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## **NerveWire Executive Series:**

**Migrating Siebel CRM to Microsoft® SQL Server 2000™ on Windows Yields Significant Benefits**

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*NerveWire study reveals a three-year ROI of 248% as a result of migrating Siebel CRM applications to SQL Server 2000 on Windows 2000 from a competitive RDBMS on Unix.*

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**This study was commissioned by Microsoft Corp. and conducted by NerveWire, Inc., an integrated management consulting and systems integration firm that helps transform clients' businesses by leveraging technologies such as Web-based portals, application servers, messaging and identity management software to lower costs, increase profit margins, tighten security, and improve customer retention.**

**NerveWire works with leading financial services institutions and manufacturers including Merrill Lynch & Co., Inc., State Street Corp., Nokia, and Philips Semiconductors to help them plan, design, and build systems that synchronize their internal operations, as well as their interactions with customers, suppliers, and business partners. For more information, please visit [www.nervewire.com](http://www.nervewire.com).**

## NerveWire Executive Series: Migrating Siebel CRM to Microsoft® SQL Server 2000 on Windows Yields Significant Benefits

*NerveWire study reveals a three-year ROI of 248% as a result of migrating Siebel CRM applications to SQL Server2000 on Windows 2000 from a competitive RDBMS on Unix.*

### Executive Summary

This paper presents the results of a study of Siebel CRM application implementations, supported by either Microsoft SQL Server 2000™ or a leading competitive database management system running on either Windows 2000 Server or Unix. The study focused on the cost of implementing, supporting, and maintaining the application with SQL Server 2000 versus the cost of continuing to run the application with a leading competitor's RDBMS. Study results, detailed in the table below, demonstrate the significant savings that would result from migrating a Siebel CRM application environment from the competing product to Microsoft SQL Server 2000.

Siebel Migration Summary <sup>1</sup>				
Resource	SQL Server 2000 <sup>2</sup>	Competing Product	Savings	% of Total Savings
Hardware	\$7,777	\$21,652	\$13,875	1.0%
Software <sup>4</sup>	\$58,161	\$79,049	\$20,887	6.8%
Ongoing Operations	\$791,704	\$1,369,040	\$577,335	91.9%
Training	\$2,279	\$31,530	\$29,251	0.3%
<b>Total</b>	<b>\$859,922</b>	<b>\$1,501,270</b>	<b>\$641,349</b>	<b>100.0%</b>
Migration Cost <sup>3</sup>	<b>-\$261,636</b>		<b>-\$261,636</b>	
<b>NPV</b>			<b>\$387,311</b>	

- Note:
1. All figures in present value calculated using a 15% discount rate.
  2. The above figures are the sum of the costs experienced over the three-year period of the study.
  3. Migration cost includes: hardware purchase, software maintenance, and migration labor effort.
  4. Software costs include the cost of licensing the RDBMS and the operating system. Software costs exclude CRM licensing as the cost does not vary by platform.

For companies making the initial database decision, study results show that the total cost of ownership of the Windows Server 2000/SQL Server 2000 environment is less than one-half of what it would be with the Unix/competing RDBMS environment. The migration study results shown above and the TCO savings listed below demonstrate that operating Siebel CRM applications on Microsoft SQL Server 2000 is a more attractive alternative from both a total cost of ownership and a migration ROI perspective.

Three-Year Total Cost of Ownership Comparison					
Resource	SQL Server 2000	Competing Product	Savings	% Difference	% Savings
Hardware	\$47,602	\$109,616	\$62,014	57%	8%
Software	\$103,596	\$160,000	\$55,404	35%	7%
Ongoing Operations					
Hardware Maintenance	\$7,777	\$21,652	\$13,875	64%	2%
Software Maintenance	\$58,161	\$79,049	\$20,888	26%	3%
Support Activities	\$791,704	\$1,369,040	\$577,336	42%	76%
Training	\$2,279	\$31,530	\$29,251	93%	4%
<b>Total Cost of Ownership</b>	<b>\$1,011,119</b>	<b>\$1,770,887</b>	<b>\$758,768</b>	<b>43%</b>	<b>100%</b>

Key findings of the Siebel CRM database environment study and migration analysis include:

**Reduced Hardware & Software Costs.** Modeled server hardware costs were 57% lower for SQL Server 2000 customers. The lower hardware costs are primarily attributable to the scale economies of price/performance obtained with Windows based solutions. This alone often can justify migration efforts. Lower software licensing and maintenance contracts accounted for 7% of the total savings of migrating to SQL Server 2000.

**Reduced IT Support Costs.** Reductions in IT support costs contributed 92% of the total savings for the migrated application. Comparative reductions in support costs per server were \$192,445. Customers were able to draw on a larger pool of trained SQL Server DBAs to support the SQL Server 2000 environment and fewer DBAs were needed to manage SQL Server when compared to the competing environment.

**Rapid and Cost-Effective Migration and Implementation.** Migration investment costs amounted to only \$261,636 and were comprised of hardware, software and labor costs. The implementation averaged 180 person days of effort. Actual migration efforts will vary based on the number of factors including:

- Number of Siebel CRM modules deployed
- Architectural complexity
- Number of customized functions

**Rapid Return on Investment.** Customers migrating to SQL Server 2000 can achieve an ROI of 248% and a payback period of 11 months. The net present value for the migration project is \$387,311.

With savings across hardware, software, and operations and with minimal migration costs, the benefits of migrating to SQL Server 2000 are substantial. The Investment Analysis table highlights the key financial metrics supporting the decision to migrate Siebel CRM applications to the Windows Server 2000/SQL Server 2000 environment.

Investment Analysis				
Metric	Investment	Year 1	Year 2	Year 3
SQL Server Savings	-\$254,038	\$282,775	\$293,806	\$305,270
Present Value of Savings	-\$254,038	\$240,358	\$212,275	\$187,474
Net Present Value @ 15%	\$378,311			
Payback (Months)	10.76			
Internal Rate of Return	100%			
Return on Investment	248%			

## Introduction

What is the real cost of doing business with customers? Are companies getting the best ROI for their IT spend? Companies in every industry share your concern. In particular, firms are focused on distinguishing between customer acquisition costs and retention costs, with the goal of investing in retention. In order to maintain and build on their customer relationships, companies have increasingly turned to CRM solutions. A CRM solution is an integral part of any retention strategy because it allows companies to capture, store, and analyze customer data gathered from companywide customer “touch points.”

For the IT Director or CIO, the challenge has emerged to provide the best-performing, lowest-cost CRM solution. Fundamental to this challenge is selecting the database management system to support the application. This decision will have a strong impact on hardware, software, and support costs for the Siebel CRM environment. This study provides the detail necessary to help with that decision.

**Key Decision Factors.** Several key decision factors emerge as the primary reasons for selecting a SQL Server 2000 on Windows 2000 for a Siebel CRM solution, rather than an alternative database on Unix. Selecting a Windows-based solution from Microsoft provides advantages on many dimensions. These key factors include:

- Lower hardware expense
- Lower software expense
- Lower ongoing operating costs
- Minimal implementation expense/effort

Hardware costs for servers running Windows operating systems are lower than servers running Unix operating systems. Study participants running SQL Server on Windows-based systems consistently reported lower hardware costs than those participants running the competing DBMS on Unix-based systems.

The licensing costs of SQL Server 2000 software are less than the software costs of the leading competitor’s RDBMS software. Evidence gathered confirms that the per-processor licensing cost of SQL Server 2000 is as much as 50% lower than the licensing cost of the competing DBMS.

Operational costs for maintaining a SQL Server 2000 environment are less than those of the competing product’s environment. IT managers were able to support a SQL server environment using fewer hours and taking advantage of a larger pool of trained resources than were managers of the competing RDBMS environment. Ease-of-use features, self-managing capabilities, better integration with the operating system, and productive utilities all contribute to a less expensive operating environment for SQL Server 2000.

The cost and effort of migrating an application from the competing RDMS environment to a SQL Server 2000 environment is minimal considering the return on investment. Modeled migration costs show that the benefits of implementing a SQL Server 2000 environment far outweigh the expense of doing so.

## Study Overview & Methodology

### Study Overview

**Participant Profile.** Twelve companies with Siebel CRM applications in place and running on either the SQL Server database management system or that of a leading competitor participated in this study. Six of the companies have implemented their Siebel CRM applications in a Windows Server/SQL Server environment, three in a Unix/competing database management system environment, two in a Windows/competing database management system, and one participant is running modules of the Siebel CRM application suite in both Windows/SQL Server and Unix/competing database management system environments.

The businesses in this study ranged in size from 150 to 15,000 employees. Of those, there were from 35 to 1,400 Siebel CRM named users, and application transactions per day varied from 100 to 75,000. The companies spanned the financial services, high tech, and manufacturing industries (see Study Participant Profile table for further detail).

Study Participant Profile						
Industry	Environment	Total # Named Users	Daily Transactions	Availability Target	Availability Actual	Siebel CRM Modules
Financial Services	Win NT/SQL Server 7	350	12,000	98.0%	95.0%	Sales Force, Call Center
Publishing	Win2000/SQL Server 2000	50	500	100.0%	99.7%	Sales Force
Software	Win2000/SQL Server 2000	1,395	N/A	100.0%	99.9%	Sales Force, Call Center, Marketing, Employee Relationship Management
Insurance	Win2000/SQL Server 2000	700	50,000	100.0%	100.0%	Sales Force, Call Center
Government	Win2000/SQL Server 2000	400	4,000	100.0%	100.0%	Call Center
Manufacturing	Unix/Competing RDBMS	300	150	100.0%	90.0%	Sales Force, Employee Relationship Management, Marketing
Insurance	WinNT/Competing RDBMS	300	75,000	99.9%	99.9%	Sales Force, Call Center
Publishing	Unix/Competing RDBMS	200	3,000	100.0%	99.7%	Sales Force
	Win2000/SQL Server 2000	50	500	100.0%	99.7%	Sales Force
Consulting	Unix/Competing RDBMS	500	N/A	100.0%	99.8%	Sales Force, Marketing
High Tech	Win2000/Competing RDBMS	80	190	98.0%	96.0%	Sales Force, Call Center, Marketing
Music	Unix/Competing RDBMS	35	N/A	100.0%	99.9%	Sales Force

**Interviews.** Financial data and qualitative commentary were gathered through a series of interviews with IT Directors and CIOs at participant companies. The participants had a thorough knowledge of their company's Siebel CRM applications and of the database management system supporting the overall environment. The participants also had responsibility for the database decision and were involved in the initial planning and development of the business case.

### ***Methodology***

**Modeled View.** To model savings, NerveWire developed two composite views: one of the seven companies supporting its Siebel CRM applications with a Windows Server 2000/SQL Server 2000 environment and the other of the companies using the Unix/competing database environment. The composite views exposed the significant variability in costs experienced by participant companies which resulted from differences in the number of named users, transaction volumes, licensing agreements, and resources dedicated to support and maintenance activities.

The modeled environments were designed to be comparable in terms of named users, transaction volumes, availability requirements, and performance. And they are meant to reflect the costs of currently available software licenses and maintenance, as well as hardware purchases and maintenance.

To create a baseline view of migration labor costs, NerveWire modeled the effort based on data captured as a part of this study and data gathered from two previous SQL Server studies. The two studies - "Strategic IT Initiatives: ERP Migrations to SQL Server Lead to Significant Savings" and "Strategic IT Initiatives: TCO Benefits of SQL Server" - are available at [www.microsoft.com](http://www.microsoft.com). The modeled migration labor costs, developed from the analysis of data provided by 20 companies, provide an accurate measure of the effort to migrate Siebel CRM from a Unix/leading competitor to a Windows Server 2000/SQL Server 2000 environment.

Ongoing operating costs, which include ongoing hardware maintenance, software maintenance, and database support and maintenance costs, were modeled to reflect current licensing practices and salary trends. To determine ongoing support and maintenance costs, hours of effort were determined for both environments and hourly wage rates were adjusted to reflect current standards. Calculating labor costs based on hours of effort removed the variability in costs resulting from differences in geography and corporate benefit structures.

**Present Value & Other Assumptions.** Most of the financial data included in this paper is shown in present value dollars, using a discount rate of 15%. The fully burdened hourly rate of IT staff is assumed to increase at 4% per year, reflecting interviewees' belief that the rising cost of benefits will drive hourly rate increases going forward. All other expenses are assumed to grow at the rate of inflation of 3% per year. Investment costs for the competing environment were considered to be sunk costs since the modeled company would have that solution up and running at the time of migration analysis.

The following table shows the main assumptions for the modeling effort.

Model Assumptions			
Area	Detail	Input	
		SQL Server 2000	Competing Product
Siebel CRM Statistics	Siebel CRM Modules	Sales Force & Call Center	Sales Force & Call Center
	Number of Named Users	500	500
	Number of Heavy Users	200	200
	Number of Peak Concurrent Users	250	250
	Number of Online Transactions	40,000	40,000
	Customer Base	500,000	500,000
Hardware	Number of Servers	3	3
	Total Number of Processors	7	7
	Operating System	Windows 2000 Server	UNIX
	Total Hardware Cost	\$55,200	\$109,616
	Hardware Maintenance (% of Cost)	7.3%	8.8%
Software	Operating System License (Perpetual)	\$1,200 per Server + \$40 per CAL	Bundled with Hardware
	Annual Operating System Maintenance	25%	22%
	Per Processor Database License (Perpetual License)	\$19,999	\$40,000
	Annual Database Maintenance	25%	22%

### Modeled Results

The modeled results show the expected savings of migrating to Windows Server 2000/SQL Server 2000 experienced over a three-year period. As shown in the chart below, SQL Server migration projects are a sound investment from a capital budgeting standpoint.

Three-Year Migration Savings				
Resources	Investment	Operations	Total	% of Total
Hardware	-\$47,602	\$12,634	<b>-\$33,727</b>	-9%
Software	-\$103,596	\$20,887	<b>-\$82,709</b>	-21%
Migration Labor	-\$102,840		<b>-\$102,840</b>	-27%
Ongoing Operations		\$577,335	<b>\$577,335</b>	149%
Training		\$29,251	<b>\$29,251</b>	8%
<b>Total</b>	<b>-\$254,038</b>	<b>\$640,107</b>	<b>\$387,311</b>	<b>100%</b>
<b>% of Total</b>	<b>-69%</b>	<b>169%</b>	<b>100%</b>	

The table below details the costs of migrating Siebel CRM applications to and supporting the applications on a Microsoft Windows Server 2000/SQL Server 2000 environment versus the costs of doing so on the competing vendor environment. Most of the costs of both database management systems are driven by ongoing support and maintenance activities. Overall, ongoing operations constitute 71% of the cost of running Siebel CRM applications on a SQL Server environment versus 91% of the cost on the competing vendor environment. The expected cost savings from ongoing operations for the migrated CRM applications is \$577,335.

The key message from the cost comparison is that the competing product has a higher total cost of ownership and a lower ROI associated with a migration to a Windows/SQL platform. In short, the competing product is more expensive to own and operate, and migrating Siebel CRM

applications to a Windows Server 2000/SQL Server 2000 environment makes financial sense as migration costs would be recovered within 11 months and actual savings would accrue going forward.

SQL Server Cost Life Cycle								
Resources	Investment		Operations		Total		% of Total	
Platform	SQL Server	Competing DBMS (In Place)	SQL Server	Competing DBMS	SQL Server	Competing DBMS	SQL Server	Competing DBMS
Hardware	\$47,602	\$0	\$7,777	\$21,652	\$55,379	\$21,652	5.7%	2%
Software	\$103,596	\$0	\$58,161	\$79,049	\$161,757	\$79,049	14.5%	5%
Migration Labor	\$102,840	\$0			\$102,840	\$0	9.2%	0%
Ongoing Operations		\$0	\$791,704	\$1,369,040	\$791,704	\$1,369,040	71.1%	91%
Training		\$0	\$2,279	\$31,530	\$2,279	\$31,530	.2%	2%
<b>Total</b>	<b>\$254,038</b>	<b>\$0</b>	<b>\$859,921</b>	<b>\$1,501,270</b>	<b>\$1,113,959</b>	<b>\$1,501,271</b>	<b>100%</b>	<b>100%</b>

Note: All figures are calculated as present value at a 15% discount rate.

## Migration Costs

Modeled costs of migrating a Siebel CRM application from the competing RDBMS environment to SQL Server totaled \$254,038. This relatively low investment cost reflects the lower hardware and software costs associated with a SQL Server platform, as well as the value of tools and utilities provided by the SQL Server DBMS in performing the migration. The table below details the costs included in the migration investment analysis.

Migration Investment		
Resource	Cost	% of Total
<b>Migration Labor</b>		
Project Management Labor Cost	\$36,000	14%
System/Hardware Migration Labor Cost	\$7,760	3%
Data Management Migration Labor Cost	\$29,760	12%
Application Migration Labor Cost	\$29,320	12%
<b>Total Migration Labor</b>	<b>\$102,840</b>	<b>40%</b>
<b>Hardware Investment</b>	\$47,602	19%
<b>Software Investment</b>	\$103,596	41%
<b>Total Migration Cost</b>	<b>\$254,038</b>	<b>100%</b>

Note: Investment costs will vary based on hardware configuration and licensing discounts.

The numbers provided represent a hardware solution capable of supporting the modeled application.

**Hardware.** Hardware investment accounts for 19% of the total cost of migration. Differences in base hardware costs between the two environments are due primarily to the operating system and not the DBMS. As a result, companies running the competing RDBMS in a Windows environment will have lower or no hardware costs when migrating to SQL Server. Efficiencies created by the integration of SQL Server and the Windows operating system may allow this solution to provide more substantial performance capacity than with the competing RDBMS on the same server platform.

**Software Costs.** Operating system and database management system licensing fees account for 41% of the migration cost. Siebel CRM licensing fees, which account for the bulk of the CRM platform investment, are excluded from this study as the fees are expected to be the same regardless of the database management system.

**Migration Labor Costs.** Migration labor costs constitute a large portion of the total migration investment and are expected to run between 170 and 490 person-days of effort. This includes all activities from installing and configuring the hardware to migrating and testing the CRM application in the new environment. Participants felt that labor costs were low due to the ease-of-use characteristics of the Windows Server 2000/SQL Server 2000 environment and the tools and utilities provided with the software. The Migration Labor Costs table describes the staffing levels required.

Migration Labor Costs		
Area	FTE Requirements <sup>1</sup>	Migration Cost <sup>2</sup>
Project Management	1 Project Manager, dedicated 50% for 6 months	\$36,000
System Environment Level	1.5 FTE for 1 month <sup>2</sup>	\$7,760
Database Level	2 Staff, 1 Consultant for 1 month <sup>2</sup>	\$29,760
Application Level	1.25 Staff, 1 Consultant for 1 month <sup>2</sup>	\$29,320
<b>Total</b>		<b>\$102,840</b>

*Note:* 1. Includes consultant costs and internal FTE costs.  
 2. Duration shown to reflect effort required for the migration. Elapsed FTE time may be spread over a longer or shorter period, depending on the migration project's timeline.  
 Source: Interviews, NerveWire analysis

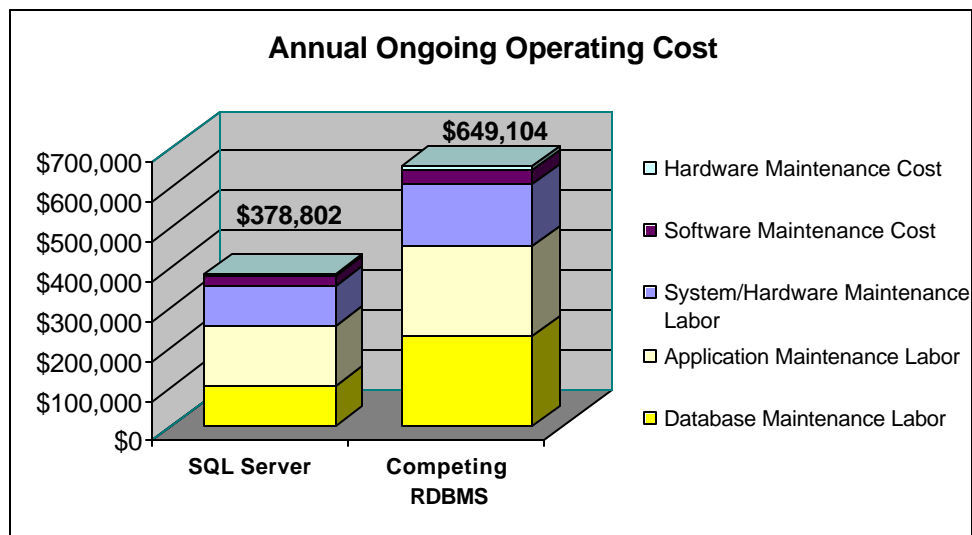
## Ongoing Support

**Hardware.** Modeled hardware maintenance savings amount to \$13,875. Due to the three-year timeframe of the study, hardware upgrade and replacement costs were not included. The ROI of migrating to SQL Server 2000 will grow substantially as hardware is replaced and upgraded beyond the assumed three-year useful life of server hardware.

**Software.** Over the three-year period of the study, savings from software maintenance contracts are expected to be \$20,887. The annual maintenance amounts used in the model reflect the cost of Microsoft's software assurance program<sup>1</sup> and the equivalent program for the competing product. Those programs entitle the company to all updates and upgrades in both the operating and database software.

**Maintenance Labor.** Lower maintenance and support costs contributed \$577,335 of the total savings for companies migrating to a Windows Server 2000/SQL Server 2000 environment. The dramatic differences in the costs associated with each environment are highlighted in the chart of annual operating costs below.

<sup>1</sup> See [www.microsoft.com](http://www.microsoft.com) for more information on the Software Assurance Program.



Support and maintenance labor costs can be analyzed by their two components: the number of hours needed to accomplish the various tasks and the cost of the resources needed to perform those tasks. The SQL Server 2000 environment proved to require less expenditure in both respects, as shown in the Annual Ongoing Operating Labor Costs table below.

Annual Ongoing Operating Labor Costs		
Resource	SQL Server	Competing Product
System/Hardware Maintenance Hours	1,920	2,688
System/Hardware Maintenance Cost per Hour	\$52	\$57
Database Maintenance Hours	1,920	3,840
Database Maintenance Cost per Hour	\$52	\$58
Application Maintenance Hours	2,880	2,880
Application Maintenance Cost per Hour	\$52	\$79
<b>Total Annual Operations Cost</b>	<b>\$349,440</b>	<b>\$604,262</b>

The lower number of hours required for ongoing operational activities in the SQL Server environment can be attributed to several factors:

- Ease-of-use features
- Self-managing and auto-tuning capabilities
- Integration with the Windows environment
- Utilities

The lower cost of resources required for the operational activities in the SQL Server environment include:

- Less time to train staff to be effective
- Larger pool of resources available to perform the task
- Fewer dedicated resources required for specific tasks

As expected, the decrease in the database maintenance effort accounted for the greatest portion of savings from ongoing support activities. This effort was roughly half that of maintaining the competing RDBMS. Study participants noted that the features of SQL Server 2000 listed above allowed them to accomplish comparable activities in less time than with the competing environment. Study results indicate that lower level resources could be used to perform tasks and

that resources with comparable experience were less expensive on the SQL Server side. According to one IT Director, a move to the competing data management system would require that the IT headcount be increased by at least two full-time dedicated resources.

System/hardware maintenance efforts were significantly reduced with the Windows Server 2000/SQL Server 2000 environment. This reduction is attributable to both the Windows Server 2000 operating system and to the tighter integration of the operating system and DBMS. The reduction in the hours of effort targeting activities such as infrastructure management is likely the result of the advanced, user-friendly operating system. Problem resolution activities, which also require fewer hours with the Windows Server 2000/SQL Server 2000 environment, suggest the value created by the tight integration of the operating system and RDBMS environments.

Application maintenance includes activities such as user management and security, reference data management, problem resolution, and application modifications. Because the operating environment should be relatively transparent from the application standpoint, it is not surprising that the number of hours required to perform these tasks remained the same for both environments. Nonetheless, study respondents indicated that a higher-level resource was typically required to complete these tasks on the competing platform.

**Training.** Ongoing training requirements for both DBMS environments were minimal. Training costs over three years were just \$2,279 for SQL Server 2000 versus \$31,500 for the competing DBMS environment.

## Conclusion

Against the backdrop of tighter budgets, companies are rethinking the management of their information technology systems and are placing the same demands on IT investments as those placed on all other capital spending decisions. The shift has placed new and challenging demands on CIOs, forcing them to justify each IT investment by demonstrating its value to the rest of the senior management. For IT professionals who have done the critical analysis, Microsoft solutions provide a much better ROI, integration with infrastructure, and roadmap for the future than Unix. In particular, SQL Server 2000 on Windows 2000 Server has proven time and again to be a cost-effective environment that is well able to meet users' high service-level expectations.

The IT decision makers who participated in this study have highlighted many benefits of SQL Server 2000 from their own experience. They have been able to:

- Lower hardware costs
- Lower software licensing costs
- Reduce support and maintenance costs
- Meet business/user requirements

Although this analysis was targeted at firms considering a migration, the basic results apply to companies selecting a data management system for the first time. They too will experience greater cost savings if they opt for the Windows Server 2000/SQL Server 2000 environment instead of competing database products.

The study's results demonstrate that, compared with migration to other database management environments, the Windows Server 2000/SQL Server 2000 solution features lower hardware costs, decreased software licensing and maintenance expenses, and significantly reduced support and maintenance costs. The value of SQL Server is clear. Migrating to a Windows Server 2000/SQL Server 2000 environment provides an ROI of 248% and a NPV of \$387,311.