A Forrester Total Economic Impact™ Study Prepared For Microsoft

The Total Economic Impact Of Microsoft Exchange Online

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Executive Summary

In June 2011, Microsoft commissioned Forrester Consulting to examine the total economic impact and potential return on investment (ROI) small to medium-size organizations may realize by migrating to Microsoft Exchange Online. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Microsoft Exchange Online on their organizations. Microsoft Exchange Online is Microsoft's cloud-based messaging and collaboration solution featuring email, voicemail, calendaring, contacts, and tasks. This study illustrates the financial impact of replacing an existing on-premises Microsoft Exchange environment with Microsoft Exchange Online for "Alacrity," a 150-person US accounting firm that is a composite organization based on the companies Forrester interviewed for the purposes of this study. (See Appendix A for a detailed description of the composite organization.)

Microsoft Exchange Online Delivers Professional-Grade Email For A Fraction Of The Cost Of Operating Your Own Microsoft Exchange Email Environment

In conducting in-depth interviews with 10 existing customers, Forrester found that these companies achieved decreased capital expenditures and operating costs, increased IT productivity, and cost-effective scalability, among other benefits. The financial analysis presented in this study illustrates that Alacrity can expect to experience a risk-adjusted ROI¹ of 378%, as indicated in Table 1.

Table 1Composite Organization Three-Year Risk-Adjusted ROI

| ROI | Payback | Total benefits | Total costs | Net present |
|------|------------|----------------|-------------|-------------|
| | period | (PV) | (PV) | value (NPV) |
| 378% | 1.0 months | \$194,290 | (\$40,611) | \$153,679 |

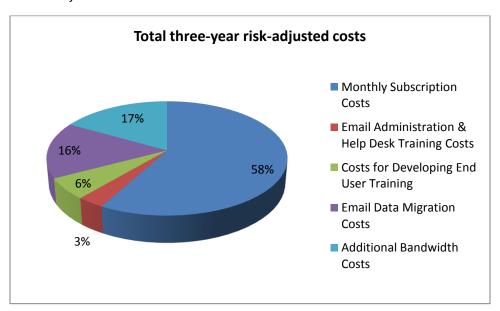
Source: Forrester Research, Inc.

• Benefits. Forrester found that organizations can realize benefits in the form of cost avoidance of storage, IT labor savings, cost avoidance of Microsoft Exchange and Windows Server, enhanced message filtering, savings in backup systems and staff, and cost-effective scalability. Alacrity, the composite organization, will likely experience all of these risk-adjusted benefits, valued in total over a period of three years at \$236,340. Among these benefits, the key takeaways are:

¹ Refer to Appendix D for an explanatory note on comparing ROI values from different TEI case studies.

- Decreased capital expenditures and operating costs. Alacrity is able to reduce the operating costs of its onpremises email environment by \$179,119 and, at the same time, upgrade its email environment without incurring additional capital expenditures.
- Increased IT productivity. With just six IT staff spread across three regional offices, Alacrity's IT staff is able
 to save 4 hours per week from routine activities associated with keeping its on-premises email system
 running. With the introduction of Microsoft Exchange Online, Alacrity is able to focus its limited IT
 resources on more value-added activities.
- Enhanced cost-effective scalability. Fast-growing organizations like Alacrity are constantly concerned that their existing email system wouldn't scale to handle the message volume, mailbox size, or headcount that they need in the near future. With Microsoft Exchange Online, such organizations are able to add headcount independent of cost constraints and geographic limitations present with an on-premises environment.
- Costs. Forrester learned that the key cost components of Microsoft Exchange Online are the monthly subscription fees, email migration costs, additional bandwidth costs, and IT and end user training costs. The total PV of risk-adjusted costs for the three-year period of analysis amounts to \$40,611, with the monthly subscription costs making up 58% of the total costs.

Figure 1
Total Three-Year Risk-Adjusted Costs



Factors Affecting Benefits And Costs

Table 1 illustrates the risk-adjusted financial results that were achieved by the composite organization. The risk-adjusted values take into account any potential uncertainty or variance that exists in estimating the costs and benefits, which produces more conservative estimates. The following factors may affect the financial results that an organization may experience:

- Complexity of existing on-premises email environment. An organization with a more complex messaging
 environment than the assumptions made for the composite organization profiled in this study may see higher
 data migration and training costs but potentially greater benefits around hardware cost avoidance and IT labor
 savings.
- Storage needs for email archiving. One of the most significant benefits of moving to Microsoft Exchange 2010 is the cost avoidance of additional storage. Organizations that don't have a strong need for additional storage to provide large mailboxes or to provision a growing rate of mailboxes to account for new employees may not experience the same degree of benefits as those described in this study.
- Application email integration. Many organizations have legacy applications, which may integrate directly with their on-premises Exchange implementation. In those cases, companies will need to remediate the applications to modern Exchange integration protocols like Exchange Web Services or standard protocols like SMTP. This remediation effort could result in additional time and investment. Additionally, a customer may need to deploy an on-premises server to facilitate the integration.
- Access to an installed Outlook client. Customers acquire Microsoft Outlook either as a standalone product or via the broader Microsoft Office suite. The Exchange Online service fee offers access to Outlook, but customers may need to invest in Outlook or Office licenses for PCs that don't currently have Outlook 2003 or greater.

Disclosures

The reader should be aware of the following:

- The study is commissioned by Microsoft and delivered by the Forrester Consulting group.
- Forrester makes no assumptions as to the potential ROI 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 Online.
- 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.

TEI Framework And Methodology

Introduction

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for small or medium-size organizations considering migrating to Microsoft Exchange Online. Microsoft Exchange Online is Microsoft's cloud-based messaging and collaboration solution included in its Office 365 solution, which also includes SharePoint, Live Meeting, and Office Communications, all of which are available as online suites for business or as standalone services. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision.

Approach And Methodology

Forrester took a multistep approach to evaluate the impact that Microsoft Exchange Online can have on an organization (see Figure 2). Specifically, we:

- Interviewed Microsoft marketing/sales/consultants personnel and Forrester analysts to gather data relative to Microsoft Exchange Online and the marketplace for Microsoft Exchange Online.
- Interviewed 10 organizations currently using Microsoft Exchange Online to obtain data with respect to costs, benefits, and risks.
- Designed a composite organization ("Alacrity") based on the characteristics of the interviewed organizations (see Appendix A).
- Constructed a financial model representative of the interviews using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews as applied to the composite organization.



Source: Forrester Research, Inc.

Figure 2

Forrester employed four fundamental elements of TEI in modeling Microsoft/Microsoft Exchange Online's service:

- 1. Costs.
- 2. Benefits to the entire organization.
- 3. Flexibility.

4. Risk.

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

Analysis

Interview Highlights

A total of 10 interviews were conducted for this study, involving representatives from the following companies (Microsoft customers based in the US and Europe):

- 1. A top three German system integrator employing 2,200 employees across 30 offices in Germany, Austria, and the UK. As a Microsoft partner with a large customer base interested in Microsoft's cloud-based services, it was an enthusiastic participant in Microsoft's Technology Adoption Program because of the early experience and familiarity the program provided it. At the time of the interview, the company had migrated 10 mailboxes from Microsoft Exchange 2010 to Exchange Online for evaluation, training, and testing purposes.
- A US-based firm that develops and markets high-end skin care beauty products. The company markets
 and sells to physicians both prescription and nonprescription skin care products. The company's twoperson IT staff maintains a Microsoft Exchange 2003 environment for 185 mailboxes, of which 135 are
 dedicated user mailboxes.
- 3. An American architecture, design, and planning firm that specializes in building solutions for healthcare, sustainable urban design and planning, interior architecture and design, commercial, mixed-use/residential, and science and technology. The firm has a staff of 85 highly mobile employees supported by a single IT full-time resource managing a Microsoft Exchange 2007 environment.
- 4. A key provider of title insurance, appraisal, and settlement services that operates in 47 US states as well as in select international markets and provides both residential and commercial services. The organization employs 250 employees, with a large percentage of these being remote workers across the US, with a small IT staff operating a Microsoft Exchange 2007 environment.
- 5. An American nonprofit organization that brings information technology services to other not-for-profit organizations and training to young adults. The organization's 50 employees provide its clients a range of professional services, including IT professional services and IT workforce and professional development. The company's two-person IT staff maintains a Microsoft Exchange 2007 environment for 50 mailboxes.
- 6. A leading Dutch system integrator that provides integrated IT solutions to customers in industries, including healthcare, finance, education, and government. As a Microsoft partner, it was an enthusiastic participant in Microsoft's Technology Adoption Program because of the early experience and familiarity the program provided it. The company has 130 employees, of which 110 who had mailboxes on the onpremises Microsoft Exchange 2010 had been migrated to Microsoft Exchange Online.
- 7. An American Business Productivity Online Suite (BPOS) reseller and system integrator that specializes in implementing Microsoft SharePoint and related technologies. The organization's small core IT staff

plans to migrate the organization's 175 mailboxes on Microsoft Exchange 2007 to Microsoft Exchange Online.

- 8. A leading UK-based provider of enterprise-class data storage subsystems and hard disk drive capital equipment. The organization has 2,200 employees across 12 offices in three continents with mailboxes on Microsoft Exchange 2007.
- 9. A small British IT consultancy that resells and implements Microsoft SharePoint for its clients. The organization has a half-dozen remote workers who rely on third-party-hosted service providers for key IT applications and systems, including email.
- 10. A US-based Microsoft system integrator and IT consultancy with 60 employees. As a Microsoft partner with a large customer base interested in Microsoft's cloud-based services, it was an enthusiastic participant in Microsoft's Technology Adoption Program because of the early experience and familiarity the program provided it. At the time of the interview, the company had migrated 100 group and individual mailboxes from BPOS to Exchange Online for evaluation, training, and testing purposes.

The 10 interviews uncovered a number of important insights:

- While the interviewed organizations were largely satisfied with the basic operations of earlier versions of
 Microsoft Exchange Server, the most common motivation for upgrading was the high cost of maintaining an onpremises email environment, which included frequent software and hardware expenditures and continuous IT
 time investment. The cost was especially high for small to medium-size businesses with limited IT staff and tight
 budgets like the ones interviewed.
- Many of the interviewees, especially smaller organizations with fewer than 10 IT staff members, expressed a
 strong desire to simplify their IT systems in order to decrease the amount of time and resources spent on
 managing critical but non-revenue-generating activities. Many of these organizations wanted affordable and
 reliable "one-stop" solutions that would provide all of the critical business tools, including email, without the
 administrative overhead of administering and maintaining an on-premises IT environment.
- Another driving factor for upgrading to Microsoft Exchange Online was the high service-level guarantee and high availability provided by Microsoft. Because email was the primary communication vehicle for information for each of the interviewed companies, many organizations felt vulnerable to disasters or spam-induced attacks that may, or in some cases have, resulted in email downtime. Furthermore, while many of these organizations regularly backed up email data and systems, most could not back up to remote locations because of the high cost of doing so and therefore were not protected against disasters like fire and flood.
- While most Microsoft customers did not create business cases to justify the cost of upgrading to Microsoft Exchange Online, they did note that they intuitively felt that the cost savings from not having to spend on additional storage for larger mailboxes alone accounted for the investment in the upgrade process. They were pleased to be able to meet end user demands for significantly larger mailboxes while at the same time freeing up storage capacity previously dedicated for email.

- Certain organizations that Forrester interviewed cited the lower cost to support mobile employees as a key benefit of Microsoft Exchange Online. These organizations tended to be either highly distributed organizations or organizations with a highly mobile workforce.
- Maintaining the familiar Microsoft user experience was a key concern for some interviewees. For these
 customers, Microsoft Exchange Online's features around full-fidelity Outlook support, support for shared
 calendars, conference rooms and delegate access, and collaboration features including global address lists,
 distribution groups, and shared mailboxes were equally important benefits beyond some of the IT-focused
 benefits.

Composite Organization

Based on the interviews with the 10 existing customers provided by Microsoft, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. Alacrity, the composite organization that Forrester synthesized from these results, represents a 150-person US accounting firm with three regional offices in the US, each having a resource-strapped two-person IT staff managing and administering an on-premises Microsoft Exchange 2003 environment. See Appendix A for a detailed description of the composite organization.

Framework Assumptions

Table 2 provides the model assumptions that Forrester used in this analysis. In addition to the financial assumptions used to construct the cash flow analysis, this table also provides salary assumptions used within this analysis. The relative high salary given is accounted for the highly qualified and experienced IT individuals who many small to medium-size organizations rely on for all of their corporate technology needs.

Table 2Model Assumptions

| Ref. | Metric | Calculation | Value |
|------|---|-------------|-----------|
| A1 | Hours per week | | 40 |
| A2 | Weeks per year | | 52 |
| А3 | Hours per year (M-F, 9-5) | | 2,080 |
| A4 | Hours per year (24x7) | | 8,736 |
| A5 | Fully loaded salary for a senior IT manager | | \$112,500 |
| A6 | Hourly | (A5/A3) | \$54.09 |

Source: Forrester Research, Inc.

The discount rate used in the PV and NPV calculations is 10%, and the time horizon used for the financial modeling is three years. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult with their respective company's finance department to determine the most appropriate discount rate to use within their own organizations.

Costs

"The high cost, in terms of time and money, of continuous management and administration and regular upgrades of an on-premises [Microsoft] Exchange environment is something I'm happy to forget." (Infrastructure architect, information technology, British data storage system provider)

The key cost categories associated with Microsoft Exchange Online are: 1) monthly subscription costs; 2) labor costs associated with email data migration; 3) labor costs associated with IT training for email administration and help desk; 4) labor costs associated with IT developing end user training; and 5) additional telecommunications costs for increased bandwidth as a result of using Microsoft Exchange Online. The project is measured on a three-year basis. The following are the cost inputs to the financial analysis.

Monthly Subscription Costs

Microsoft offers a flat rate on a monthly per-user basis for subscription to Microsoft Office 365, which includes Microsoft Exchange Online. This \$5 monthly base fee covers ongoing upgrades, support, and maintenance. Such a license provides the user with unlimited 24x7 connectivity to Microsoft Exchange Online, unlimited number of conference room mailboxes and group mailboxes, and space for email (25 GB mailboxes per user license). Microsoft Office 365 suite subscriptions are also available, which provide, in addition to Microsoft Exchange Online, access to the full Office 365 suite (currently referred to as BPOS), including the most recent versions of SharePoint Online and Lync Online in a Microsoft cloud-hosted environment at a discounted price. For 150 users, the total annual subscription costs for Alacrity would amount to \$9,000 per year.

Email Data Migration Costs

Because of the critical importance of email data, Forrester believes Alacrity would be prudent in allocating the necessary IT resources to minimize the risk of losing any emails or contacts. Alacrity would assign 1.5 full-time equivalent (FTE) staff members from its IT department who would spend on average 20 minutes per mailbox to plan, migrate, and check data accuracy. This careful process of migrating 165 individual and group mailboxes would take Alacrity less than a week, and using Forrester's estimate of average fully loaded compensation rates, the total email data migration costs would amount to \$4.462.

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Table 3 Email Data Migration Costs

| Ref. | Metric | Calculation | Per period | Year 1 | Year 2 | Year 3 | Total |
|------|--|------------------|------------|--------|--------|--------|-----------|
| B1 | Number of mailboxes | | 165 | | | | |
| B2 | Time (minutes) to migrate each mailbox | | 20 | | | | |
| В3 | Number of IT FTEs involved | | 1.5 | | | | |
| B4 | Fully loaded hourly salary | | \$54.09 | | | | |
| Bt | Email data migration costs | (B2/60)*B1*B3*B4 | \$4,462 | _ | - | | _ |
| Bto | Total (original) | | (\$4,462) | \$0 | \$0 | \$0 | (\$4,462) |

Email Administration And Help Desk Training Costs

Because of the importance attached to email data and the impact of managing it on IT staff members, Forrester believes that it would be in Alacrity's best interest to provide training to an IT staff member from each of its three regional offices. Using Forrester's average fully loaded salary rates, 8 hours of training on help desk issues and the administration of Microsoft Exchange Online would cost Alacrity \$1,298.

Table 4Email Administration And Help Desk Training Costs

| Ref. | Metric | Calculation | Per period | Year 1 | Year 2 | Year 3 | Total |
|------|---|-------------|------------|--------|--------|--------|-----------|
| C1 | Number of IT FTEs being trained | | 3 | | | | |
| C2 | Hourly fully loaded salary of an IT FTE | | \$54.09 | | | | |
| C3 | Hours of training | | 8 | | | | |
| Ct | Email administration and help desk training costs | C1*C2*C3 | \$1,298 | | | | |
| Cto | Total (original) | | (\$1,298) | \$0 | \$0 | \$0 | (\$1,298) |

End User Training Costs

To ensure a successful rollout, Alacrity would need to develop end user training guides and documentation that will detail any specific setup instructions and provide clear descriptions and instructions on how to use the new features offered by Microsoft Exchange Online, as some of the interviewed customers that had the greatest success with Microsoft Exchange Online did. In Forrester's estimation, 1.5 FTE IT staff members would spend nearly four workdays creating and delivering training to each of the company's 150 employees. Using Forrester's average fully loaded salary rates, this would cost Alacrity \$2,596.

Table 5 End User Training Costs

| Ref. | Metric | Calculation | Per period | Year 1 | Year 2 | Year 3 | Total |
|------|---|-------------|------------|--------|--------|--------|-----------|
| D1 | Number of IT FTEs involved | | 1.5 | | | | |
| D2 | Hourly fully loaded salary of an IT FTE | | \$54.09 | | | | |
| D3 | Hours spent on creating and disseminating end user training | | 32 | | | | |
| Dt | End user training costs | D1*D2*D3 | \$2,596 | | | | |
| Dto | Total (original) | | (\$2,596) | \$0 | \$0 | \$0 | (\$2,596) |

Additional Bandwidth Costs

By moving from an on-premises email environment to an entirely cloud-based environment like Microsoft Exchange Online, Alacrity will likely see an increase in network traffic. While it cannot precisely be estimated, as network traffic is dependent on several factors such as the services a company has subscribed to and the performance of Internet browser software used to connect to Microsoft Exchange Online, Forrester estimates that Alacrity will see an increase of 2,600 KB in network traffic per mailbox per day, assuming users continue to use their Outlook clients to connect to Microsoft Exchange Online. For 165 mailboxes, Forrester estimates that Alacrity would need to spend approximately \$200 per month in telecommunication costs to accommodate an increase of 9 GB in network traffic per month.

Total Costs

Table 6 summarizes the costs Alacrity would be presented with upon migrating to Microsoft Exchange Online over a three-year time frame.

Table 6Total Costs

| Costs | Initial | Year 1 | Year 2 | Year 3 | Total | PV |
|---|-----------|------------|------------|------------|------------|------------|
| Monthly subscription costs | | (9,000) | (9,000) | (9,000) | (27,000) | (22,382) |
| Email administration and help desk training costs | (1,298) | | | | (1,298) | (1,298) |
| End user training costs | (2,596) | | | | (2,596) | (2,596) |
| Email data migration costs | (4,462) | | | | (4,462) | (4,462) |
| Additional bandwidth costs | | (2,400) | (2,400) | (2,400) | (7,200) | (5,968) |
| Total | (\$8,356) | (\$11,400) | (\$11,400) | (\$11,400) | (\$42,556) | (\$36,706) |

Benefits

"Microsoft Exchange Online allows a small organization like us to get best-in-class corporate email system without the cost and hassles of running one." (Chief executive officer, British IT consultancy)

The customers Forrester interviewed for this study collectively described a range of hard and soft benefits that have accrued from migrating to Microsoft Exchange Online. 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 IT costs significantly while at the same time meet critical corporate demands in the way of high availability, disaster recovery, and unified communications. The possibility of doing this would have been cost-prohibitive for a small or medium-size organization with limited IT staff running an on-premises email environment on a tight budget. Therefore, Microsoft Exchange Online, together with all of its new features, was considered a major boon for most customers that Forrester interviewed.

Cost Avoidance Of Storage

Perhaps the biggest benefit of implementing Microsoft Exchange Online, 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. Achieving this goal is often cost-prohibitive for small organizations running an on-premises email environment that cannot afford to purchase additional storage racks, for example.

With 25 GB as the standard default mailbox size offered in Microsoft Exchange Online, Forrester believes Alacrity will benefit by not having to buy and manage more than 600 GB of additional storage needed to meet its rapid growth rate and to increase existing mailbox sizes of existing users from 1 GB to a minimum of 5 GB as mandated by senior

management. Forrester estimates organizations like Alacrity spend more than \$78 per GB on email-related software and hardware. Add to that approximately 120 man-hours of IT managing that hardware and storage per month. Based on Forrester's conservative estimate, Alacrity should save nearly \$130,000 annually on storage costs, although this could easily be much higher, as one interviewee pointed out: Because cost has been a "deferred expense for us, we anticipate spending about two to three times the cost of the storage we have currently dedicated to email over the next three years." The calculation of this value is shown in Table 7 below.

Table 7Cost Avoidance Of Storage

| Ref. | Metric | Calculation | Per period | Year 2 | Year 3 | Total |
|------|---|------------------------------|------------|--------|--------|-----------|
| E1 | Number of mailboxes | | 165 | | | |
| E2 | Amount of storage currently offered per mailbox (GB) | | 1 | | | |
| E3 | Minimum amount of storage planned to offer per mailbox (GB) | | 5 | | | |
| E4 | Fully loaded storage costs per GB | | \$78.33 | | | |
| E5 | IT FTE hours per month to manage storage hardware/software | | 120 | | | |
| E6 | Fully loaded hourly salary | | \$54.09 | | | |
| Et | Cost avoidance of storage | E1*(E3-E2)*E4+ (E5*12*E6) | \$129,582 | - | | |
| Eto | Total (original) | | \$129,582 | \$0 | \$0 | \$129,582 |

Source: Forrester Research, Inc.

IT Labor Savings In Overhead Of Supporting On-Premises Email Environment

Forrester estimates that by moving to Microsoft Exchange Online, Alacrity will witness labor savings associated with routine email maintenance ("keep the lights on") operations such as server hardware and software administration and patch management. Based on customer experiences, Forrester estimates that each of Alacrity's six IT staff members, who are currently tasked with various time-consuming email administration activities, would save 4 hours per week. Even if only half of that freed time is converted into actual productive time then, using market rates for fully loaded compensation estimates, the time saved would calculate to an actual savings of more than \$31,000 annually.

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Table 8IT Labor Savings In Overhead Of Supporting On-Premises Email Environment

| Ref. | Metric | Calculation | Per period | Year 2 | Year 3 | Total |
|------|--|----------------|---------------|----------|----------|----------|
| F1 | Number of IT FTEs | | 6 | | | |
| F2 | Hourly rate per worker | | \$54.09 | | | |
| F3 | Number of hours (saved) per week | | 4 | | | |
| F4 | Percent captured | | 50% | | | |
| Ft | IT labor savings in overhead of supporting on- premises email environment | F1*F2*F3*48*F4 | \$31,154 | | | |
| Fto | Total (original) | | \$31,154 | \$31,154 | \$31,154 | \$93,462 |

Cost Avoidance Of Microsoft Exchange And Windows Server

Because Microsoft Exchange Online is an entirely cloud-based solution, Alacrity would be able to save what it spends on Microsoft Exchange 2003 and Microsoft Windows Server. As Alacrity operates a separate Microsoft Exchange environment in each of its three offices, Forrester believes the company would be able to save \$700 in annual Software Assurance (SA) fees for each of its three Microsoft Exchange Server licenses, plus \$200 in annual SA fees on each of its four mailbox and utility servers. Additionally, Alacrity would be able to save costs associated with Microsoft Exchange 2003 Client Access Licenses (CALs), which Forrester estimates to be \$14 per user per year for a company like Alacrity. In total, Alacrity would be able to save \$5,000 per year in maintenance fees and CALs.

Table 9Cost Avoidance Of Microsoft Exchange And Windows Server

| Ref. | Metric | Calculation | Per period | Year 2 | Year 3 | Total |
|------|--|----------------------------------|------------|---------|---------|----------|
| G1 | Number of Microsoft Exchange 2003 instances | | 3 | | | |
| G2 | Number of mailbox-related servers | | 3 | | | |
| G3 | Number of utility nonmailbox servers | | 1 | | | |
| G4 | Annual Microsoft Exchange maintenance cost | | \$700 | | | |
| G5 | Annual Windows Server maintenance fees | | \$200 | | | |
| G6 | Number of users | | 150 | | | |
| G7 | Annual per user Microsoft Exchange CAL | | \$14 | | | |
| Gt | Cost avoidance of Microsoft Exchange and Windows Server | (G1*G4)+([G2+G3]*G5) +(G6*G7) | \$5,000 | | | _ |
| Gto | Total (original) | | \$5,000 | \$5,000 | \$5,000 | \$15,000 |

Enhanced Message Filtering

Microsoft customers that Forrester interviewed indicated enhanced message filtering with Forefront Online Protection for Exchange offered by Microsoft Exchange Online. Because of the anti-spam features included in Exchange Online, some customers like Alacrity upgrading from Exchange 2003 felt comfortable retiring third-party spam filtering services such as Postini. According to Forrester, estimated savings on annual fees for third-party spam filtering services would average \$3,000 per year for Alacrity.

Savings In Backup Systems And Staff

Customers also reported significant operational cost savings in the area of backup. Some of the companies that Forrester interviewed relied on frequent tape backups either to meet regulatory requirements and other compliance needs or more commonly serve as a short-term insurance policy to facilitate disaster recovery. These organizations often had developed set regular routines for backing up email data to tape, which involved a fair investment of IT labor time and technical resources such as software and hardware. Despite the investment, many of these organizations also cited the drawbacks of tape backup — namely the time and effort required to conduct the process, the high number of

failure rates associated with tape medium, and the relative high risk of losing company data due to failed tapes — as reasons for relying on a hosted service like Microsoft Exchange Online for automatic backups.

For the purposes of this analysis, Forrester estimates an organization like Alacrity would save \$740 in annual related hardware and software costs, \$200 in annual tape transportation and storage costs, and an hour per month in lost productivity due to weekly tape rotation and monthly tape maintenance activities. In total, Alacrity would be able to save more than \$8,500 annually, taking into account fully loaded compensation rates. The calculation of this value is shown in Table 10 below.

Table 10Savings In Backup Systems And Staff

| Ref. | Metric | Calculation | Per period | Year 2 | Year 3 | Total |
|------|--|---|------------|---------|---------|----------|
| H1 | Annual related hardware and software costs | | \$700 | | | |
| H2 | Number of tapes devoted to email archiving | | 10 | | | |
| H3 | Time (minutes) to rotate tapes weekly | | 10 | | | |
| H4 | Time (minutes) for monthly tape maintenance | | 30 | | | |
| H5 | Average cost of new replacement tape per year | | \$40 | | | |
| Н6 | Annual tape transportation and storage costs | | \$200 | | | |
| H7 | Number IT FTEs | | 1 | | | |
| Н8 | Fully loaded hourly salary | | \$54.09 | | | |
| Ht | Savings in backup systems and staff | H1+H2*([H3/60*48]+ [H4/60*12])*H7*H8+ H5+H6 | \$8,512 | | | |
| Hto | Total (original) | | \$8,512 | \$8,512 | \$8,512 | \$25,536 |

Source: Forrester Research, Inc.

Cost-Effective Scalability — Not Quantified

Some fast-growing organizations that Forrester interviewed for this study were concerned that their existing email system wouldn't scale to handle the message volume, mailbox size, or headcount that they needed in the near future. With Microsoft Exchange Online, these organizations are able to add headcount independent of cost constraints and geographic limitations present with an on-premises environment. Although this benefit does not translate into quantifiable cost savings, it is nevertheless an important consideration for a fast-growing organization like Alacrity.

Other Benefits

In addition to the benefits described above, some customers that Forrester interviewed also reported other ancillary benefits leading to increased general levels of IT and email service. 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 he or she so wishes.

- Several organization like Alacrity that were interviewed for this study mentioned considering other hosted email providers as possible alternatives to Microsoft Exchange Online. After a careful study of the competing solutions and taking into account the time and effort needed to train and support each, these organizations selected Microsoft Exchange Online for its user-friendly web-based admin interface, greater feature set, better uptime, and better migration paths. Some customers also cited Microsoft's level of data security and protection as additional reasons for choosing Microsoft over other competing solutions.
- Because Microsoft Exchange Online is easier to administer over the Web than the older on-premises variant, some customers reported benefits from being able to more easily delegate routine email administrative tasks to junior IT staff.
- Interviewees also mentioned that it was significantly easier to migrate to Microsoft Exchange Online than any other on-premises version of Microsoft Exchange, although larger customers with more mailboxes than Alacrity mentioned the lack of sufficient guidance and support in migration and noted that the amount of time and effort spent was greater than expected.
- Some customers claimed a reduction in email downtime, although when asked to provide metrics as evidence, none could. Therefore, Forrester is unsure if this benefit is actual or simply perceived because of the 99.9% SLA promised by Microsoft.
- Certain organizations also reported Microsoft Exchange Online's improved access to corporate network for
 remote workers, which led some to discontinue their support and maintenance of VPN software. For the
 customers for whom this was true, this benefit didn't necessarily translate into substantial cost savings, although
 it did contribute to improved end user experience.
- Customers have the ability to step up their Exchange Online subscription to the E2 plan, which includes
 archiving and voicemail integration. If Alacrity elects to do this, it could potentially avoid investing in a new
 archiving solution or save on its existing voicemail system investment.
- Microsoft Exchange Online allows organizations to extend email messaging, calendars, and contacts to a broad set of smartphone users, including Android, iPhone, Windows Phone, and any of the hundreds of other

ActiveSync-connected devices. Customers that Forrester interviewed appreciated the opportunity to liberalize corporate policies on approved smartphones and indicated potential savings in not having to administer and maintain software such as BlackBerry Enterprise Server and related hardware to provide email access to BlackBerry smartphone users.

Total Benefits

Table 11 summarizes the benefits experienced by Alacrity by migrating to Microsoft Exchange Online and shows the PV for each benefit category.

Table 11Total Benefits

| Benefits | Initial | Year 1 | Year 2 | Year 3 | Total | PV |
|--|---------|-----------|----------|----------|-----------|-----------|
| Cost avoidance of Microsoft Exchange and Windows Server | | 5,000 | 5,000 | 5,000 | 15,000 | 12,434 |
| Cost avoidance of storage | | 129,582 | | | 129,582 | 117,802 |
| Enhanced message filtering | | 3,000 | 3,000 | 3,000 | 9,000 | 7,461 |
| Savings in backup systems and staff | | 8,512 | 8,512 | 8,512 | 25,536 | 21,168 |
| IT labor savings in overhead of supporting on-premises email environment | | 31,154 | 31,154 | 31,154 | 93,462 | 77,475 |
| Total | | \$177,248 | \$47,666 | \$47,666 | \$272,580 | \$236,340 |

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 Online for a specific set of purposes and discover additional value that can be gained from the hosted application as future initiatives play out. For rester believes that there are several such real options available to the composite organization.

Option To Support Mobile Offices

Microsoft Exchange Online allows organizations to offer more flexible workspace options, such as teleworking and desk sharing aided by the mobile capabilities offered by Exchange Online and combined with unified communications capability.

One customer expressed the ability for his organization to scale his business more quickly and effectively by encouraging users to work remotely and supporting them with Microsoft Exchange Online. 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 and 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 a special \$2 per user per month kiosk-user subscription that provides web-based access to email and a smaller (500 MB) mailbox size.

For Alacrity, 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 PV 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.

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, as 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 Online were considered in this study.

Monthly Subscription Costs

Forrester assumes monthly subscription costs have been determined by contract, so no risk adjustment is applied.

Email Data Migration Costs

In its estimation, Forrester determined Alacrity would allocate 1.5 IT FTEs on email data migration activities and spend 20 minutes to migrate each mailbox. However, organizations with complex email environments consisting of a large number of mailboxes with large amounts of data may allocate up to two IT FTEs, who may spend close to 45 minutes to migrate each mailbox.

Email Administration And Help Desk Training Costs

Some customers may find that email administration and help desk training may take up to 12 hours instead of 8 hours depending on the complexities of the IT environment and the relative skill levels of the individuals being trained.

End User Training Costs

End user training costs may be higher for some organizations that have users requiring instructions and guidance more than what is considered typical in a corporate setting. For this reason, Forrester believes some organizations may need to provide additional training than anticipated.

Additional Bandwidth Costs

Because increases in network traffic are largely driven by the amount of email data sent and received, among other factors, the total added bandwidth needed per month may be double than Forrester's original estimate. Therefore, organizations should factor in slightly higher telecommunication costs than Forrester's estimate of \$200 per month.

Total Impact On Costs

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

Table 12Total Impact On Costs

| Costs | Risk impact |
|---|-------------|
| Monthly subscription costs | 100% |
| Email administration and help desk training costs | 117% |
| End user training costs | 108% |
| Email data migration costs | 167% |
| Additional bandwidth costs | 108% |
| Total | 109% |

Source: Forrester Research, Inc.

Cost Avoidance Of Storage

Several things can lower the benefit of reduced storage: 1) the decreasing costs of storage capacity; 2) a drop in the growth rate of adding new mailboxes; and 3) less time and effort to manage storage hardware and software with the help of tools and other automated solutions. For these reasons, it is possible that the actual benefit will be lower than the original estimate.

IT Labor Savings In Overhead Of Supporting On-Premises Email Environment

Some IT staff tasked with routine on-premises email administrative activities may not be able save as much time as Forrester's original estimate of 4 hours per week and may only save half that amount, as there may be lingering redundant systems or processes or decisions by the company to operate hybrid email environments.

Cost Avoidance Of Microsoft Exchange And Windows Server

The actual magnitude of this benefit is dependent on the annual maintenance fees of the on-premises Microsoft Exchange environment and the Windows Server operating system. Because Forrester's original estimate doesn't take into account discounts or credits offered to certain customers, organizations may see a slight reduction in this benefit.

Enhanced Message Filtering

As Forrester's estimate of annual third-party message filtering costs doesn't take into account discounts or credits offered to certain customers, some organizations may only experience half of the benefit originally estimated.

Savings In Backup Systems And Staff

Forrester believes that the annual backup-related hardware and software costs may range from \$400 to \$700, thereby reducing the total benefit.

Total Impact On Benefits

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

Table 13Total Impact On Benefits

| Benefits | Risk impact |
|--|-------------|
| Cost avoidance of Microsoft Exchange and Windows Server | 98% |
| Cost avoidance of storage | 89% |
| Enhanced message filtering | 83% |
| Savings in backup systems and staff | 33% |
| IT labor savings in overhead of supporting on-premises email environment | 83% |
| Total | 82% |

Other Risks Not Quantified

During the course of its interviews with Microsoft customers, Forrester also heard the following concerns about Microsoft Exchange Online and the resulting potential to further decrease the benefits listed above. Because all of the customers Forrester interviewed were using a beta version of Microsoft Exchange Online and recognizing Microsoft's active efforts at addressing many of these concerns, Forrester chose not to quantify these risks or include them in its risk adjustments to cost or benefits.

- Sensitivity about data in the cloud: Some customers, especially those based in Europe, were very concerned about having their sensitive corporate data stored in the cloud. Because Microsoft, like all other major software developers, isn't yet viewed as a trusted partner in this space, there were some apprehensions by some to entirely decommission their on-premises email environment and give up control and access to email data.
- Single sign-on: Some customers were looking for more options to integrate Exchange Online with their existing single sign-on initiatives.
- Application integration: Customers report that the current SMTP relay solution for Exchange Online can be improved.
- Compatibility with non-Microsoft systems and devices: Although Outlook Web Access offers email access for most browsers and platforms, the full Outlook experience requires an Outlook client on Microsoft Windows.
- Network infrastructure is a concern for some.
- Latency issues due to single monolithic system: For organizations with a distributed global workforce, the experience may differ. A company's Exchange deployment is homed in a single data center, so if a company has

employees in locations significantly far away, there may be longer delays in sending and receiving large emails with attachments.

- Migration and federation are not as straightforward as many had hoped.
- Outlook Web Access is good for always-connected users, not for those who require offline access to their email.

Financial Summary

The financial results calculated in the Costs and Benefits sections can be used to determine the ROI, NPV, and payback period for the organization's investment in Microsoft Exchange Online. These are shown in Table 14 below.

Table 14Summary Financial Results

| Summary financial results | Original estimate |
|---------------------------|-------------------|
| ROI | 544% |
| Payback period (months) | 0.6 |
| Total costs (PV) | (\$36,706) |
| Total benefits (PV) | \$236,340 |
| Total (NPV) | \$199,634 |
| Internal rate of return | 1,907% |

Source: Forrester Research, Inc.

Table 15 below shows the risk-adjusted ROI, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Tables 12 and 13 in the Risk section to the cost and benefits numbers in Tables 6 and 11.

Table 15Risk-Adjusted Summary Financial Results

| Summary financial results | Risk-adjusted |
|---------------------------|---------------|
| ROI | 378% |
| Payback period (months) | 1.0 |
| Total costs (PV) | (\$40,611) |
| Total benefits (PV) | \$194,290 |
| Total (NPV) | \$153,679 |
| Internal rate of return | 1,103% |

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 Online.

Study Conclusions

Forrester's in-depth interviews with Microsoft Exchange Online's customers yielded several important observations. Based on information collected in interviews with current Microsoft Exchange Online customers, Forrester found that organizations can realize benefits in the form of cost avoidance of storage, IT labor savings, cost avoidance of Microsoft Exchange and Windows Server, enhanced message filtering, savings in backup systems and staff, and cost-effective scalability.

The financial analysis provided in this study illustrates the potential way an organization can evaluate the value proposition of Microsoft Exchange Online. Based on information collected in 10 in-depth customer interviews, Forrester calculated a three-year risk-adjusted ROI of 378% for the composite organization, with a payback period of one month. 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 Online 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.

Microsoft Exchange Online: Overview

According to Microsoft, Microsoft Exchange Online is a full-featured email, calendar, and contacts solution delivered as a service hosted by Microsoft. Built on the same technologies as Microsoft Exchange Server, Exchange Online provides end users with a familiar experience across PCs, the Web, and mobile devices while giving IT administrators web-based tools for managing their online deployment.

Exchange Online provides the core features of Exchange Server so users get the business-class messaging capabilities they need to be productive, including:

- Large mailboxes: Each user gets 25 GB of mailbox storage standard and the ability to send messages up to 35 MB in size.
- **Antivirus/anti-spam:** Forefront Online Protection for Exchange is included, providing multiple filters and virus-scanning engines to help protect your organization from spam, viruses, and phishing scams.
- **Web-based access:** For web-client access, Outlook Web App provides a premium browser-based experience that matches the look and feel of the full Outlook client.
- Mobility: Mobile access is available from all phones capable of receiving email, including Windows Phone, iPhone, Android, Palm, and Nokia.
- Shared calendar and contacts: Users can compare calendars to schedule meetings with Exchange Online and have access to collaboration features like shared calendars, groups, global address list, external contacts, tasks, conference rooms, and delegation.

Appendix A: Composite Organization Description

For this TEI study, Forrester has created a composite organization to illustrate the quantifiable costs and benefits of Microsoft Exchange Online. Based on the interviews with the 10 existing users provided by Microsoft, Forrester constructed a composite company that we will call "Alacrity." 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 replacing its on-premises deployment of Microsoft Exchange Server 2003 with Microsoft Exchange Online, this Forrester study illustrates the financial impact of using Exchange Online for a typical small or medium-size organization.

Alacrity is a 50-year-old privately owned accounting firm specializing in public and private sector auditing and accounting licensed in New York, Washington, D.C., and California. This rapidly growing company enjoys double-digit growth in headcount and currently employs 150 information workers across three regional offices in New York City, Washington, D.C., and San Francisco, each of which has a two-person IT department that administers and manages, among other things, a dedicated Exchange Server 2003 solution to provide reliable corporate email. All of these information workers are experienced Microsoft Office users and use Microsoft Office Outlook 2007 as their desktop email and calendar application. Being able to access email and attachments while away from a computer is important for 70% of Alacrity's staff, who rely extensively on an array of mobile devices to stay in touch and access key information through email on a regular basis. The importance of maintaining security and privacy in compliance of government and industry regulations is even more important for those at Alacrity who access sensitive financial client data.

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

- Alacrity's management has a hands-on focus on profitability and prudent investment. In its industry, as in many
 industries, margins are thin, and capital efficiency is paramount. There is a strong impetus to decrease IT support
 costs, which includes email provisioning costs, while increasing level of service and reliability. As such,
 management authorizes investments in equipment and IT only after careful consideration of the return on that
 investment.
- CPAs and other staff, including consultants, sales representatives, and management support teams, use their mailboxes as filing cabinets a place to store and retrieve client work-related materials, policies, data, and regulatory updates. The 1 GB size limit of Alacrity's mailboxes is always a challenge for users, and the staff is tired of being asked to delete attachments and older email. Conversely, the IT staff is constrained by lack of funds and resources in allocating larger-size mailboxes.
- Alacrity's distributed IT infrastructure and operations team of six engineers and three support and customer
 service staff focus on a whole host of Exchange 2003 support and maintenance activities, ranging from security,
 mail permissions, storage, and mailbox creation to encryption, backups, and archiving. Increasingly, IT teams at
 each of the regional offices would like to spend less time on these routine administration activities and more time
 on revenue-generating IT projects and directives.
- Given the importance of email as the primary communication vehicle for information at Alacrity, management is interested in protecting and ensuring high availability for this vital application asset to minimize disruption and

maintain productivity for all key employees in the event of a power outage or natural disaster. Ensuring the high availability of the existing Exchange 2003 system (including the server, application, and data) through georedundancy is cost-prohibitive for Alacrity.

Appendix B: 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.

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 form 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: 1) the likelihood that the cost and benefit estimates will meet the original projections, and 2) 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 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 enterprise wide 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 C: 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. For rester 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 respective 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 Framework Assumptions section) 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 D: Considering This Study in Context with Other Recently Published TEI Studies

Microsoft has commissioned Forrester Research to conduct Total Economic Impact™ case studies to calculate the potential return on investment (ROI) for many of the company's desktop and server products and online services. Each study contains a detailed quantitative analysis based on interviews with multiple Microsoft customers that have been using one or more products. Forrester relies on the experience of these customers and their articulation of the costs, benefits, flexibility options and risks as they relate to those financial impacts.

The reader of these studies should be careful in drawing conclusions about comparative value solely based on the ROI metric calculated by Forrester. ROI is a metric that will vary by size and type of organization as well as use cases of a given product. As a result, comparing the anticipated ROIs across studies without the full context of the assumptions behind the ROIs will not result in a fair comparison. When reviewing multiple Forrester TEI case studies we recommend you take the following into consideration:

- Each study bases its findings on a different set of customer organizations, of varied sizes and different industries.
- The "composite" organization that Forrester synthesizes based on the interviews conducted for each study vary by size, industry and use case, from 150 users to more than 5,000.
- Customers' deployments of Microsoft products vary in extent; at the time of the study many are still testing prior to full-scale deployment.
- Differences in the product features, functionality and their use cases (Lync Server 2010 versus Lync Online as part of Office 365, for example), will produce different cost, benefit and ROI calculations.

The purpose of this study is to illustrate the benefits of adopting Microsoft Office 365 as a cloud based productivity solution which includes Office 2010, SharePoint Online, Exchange Online and Lync Online. This study does not include all of the potential benefits of each individual product but describes the general benefits of the suite and the benefits of moving to Microsoft's cloud solution. For specific quantification of benefits for each of the individual products the reader should refer to previous detailed Total Economic Impact studies for Exchange Online, Forefront 2010, Lync Server 2010, SharePoint 2010, Exchange 2010, and Office 2010, which can be searched for at www.microsoft.com/bpio. For the benefit of the reader, Forrester has excerpted sections describing the general quantified benefits presented in these related case studies.

The Total Economic Impact $^{\rm TM}$ Of Microsoft Exchange 2010 Online Prepared for Microsoft Corporation, July 2011 by Amit Diddee

"Forrester's in-depth interviews with Microsoft Exchange Online's customers yielded several important observations. Based on information collected in interviews with current Microsoft Exchange Online customers, Forrester found that organizations can realize benefits in the form of cost avoidance of storage, IT labor savings,

cost avoidance of Microsoft Exchange and Windows server, enhanced message filtering, cost avoidance of providing mobile access to BlackBerry users, savings in backup systems and staff, and cost effective scalability.

Based on these findings, companies looking to implement Microsoft Exchange Online 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."

The Total Economic Impact TM Of Microsoft Forefront Endpoint Protection (FEP) 2010 Prepared for Microsoft Corporation, May 2011 by Michael Speyer

"The interviewed companies experienced the following economically quantifiable benefits:

- o Reduced labor effort for remediating malware infections.
- Reduced labor effort for investigating malware alerts.
- Reduced labor effort for desktop administration.
- Cost avoided for license fees associated with retired third party antimalware software.

The labor savings for investigating and remediating malware infections arises from fewer malware incidents and reduced effort needed for remediation. We note that there are additional benefits that we have not quantified such as reduced exposure of sensitive date, disruption to business processes or data theft. Cumulatively, these represent a reduction in enterprise risk."

The Total Economic Impact TM Of Microsoft Lync Server 2010 Prepared for Microsoft Corporation, November 2010 by Jeffrey North

"Forrester's in-depth interviews with Microsoft Lync Server 2010 customers yielded important observations on the business value of the Lync 201 investment. Forrester found that organizations can realize benefits in the form of:

- Replacing PBX telephone systems with Lync Server 2010 software.
- o Cost reductions for Web- and teleconferencing charges.
- o IT and help desk labor cost savings.
- o Enhanced individual and workgroup productivity.
- o Travel cost savings.

Further, although not quantified for this case study, Forrester recommends that prospective Lync Server 2010 implementers examine potential future options for these categories as well:

• Embedding enhanced communications into line-of-business applications, changing the way these tools serve the enterprise.

- Extending unified communication beyond the enterprise, to partners, customers, and suppliers, through federation.
- Extending rich presence, audioconferencing, and access to multiple communication capabilities to mobile workers.

Forrester believes that Lync Server 2010 offers the promise of significant competitive advantage in making employee, customer, and supplier/partner relationships stronger for firms that adopt these collaboration technologies."

The Total Economic Impact TM Of Microsoft Office SharePoint 2010 Prepared for Microsoft Corporation, March 2010 by Jeffrey North

"In conducting the interviews with Microsoft customers, Forrester found that organizations can achieve significant financial benefits from consolidating collaboration, document management, internal and external portal software, and search onto SharePoint Server 2010. The new capabilities of SharePoint 2010 can encompass line of business applications – accounting and finance, business intelligence, and other complex workloads for some customer organizations, allowing organizations to reduce the number of vendors and achieve lower software license and maintenance costs. Additional benefits can be accrued from lower IT administration and simplified application development by upgrading SharePoint 2003 and 2007 environments to SharePoint Server 2010.

The study also uncovered benefits of improved collaboration and information worker productivity and indications of even stronger collaboration in the future as customer organizations take advantage of new capabilities in SharePoint Server 2010."

The Total Economic Impact TM Of Microsoft Office 2010 Prepared for Microsoft Corporation, May 2010 by Bob Cormier

"In conducting the interviews with Microsoft customers, Forrester found that the composite Organization can achieve significant <u>risk-adjusted</u> benefits in the following areas (see Benefits section for more details):

- o Coauthoring productivity benefits in a sales and business development group.
- OneNote productivity benefits for 40 discrete project teams.
- Elimination of 3rd party photo/video editing tool.
- O Benefits associated with "can't live without" features of Office 2010 in productivity benefits associated with the aggregate use of the following Office 2010 features/functionality: Microsoft Office Backstage view, Enhanced Ribbon across Office 2010 applications, Microsoft's Protected View feature, Paste/Preview, Conversation View, Quick Steps feature, Calendar Preview and Sparklines and Slicers (Excel 2010)."