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The Total Economic Impact™ Of Microsoft Exchange 2010

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Executive Summary

In October 2009, Microsoft commissioned Forrester Consulting to examine the total economic impact and potential return on investment (ROI) enterprises may realize by deploying Microsoft Exchange 2010. Microsoft Exchange 2010 is the newest release of Microsoft's messaging and collaborative server software solution featuring email, voicemail, calendaring, contacts, and tasks; support for mobile and Web-based access to information; and support for data storage. This study illustrates the financial impact of deploying Microsoft Exchange 2010 for a retail and distribution organization of 1,500 employees and $450 million in annual revenue.

In conducting in-depth interviews with nine existing customers, Forrester found that these companies achieved cost avoidance of storage, reduced cost of high availability, cost avoidance in voicemail, savings in backup systems, fewer help desk calls, cost avoidance of mobility, enhanced communication security, and simplified compliance and legal discovery, among other benefits.

Purpose

The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Microsoft Exchange 2010 on their organizations. Forrester's aim is to clearly show all calculations and assumptions used in the analysis. Readers should use this study to better understand and communicate a business case for investing in Microsoft Exchange 2010.

Methodology

Microsoft selected Forrester for this project because of its industry expertise in infrastructure and operations and Forrester's Total Economic Impact™ (TEI) methodology. TEI not only measures costs and cost reduction (areas that are typically accounted for within IT) but also weighs the enabling value of a technology in increasing the effectiveness of overall business processes.

For this study, Forrester employed four fundamental elements of TEI in modeling Microsoft Exchange 2010:

1. Total cost of ownership.
2. Direct and indirect benefits to the entire organization.
3. Flexibility.
4. Risk.

Given the increasing sophistication that enterprises have regarding cost analyses related to IT investments, Forrester's TEI methodology serves an extremely useful purpose by providing a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

Approach

Forrester used a five-step approach for this study:

1. Forrester gathered data from existing Forrester research relative to Microsoft Exchange 2010 and the infrastructure and operations market in general.

2. Forrester interviewed Microsoft marketing and sales personnel to fully understand the potential (or intended) value proposition of Microsoft Exchange 2010 solutions.

3. Forrester conducted a series of in-depth interviews with nine organizations currently using Microsoft Exchange 2010 solutions.

4. Forrester constructed a financial model representative of the interviews. This model can be found in the TEI Framework section below.

5. Forrester created a composite organization based on the interviews and populated the framework using data from the interviews as applied to the composite organization.

Key Findings

Forrester's study yielded three key findings:

- **ROI.** Based on the interviews with the nine existing customers, Forrester constructed a TEI framework for a composite organization and the associated ROI analysis illustrating the financial impact areas. As seen in Table 1, the ROI for our composite company, computed from hard benefits, is 48% with a breakeven point (payback period) of less than six months after deployment.

- **Benefits.** Based on information collected in interviews with current Microsoft Exchange 2010 customers, Forrester found that organizations can realize benefits in the form of cost avoidance of storage, reduced cost of high availability, cost avoidance in voicemail, savings in backup systems, fewer help desk calls, cost avoidance of mobility, enhanced communication security, and simplified compliance and legal discovery. The total present value of risk-adjusted benefits for three years amounts to $455,750.

- **Costs.** Forrester learned that the key cost components of a Microsoft Exchange 2010 implementation are the hardware costs, software license fees, implementation costs, administration and maintenance costs, and IT and help desk training costs. The total present value of risk-adjusted costs for three years amounts to $307,641.

Table 1 illustrates the risk-adjusted cash flow for the composite organization based on data and characteristics obtained during the interview process. Forrester risk-adjusts these values to take into account the potential uncertainty that exists in estimating the costs and benefits of a technology investment. The risk-adjusted value is meant to provide a conservative estimation, incorporating any potential risk factors that may later affect the original cost and benefit estimates. For a more in-depth explanation of risk and risk adjustments used in this study, please see the Risk section.

Table 1: Composite Company ROI, Risk-Adjusted

Summary financial results	Original estimate	Risk-adjusted
ROI	103%	48%
Payback period (months)	2.4	5.2
Total costs (PV)	$291,796	$307,641
Total benefits (PV)	$591,366	$455,750
Total (NPV)	$299,570	$148,109

Source: Forrester Research, Inc.

Disclosures

The reader should be aware of the following:

- The study is commissioned by Microsoft and delivered by the Forrester Consulting group.
- Microsoft reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.
- The customer names for the interviews were provided by Microsoft.
- Forrester makes no assumptions as to the potential return on investment that other organizations will receive. Forrester strongly advises that readers should use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Microsoft Exchange 2010.
- This study is not meant to be used as a competitive product analysis.

Microsoft Exchange 2010: Overview

Microsoft Exchange 2010 is the newest version of the messaging and collaborative software solution from Microsoft.

According to Microsoft, Exchange 2010 ushers in the next generation of Microsoft unified communications software as the first server designed from inception to work both on-premises and as an online service and introduces new capabilities to help organizations reduce cost, protect communications, and delight email users.

- **Lower IT costs with a flexible and reliable messaging platform.** Exchange Server 2010 provides flexible options to tailor deployment to unique needs and provides a simplified way to help keep email continuously available.
    - A new, unified approach to high availability and disaster recovery, such as Database Availability Groups and online mailbox moves, helps reduce the complexity and cost of delivering business continuity.
    - Greater choice of storage hardware options, from traditional storage area networks (SAN) to low-cost, desktop-class direct attached storage (DAS), helps tailor Exchange infrastructure.
    - Administrative advances such as anew role-based security model, self-service capabilities, and the Web-based Exchange Control Panel help lower operational costs by reducing the burden on IT staff.
    - Having been designed, developed, and tested with the Microsoft Software-plus-Services strategy at its core, Exchange 2010 offers flexible deployment options; on-premises deployment with Exchange 2010, a Microsoft-hosted service with Exchange Online, or a seamless mix of both.
- **Better manage risk by safeguarding your business with protection and compliance capabilities.** Exchange 2010 delivers integrated information protection, control, and compliance tools to protect and archive email, from regulatory concerns to internal organizational governance.
    - New integrated, out-of-the-box email archiving gives tools to preserve email data without changing the experience for users or IT staff.
    - A new retention policy framework allows IT staff to define, deploy, and automate the expiry and archiving of email data and provides users with the flexibility to select and apply retention policies to individual messages or folders.
    - New Transport Protection Rules help organizations safeguard sensitive business information by allowing IT staff to automatically apply information rights management (IRM) policies to both email and voicemail messages.
- **Increase productivity through Anywhere Access to business communications.** Exchange Server 2010 gives users the freedom to securely access all of their communications — email, voicemail, instant messaging, and more — from virtually any platform, Web browser, or device to get more done wherever they are.

- Time-saving inbox management tools such as an enhanced conversation view and MailTips help users more easily organize and prioritize communications.

- A transformed voicemail experience with enhancements like voice access to e-mail, speech-to-text previews of received voice messages, the flexibility for users to create customized voicemail menus, and call handling rules to ensure callers are given the right priority.

- The best three-screen user experience available through Outlook on the desktop, Outlook Web App in the Web browser, and Exchange ActiveSync, the de facto industry standard for mobile devices.

Analysis

As stated in the Executive Summary, Forrester took a multistep approach to evaluate the impact that implementing Microsoft Exchange 2010 can have on an organization:

- Interviews with Microsoft product development, marketing, and sales personnel.

- In-depth interviews of nine organizations currently using a prerelease version of Microsoft Exchange 2010.

- Construction of a common financial framework for the implementation of Microsoft Exchange 2010.

- Construction of a composite organization based on characteristics of the interviewed organizations.

Interview Highlights

A total of nine interviews were conducted for this study, involving representatives from the following companies (Microsoft customers based in North America and Europe):

1. A midsize investment banking, securities brokerage, trust, and asset management division of a large publicly held bank holding company that performs commercial banking operations, mortgage banking, leasing, investment banking services, and insurance services. The division has more than 450 offices in 20 US states, more than 4,000 employees, and more than $890 million in equity capital. Its messaging environment supports 1,200 smart phone users.

2. A large law firm employing more than 600 attorneys in 25 locations across the US and the UK. Its 40 practice areas include corporate, financial services, litigation, and real-estate law. A large majority of these attorneys are mobile Exchange users.

3. A Canadian division of an international automobile manufacturing division of Japanese transportation conglomerate that has approximately 100 information workers in a single main location. Less than 10% of the Exchange users are mobile users.

4. A public research university in the US that has nearly 30,000 students enrolled and employs nearly 3,000 faculty members. The school offers 152 baccalaureate programs,

160 master's programs, 75 doctorate programs, and 20 majors at the professional level. All faculty and students operate from a single campus.

5. A major Scandinavian university with close to 16,000 students offering more than 60 educational programs, 1,200 courses in some 50 subjects, as well as profiled research within entrepreneurship and business development and labor market research, forestry, timber, and bio-energy. All faculty and students operate from a single campus.

6. A leading global IP solutions provider that provides telecommunications solutions over an integrated global IP-based network. Its core network connects more than 300 cities in 30 countries and delivers services to approximately 700 cities in 60 countries and six continents, worldwide. The company’s IP services are global in scale, linking enterprises, governments, and carriers with customers, employees, and partners worldwide in a secure environment that is suited for IP-based business applications, allowing eCommerce to thrive. This organization offers a range of data, voice, and security products to Fortune 500, as well as 700 carriers, mobile operators, and ISPs. The company has a total of 6,000 users, of which approximately 15% require mobile access.

7. A leading IT and business services company, employing 40,000 people across 36 countries, provides business consulting, systems integration, and IT and business process outsourcing services. The company implemented a highly resilient communications platform for a European airport and air navigation operator. A high percentage of the intended Exchange users have smartphone devices requiring access to corporate email.

8. A European provider of advanced mobile telecommunication solutions for a European nation, covering 99% of the population with GSM and 74% with UMTS network. Operating from two main offices with a total of nearly 300 Exchange users, it provides its users with the top roaming options because it provides the use of mobile services of foreign operators in most countries around the globe.

9. A major communications solutions provider specializing in the convergence of voice, data and IT communications employing 400 employees. The main activities at the headquarters are sales management, finance, product support, and IT. A joint venture between two major international electronics firms, the organization provides unified communications solutions based around Microsoft technology and also markets its own portfolio of voice and data products. The customer organization is a part of the global enterprise communications business that has the highest market share in the enterprise communications industry.

The nine in-depth interviews uncovered a number of important insights:

- While the interviewed organizations were largely satisfied with basic operations of earlier versions of Microsoft Exchange, the most common motivations for upgrading were slow performance caused by high read/write IOPS, diminishing storage capacities, and the relative high degree of complexity of leveraging Microsoft Exchange for high availability and disaster recovery.

- Upon upgrading to Microsoft Exchange 2010, the following benefits were almost immediately recognized by nearly all of the interviewed customers:

    - Improved storage management and reliability.

    - Access to much larger mailboxes.

    - Better protection and improved compliance.

- While most customers did not create business cases to justify the cost of upgrading to Microsoft Exchange 2010, they did note that they intuitively felt that benefit offered in terms of Microsoft Exchange's improved storage reliability alone accounted for the investment in the upgrade process. They were pleased to be able to run Microsoft Exchange 2010 without having to deal with Windows clustering, RAID arrays, or enterprise-class disks. Most customers mentioned the significant savings in storing mailbox databases and significant time savings in recovering mailboxes in the event of failures.

- Certain organizations that Forrester interviewed cited the lower cost to support mobile employees as a key benefit of Microsoft Exchange 2010. These organizations tended to be either highly distributed organizations or organizations with a highly mobile workforce.

- Enhancing the solid and consistent user experience was a key concern for some interviewees. For these customers, Microsoft Exchange 2010's features around enhanced conversation view for mail triage, speech-to-text preview for voicemail, and MailTips to improve messaging efficiency and avoid accidental or unintended emails were equally important benefits beyond some of the IT-focused benefits.

TEI Framework

Introduction

From the information provided in the in-depth interviews, Forrester has constructed a TEI framework for those organizations considering implementation of Microsoft Exchange 2010. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that impact the investment decision.

Composite Organization

Based on the interviews with nine existing customers provided by Microsoft, Forrester constructed a composite company that we will call "Lorimer, Incorporated." Forrester created a TEI financial framework and an associated ROI analysis for this composite company. By aggregating the findings from the customer interviews and portraying a composite organization that has benefited from deploying Microsoft Exchange 2010, this Forrester study illustrates the financial impact of deploying Exchange 2010 for a typical customer.

Lorimer, Incorporated is a 40-year-old family-owned retailer specializing in lawn and garden products. The company employs 1,500 information workers, all having email access through an earlier version of Microsoft Exchange and ported to Microsoft Exchange 2010. The company has an additional 4,100 retail floor, warehouse, and transportation staff who do not have corporate email today. The company has grown prudently and organically by adding states, stores, and product lines that match its customer base: suburban dwellers looking for a one-stop shop for lawn and garden products. The company is headquartered in Indianapolis with three distribution centers and 70 stores located throughout five Midwestern states. The majority of information workers are either based in the Indianapolis headquarters or at one of two branch offices on the East and West Coasts.

Forrester created this composite company to reflect an organization with the following characteristics:

- Lorimer's third-generation family leaders have a hands-on focus on profitability and prudent investment. In retail as in many industries, margins are thin, and capital efficiency is paramount. This company makes investments in equipment and IT after careful consideration of the return on that investment.

- Best practices are important in this industry. What one store manager learns during a cold snap in April will benefit sales in the other 69 stores. To share best practices, Lorimer has created email distribution lists for store managers. An integral group of information workers, the managers leverage email as their pipeline to each other.

- Store managers and other staff, including buyers, procurement, and inventory management teams, use their mailboxes as filing cabinets — a place to permanently store and retrieve marketing materials, policies, product information, and regulatory updates. The 250 MB size limits of Lorimer's mailboxes is always a challenge for users, and the staff is tired of being asked to delete attachments and older email.

- Being able to access email and attachments while away from a computer is important for 20% of Lorimer's staff. These 300 information workers rely extensively on their smartphones to stay in touch and access key information through email.

Lorimer, Inc. has been running applications, including email, on Microsoft Windows Server 2003 and Microsoft Exchange Server 2003. It has been happy with that investment, though it is running into challenges with ramping storage volume requirements and costs in its storage area network system. The engineering team is also worried that it's starting to run out of time each night to do the automatic backup. As a careful company, Lorimer also wants to improve the availability of email in event of a power outage or other natural disaster in the storm-prone Midwest. The company plans to add archiving and high availability to its Exchange environment using the built-in features of Exchange 2010.

Most of Lorimer's desktop computers are running Windows XP and Outlook 2003. A few technical and senior staff is running Outlook 2007 in a pilot. Lorimer's centrally located IT infrastructure and operations team of nine engineers and 10 support and customer service staff focus on a whole host of Microsoft Exchange support and maintenance activities ranging from mail permissions, storage, and mailbox creation to encryption, backups, and archiving.

Framework Assumptions

Table 2 lists the discount rate used in the PV and NPV calculations and time horizon used for the financial modeling.

Table 2: General Assumptions

Ref.	General assumptions	Value
A1	Discount rate	10%
A2	Length of analysis	Three years

Source: Forrester Research, Inc.

Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult with Finance to determine the most appropriate discount rate to use within their own organizations.

In addition to the financial assumptions used to construct the cash flow analysis, Table 3 provides salary assumptions used within this analysis.

Table 3: Salary Assumptions

Ref.	Metric	Calculation	Value
A1	Hours per week		40
A2	Weeks per year		48
A3	Hours per year (M-F, 9-5)		2,080
A4	Hours per year (24x7)		8,736
A5	Average fully loaded salary of an employee		$95,000
A6	Hourly	(A5/A3)	$45.67

Source: Forrester Research, Inc.

Costs

> *"Our [messaging] solution costs us about $50 per user. With Exchange Unified Messaging, the cost would be about $9 per user."* — Info tech analyst III, private university

The key cost categories associated with this Microsoft Exchange 2010 implementation are: 1) hardware costs associated with the acquisition of new servers; 2) software license and maintenance fees; 3) labor costs associated with the internal team charged with implementation, training, and system administration. The project is measured on a three-year basis. The following are the cost inputs to the financial analysis.

Hardware Costs

Customers who have implemented Microsoft Exchange 2010 have done so in parallel to the existing/prior version of Microsoft Exchange. Therefore, each of the customers Forrester interviewed reported acquiring additional server hardware to host Microsoft Exchange. Forrester believes that Lorimer, Incorporated would have to purchase four (4) additional servers with added RAM at a cost of $4,000 per server to host Microsoft Exchange 2010. The total one-time hardware cost amounts to $16,000.

Table 4: Hardware Costs

Ref.	Metric	Calculation	Per period	Year 1	Year 2	Year 3	Total
A1	Hardware costs		4,000				
A2	Number of servers		4				
At	Hardware costs	A1 * A2	16,000				
Ato	Total (original)		($16,000)	$0	$0	$0	($16,000)

Source: Forrester Research, Inc.

Software Costs

The largest cost item for this implementation at Lorimer is software costs, including Windows Server, Exchange Server, and client access licenses (CALs) for Exchange Server and Windows Server.[1]

To implement Exchange 2010, Lorimer purchased four (4) new servers to deploy Exchange Server 2010 with full archiving and high-availability. Since Lorimer will deploy a high-availability solution with replicated servers, it requires Windows Server Enterprise Edition. The cost for this is $1,367 annually for each of the three years. The cost represents the annual price of License and Software Assurance.

However, because the high-availability and continuous replication are performed by Exchange 2010 and do not rely on Windows Server clustering, Exchange 2010 does not require Exchange Server Enterprise Edition for email resiliency. Therefore Lorimer is able to replace their Exchange Server Enterprise Edition licenses with Exchange Server Standard Edition. The cost for this is $411 per server annually for each of the three years.

For the client software, we assume that Lorimer, Incorporated has an existing Microsoft Select Agreement and renews the Exchange Server Standard CAL standalone license at a one-year cost of $17 per license for 1,500 users each. Exchange Server Standard CAL is also offered as part of Core CAL which gives Windows Server Standard CAL, Exchange Server Standard CAL, Office SharePoint Server Standard CAL, and System Center Configuration Manager Configuration Management License for a discounted price.

Since Lorimer will use the advanced features including archiving and voicemail that are included in the Exchange Enterprise CAL, it will also purchase Exchange Enterprise CAL License and Software Assurance at a cost of $40 per license for 1,500 users each.

[1] None of the customers interviewed for this study actually paid any additional software license fees, as each was part of Microsoft's Rapid Deployment Program and was provided access to prerelease versions of Microsoft Exchange 2010. However, corporate customers like the composite one profiled in this study are likely to pay for license fees to implement and use Microsoft Exchange 2010. Forrester estimates these costs using standard retail pricing information made available by Microsoft.

For this analysis, the software costs represent standalone licenses and are given to illustrate solely the Exchange cost. They do not factor in discounts or rebates typically offered since most customers purchase Exchange as part of bundled offerings or suites.

Table 5: Software License Fees

Ref.	Metric	Calculation	Per period	Year 1	Year 2	Year 3	Total
A1	Number of servers installed		4				
A2	Number of users		1,500				
A3	Server software cost per license: Exchange Server Standard L&SA		$411				
A4	Server software cost per license: Windows Server Enterprise L&SA		$1,367				
A5	Client software cost per license: Exchange Standard CAL SA		$17				
A6	Client software cost per license: Exchange Enterprise CAL L&SA		$40				
At	Software license fees	(A1 * A3) + (A1 * A4) + (A2 * A5) + (A2 * A6)	$92,612				
Ato	Total (Original)		$0	($92,612)	($92,612)	($92,612)	($277,836)

Source: Forrester Research, Inc.

Implementation Costs

Each of the customers Forrester interviewed allocated internal resources for varying lengths of time to implement Microsoft Exchange 2010. The implementation time varied greatly depending on level of priority assigned to the implementation, number of individuals performing the implementation, level of complexity of the IT environment, and level of technical familiarity with specifics regarding the implementation of Microsoft Exchange 2010. Based on findings gathered from the interviews, Forrester estimates Lorimer, Incorporated to allocate two system engineers and one network engineer dedicated at 50% to the initiative for three weeks. This amounts to 60 hours per engineer at a fully loaded compensation rate of $95,000 per year or $49 per hour.

Table 6: Implementation Costs

Ref.	Metric	Calculation	Per period	Year 1	Year 2	Year 3	Total
A1	Number of people		3				
A2	Hourly rate per person		$49.48				
A3	Hours		60.0				
At	Implementation costs	A1 * A2 * A3	$8,906				
Ato	Total (original)		($8,906)	$0	$0	$0	($8,906)

Source: Forrester Research, Inc.

Administration and Maintenance Costs

Forrester believes Lorimer to allocate a single systems engineer at an annual salary of $95,000 to spend only three days of every month on regular administration and maintenance activities associated solely with Microsoft Exchange 2010 (e.g., apply software patches).[2] This is because Lorimer would not be implementing a prerelease version of the product as each of the interviewed customers had and therefore would have a more stable and mature product with few of the maintenance tasks reported by the interviewees.

Table 7: Administration And Maintenance Costs

Ref.	Metric	Calculation	Per period	Year 1	Year 2	Year 3	Total
A1	Number of people		1				
A2	Hourly rate per person		$49.48				
A3	Percent time allocated to maintenance tasks		100%				
A4	Hours		288.0				
At	Administration and maintenance costs	A1 * A2 * A3 * A4	$14,250				
Ato	Total (original)		$0	($14,250)	($14,250)	($14,250)	($42,750)

Source: Forrester Research, Inc.

[2] Most of the interviewees reported allocated significantly more personnel and devoting more time on the administration and maintenance of Microsoft Exchange 2010 than originally planned.

IT And Help Desk Training Costs

Because of some of the many significant changes made to Microsoft Exchange 2010 from earlier versions, Forrester believes that it would be in Lorimer's best interest to provide IT training to each of its 19 IT and help desk staff members, as some of the interviewed customers who had the greatest success with Microsoft Exchange 2010 did. Based on Forrester research that indicates the cost of providing 4 hours of IT training per staff member to be $60, Forrester estimates the total training cost for Microsoft Exchange 2010 to be $1,140.

Table 8: Composite Company ROI, Risk-Adjusted

Ref.	Metric	Calculation	Per period	Year 1	Year 2	Year 3	Total
A1	Number of people		19				
A2	4-hour training cost per trainee		$60				
At	IT and help desk training costs	A1 * A2	$1,140				
Ato	Total (original)		($1,140)	$0	$0	$0	($1,140)

Source: Forrester Research, Inc.

Total Costs

Table 9 summarizes the costs Lorimer would be presented with upon implementing Microsoft Exchange 2010 over a three-year time frame.

Table 9: Composite Company ROI, Risk-Adjusted

Costs	Initial	Year 1	Year 2	Year 3	Total	Present value
Hardware costs	(16,000)				(16,000)	(16,000)
Software license fees		(92,612)	(92,612)	(92,612)	(277,836)	(230,312)
Implementation costs	(8,906)				(8,906)	(8,906)
Administration and maintenance costs		(14,250)	(14,250)	(14,250)	(42,750)	(35,438)
IT and help desk training costs	(1,140)				(1,140)	(1,140)
Total	$26,046	$106,862	$106,862	$106,862	$346,632	$291,796

Source: Forrester Research, Inc.

Benefits

The customers Forrester interviewed for this study collectively described a range of hard and soft benefits that have accrued from the Microsoft Exchange 2010 implementation. The most significant benefit described to Forrester was the significant cost savings in a number of areas but most notably in storage costs. Customers remarked how they were able to "cut storage costs by 20% to 30%," while at the same time meet critical corporate demands in the way of high availability, disaster recovery, and archiving. The possibility of doing this would have been unthinkable just a few years ago, and therefore the release of Microsoft Exchange 2010, together with all of its new features, was considered a major boon for most customers. In the words of an actual interviewee, "We found over three years that we would save $5.1 million, mostly by avoiding the cost of third-party archiving and compliance, but also . . . from storage savings."

Cost Avoidance Of Storage

The single biggest benefit of implementing Microsoft Exchange 2010, as reported by the customers that Forrester interviewed, is the ability to provide larger mailbox sizes without the need to purchase expensive storage hardware and without implementing onerous mailbox size rules. For some of the customers interviewed, a major IT directive from senior executives was to be able to accommodate increasing mailbox sizes due to increasing email volume and increasing size of messages and attachments without straining bandwidth and taking up too much server disk space. Achieving this goal would be vastly more expensive using existing versions of Microsoft, particularly Exchange 2003 with its storage-area network (SAN) solution. Instead of this expensive storage solution, interviewees claimed a "10 to 12 time's reduction" in the cost of storage by replacing SANs with direct-attached storage using inexpensive SATA disks. Microsoft Exchange 2010's ability to use cheaper drives that offer more space allowed these organizations to suddenly meet these demands escalating demand for larger mailboxes at a much lower cost.

Forrester believes Lorimer will benefit by being able to use fewer and cheaper SATA storage drives rather than the number of Fiber Channel or SCSI drives (together with the SAN management tools) needed by Exchange 2003. With fewer drives comes the need for fewer resources for maintenance, allowing Lorimer to reallocate people to more value-added activities. Based on Forrester's conservative estimate, Lorimer should save approximately $64,100 annually on storage costs. The calculation of this value is shown in Table 10 below.

Table 10: Cost Avoidance Of Storage

Ref.	Metric	Calculation	Per period	Year 2	Year 3	Total
A1	Number of 150 GB FC/SCSI drives needed		15			
A2	Cost of a 150 GB FC/SCSI drive		$1,800			
A3	Number of 1TB SATA drives purchased		2			
A4	Cost of 1TB SATA drive		$200			
A5	Number of FTEs reallocated		0.5			

A6	Annual salary		$75,000			
At	Cost avoidance of storage	[(A1*A2)-(A3*A4)]+(A5*A6)	64,100			
Ato	Total (original)		$64,100	$64,100	$64,100	$192,300

Source: Forrester Research, Inc.

Cost Avoidance Of Exchange Server Enterprise CAL

Because Exchange 2010 handles continuous replication and high-availability features, it does away with the need to use the clustering feature of Windows Server, which requires an Exchange Server Enterprise Edition license. With Exchange 2010, Lorimer can use an Exchange Server Standard Edition and save $1,938 per server or $7,752 per year for four servers.

Table 11: Cost Avoidance Of Exchange Server Enterprise CAL

Ref.	Metric	Calculation	Per period	Year 2	Year 3	Total
A1	Number of servers installed		4			
A2	Server software cost per license: Exchange Server Enterprise L&SA		$2,349			
A3	Server software cost per license: Exchange Server Standard L&SA		$411			
A4	Cost difference per license	A2 - A3	$1,938			
At	Cost avoidance of Exchange Server Enterprise Edition license	A1 * A4	$7,752			
Ato	Total (original)		$7,752	$7,752	$7,752	$23,256

Source: Forrester Research, Inc.

Reduced Cost Of High Availability And Disaster Recovery

A new feature of Microsoft Exchange 2010 combines continuous replication technology, first introduced in Microsoft Exchange 2007, with on-site data replication and off-site data replication into a single framework called a “Database Availability Group” or DAG. Exchange Server Database

Availability Groups handle clustering internally, allowing administrators to add replicated database copies incrementally by adding an additional server (as Lorimer has done) and configuring the backup. Exchange 2010 switches between these copies automatically as needed to maintain availability without the need for a client-side solution. This has two benefits: 1) The archiving and availability solution is included in the Enterprise CAL, thus lowering costs of additional software; and 2) the availability is automatically extended to any client email device, including Outlook, Outlook Web App, and mobile devices.

This high-availability architecture provides simplified recovery from a variety of failures (disk-level, server-level, and data-center-level), and can be deployed on a variety of storage types. Interviewees appreciated this and noted that it allowed them to bring back in-house a previously outsourced disaster recovery solution while tightening recovery time to a few minutes.

Some customers that Forrester interviewed reported paying heavy annual fees to third-party firms for ensuring disaster recovery:

> *"We have been able to move from a single copy cluster in one location to a multisite replication model giving us site-level resilience rather than server-level resilience. By using this configuration, we have been able to remove the need for using an external disaster recovery vendor solution, thus saving us thousands of pounds each year."*

Because of Microsoft Exchange 2010's significant advances in disaster recovery, these customers felt more confident in solely relying on Microsoft Exchange 2010 and discontinuing disaster recovery service provided by a third-party vendor. Forrester estimates that Lorimer would be able to save an average of $25,000 in annual third-party disaster recovery costs because of this benefit.

Savings In Backup Systems And Staff

Customers also reported significant operational cost savings in the area of backup. In addition to reducing the number of backups required monthly, an organization like Lorimer would be able to save nearly $5,000 in annual maintenance fees for a third-party backup solution and at the same time allow half an FTE that devotes half of their time on backup-related tasks and activities to work on higher value-added activities. Using a fully loaded annual salary rate of $50,000, this amounts to a net savings of $17,500.

Table 12: Savings In Backup Systems And Staff

Ref.	Metric	Calculation	Per period	Year 2	Year 3	Total
A1	Annual maintenance fees for third-party backup application		$5,000			
A2	FTEs maintaining backup systems		0.5			
A3	Percent time allocated to backup tasks		50%			
A4	Annual salary		$50,000			

At	Savings in backup systems and staff	A1 + A2 * A3 * A4	$17,500			$17,500

Source: Forrester Research, Inc.

Voicemail Cost Avoidance

Some interviewees reported in the net decrease in reliance on a corporate voicemail system because of the unified messaging features built into Microsoft Exchange 2010. While this feature is available in Exchange 2007, the addition of audio voicemail preview with Outlook 2007 enhances the functionality. At companies where a large percentage of the corporate workforce is mobile, the organizations had plans to decommission PBX voicemail systems and reclaim up to 75% of the funds earmarked for annual maintenance fees: “We plan to decommission our old voicemail and save $50,000 in support and maintenance,” said one customer. Using standard industry defaults, Forrester believes Lorimer to save approximately $45,000 annually from retiring traditional PBX voicemail systems from each of its three office locations.

Table 13: Voicemail Cost Avoidance

Ref.	Metric	Calculation	Per period	Year 2	Year 3	Total
A1	Number of PBX voicemail systems decommissioned		3			
A2	Annual maintenance fees for PBX voicemail		$20,000			
A3	Percent captured		75%			
At	Voicemail cost avoidance	A1 * A2 * A3	$45,000			
Ato	Total (Original)		$45,000	$45,000	$45,000	$135,000

Source: Forrester Research, Inc.

Fewer Help Desk Or Support Calls

Interviewees noted that Microsoft Exchange’s features around delegated role-based administration allowed them to empower certain users to perform specific but routine role-based tasks that would normally result in time spent by the organization’s help desk staff. By designating these users upfront, interviewees reported experiencing a reduction of 10% in total help desk call volume. For Lorimer, this would amount to an annual savings of $17,100 for a help desk staff receiving 1,500 calls per month, assuming an average internal cost of a help desk call to be $9.50.

Table 14: Fewer Help Desk Or Support Calls

Ref.	Metric	Calculation	Per period	Year 2	Year 3	Total
A1	Number of help desk calls per year		$18,000			
A2	Percent of calls reduced due to role-based administration		10%			
A3	Average internal cost of a help desk call		9.5			
At	Fewer help desk or support calls	A1 * A2 * A3	$17,100			
Ato	Total (original)		$17,100	$17,100	$17,100	$51,300

Source: Forrester Research, Inc.

Cost Avoidance Of Extending Mobility

Microsoft Exchange 2010 allows organizations to extend email messaging, calendars, and contacts to a broad set of smartphone users, including Windows Mobile devices, BlackBerry devices and any other ActiveSync-connected devices such as those by Apple. Customers that Forrester interviewed indicated that they were able to support a greater number of smartphones with Exchange ActiveSync, resulting in the need for fewer third-party mobile middleware packages. For Lorimer, this would amount to $3,995 in annual fees for maintenance of a single server mobile middleware package plus a $55 reduction per annual client access license fees for 150 mobile users.

Table 15: Cost Reduction Of Extending Mobility

Ref.	Metric	Calculation	Per period	Year 2	Year 3	Total
A1	Reduction in server middleware software for push email		1			
A2	Avg annual maintenance fees		$3,995			
A3	Number of client access licenses		150			
A4	Cost per annual client access license		$55			
At	Cost reduction of extending mobility	(A1 * A2) + (A3 * A4)	$12,245			

Source: Forrester Research, Inc.

Enhanced Message Filtering

Microsoft customers that Forrester interviewed indicated enhanced message filtering offered by Microsoft Exchange 2007 and Exchange 2010. Because of the anti-spam features included in Exchange, some customers upgrading from Exchange 2003 felt comfortable retiring third-party spam filtering applications: “We have been able to remove the third-party mail filtering software [with Microsoft Exchange 2010 and] have reduced the cost per month by more than 50%.”

Estimated savings on annual maintenance fees for third-party spam filtering applications in our analysis averaged 12,000 per year. Some customers also reported net 10% reduction in help desk call volume from not having to deal with calls from customers complaining about IT problems related to spam. For Lorimer, Incorporated, the total annual savings would be $34,800. Additionally, because the Exchange Enterprise Client Access License includes Forefront Protection for Exchange, Lorimer may potentially be able to replace its antivirus solution altogether.

Table 16: Enhanced Message Filtering

Ref.	Metric	Calculation	Per period	Year 2	Year 3	Total
A1	Annual maintenance fees for third-party spam filtering applications		$12,000			
A2	Number of help desk calls per year		18,000			
A3	Fewer help desk/support calls dealing with spam-caused problems		10%			

A4	Average internal cost of a help desk call		$9.50			
At	Enhanced message filtering	A1 + (A2 * A3 * A4)	29,100			

Source: Forrester Research, Inc.

Simplified Compliance And Legal eDiscovery

A subset of the customers that Forrester interviewed also reported the compliance benefits of Microsoft Exchange 2010. Microsoft Exchange 2010 allows for the delegation of tasks associated with compliance away from email administrator and more into the hands of those responsible and familiar with compliance, typically in the legal department.

Traditional email systems can require complex access control policies and can provide complicated tools to allow human resources of legal departments, who are often non-IT users who are unfamiliar with email administration and management tools and who do not typically have access to the admin tools on email servers, to quickly and easily search through multiple mailboxes, put mail on legal hold, or change retention policies. Customers experiencing this benefit reported that these compliance officers and HR representatives no longer have to follow complex processes and use complex tools because of Microsoft Exchange 2010, which empowers these individuals to produce results with a simpler Web-based administration tool without IT intervention.

In an environment with heavy corporate stress on IT compliance with regulations such as the Sarbanes-Oxley Act of 2002, Forrester believes that Lorimer may also experience gains from this benefit. Forrester feels that Lorimer could save 16 hours of productive time from 2 IT FTEs each month. Using a fully loaded annual salary of $100,000, this benefit would yield nearly $20,000 in annual savings.

Table 17: Simplified Compliance And Legal eDiscovery

Ref.	Metric	Calculation	Per period	Year 2	Year 3	Total
A1	Number of eDiscovery requests per year		12			
A2	Number of hours spent per request		16			
A3	Number of IT FTEs involved		2			
A4	Average hourly salary		$52.08			
At	Simplified compliance and legal eDiscovery	A1 * A2 * A3 * A4	$20,000			

Source: Forrester Research, Inc.

Enhanced Communication Security – Not Quantified

Exchange 2010 also improves on the information security of in-company communications as well as secure messaging between trusted partners. In addition, Exchange 2010 provides new functionality to control outbound messages that could compromise a business by sending sensitive information to outsiders or increasing the load on networks on email systems due to inadvertent use of large mailing lists. While the companies we interviewed hadn't yet implemented these features, Forrester believes that each will be an improvement over existing systems and in some cases lower costs.

Improved Retention Management – Not Quantified

Exchange 2010 provides more features for retention management, for example, to select a retention policy on a specific mailbox or mail message. This additional protection will benefit firms with complex or variable retention policy requirements.

Increase In User Productivity – Not Quantified

> *"The new Outlook experience is fabulous — blazing fast due to performance gains in Exchange 2010."*

In addition to the benefits described above, some customers that Forrester interviewed also reported other "soft" benefits experienced by information workers, leading to an increase in productivity and general levels of employee satisfaction. Because of the difficulty in measuring these metrics and level of accuracy in estimating the financial value of these benefits, Forrester decided not to quantify these benefits and to leave it to the reader to include in the final results if she so wishes.

Customers described several features of Microsoft Exchange 2010 that contributed to this benefit:

- Specific features of Microsoft Exchange 2010 such as conversation view and filters allow users to more effectively organize and navigate email messages.

- Users felt comfortable using multiple clients and devices "right out of the box" because of the familiar and common user interface and experience. Because Exchange inboxes are accessible from a variety of platforms and technologies, users are allowed to be flexible in their organizations while staying connected and productive. For example, users are now able to use any variety of the most popular Web browsers rather than just use the Microsoft-branded browser.

- Universal inbox allowed users to consolidate message feeds from multiple applications, saving time and frustration in not having to log into a variety of applications. This extends to both RSS feeds, allowing users to get information without having to surf the Web, and SMS text messages, which allow users to send, receive, backup and sync text messages directly from the inbox.

- Users noted Microsoft Exchange 2010's ability to allow calendar federation among trusted companies. This feature allows users to share free/busy information when scheduling meetings in Microsoft Outlook, breaking down scheduling barriers among companies. Additional benefits of federation in regards to instant messaging were also appreciated by some customers.

Total Benefits

Table 18 summarizes the benefits experienced by Lorimer by implementing Microsoft Exchange 2010 and shows the present value for each benefit category.

Table 18: Total Benefits

Benefits	Initial	Year 1	Year 2	Year 3	Total	Present value
Cost avoidance of storage		64,100	64,100	64,100	192,300	159,407
Reduced cost of high availability and disaster recovery		25,000	25,000	25,000	75,000	62,171
Savings in backup systems and staff		17,500	17,500	17,500	52,500	43,520
Fewer help desk or support calls		17,100	17,100	17,100	51,300	42,525
Cost reduction of extending mobility		12,245	12,245	12,245	36,735	30,452
Enhanced message filtering		29,100	29,100	29,100	87,300	72,367
Simplified compliance and legal eDiscovery		20,000	20,000	20,000	60,000	49,737
Voicemail cost avoidance		45,000	45,000	45,000	135,000	111,908
Cost avoidance of Exchange		7,752	7,752	7,752	23,256	19,278

Server Enterprise Edition license						
Total		$237,797	$237,797	$237,797	$713,391	$591,366

Source: Forrester Research, Inc.

Forrester believes the benefits described above would be further enhanced in an environment that also includes Microsoft Server 2008 R2. Forrester Consulting recently completed a case study of the Total Economic Impact of Microsoft Windows Server 2008. According to the case study, Forrester found that the organizations investing Microsoft Windows Server 2008 R2 could experience benefits in excess of $2 million over three years — primarily around cost avoidance of physical servers, disaster recovery, and productivity improvement. By implementing Microsoft Exchange 2010 in an environment with Microsoft Server 2008 R2, organizations may expect to see even greater results in each of these three benefits.

Risk

Risk is the third component within the TEI model; it is used as a filter to capture the uncertainty surrounding different cost and benefit estimates. If a risk-adjusted ROI still demonstrates a compelling business case, it raises confidence that the investment is likely to succeed because the risks that threaten the project have been taken into consideration and quantified. The risk-adjusted numbers should be taken as “realistic” expectations, since they represent the expected values considering risk. In general, risks affect costs by raising the original estimates, and they affect benefits by reducing the original estimates.

For the purpose of this analysis, Forrester risk-adjusts cost and benefit estimates to better reflect the level of uncertainty that exists for each estimate. The TEI model uses a triangular distribution method to calculate risk-adjusted values. To construct the distribution, it is necessary to first estimate the low, most likely, and high values that could occur within the current environment. The risk-adjusted value is the mean of the distribution of those points.

The following risks specific to Microsoft Exchange 2010 were considered in this study:

Hardware And Software Costs

In its estimation, Forrester estimated two servers being needed for the installation of Microsoft Exchange 2010. However, the actual number of servers required may very well be higher depending on the level of redundancy required. For example, a single backup copy on-premises does not provide the same level of reliability as multiple copies on different physical sites. If Lorimer wanted to add a third set of servers on a remote location, that would increase the hardware and software costs.

Implementation Costs

In its original estimate, Forrester estimated Lorimer requiring three weeks to install and implement Microsoft Exchange 2010. However, as indicated by the range of duration experienced by the customers Forrester interviewed, the actual time it takes to implement Microsoft Exchange 2010 may be higher depending on the level of priority assigned to the implementation, number of individuals performing the implementation, level of complexity of the IT environment, and level of technical familiarity of the staff conducting the implementation.

Administration And Maintenance Costs

Some customers may find that administration and maintenance may take up to five days per month because of IT environment complexities and requests for infrastructural changes to Microsoft Exchange 2010. This would result in higher costs than the three days per month value used in the estimate.

IT And Help Desk Training Costs

Training costs may be higher if organizations are migrating from very old versions of Microsoft Exchange and IT staffs are not familiar in the technical experience and skills needed to effectively administer and operate Microsoft Exchange 2010. For this reason, Forrester believes some organizations may need to provide additional training than anticipated.

Total Impact On Costs

The table below outlines the total impact on costs of factoring in the risks described above.

Table 19: Risk Adjustments To Costs

Costs	Risk adjustment
Hardware costs	117%
Software license fees	101%
Implementation costs	122%
Administration and maintenance costs	122%
IT and help desk training costs	133%
Total	105%

Source: Forrester Research, Inc.

Cost Avoidance Of Storage

Several things can lower the benefit of reduced storage: 1) mailboxes may grow very quickly, thus requiring more storage than originally estimated; 2) adding more redundancy will increase the cost of storage; storage administrators might not be as efficient in the new environment. For these reasons, it is possible that the actual benefit will be lower than the original estimate. However, the use of lower-cost direct-attached drives should remain a benefit.

Reduced Cost Of High Availability And Disaster Recovery

Since annual disaster recovery costs can vary greatly depending on size and scale of data maintained, actual savings could range from as low $10,000 to $25,000.

Savings In Backup Systems And Staff

Forrester believes that the number of employees managing and maintaining the backup systems at Lorimer may not reduced and be kept in the existing roles. However, the reduction in backup software is more likely to occur.

Voicemail Cost Avoidance

Some organizations experiencing this benefit may not reclaim all of the funds earmarked for annual maintenance fees associated with voicemail and only reclaim up to 40% since there may be lingering redundant systems, portions of the PBX system that must remain place, or resistance by employees for turning older systems off.

Fewer Help Desk Or Support Calls

The actual reduction in the number of help desk calls may be dependent on the complexity and nature of the support calls. In cases of high complexity that still require human responses, organizations may see only a 5% reduction in help desk calls.

Cost Avoidance Of Extending Mobility

Annual maintenance fees of proprietary middleware software packages may be lower for certain organizations, depending on specific deals secured between the organization and the vendor. Additionally, if there is no proprietary middleware in place today, then clearly no cost benefit will result from the implementation of the new system.

Enhanced Communication Security

The actual reduction in the number of help desk calls may be dependent on the complexity and nature of the support calls. In cases of high complexity that still require human responses, organizations may see only a 5% reduction in help desk calls.

Simplified Compliance And Legal Discovery

For some organizations in industries that are not very heavily regulated, the number of eDiscovery requests in a year may be lower than the original estimate. In particular, the benefit of better search, retention management, and offloaded administration may not result.

Total Impact On Benefits

The table below outlines the total impact on benefits of factoring in the risks described above.

Table 20: Risk Adjustments To Benefits

Benefits	Risk-adjustment
Cost avoidance of storage	80%
Reduced cost of high availability and disaster recovery	80%
Savings in backup systems and staff	76%
Fewer help desk or support calls	83%

Cost reduction of extending mobility	89%
Enhanced message filtering	90%
Simplified compliance and legal eDiscovery	83%
Voicemail cost avoidance	50%
Cost avoidance of Exchange Server Enterprise Edition license	100%
Total	77%

Source: Forrester Research, Inc.

Flexibility

Flexibility, as defined by Forrester's TEI methodology, represents an investment in additional capacity or capability today that could be turned into future business benefits for some future additional cost. Flexibility benefits typically increase with the scalability of the technology investment. Flexibility provides an organization with the "option" or the ability to engage in future initiatives but not the obligation to do so.

There are multiple scenarios in which a customer might choose to maintain Microsoft Exchange 2010 for a specific set of purposes and discover additional value that can be gained from the application as future initiatives play out. Forrester believes that there are several such real options available to the composite organization:

Option To Expand Deployment

Microsoft Exchange 2010 allows customers to expand smartphone support without incurring additional licensing costs. The initial investment in Microsoft Exchange 2010 has created the option o more cost-effectively implement similar messaging capabilities for a greater portion of the 4,100 staff at the customer's organization. This is especially critical in organizations that engage in significant infrastructure changes that result from acquisitions, divestitures, network migrations, large application deployments, and operating system upgrades. For example, one customer explained that they were able to move physical offices to different cities with nearly no messaging downtime:

> *"[Microsoft Exchange 2010] will be restored as of minutes from when we shut down the old data center, so there will be no downtime for email during the office move . . . that's huge! There's no way I could do this on the current version of exchange — it's only possible because we've migrated to Exchange 2010."* — Enterprise development manager

Option To Support Mobile Offices

Microsoft Exchange 2010 allows organizations to offer more flexible workspace options such as tele-working and desk-sharing aided by the mobile capabilities offered by Exchange 2010 and combined with unified communications capability.

One customer expressed the ability for his organization to scale its business more quickly and effectively by encouraging users to work remotely and supporting them with Microsoft Exchange 2010. This had taken greater importance most recently with potential pandemics like H1N1, causing the IT department to accelerate plans to support an even greater number of users forced to work remotely from home for extended periods of time. This potential benefit allows organizations to grow more easily and more cost effectively by offering the same virtual office "tools" (e.g., access to email from PC, Web, or phone without VPN access) without having to invest in setting up a physical office and saving on real estate and technical infrastructure costs.

Option To Provision Infrequent Email Users

Non-information workers who share computers primarily read rather than send email, need a smaller mailbox, or are partners to the organization can often be provisioned with a lightweight Web-based email client. These occasional users can take advantage of an Exchange Online "deskless worker" license to access Web-based email for a low monthly cost. One customer said: "We asked ourselves, 'Does this user actually need an installed email client — or can we give them Web-based email access only?' We decided to start with a Web-only email client for our occasional users and many of our partners as well. We think we can easily upgrade them if we need to later."

Option To Move Mailboxes To Exchange Online

Microsoft Exchange 2010 offers flexibility in moving some mailboxes to Exchange Online to offload administrative and capital expense without disrupting employees' email experience. This "hybrid" email environment gives IT managers the ability to provision some workers on-premises and others online while retaining a single point of administration control. This is particularly attractive for customers who want to quickly integrate or launch a new business group without worrying about the on-premises installation.

Option To Build Business Collaboration Applications

Forrester believes that because of the wide-ranging features available in Microsoft Exchange 2010, organizations can support any number of self-service and business applications. This allows engineers to develop their own in-house applications on top of Microsoft Exchange 2010 messaging platform. A customer Forrester interviewed explained that they were able to lower the frequency of help desk and support calls even further as a result of developing and deploying a help desk self-service Web portal that tied into Microsoft Exchange 2010's System Center Configuration Manager. This also resulted time savings of four to five full-time equivalent engineers because fewer FTEs were needed for onsite visits to dispersed offices. Forrester believes that the range of flexibility options available to Lorimer in this regard is only limited by what it can do with consolidated messaging capabilities.

For Lorimer, the flexibility options described above do not promise immediate benefits and likely will be captured later. The existence of the option to capture these benefits has a present value that can be estimated, and calculating this value using the industry standard Black-Scholes option pricing model, would require inputs that were not available in the course of this study. Forrester therefore has not included the value of these options in this study's ROI calculations. These future optional benefits exist in addition to the risk-adjusted benefits described in this analysis.

TEI Framework: Summary

Considering the financial framework constructed above, the results of the costs, benefits, risk, and flexibility sections using the representative numbers can be used to determine a return on investment, net present value, and payback period. Table 21 shows the consolidation of the numbers for the composite organization.

Table 21: Composite Company ROI, Original Estimates

Summary financial results	Original estimate
ROI	103%
Payback period (months)	2.4
Total costs (PV)	$291,796
Total benefits (PV)	$591,366
Total (NPV)	$299,570

Source: Forrester Research, Inc.

Table 22 shows the risk-adjusted values, applying the risk adjustment method indicated in the "Risks" section and the values from Tables 19 and 20 to the numbers in Tables 9 and 18.

Table 22: Composite Company ROI, Risk-Adjusted

Summary financial results	Original estimate	Risk-adjusted
ROI	103%	48%
Payback period (months)	2.4	5.2
Total costs (PV)	$291,796	$307,641
Total benefits (PV)	$591,366	$455,750
Total (NPV)	$299,570	$148,109

Source: Forrester Research, Inc.

It is important to note that values used throughout the TEI Framework are based on in-depth interviews with nine organizations and the resulting composite organization built by Forrester. Forrester makes no assumptions as to the potential return that other organizations will receive within their own environment. Forrester strongly advises that readers use their own estimates within the framework provided in this study to determine the expected financial impact of implementing Microsoft Exchange 2010.

Study Conclusions

Forrester's in-depth interviews with Microsoft Exchange 2010's customers yielded several important observations. Based on information collected in interviews with current Microsoft Exchange 2010 customers, Forrester found that organizations can realize benefits in the form of cost avoidance of storage, reduced cost of high availability, cost avoidance in voicemail, savings in backup systems, fewer help desk calls, cost avoidance of mobility, enhanced communication security, and simplified compliance and legal discovery.

The financial analysis provided in this study illustrates the potential way an organization can evaluate the value proposition of Microsoft Exchange 2010. Based on information collected in nine in-depth customer interviews, Forrester calculated a three-year risk-adjusted ROI of 48% for the composite organization with a payback period of less than six months. All final estimates are risk-adjusted to incorporate potential uncertainty in the calculation of costs and benefits.

Based on these findings, companies looking to implement Microsoft Exchange 2010 can see cost savings and productivity benefits. Using the TEI framework, many companies may find the potential for a compelling business case to make such an investment.

Appendix A: Total Economic Impact™ Overview

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

The TEI methodology consists of four components to evaluate investment value: benefits, costs, risks, and flexibility. For the purpose of this analysis, the impact of flexibility was not quantified.

Benefits

Benefits represent the value delivered to the user organization — IT and/or business units — by the proposed product or project. Often product or project justification exercises focus just on IT cost and cost reduction, leaving little room to analyze the effect of the technology on the entire organization. The TEI methodology and the resulting financial model place equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization. Calculation of benefit estimates involves a clear dialogue with the user organization to understand the specific value that is created. In addition, Forrester also requires that there be a clear line of accountability established between the measurement and justification of benefit estimates after the project has been completed. This ensures that benefit estimates tie back directly to the bottom line.

Costs

Costs represent the investment necessary to capture the value, or benefits, of the proposed project. IT or the business units may incur costs in the forms of fully burdened labor, subcontractors, or materials. Costs consider all the investments and expenses necessary to deliver the proposed value. In addition, the cost category within TEI captures any incremental costs over the existing environment for ongoing costs associated with the solution. All costs must be tied to the benefits that are created.

Risk

Risk measures the uncertainty of benefit and cost estimates contained within the investment. Uncertainty is measured in two ways: the likelihood that the cost and benefit estimates will meet the original projections and the likelihood that the estimates will be measured and tracked over time. TEI applies a probability density function known as "triangular distribution" to the values entered. At a minimum, three values are calculated to estimate the underlying range around each cost and benefit.

Flexibility

Within the TEI methodology, direct benefits represent one part of the investment value. While direct benefits can typically be the primary way to justify a project, Forrester believes that organizations should be able to measure the strategic value of an investment. Flexibility represents the value that can be obtained for some future additional investment building on top of the initial investment already made. For instance, an investment in an enterprisewide upgrade of an office productivity suite can potentially increase standardization (to increase efficiency) and reduce licensing costs. However, an embedded collaboration feature may translate to greater worker productivity if activated. The collaboration can only be used with additional investment in training at some future point in time. However, having the ability to capture that benefit has a present value that can be estimated. The flexibility component of TEI captures that value.

Appendix B: Glossary

Discount rate: The interest rate used in cash flow analysis to take into account the time value of money. Although the Federal Reserve Bank sets a discount rate, companies often set a discount rate based on their business and investment environment. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult their organization to determine the most appropriate discount rate to use in their own environment.

Net present value (NPV): The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.

Present value (PV): The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total net present value of cash flows.

Payback period: The breakeven point for an investment. The point in time at which net benefits (benefits minus costs) equal initial investment or cost.

Return on investment (ROI): A measure of a project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits minus costs) by costs.

A Note on Cash Flow Tables

The following is a note on the cash flow tables used in this study. The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1. Those costs are not discounted. All other cash flows in Years 1 through 3 are discounted using the discount rate shown in Table 2 at the end of the year. Present value (PV) calculations are calculated for each total cost and benefit estimate. Net present value (NPV) calculations are not calculated until the summary tables and are the sum of the initial investment and the discounted cash flows in each year.

Appendix C: About the Project Manager

Amit Diddee, Consultant

Amit Diddee is a consultant with Forrester's Total Economic Impact (TEI) consulting practice. The TEI methodology focuses on measuring and communicating the value of IT and business decisions and solutions as well as providing a business case based on the costs, benefits, flexibility, and risk of investments. Amit specializes in developing complex financial analytic models and decision-support systems to help clients solve business challenges around financial justification of investments.

Amit's past experience spans a wide variety of industries and functional areas. Amit came to Forrester from the Monitor Group, where he advised top Fortune 500 companies on high-profile projects focused on corporate and growth strategy, marketing and sales, IT, and performance improvement. Prior to the Monitor Group, Amit worked at EMC implementing process improvement projects to increase customer satisfaction levels and business productivity. He was also a senior technical analyst at Business Forecast Systems, where he provided demand management and supply chain consulting services.

Amit holds a B.S. in neuroscience and psychology from Brandeis University and a M.S. in computer science with a concentration in knowledge discovery and data mining from Worcester Polytechnic Institute.