

Using the PC Client Refresh to Transform Customer Relationships

Measuring the Financial Value of PC Client Refresh for Retail Banking and Financial Institutions

Abstract

Competing for and retaining customers in the retail banking and financial services sector has never been more challenging. By deploying a client PC that uses Microsoft® Windows® XP Professional and Microsoft Office 2003 running on Intel® Pentium® 4 Processors with Hyper-Threading Technology-based desktop PCs and Intel Centrino™ mobile technology-based notebook PCs, the companies profiled in this report are able to:

- Increase workflow process efficiencies and improve individual and team productivity.
- Improve decision-making and customer response time by having the right information at the right time.
- Transform transactional relationships into consultative relationships.
- Improve IT operational efficiency and reduce overall operating expenses.

The findings in this report will assist senior business and financial executives who make decisions about their organization's IT investments or have an interest in ensuring the productivity of their company's workforce by helping them make more informed choices about the financial value that can be realized by maintaining an up-to-date client PC environment.

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Executive Summary

Banking and financial services companies that implement a timely refresh of their client PC can achieve significant gains in customer responsiveness, employee efficiency and productivity, and reductions in overall operating expenses, including direct and indirect costs of information technologies (IT).

This paper presents findings of business value studies conducted and assessed by Gartner Inc. during 2003. These studies analyzed the financial benefits of refreshing the client PC at nine banking and financial services companies.¹ These companies use a total of more than 280,000 client PCs. The studies assessed the deployment of client PCs based on Microsoft® Windows® XP Professional and Microsoft Office 2003 running on Intel® Pentium® 4 Processor with Hyper-Threading Technology (HT Technology)-based desktop PCs or Intel Centrino™ mobile technology-based notebook PCs. Key findings of the business value studies at the banking and financial services companies identified:

- **High financial value per desktop.** Although total financial benefits averaged \$715 per desktop per year, the total value is greater in most companies.
- **Improved customer satisfaction and responsiveness.** These benefits were the result of new cross-selling and up-selling capabilities valued at \$1,304 per desktop per year and improved access to customer data valued at \$375 per desktop per year.
- **Improved workflow process efficiency.** Efficiency improvements included accelerated time to market of market reports (a benefit valued at \$1,559 per desktop per year) and an accelerated sales cycle valued at \$1,467 per desktop per year.
- **Lower operational costs.** Cost savings included an average 55-percent reduction in IT help desk support costs that are projected to provide benefits valued from \$64 to \$133 per desktop per year. Additional savings are projected to result from lower office leasing costs valued at \$108 per desktop per year, lower costs for application compatibility testing valued at \$66 per desktop per year, and lower client PC management costs.
- **Rapid return on investment.** The internal rate of return averaged 132 percent; payback averaged 16 months.

Results of the business value studies show that for the banking and financial services companies profiled, traditional cost-focused metrics measured as IT Responsiveness and Operational Efficiency represent 23 percent and 13 percent respectively of the value derived from refreshing the client PC.

¹ For more information about the companies that conducted business value analyses and the valuation methodologies, go to Appendix A, "About this Report."

Exhibit 1 shows that the majority of the financial value—64 percent—is found in three categories not related to IT.

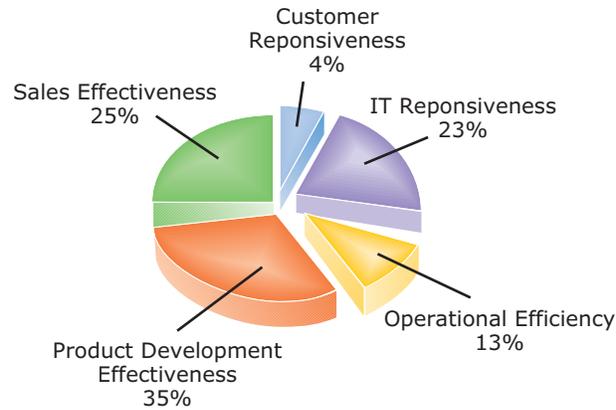


Exhibit 1 – Sources of value of refreshing the client PC

These business-related categories include:

- **Customer Responsiveness**, which includes increased revenue potential due to better customer satisfaction that resulted from improved interaction with customers.
- **Product Development Effectiveness**, which includes reduced costs and increased revenue potential due to faster time to market.
- **Sales Effectiveness**, which includes a reduction in sales, general, and administration (SG&A) costs and an increase in revenue potential due to improved customer touch.

In the companies profiled, most of the benefits gained by refreshing the client PC were attributable directly to business-related benefits. For business and IT decision makers in the banking and financial services sector who have previously made IT investment decisions based principally on total cost of ownership (TCO) and IT-related metrics, this is an important revelation.² The IT-related benefits are represented in the following categories:

- **IT Responsiveness**, which includes the performance and effectiveness of IT systems in meeting the business needs of an organization in a way that is timely, cost-effective, and operationally efficient.
- **Operational Efficiency**, which includes the fundamental value-added activities performed internally to create the goods and services of the organization.

As a result, business decision makers now have new information validated by third parties, information that demonstrates the tangible business value of investing in a timely refresh of the client PC. The substantial financial benefits of ensuring that information stored in back-end databases or other network resources can now be easily accessed by retail bank

² These benefit categories are part of the Gartner TVO methodology that was used for the business value analysis at nearly all of the companies. For more information on Gartner TVO see Appendix A, "About This Report" or go to <https://tvo.gartner.com/home>.

branches and customer service representatives are equally important. Quicker access to more accurate information gives front-line sales and customer service representatives an opportunity to stay informed about customer accounts and enables companies to improve customer responsiveness. The net results are improved customer satisfaction and the potential for increased revenue. This strategy also effectively shifts the decision-making process to a business environment focused on value rather than to an IT equation focused only on costs.

During 2003, the nine banking and financial services companies profiled in this report participated in business value studies conducted by Microsoft and Intel at 23 enterprise organizations representing business, government, and education sectors.^{3,4} The retail banking and financial services companies profiled in this report use more than 280,000 desktop and notebook PCs of the total 723,000 PCs used at all 23 organizations.⁵

³ Seven of the nine studies used the Total Value of Opportunity (TVO) methodology of Gartner Inc. The TVO software model is based on a methodology researched and developed by Gartner, Inc. Gartner has examined the data collection methods of Microsoft and Intel, and has concluded that the methodology employed conforms to Gartner's approved methods. The results are based on the specific outcome of a client implementation and should not be construed as an industry view. This statement is not, and should not directly or by implication be taken as an endorsement by Gartner of any Microsoft or Intel product or service.

⁴ The business value analyses were conducted in each company's local currency; however, for this report, all financial results have been converted to U.S. dollars to ensure consistency in comparison and presentation. Currency conversions were made at the completion of each study; no adjustments were made for subsequent fluctuations in currency value.

⁵ For detailed information about the results of the business value studies conducted at the 23 organizations, see the white paper co-published by Microsoft and Intel, "Empowering Business on the Desktop: Using Gartner Total Value of Opportunity to Measure the Financial Value of Enterprise Client Refresh" at <http://www.microsoft.com/resources/desktop/businessvalue.asp>.

Introduction

The ultra-competitive environment in which retail banks and financial institutions throughout the world compete to gain and retain customers has only increased in intensity. In response to this need for greater agility and competitive advantage, many banking and financial service companies have taken advantage of new information technologies, which enable businesses to accomplish their organization's business goals more effectively. Microsoft software and Intel Architecture-based hardware have helped many of these companies transform workflow processes by enabling them to:

- Improve individual and team productivity by increasing business process efficiency.
- Improve decision making and customer response time by having the right information at the right time, resulting in more satisfied customers.
- Increase potential revenue by transforming transactional relationships into consultative relationships.
- Decrease overall operating expenses by making IT operations more efficient.

This paper presents findings of business value studies conducted at nine banking and financial services companies.¹ These organizations analyzed the financial benefits of refreshing client PCs that use Microsoft Windows XP Professional and Microsoft Office 2003 on desktop PC hardware running Intel Pentium 4 Processors with Hyper-Threading Technology (HT Technology), and Intel Centrino mobile technology for notebook PCs.^{6, 7}

This section discusses some of the common challenges faced by companies in the banking and financial services sector, problems that can be effectively addressed by a timely refresh of the client PC and core information worker productivity programs. This report also describes distinct changes to workflow processes, which can be

Synopsis

Industry Pressures

- Market erosion
- Blurring of services
- Internal cost pressures
- Antiquated IT systems

Challenges

- Increase customer satisfaction by providing customer data whenever and in the form that users need it.
- Optimize customer relationships by using the organization's knowledge base to move from a transactional to a consultative sales approach.
- Optimize legacy computing systems by ensuring that databases and network resources are more easily accessed by information workers at corporate and branch office locations.
- Improve business processes by driving down operational costs and enabling teams to be more efficient and responsive to customer needs.

Value of Client PC

- Ensure quicker access to customer data and corporate knowledge base.
- Create new ways of interacting with customers.
- Increase efficiency of information workers, sales representatives, and customer service personnel.

Action Plan

1. Provide real-time data integration for client PC access.
2. Improve control and organization of data and customer information by providing Web-based team work-spaces.
3. Convert paper-based processes to digital processes and files.

⁶ Each organization intends to deploy different editions of Microsoft Office 2003. For more information on the different Office 2003 editions, go to <http://www.microsoft.com/office/preview/choosing/default.asp>.

⁷ For more information on Intel Pentium 4 Processors supporting Hyper-Threading Technology, go to <http://www.intel.com/info/hyperthreading>. For more information about Intel Centrino mobile technology, go to <http://www.intel.com/products/mobiletechnology/index.htm>.

implemented by using server-based applications and related back-end technologies to decrease direct and indirect IT costs and provide tangible top-line benefits.

Challenges Faced by Retail Banks and Financial Services Companies

The Internet and related information technologies have helped unleash a new era of providing banking and financial services. Consumers can now conduct banking and finance-related transactions at non-conventional locations such as supermarkets just as easily as they can comparison shop for mortgages and mortgage banking companies online or place stock market trades with a multitude of low-cost online brokerage firms. Many of these new companies don't have the legacy computing or customer service infrastructure of traditional banks or finance firms. As a result, these firms are not bound by the past as they use IT to deliver products and services in new ways to more sophisticated and demanding consumers. In the United States for example, the repeal of the Glass-Steagall Act permits the entry of new competitors from other financial services segments where previously there were none.

IT has helped to transform consumer buying habits and expectations, but many banks and financial service providers with legacy business models, business processes, and computing infrastructure have not been able to take advantage of these changes effectively. In many instances, the IT that once enabled these companies to provide volume services to a mass market now constrain financial institutions from adapting to a new world that values personalization, 24 hours a day, 7 days a week, on any device from virtually any location. These organizations must integrate new IT with legacy computing systems to cut costs and increase operating margins, improve existing customer services, develop new products and services, and optimize existing customer information.

Banks and financial services companies recognize that they must counter the impact of their customers who currently conduct business in non-conventional retail environments or with non-traditional sources that did not exist five years ago. These companies must also implement substantive changes in business processes and the IT that support their business. In some instances, this means wholesale change, starting from the ground up, reengineering core processes around new technologies and finding ways to use the storehouse of information and legacy computing systems that have enabled the creation of value in the past and have been paid for many times over. Virtually all banking and financial services companies throughout the world face similar challenges, which include:

- **Maintaining customer satisfaction** and with it customer loyalty and retention by providing customers with the information they need in the form they desire it, whenever they need it.
- **Optimizing customer relationships** by using the organization's knowledge base to convert transactional relationships to consultative relationships, thereby gaining both top-line revenue and market share.

- **Improving business processes** so that individuals and teams can be more efficient, productive, and more responsive to customer needs resulting in decreased unit transaction costs.
- **Optimizing legacy computing systems** by ensuring that information stored on disparate databases and network resources is more easily and quickly accessed by information workers at corporate headquarters and by customer service or sales representatives at retail branch locations.

Banks and financial services firms know that to thrive, their processes must become more customer-centric. And they know that information technologies can play a vital role in achieving these goals.

Tangible Business Value Provided by Client PC and Related Information Technologies

Insight gained from the business value analyses profiled in this report and from other IT projects conducted by Microsoft, Intel, and their Partners indicate that profiled banks and financial services companies share several important goals, which include:

- **Ensure easier and quicker access** to customer account information and the corporate knowledge base.
- **Create new types of customer interaction** that meet customer needs more readily and help improve customer satisfaction.
- **Increase the efficiency and productivity** of sales and customer service representatives and information workers in corporate locations.

Microsoft technologies such as Windows XP Professional and Office 2003 running on Intel Architecture-based hardware and related capabilities of the Microsoft Windows Server System™ can help banking and financial services companies achieve these goals by:

- **Providing real-time data access** by enabling easier, quicker, and more cost-effective data integration with customer information and by accessing databases and other network resources from the client PC. This approach helps improve customer responsiveness and leads to improved customer satisfaction and potential gains in revenue.
- **Improving the control and organization of data** through Web-based team workspaces, which can help to improve team collaboration and sharing of corporate knowledge and customer information. This strategy results in greater information worker efficiency and productivity, which promote better customer relationships and help to improve profit margins.
- **Converting paper-based information and business processes** to digital files and processes that provide more efficient workflow, greater flexibility, and business agility. This approach increases data integrity and security and improves interaction with customers, resulting in improved customer satisfaction, loyalty, and retention.

As the experiences of the companies profiled in this report demonstrate, the client PC – the front end – plays an essential role in realizing these goals. However, to fully realize the

goals defined by the companies profiled, new technologies such as Web services must be orchestrated with back-end network resources. This back-end control is necessary to drive improved process efficiencies with traditional line of business applications and to deliver and consume new products, services, and account information.

Profiled companies evaluated the financial value of a timely client PC refresh and discovered new opportunities to gain process efficiencies that helped both their customers and their bottom line. In effect, these companies used the timing of the client refresh to examine how they could improve their enterprise-wide business processes. As a result, they discovered that it made financial sense to implement these initiatives during the client PC refresh.

All the profiled companies decided to implement a new client PC environment based on a Microsoft PC operating system and productivity software and Intel Architecture-based hardware. To provide a complete and integrated solution, they also evaluated and piloted a range of other Microsoft server-based applications and related technologies appropriate to their business needs and IT environments.

For example, some organizations ran pilot programs to test the use of tablet PCs running Windows XP Tablet PC Edition.⁸ Other organizations have started to use Microsoft Windows SharePoint™ Services, a technology of Microsoft Windows Server 2003. This strategy helps to improve individual and team productivity by providing a Web-based team collaboration environment that is used alone or used with Microsoft Office SharePoint Portal Server 2003.^{9, 10} Other companies evaluated the use of Microsoft Office InfoPath™ 2003, a new XML-based program in the Microsoft Office System that enables organizations to gather data more effectively and integrate it with back-end and front-end systems.¹¹ Companies also evaluated Microsoft BizTalk® Server 2003 and Microsoft Host Integration Server 2000 to provide greater connectivity to legacy network resources.^{12, 13}

The remainder of this report summarizes the results of the business value studies and presents case studies that highlight the experience of profiled banks and financial services companies at which studies were conducted.

⁸ For more information on tablet PCs and Windows XP Tablet PC Edition, go to <http://www.microsoft.com/windowsxp/tabletpc/default.asp>.

⁹ For more information on Microsoft Windows SharePoint Services, go to <http://www.microsoft.com/windowsserver2003/technologies/sharepoint/default.mspx>.

¹⁰ For more information on Microsoft Office SharePoint Portal Server 2003, go to <http://www.microsoft.com/office/sharepoint/prodinfo/default.mspx>.

¹¹ For more information on Microsoft Office InfoPath 2003, go to <http://office.microsoft.com/home/office.aspx?assetid=FX01085792>.

¹² For more information on Microsoft BizTalk Server, go to <http://www.microsoft.com/biztalk/>.

¹³ For more information on Microsoft Host Integration Server, go to <http://www.microsoft.com/hiserver/>.

Business Value Results

The business value methodologies used for analysis at the banking and financial services companies are the same as those used at the other organizations that were part of the larger business value study group. The two methodologies used are Gartner Total Value of Opportunity (TVO) and the Microsoft Rapid Economic Justification (REJ). For more information about these methodologies and how they were used, please see Appendix A, “About this Report.” For more detailed analyses of studies conducted at all 23 organizations and for more information about how the TVO methodology was applied, see the white paper co-published by Microsoft and Intel, “Empowering Business on the Desktop: Using Gartner Total Value of Opportunity to Measure the Financial Value of Enterprise Client Refresh.”¹⁵

This section summarizes the results of the business value studies conducted at the banking and financial services companies and compares the results with those for all 23 organizations. The metrics reflect the unique circumstances of each of the companies profiled and are not intended to indicate that other companies or organizations can attain the same results.¹⁴

Gartner Business Performance Framework and Total Value of Opportunity

The Gartner TVO methodology, a core component of the Gartner Business Performance Framework™ developed by Gartner Inc., was designed to help organizations determine the business value of their IT investments.¹⁵ The methodology provides quantitative and qualitative analytical tools that measure value for both the IT and the business aspects of an organization. The Gartner Business Performance Framework is organized into three core areas:

- **Demand Management**, which includes all activities that generate demand for the products and services offered by the organization.
- **Supply Management**, which includes all activities directly involved with satisfying demand for the products and services offered by the organization.
- **Support Services**, which includes all other activities that support the organization. These services support internal clients by operating on business principles and providing internal services at a cost and quality that is acceptable when assessed against alternatives.

Each core category is divided into three sub-categories, referred to as Aggregates, which further describe specific value. These Aggregates are subdivided into Primes, which define more prescriptive value. Note that not all Aggregates provided value for the companies, and not all companies derived value in each Aggregate.

¹⁴ Other organizations may or may not receive similar business value depending upon their unique business circumstances and IT infrastructure.

¹⁵ For more information about Gartner TVO methodology, go to <https://tvo.gartner.com/home>.

Exhibit 2 shows the framework's three core areas of value and their Aggregates for all organizations studied and for the banking and financial services companies profiled.

Gartner Business Performance Framework	TVO Aggregate	All TVO Studies Benefit/PC/Year	Banking/Finance Studies Benefit/PC/Year
Demand Management	Market Responsiveness	\$2,612	n/a
	Sales Effectiveness	\$616	\$904
	Product Development Effectiveness	\$1,177	\$1,559
Supply Management	Customer Responsiveness	\$320	\$76
	Supplier Effectiveness	n/a	n/a
	Operational Efficiency	\$338	\$310
Support Services	Human Resources Responsiveness	n/a	n/a
	IT Responsiveness	\$408	\$283
	Finance and Regulatory Responsiveness	n/a	n/a

Exhibit 2 – TVO results of banking and financial service companies and all TVO studies

Exhibit 2 does more than just show the distribution of value for specific customer organizations. It also identifies new business-oriented metrics that can be measured as accurately as IT and cost-related metrics. Because the value categories are defined more clearly and are relevant to both IT and business stakeholders, the TVO methodology makes it easier to assess the business value of investing in a client PC refresh objectively.

Exhibit 2 also shows that although the actual dollar values vary due to specific company circumstances, there is relatively little difference between the value per PC per year at the banking and financial services companies and all companies that conducted TVO studies. This similarity indicates that a timely refresh of the client PC applies provides roughly equal value to all industry sectors. The total dollar values are specific to the companies profiled, but the dollar value per PC per year reflects outcomes that can be extrapolated and applied to virtually any banking and financial services company whenever each company's unique business circumstances and IT environment are taken into account.

And finally, Exhibit 2 demonstrates that the TVO assessment process is a valuable exercise that any company can undertake to identify important categories of business value that can be achieved with a timely or accelerated client PC refresh.

Traditional Measures of Valuation

In addition to the TVO analysis, each company's IT investment was measured with the same business-standard methodologies that are used to evaluate other capital investments and that conform to generally accepted accounting practices. These valuation measures include a cash flow analysis that uses internal rate of return (IRR), return on investment (ROI), and payback period as indicators of value on the effective use of capital.

Exhibit 3 compares the results projected for the banking and financial services companies with those of the TVO and business value studies conducted at all 23 organizations. Both the average and the range of values for each study group are presented.^{16, 17, 18}

Traditional Valuation Measure	All TVO/Business Value Studies		Banking/Finance Studies	
	Average Value	Range of Values	Average Value	Range of Values
Internal rate of return	201%	26% to 930%	132%	26% to 313%
Return on investment	208%	25% to 583%	161%	25% to 252%
Payback period	16 months	12 to 23 months	16 months	12 to 21 months
Discount rate	10.8%	10% to 18%	12.85%	10% to 18%
Number of PCs per organization	30,000+ seats	2,500 to 120,000+ seats	30,000+ seats	7,000 to 120,000+ seats

Exhibit 3 – Results of TVO and business value studies measured by traditional valuation methods.

For analytical and decision-making purposes, the differences between the banking and financial services companies and the larger study group are marginal.¹⁹

The key takeaway points include the relative consistency of results across different vertical sectors and the banking and financial services sector and the fact that all organizations are using their capital effectively to realize value. Some aspects of the financial value resulting from a timely refresh of the client PC might be more difficult to quantify than typical IT or cost savings. Nevertheless, business value is quantifiable, and any company can realize tangible value by transforming business processes that are common to all organizations as well as those that are unique to each company.

¹⁶ Two outliers of 3 percent and 27 percent are not included in the range for the discount rate of the 23 organizations because they represent unique environments and circumstances. One European financial institution had an unusually low (3 percent) weighted cost of capital. The weighted cost of capital for a South American manufacturing company was 27 percent due to an extraordinarily high rate of national inflation.

¹⁷ One outlier of 3 percent is not included in the discount rate range for banking and financial services companies.

¹⁸ Two additional companies were included in the total TVO studies calculations since the original Microsoft-Intel TVO report was published.

¹⁹ Any differences in IRR, ROI, or payback period between the banking and financial services companies and all companies at which business value studies were conducted are due principally to a slightly higher risk factor caused by a more conservative financial environment for the banking and financial services companies.

Transforming Customer Relationships: Case Studies

This section presents some of the quantitative results of the business value studies conducted at the banking and financial services companies profiled in this report. The summaries provided here describe the business situation and business value projected for four companies. Additional summaries can be found in Appendix C, “More Case Study Summaries.” This section groups business value results by the three common goals discussed earlier in this report.

The results demonstrate that deploying a desktop or notebook PC solution based on Windows XP Professional and Microsoft Office 2003 running on Intel Architecture-based hardware can contribute more than simple IT cost-based benefits. Timely adoption of these desktop technologies is equally important to ensuring tangible business value.

Financial benefits for these companies include increased customer satisfaction from new ways of interacting with customers, faster customer responsiveness, quicker access to customer information, and improved data integrity. Each summary, which looks at a business challenge from both the business and IT points of view, shows how using desktop and related Microsoft server technologies provide tangible financial value. Exhibit 4 highlights each of the case studies presented.

Business Goal	Company	TVO Category or Critical Success Factor	Technology Enabler	Improvement	Projected Value
Become more customer centric	Bank #4	IT Responsiveness and Support - System Performance	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Cross-selling and up-selling enabled by improved collaboration and communications	\$1,304 per desktop per year Improved desktop stability due to increased manageability, availability, and reliability Increased user efficiency and productivity due to better data sharing and collaboration, better usability, and better hardware performance Reduced operational expenses due to fewer help desk calls 148% IRR, 25% ROI, and 13-month payback period
	Bank #2	Demand Management: Product Development Effectiveness - Time to Market Index Sales Effectiveness: Sales Cycle Index and Sales Opportunity Index IT Support Performance	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Windows Server 2003 Office SharePoint Portal Server 2003 BizTalk Server 2003 Host Integration Server 2000	Reduced time to market for market reports.	210% ROI and 17-month payback period A 1% improvement in the Time to Market Index metric valued at \$1,559 per desktop per year

Office 2003
 Windows XP
 Intel Pentium 4 Processor with HT Technology
 Intel Centrino Mobile Technology

Exhibit 4 – Overview of projected value for selected organizations

Business Goal	Company	TVO Category or Critical Success Factor	Technology Enabler	Improvement	Projected Value
Transform transactional relationships into consultative relationships	Bank #1	Demand Management: Product Development Effectiveness	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> InfoPath 2003 Windows Server 2003	Accelerated sales cycle enabled by less data analysis and more efficient workflow	25% IRR with 24-month payback period. Total value of \$1,467 per desktop per year. A 1% improvement in the Sales Opportunity Index metric valued at \$375 per desktop per year. A 0.5% improvement in Sales Cycle Index metric valued at \$710 per desktop per year.
		Sales Effectiveness: Sales Opportunity Index	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> SharePoint Portal Server 2003 BizTalk Server 2003		
		Sales Effectiveness: Sales Cycle Index	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Host Integration Server 2000		
		Loan Process Quality	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Host Integration Server 2000		
	Bank #2	Materials Quality	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> InfoPath 2003	Improved process flow for customer information	\$174 per desktop per year.
	Bank #9	Sales Effectiveness: Sales Cycle Index	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Windows SharePoint Services BizTalk Server 2003 Host Integration Server 2000	Reduced cycle time to process a financial product for small business customers	Overall 252% ROI with 14-month payback period. 0.2% improvement in the Sales Cycle Index metric. 0.2% improvement in the Sales Opportunity Index metric. 0.3% improvement in the Customer Care Performance metric.
		Sales Effectiveness: Sales Opportunity Index	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> BizTalk Server 2003 Host Integration Server 2000	Improved cross-selling opportunities within the business process	
		Customer Responsiveness: Customer Care Performance	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Host Integration Server 2000	Increased customer satisfaction due to faster cycle time of loan processing	
	Improve control of data	Bank #6	IT Support Performance	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> InfoPath 2003	Lower help desk costs due to improved reliability and availability
IT Total Cost Index			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> InfoPath 2003	Lower overall IT costs due to better compatibility of line of business applications	
Bank #3		IT Total Cost Index	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Windows Server 2003	Reduced cost of Tier 1 and Tier 2 support	\$108 per desktop per year. 107% IRR, 119% ROI, and 17-month payback period.
		Service Performance	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Windows Server 2003	Improved desktop software distribution capabilities	
		Conversion Cost	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Windows Server 2003	Lower help desk costs	
		Conversion Cost	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Windows Server 2003	Improved defense against virus attacks	
Bank #5	Conversion Cost	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Windows Server 2003	Standard desktop helps improve IT efficiency	\$133 per desktop per year. 69% IRR, 119% ROI, and 16-month payback period.	

Office 2003
 Windows XP
 Intel Pentium 4 Processor with HT Technology
 Intel Centrino Mobile Technology

Exhibit 4 – Overview of projected value for selected organizations (continued)

Reference is made to the Gartner TVO nomenclature of Aggregates and Primes because many of the business value studies used the TVO methodology for analysis. For the definitions of the TVO Aggregate and Primes referenced in the preceding table, please see Appendix B, “Gartner Total Value of Opportunity Methodology.” For more detailed information, see the white paper co-published by Microsoft and Intel, “Empowering Business on the Desktop: Using Gartner Total Value of Opportunity to Measure the Financial Value of Enterprise Client Refresh,” or go to the TVO page of Gartner, Inc. at <https://tvo.gartner.com/home/>.⁵

Becoming More Customer Centric

Becoming more customer centric focuses on how client PC technologies empower customer service and sales representatives in retail branch or corporate locations to be more responsive to customer needs, in part by connecting to network and back-end resources.

Case Study: Banking and financial services company # 4 Robust development platform enables creation of customer-focused applications and Web services.

A leading Middle Eastern bank operated more than 10,000 desktops running IBM DOS® version 6.22 and a mix of other Microsoft client operating systems including Windows 95, Windows 98, and Windows NT® Workstation version 4.0. At 600 retail branch locations, approximately 7,000 desktop PCs used a specialized third-party banking application that was out of date. Approximately 3,000 PCs used by managers and corporate offices used the Microsoft Office 97 personal productivity suite of applications.

The legacy platform compromised desktop stability, availability, and manageability. This situation resulted in a high number of help desk support requests, which often took as much as 1 to 2 days per request to resolve. Often, the most expedient resolution was simply to provide a loaner PC and bring the problem PC into the service center. The IT staff also had multiple support issues caused by a high number of desktop images they had to support, time-consuming software rollout tasks, and patch management duties. As a consequence, help desk costs were higher than warranted and contributed to overall higher operating costs.

The bank needed a PC desktop that would provide improved desktop stability, improved user productivity, and lower operating expenses. Initially, the bank evaluated Windows 2000 Professional for its increased desktop stability. However, the analysis indicated that Windows XP Professional was a better choice because its improved availability, reliability, and manageability would help to lower IT operating expenses by further decreasing help desk service calls.

During the initial evaluation, the bank also looked at deploying Office XP to improve personal productivity. However, the business analysis helped bank officials identify new value that could be derived by using new collaboration and communications capabilities in Office 2003 that are not available in Office XP.

Desktop PCs based on the Intel Pentium 4 Processor with HT Technology will provide greater hardware performance and enable both increased PC reliability and improved information worker productivity.

Most branch banking applications are specialized and unique to each bank. Through the native capabilities of the Microsoft .NET Framework, the use of Windows XP Professional would provide both a robust development environment and a stable PC platform on which to base specialized bank applications. The bank intends to take advantage of this capability by building .NET-powered Web services to help improve both the performance of retail branch employees and customer service.

These new information sharing capabilities and new specialized banking applications enable the bank to up-sell and cross-sell banking services throughout its branch banking environment, optimize its customer relationships, and decrease its cost per sale. Upgrading to an industry-standard desktop that supports Web services and other online applications will enable the bank to be more responsive to its customers. Web services will also provide an entirely new venue, in which bank customers can learn about new financial services, determine the status of their accounts, and interact with bank customer service representatives.

The business analysis projects a value of \$1,304 per desktop per year from improved IT efficiencies. The investment is projected to have a 148-percent IRR, a 25-percent ROI, and a 13-month payback period. The bank is currently in pre-deployment planning and anticipates deployment in 2004.

Transforming Transactional Relationships to Consultative Relationships

Transforming transactional relationships to consultative relationships focuses on combining desktop technologies, server-based applications, and new XML technologies to empower organizations to change various workflow processes and gain greater business efficiency. These results have a direct impact on the ability of the company to respond to customer needs more effectively.

The following case studies demonstrate how sales opportunities can be increased by the use of powerful desktop PC productivity programs and how integrating front-end and back-end systems can help improve the sales cycle and increase customer responsiveness.

Case Study: Banking and financial services company # 1
Increase the number of loans processed by reducing sales cycle time.

At a European bank that uses more than 120,000 PCs, information workers spend from 15 to 40 percent of their time doing pre-sales activities that use customer data as baseline inputs. Unfortunately, data is pulled from the main systems only once a month, and the information is not as up-to-date as the sales team needs it to be. This situation affected the team's ability to create effective and timely sales proposals, which resulted in a decline in customer satisfaction. Within this environment, the bank faced the following business challenges:

- Loan loss minimization and control
- Demographic changes and increased customer mobility
- Internal process efficiencies and reorganization
- Maintaining customer satisfaction

To meet these challenges, the bank needed to reduce its sales cycle and improve the success rate of its sales opportunity process. To meet these business needs, the bank evaluated a technology solution that included a new front-office platform, network standard, and a sales tool that used a new user interface and platform.

The bank, which used primarily non-Microsoft client PC operating system and productivity software, needed to replace its existing system with a more up-to-date, industry-standard desktop that would enable them to establish a bank-wide standard desktop and a set of standard templates for sales and data gathering. In its current environment, the bank staff shares loan process information by exchanging e-mail messages and Microsoft Excel spreadsheets without using a centralized or departmental repository of digitized data. Everything is stored centrally on paper. As a result, the loan process can take several weeks because customer data is not fully documented or communicated in digital form. Consequently, workers spend an estimated 60 percent of their time re-keying information into various systems.

The sales team expects that the use of standardized templates will enable them to improve access to data on the back end. This approach will help them in their decision-making process as they confer with customers and result in higher customer satisfaction and more sales. Implementing a common platform for collaboration will enable sales representatives to share customer information more easily, respond to customers more quickly, and use more up-to-date and relevant information.

The bank developed a two-phase solution. Phase I consists of deploying Windows XP Professional and Office 2003 operating on PCs running Intel Pentium 4 Processors with HT Technology and Microsoft Office InfoPath 2003. InfoPath 2003 is the new XML-based data-gathering and form-building program of the Microsoft Office System. This program can be used as a bank-wide standard for capturing customer information in digital form.

XML-based InfoPath 2003 forms can integrate seamlessly with back-end databases that use XML tags. As a result, sales associates have much more customer information available to them for quicker and more informed decision making. The bank expects that using InfoPath 2003 will help to reduce sales cycle time and help sales representatives close more sales more quickly.

Phase II of the solution deploys Microsoft Office SharePoint Portal Server 2003 to provide more robust internal collaboration and cross-site access to information. Microsoft BizTalk Server 2003 and Microsoft Host Integration Server 2000 also provide improved access to information stored on legacy systems throughout the bank. This complete solution is expected to decrease the time used for customer information analysis by reducing the number of steps in the workflow process and by helping the staff respond more quickly to customers. The bank anticipates a decrease in its overall sales cycle time, improved customer satisfaction, and the opportunity to process more loans.

Based on the TVO analysis, the bank anticipates a 1-percent improvement in its Sales Opportunity Index Prime, which is valued at \$375 per desktop per year and a 0.5-percent improvement in its Sales Cycle Index valued at \$710 per desktop per year. This solution will also reduce the loan loss provision process (TVO Operational Efficiency Prime) by helping to improve customer satisfaction. The value of this improvement is projected at \$382 per desktop per year. The combined projected value of these improvements is \$1,467 per desktop per year. The bank expects a 25-percent IRR with a payback period of less than 24 months.

By using an industry-standard PC desktop and a standardized way of capturing customer information and sharing it with colleagues, bank sales representatives have an opportunity to transform customer relationship from a transaction focus that emphasizes volume to a consultative relationship that emphasizes improving customer satisfaction by responding to customer needs more effectively.

Case Study: Banking and financial services company # 9

Increased collaboration helps reduce loan approval cycle time, increases revenue, and improves customer satisfaction.

A TVO analysis was conducted at one business unit of a leading U.S.-based bank that operates more than 120,000 desktops in more than 20 states. The business unit, which made loans to small and medium-size businesses, was exceptionally effective at getting customers to apply for small business loans through the bank's retail branches.

However, the bank's due diligence process serves as a risk mitigation procedure designed to minimize loan loss. This loan review process required the attention of as many as 14 different individuals such as sales, auditing, and financial analysis professionals. Each individual had varying levels of access to customer information but only limited interaction with each other.

As a result, the loan approval process could take as long as 6 to 8 weeks, compared to the average of 1 to 2 weeks for loan closure at competing local banks. Consequently, the closure rate for many of the loans was not as high as it could have been if the loan closure cycle time was shorter. Also, the bank, which had already invested considerable resources in loan analysis, was not meeting the performance goals it had set for itself.

The data gathering and customer responsiveness problems did not originate at the front end of the retail branches. Rather, the challenge was at the back end of the process—ensuring that all of the necessary customer information was made available in a timely manner and in a usable form to all of the various back-office individuals who were part of the analytical and decision-making process. The bank was sure that if everyone in the sales value chain could communicate with each other more effectively and share the necessary information more easily, they could reduce the overall loan approval cycle time, improve customer satisfaction, and increase the bank's loan portfolio of small- and medium-sized business customers.

The bank knew that improving back-office efficiency alone would solve only part of the problem. Therefore, they used the client PC refresh cycle to implement an integrated communications and collaboration system that connected branch and corporate offices and that provided a comparable level of process integration at its retail branches.

The bank is considering deployment of Office 2003 running on Windows XP Professional in both its retail branches and corporate locations, which analyze small business loans. Windows XP Professional is expected to help reduce help desk support costs and to increase productivity by providing a highly reliable and available desktop PC. The powerful analytical capabilities of Microsoft Office Excel 2003 will enable local bankers and sales representatives to conduct virtually any type of financial analysis necessary to process a loan application. Desktop PCs based on the Intel Pentium 4 Processor with HT Technology and notebook PCs based on Intel Centrino mobile technology are expected to help improve hardware performance and result in lower operating costs and greater productivity.

But most importantly, the bank has decided to upgrade from Windows NT Server version 4.0 to Windows Server 2003. This strategy will enable the bank to implement Windows SharePoint Services to provide Web-based collaborative workspaces that integrate seamlessly with Office 2003. As a result, everyone involved in the loan approval process can share information and interact in real time more quickly and easily. This part of the solution is an essential ingredient to improving the speed with which information is shared. This accelerated collaboration process is expected to result in faster decision-making, improved customer satisfaction, and more loans in the bank's small business loan portfolio.

By implementing Microsoft BizTalk Server 2003 to help integrate data within structured business processes, the bank is also making sure that the customer information currently siloed in its legacy databases will be more easily available to local users. The bank used Microsoft Host Integration Server 2000 to connect its mainframe computers so that

customer information can be used as part of the loan analysis process. In this way, the bank optimizes its customer information.

Based on the TVO analysis, the bank expects a 0.2-percent improvement in its Sales Cycle Index Prime, a 0.2-percent improvement in its Sales Opportunity Index, and 0.3-percent improvement in Customer Care Performance. The bank anticipates a 252-percent ROI and a payback period of 14 months.

By using an industry-standard PC that runs server-based applications, the bank ensures that customer information is available to all loan-related personnel during the entire sales cycle. As a result, customer information is shared more effectively, which helps to reduce both personnel effort and cycle time. This approach enables the bank to close more loans more rapidly and leads to an increase in customer satisfaction.

Improved Control of Data

Improved control of data focuses on how the timely refresh of desktop technologies is a critical decision that affects line of business applications, data integrity, and the ability to develop new Web-based applications to better meet customer needs.

Case Study: Banking and financial services company # 3 ***Secure and reliable remote access reduces office accommodation costs.***

A European financial services group operates more than 22,000 desktops that run Windows 9x, Window NT Workstation version 4.0, and Office 97. The company was in the process of reorganization and needed to reduce overall operating expenses, including IT costs. Part of the reorganization required that workers spend less time at their office and more time working from remote locations. The group responded by increasing the number of home-based, remote, and mobile workers who do not have office space allocated but share hot desks or use wireless connections whenever they are on site. This approach would help improve operations efficiency by reducing office accommodation costs and decrease IT costs by reducing the level of outsourced IT services.

The key concern was how to implement this strategy as the company's desktop and notebook PCs approached the end of their life cycle. The PCs didn't provide easy and quick remote connectivity or wireless access and required more than average support due to lower levels of availability and reliability. The business value analysis estimated that the company would have to spend more than \$1.0 million in incremental costs if they decided to support Windows 9x and Windows NT after product support was discontinued.

The company responded by initiating a fixed refresh cycle for its desktop and notebook PCs, some of which would be replaced during the normal attrition cycle. The company also increased the number of IT professionals who could work from remote locations by deploying a PC desktop that was designed for remote computing.

Using Intel Centrino mobile technology-based notebook PCs and Windows XP Professional features that support secure and reliable remote computing and wireless local area network (WLAN) connections helped enable a shift towards remote, mobile, and wireless operations.

This company expects benefits projected at a value of \$108 per desktop per year. Benefits are anticipated from reduced office accommodation costs. Additional savings are projected from reduced cost of Tier 1 and Tier 2 service support, improved software distribution capabilities, and fewer help desk calls to resolve downtime from virus-related problems.

The business value analysis projected a 107-percent IRR, a 119-percent ROI, and payback period of only 17 months. The bank is presently engaged in the deployment planning process.

Conclusions

This report summarizes the experience of banking and financial service companies that evaluated a new client PC platform based on Windows XP Professional and Office 2003 running on Intel Pentium 4 Processor with HT Technology-based desktop PCs and Intel Centrino technology-based notebook PCs.

Virtually all of the companies profiled in this report cited business benefits as the primary reason to upgrade from their previous desktop operating systems and personal productivity applications. Their decision to upgrade to the new client platform was based on a set of established business metrics that demonstrated the measurable value of running their business-critical applications on client PCs. Changes to the client platform were justified by business metrics, not just the cost-based metrics traditionally used by IT professionals to make IT-related investment decisions.

The Gartner TVO methodology helped the profiled companies to correlate the solutions offered by Windows XP Professional and Office 2003 capabilities to tangible value to their respective businesses. By identifying where and when that value could be achieved more precisely, these companies were better able to plan their refresh cycle and deployments to optimize both their IT infrastructure and the return on their investment capital.

In these TVO studies, the profiled companies examined how client PCs that used Windows XP Professional and Office 2003 operating on Intel Architecture-based hardware could help them:

- Develop more customer-centric processes and practices.
- Establish consultative rather than transactional customer relationships.
- Control data more effectively.

Organization-specific solutions are expected to shorten the sales cycle for different products, increase customer satisfaction, and increase the companies' ability to develop new products more quickly.

For more detailed information about how other customers from different industries approached the same business challenges and arrived at similar conclusions, see the white paper co-published by Microsoft and Intel, "Empowering Business on the Desktop: Using Gartner Total Value of Opportunity to Measure the Financial Value of Enterprise Client Refresh."

For More Information

For more information about the business value of a client desktop consisting of Windows XP Professional and Microsoft Office 2003 go to <http://www.microsoft.com/resources/desktop/businessvalue.asp>.

For more information about Microsoft Office 2003 and the Microsoft Office System, go to <http://www.microsoft.com/office>.

For more information about Windows XP, go to <http://www.microsoft.com/windowsxp/default.asp>.

For more information about the Intel Pentium 4 Processor with HT Technology and Intel Centrino mobile technology go to:

- <http://www.intel.com>.
- <http://www.intel.com/ebusiness/upgrade>.
- <http://www.intel.com/business/bss/products/desktop/index.htm>.
- <http://www.intel.com/ebusiness/mobile>.
- <http://www.intel.com/business/bss/products/client/pcrefresh/unwire.htm>.

For more information about the business value of the Microsoft Office System, see the white paper, “Process Goldmine: Microsoft Office System Integrated Solutions Delivers Business Value,” at <http://www.microsoft.com/office/business/value.msp>.

For more information about the business value of a timely refresh of enterprise client PCs, see the white paper co-published by Microsoft and Intel, “Empowering Business on the Desktop: Using Gartner Total Value of Opportunity to Measure the Financial Value of Enterprise Client Refresh.” This document is available at <http://www.microsoft.com/resources/desktop/businessvalue.asp>.

For details about the business value of Windows XP Professional, see the Microsoft white paper, “Higher Yields: The Financial Benefits of Windows XP Professional,” which is available at <http://www.microsoft.com/windowsxp/pro/evaluation/whyupgrade/bizval>.

For information about the business value of Windows XP Tablet PC Edition, see the white paper, “Empowering Information Workers: The Financial Benefits of Windows XP Tablet PC Edition,” at <http://www.microsoft.com/windowsxp/tabletpc/evaluation/financialvalue.asp>.

For more information about business value at Microsoft, go to <http://www.microsoft.com/value>.

For information about Gartner Inc. and the Gartner TVO methodology, go to:

- <http://www.gartner.com>.
- <https://tvo.gartner.com/home>.

Appendix A: About This Report

The nine banking and financial services companies documented in this report were part of business value studies conducted during 2003 at 23 enterprise organizations. These organizations represent a range of sectors, including education, energy, transportation, government, manufacturing, retail, services, and telecommunications.

All profiled companies used either the Gartner TVO or the Microsoft REJ methodology to assess the financial value of investments in the client PC and related technologies such as server-based applications and Microsoft enterprise servers.

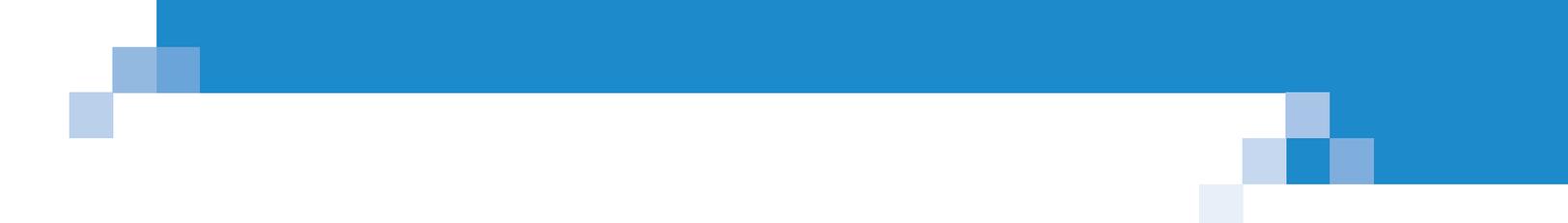
TVO is a valuation methodology developed by Gartner, Inc. to determine the overall business value expected from an IT-enabled business initiative. TVO takes up where traditional total cost of ownership (TCO) methodology leaves off. TVO includes IT cost-based measurements and business-related measurements that are not part of TCO or other IT cost-based methodologies. The essential point of conducting TVO analyses of the desktop client refresh is to assess the value that can be realized in areas outside of IT costs. TVO results are reported with a specific set of parameters and with traditional valuation measures. For more information about the Gartner TVO methodology, go to Appendix B, “Gartner Total Value of Opportunity Methodology” or to <https://tvo.gartner.com/home/>.

REJ is an open architecture financial valuation methodology created by Microsoft to assess the financial benefit of implementing information technologies. It uses standard business valuation tools and generally accepted accounting practices to develop cash flows and return on investment scenarios that are specific to the technologies considered for deployment. For more information about REJ and Microsoft business value services, go to <http://www.microsoft.com/resources/desktop/businessvalue.asp>.

To ensure consistent data gathering and analysis, all studies documented in this report conformed to either the Gartner TVO or the REJ methodology and tool set. Both methodologies provide a consistent framework for assessing the quantitative and qualitative business value that an organization derives from its IT investments.

The TVO and REJ methodologies provide results in a language common to business executives, enabling them to make more informed strategic and tactical decisions. Both methodologies also address the interests of financial executives by using a common financial language that uses internal rate of return, return on investment, payback period, and net present value as indicators of tangible financial value.

The nine retail banking and financial services companies profiled in this report use a total of more than 280,000 desktop PCs, which represent 39 percent of the more than 723,000 desktop and laptop PCs used by the 23 organizations engaged in the TVO and REJ studies.



Seven of the nine banking and financial companies conducted complete TVO analyses which were assessed by Gartner, Inc. The other companies chose to conduct either partial TVO analyses or REJ analyses that reflected their business priorities.³

The profiled companies have requested anonymity to protect the confidential nature of the business value information presented in this report. Other banking and financial services companies may extrapolate the results and apply them as appropriate to their own organization and circumstances.

Appendix B: Gartner TVO Methodology

This appendix provides the executive summary of Gartner Strategic Analysis Report R-19-1910, which was published on March 3, 2003.²⁰

TVO Methodology: Valuing IT Investments via the Gartner Business Performance Framework

TVO is a standard metrics-based, methodology developed by Gartner Inc. TVO methods can be used to perform comprehensive investment analysis of an IT-enabled business initiative. TVO methods use the Gartner Business Performance Framework as a standard framework that measures the business performance impact of the initiative being modeled. This appendix describes the components of the TVO methodology.

TVO is a quantitative and qualitative value methodology that applies a standard set of thought-leading concepts and models to answer seven key value-related questions about a potential IT investment. These questions include:

- What is the initiative?
- How will we measure the business value?
- What does the technology do?
- How much benefit will we receive?
- How much will it cost through what period of time?
- How do we take future uncertainty into account?
- Is the enterprise positioned to exploit these capabilities?

For a complete value analysis (and, therefore, a business case analysis) of a potential IT investment, it is critical to ensure that each of these questions has been answered completely and in depth. This means that each question has been considered, and an accepted methodology has been applied to answer it. Accepted means agreed to by the stakeholders in the investment. At a minimum, this includes financial, business unit, and IS organization sponsors.

The standard TVO methodology includes best practices methodologies that Gartner has identified and applied to answer each of the seven value-related questions listed previously. These components of TVO help to provide a complete view of an IT-enabled business initiative, from the capability inherent in the solution that is based on a technology perspective to the ability of an organization to convert that capability into business value. The TVO components also build a trail of evidence that links the IT capabilities to the resulting projected financial model, which makes the business metrics and resulting business operations involved in unlocking that value.

²⁰ For more information about the Gartner TVO methodology, go to <https://tvo.gartner.com/home/>

Appendix C: More Case Study Summaries

This appendix provides additional evidence of the benefits of a timely refresh of Microsoft and Intel-Architecture-based desktop technology. The case study summaries provided here reflect the three core goals described previously in this report.

Becoming More Customer Centric

Becoming more customer centric focuses on how desktop technologies empower customer service and sales representatives in retail branch or corporate locations to be more responsive to customer needs, in part by connecting to network and back-end resources.

Case Study: Banking and financial services company # 2 ***Accelerated time to market for market reports increases sales opportunities.***

With more than 12,000 desktop PCs running Microsoft Office 97 on Microsoft Windows NT Workstation version 4.0 or Windows 9x, this European bank originally perceived little value in upgrading to a desktop consisting of Windows XP Professional and Office 2003. In essence, the company was willing to maintain its legacy platform for several more years to further optimize its investment.

The bank, however, knew that to maintain and improve customer satisfaction, it needed to increase the amount of face-to-face customer contact in its branch offices. The bank also faced regulatory and governmental changes that included the possible adoption of the European Union currency and the anticipated completion of a merger with another financial services company by the end of 2004. Within this business context, the IT group faced several core challenges, including:

- Adopting a new sales tool with a new user interface and platform.
- Continuing to improve the “customer view.”
- Adopting new versions of the bank’s standard PC client hardware and software.
- Changing business applications needed to address new business challenges.
- Reviewing other business applications that can further help to reduce costs.

The TVO analysis showed that the bank would save money by maintaining its legacy desktop. However, the bank would also be effectively blocked from achieving new communication and data access flexibility necessary to meet new business challenges and take advantage of new tools to help improve customer satisfaction.

Based on the TVO analysis, the bank decided to evaluate a solution based on:

- An Intel Architecture-based PC desktop using Windows XP Professional and Office 2003.
- A collaboration solution using SharePoint Portal Server 2003.
- Better integration with legacy databases achieved by using Microsoft BizTalk Server 2003 and Microsoft Host Integration Server 2000.

As a result of the TVO analysis, the bank's IT group was able to reconsider the value of a more timely refresh of its desktop PC operating system and productivity applications. By upgrading their client PC environment, the group was more aligned with the bank's business goals and able to move forward more effectively.

The company expects that this IT investment will provide a centralized location from which to examine data and customer information and improve collaborative capabilities of its information workers. This approach is expected to reduce the time to market for highly time-sensitive capital market reports, reduce sales cycle time, and improve the success rate of the sales opportunity process. A centralized document repository based on a bank-wide collaboration platform will enable all sales representatives to gain quicker access to more customer information.

Sales representatives will have easier and quicker access to information stored in various back-end databases that they can use for more informed insight into their customers. The solution will also provide the opportunity to respond more quickly to customer needs by issuing their market reports in a more timely manner. All of this adds up to more focus on customers and meeting their unique needs.

The TVO analysis indicates that the company can anticipate a 1-percent improvement in the Time to Market Index Prime valued at \$1,559 per desktop per year. The bank anticipates a 210-percent ROI and 17-month payback on its investment.

Transforming Transactional Relationships to Consultative Relationships

Transforming transactional relationships to consultative relationships focuses on how using desktop technologies with server and new XML technologies empower organizations to change various workflow processes and gain greater business efficiency that directly affect the ability of the company to respond to customer needs more effectively.

Case Study: Banking and financial services company # 2
Customer satisfaction increased by using XML-based forms to standardize contract information.

This bank experienced difficulty in identifying and updating errors in its existing customer contracts during the sales cycle. Errors, which were sometimes found after customers had already signed a contract, caused rework in the rewriting and signing of contracts and contributed to a decline in customer satisfaction.

To transform this process, the bank is implementing a new enterprise-standard, form-based contract that uses InfoPath 2003, the new XML-based data gathering program in Office 2003. InfoPath can help teams and organizations gather and share information by creating rich, dynamic forms that enables users to collect, access, and reuse information more easily. Use of InfoPath technologies will enable the bank to manage and track forms more efficiently throughout its workflow process. Because XML enables easy integration with legacy systems, banking and customer-specific information can be filled in easily. This strategy ensures bank customer service representatives and customers that only the most current information is used in decision making. This approach is expected to lead to higher customer responsiveness and satisfaction when status information requests about a particular banking product are made by the customer.

Because the bank's staff is evaluating InfoPath 2003 on Intel Pentium 4 Processors with HT Technology, they can take advantage of Intel NetBurst™ architecture, which enables XML parsing at rates 5.95 times faster those experienced on a typical enterprise PC desktop.²¹ This example shows how using the most current Intel Architecture-based hardware supported by Windows XP can make a measurable difference in business processes. Accelerating data retrieval speed helps sales representatives better meet customer needs and helps to transform a purely transactional relationship into a more informed, consultative relationship.

The bank anticipates that by using InfoPath 2003 technologies with back-end databases, they can realize an improvement in the TVO Materials Quality Prime of the Customer Responsiveness Aggregate valued at \$174 per desktop per year.

Improved Control of Data

Improved control of data illustrates how the timely refresh of desktop technologies can be a critical decision that affects line of business applications, data integrity, and the ability to develop new Web-based applications to better meet customer needs.

²¹ For more information on Intel NetBurst architecture and performance, go to http://www.intel.com/business/bss/swapps/office_system/index.htm.

Case Study: Banking and financial services company # 6

A standardized, up-to-date desktop ensures application compatibility, data integrity, and lower IT costs.

A client PC infrastructure that is near or at the end of its life cycle often creates customer challenges that are not anticipated during refresh cycle planning. This was the problem that confronted a U.S.-based bank with more than 7,000 desktop and notebook PCs that run in a mixed client environment of Windows 95 (75 percent), Windows 2000 Professional (24 percent), and Windows NT Workstation version 4.0 (1 percent). Client PCs running Windows 95 and Windows NT operating systems had already passed their useful end of life, and those running Windows 2000 Professional were due to reach the end of their useful life in 2005, before the natural hardware attrition cycle. As a result, the bank was confronted with three critical issues:

- Ensuring data integrity
- Ensuring a reliable platform on which to run specialized line of business applications
- Standardizing on a refresh cycle that made economic sense

Although this situation might not seem like a customer-centric issue, customers were in fact the main reason why this bank established very specific guidelines for retiring the two operating systems and determining which operating system, Windows 2000 Professional or Windows XP Professional, should be the new company standard.

Windows 95 and Windows NT end-of-life issues are more complex than a simple hardware and operating system refresh. The bank estimated that due to increased help desk and service calls caused by lapses in reliability and stability, security requirements, and patch management, additional hard costs of maintaining an older operating system would exceed \$1.0 million over the next two years. Soft costs, such as lower user productivity due to PC downtime, don't usually take into account the value of that time when it compromises the ability of a bank representative to meet customer needs. Although neither a decline in customer satisfaction nor the opportunity cost of lost revenue was considered as part of the business value analysis, customer satisfaction factors are usually vital considerations in the review of client PC refresh cycles.

Application compatibility with the client operating system was also an important consideration. Because this bank, like most banks, uses proprietary or third-party line of business applications, it was essential to ensure operating system compatibility with the latest versions of the applications so that customer responsiveness is not compromised. Ensuring integrity of customer data by improved security measures was also critically important.

Although usually perceived as only an IT issue relating to operating costs, a timely client PC refresh affects customer issues directly and indirectly. The business benefits of a standard desktop refresh cycle were not part of the value analysis conducted at this bank. However,

the company did recognize the extended financial value of standardizing on Windows XP Professional. Two direct benefits included at least 25 percent fewer calls to the help desk and a 98-percent rate of application compatibility.

The financial analysis projected a benefit of \$64 per PC per year due principally to IT-related issues. However, the unsung heroes in this story are really the customer-focused benefits that accrue from stronger data security and better customer responsiveness enabled by up-to-date line of business applications, which helped the bank staff respond to customer needs.

The business value analysis projected an 84-percent IRR, an 87-percent ROI, and a payback period of 21 months. Currently, the bank is initiating the recommended 36-month refresh cycle for its desktop PCs that use Intel Pentium 4 Processors with HT Technology and for its notebook PCs that use Intel Centrino mobile technology. Should the bank decide to develop Web services to meet internal and customer needs for quicker, more real-time access to data and customer account information, it will also have the option of using the Microsoft .NET Framework as a development environment.

***Case Study: Banking and financial services company #5
Standardized desktop reduces IT expenses and help desk support.***

A large, U.S.-based risk and insurance services firm operated more than 16,000 desktops running a mixed client environment of Windows 98, Windows NT Workstation version 4.0, and Windows 2000 Professional. The company had a very distributed and heterogeneous IT environment, the result of acquiring many legacy computing systems from mergers and acquisitions. As a result, the central IT group supported many desktop images and different line of business applications. The company had a high level of availability- and reliability-related help desk calls, which increased IT costs and affected personal and team productivity. Network and desktop security was also an issue. The company wanted to lock down the desktop, reduce the number of images and applications it supported, and lower IT support costs.

The company was also in the early stages of moving to a Windows 2003 Active Directory® directory service environment. To realize the manageability and security benefits of the new directory services and back-end environment, the company needed to upgrade to Windows XP Professional as their client operating system.

The ability for the client PC to support specialized line of business applications was as important as desktop lockdown and improved manageability. As with most banking and financial services companies, this firm uses client PCs as a platform on which to run specialized applications. The variation of desktop images that resulted from running many different desktop operating made systems management very complicated and costly to support. Challenged by multiple mergers and acquisitions, the company needed to standardize on a common desktop platform for two important reasons:

- Standardization would increase system manageability and help the firm to lower IT operating costs.
- A robust development platform would provide a more cost-effective environment for building specialized line of business applications.

The bank intends to deploy a company-standard desktop consisting of Windows XP Professional on Intel Pentium 4 Processors with HT Technology. This strategy will decrease help desk support and IT costs by improving system manageability, availability, and reliability. The company also plans to deploy Office 2003, which by providing better capabilities for information sharing and collaboration is expected to help improve individual and team efficiency and productivity. Tangible benefits for deploying both technologies include:

- Reducing an estimated 60 desktop images to a single company-wide standard, which helps to reduce the expense of managing non-standard applications.
- Reducing the need for frequent re-imaging of desktop hardware.
- Reducing the expense of third-party remote access software.
- Improved application compatibility and resulting lower application testing costs.
- Improved software deployment and patch management and resulting lower IT costs.
- Development of new company-standard line of business applications such as Web services, which use the Microsoft .NET Framework and help to lower IT development costs.
- Real-time access to information, which enables sales representatives to improve customer satisfaction and increase potential revenue.

The company anticipates a value of \$133 per desktop per year from improved IT efficiencies resulting from a deeper connection between the client PC, the network, and network resources. The business value analysis projected a 69-percent IRR, a 119-percent ROI, and a 16-month payback on the company's IT investment. The solution will be deployed in the United States and then implemented in the company's other global business units. The company is currently engaged in pre-deployment planning.

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