ultimately, they decided to use a Microsoft partner, Xavor, to build a loss-prevention solution using Microsoft BizTalk Server 2004, SQL Server 2000 Analysis Services, and Windows SharePoint Services, for the following reasons:

- Aspect was more expensive and provided more functionality than Virgin actually needed.
- Aspect already had predefined reports, and Virgin wanted to be able to customize its reports and alerting.
- Virgin already had existing Windows 2000, Windows 2003, and SQL Server licenses, and Microsoft was willing to provide Virgin with additional licenses and development support as part of its early adopter program.

Xavor began working on the solution in August 2003, and the pilot was launched in November 2003. Using the BizTalk Server 2004 orchestration engine, the solution maps relevant data from Virgin's AS/400 and point-of-sale systems and uses the BizTalk Server 2004 business activity monitoring functionality integrated with SQL Server's data warehousing capabilities. Reports are generated and delivered to users via Windows SharePoint Services so that they can be easily reviewed and manipulated.

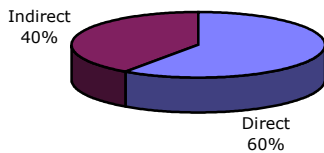
Although the loss-prevention application was the driver for purchasing Microsoft BizTalk Server 2004, the project is just the first of many Virgin is planning to implement with the technology. In April 2004, Virgin will kick off a business intelligence project that will be built on top of the loss-prevention application and add data sources for analysis, such as daily traffic reports, sales, inventory, and labor scheduling. Microsoft BizTalk Server 2004 will serve as the integration point for the data and enable Virgin employees to have self-service capabilities to access the latest business data for building reports and conducting ongoing analysis of operations.

### KEY BENEFIT AREAS

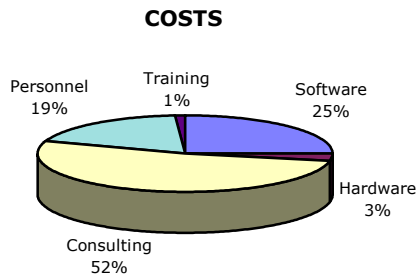
The Microsoft solution has already helped Virgin to increase its recovery rate, and the loss-prevention team expects it will improve as they further refine the reporting and alerting functions. Virgin expects the impact of the solution to expand beyond loss prevention to help managers more effectively plan and monitor operations at all locations based on easy-to-access, timely staff performance data. Key benefits include the following:

- Eliminated service costs. Deploying an in-house solution enabled Virgin to gain more timely access to data and also to eliminate the ongoing cost of an outsourced solution.
- Reduced loss due to employee theft. Improved access to information enables managers to intervene more quickly when there is suspicion of theft, increasing recovery rates and reducing the likelihood that employees leave or do significant damage before they are discovered.
- Increased loss-prevention staff productivity. Because loss prevention managers can rapidly access reports from one central source, they can spend less time trying to gather and analyze data and more time working on effective loss prevention.

### BENEFITS



3-YEAR TOTAL: \$351,750



3-YEAR TOTAL: \$315,157

**KEY COST AREAS**

Key costs included consulting, personnel, software, and training. Consulting costs were the largest category, accounting for 52 percent of the project costs. Software costs totaled 25 percent. Personnel costs for initial development and ongoing maintenance of the loss-prevention system totaled 19 percent. Hardware costs were 3 percent, and training accounting for 1 percent of the project expenses.

**LESSONS LEARNED**

As business dynamics change, so do managers’ needs in terms of data and reporting to monitor business performance. Virgin selected a solution that would enable it to build specific reporting and alerts and is taking advantage of a pilot phase to test those alerts and adjust them as needed. The flexible reporting functionality will also enable managers to query data to find exactly what they’re looking for instead of having to sift through data and reports that may not meet their needs. This flexibility, coupled with low training demands, will enable Virgin to expand its deployment beyond “power users” to give all managers tools to better manage their stores.

Virgin also kept other business dynamics in mind as it deployed the solution. Although the development was completed in November, a phased pilot approach ensured that Virgin could start recognizing benefits as soon as possible without the risk that an unforeseen adoption or technical problem would have a negative impact on holiday sales operations.

**CALCULATING THE ROI**

Nucleus quantified the costs of software, hardware, consulting, personnel, training, and other investments over a 3-year period to quantify Virgin’s total project investment. Direct benefits included eliminated outsourced service costs and reduced loss due to employee theft. Indirect benefits, including increased productivity of loss-prevention managers, were calculated based on the fully loaded cost of the employee, with a correction factor to account for the inefficient transfer of time between time saved and additional time worked.

The company made a significant investment in software and consulting to establish its BizTalk integration framework, making for a large initial cost that impacted the ROI. The cost of all software licenses purchased, plus yearly maintenance, and the share of consulting costs driven by the loss-prevention project were included in the ROI calculation. This analysis focused solely on the benefits associated with the loss-prevention system; Virgin anticipates that the ROI will increase as the technology is used by more employees and provides additional benefits to its business operations.

**Corporate Headquarters**  
 Nucleus Research Incorporated  
 36 Washington Street  
 Wellesley, MA 02481  
 United States  
 +1 781 416 2900

**Europe, Middle East, and Africa**  
 Nucleus Research EMEA  
 17A rue Pavée  
 75004 Paris  
 France  
 +33 1 42 77 75 38

**SUMMARY**

Project:	<b>Microsoft BizTalk Server 2004</b>
Annual return on investment (ROI)	<b>39%</b>
Payback period (years)	<b>2.64</b>
Net present value (NPV)	<b>(15,262)</b>
Average yearly cost of ownership	<b>105,052</b>

<b>ANNUAL BENEFITS</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Direct	0	64,000	73,000	73,000
Indirect	0	28,350	56,700	56,700
<b>Total Benefits per Period</b>	0	92,350	129,700	129,700

<b>DEPRECIATED ASSETS</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Software	0	0	0	0
Hardware	0	0	0	0
<b>Total per Period</b>	0	0	0	0

<b>DEPRECIATION SCHEDULE</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Software	0	0	0	0
Hardware	0	0	0	0
<b>Total per Period</b>	0	0	0	0

<b>EXPENSED COSTS</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Software	45,000	11,250	11,250	11,250
Hardware	9,800	0	0	0
Consulting	164,867	0	0	0
Personnel	5,833	17,500	17,500	17,500
Training	568	2,840	0	0
Other	0	0	0	0
<b>Total per Period</b>	226,068	31,590	28,750	28,750

<b>FINANCIAL ANALYSIS</b>	<b>Results</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Net cash flow before taxes		60,760	100,950	100,950
Net cash flow after taxes		30,380	50,475	50,475
<b>Annual ROI - direct and indirect benefits</b>				<b>39%</b>
Annual ROI - direct benefits only				18%
<b>Net present value (NPV)</b>				<b>-15,262</b>
<b>Payback (years)</b>	<b>2.64</b>			
Average annual cost of ownership		257,657	143,204	105,052
3-year cumulative ROI	-14%			
3-year IRR	7%			

**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.