

A Forrester Total Economic  
Impact™ Study  
Commissioned By

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# The Total Economic Impact™ Of Microsoft Office 365 Corporate Accounts

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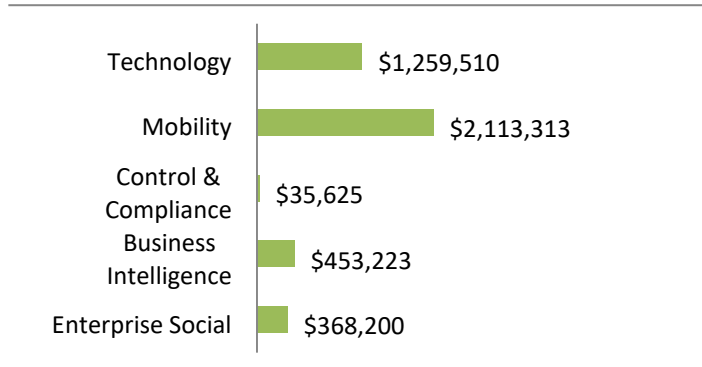
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### ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit [forrester.com/consulting](http://forrester.com/consulting).

## Executive Summary

Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by



Source: Forrester Research, Inc.

**FIGURE 1**

### Benefits Summary by Pillar — Risk-Adjusted Results

deploying Office 365. The purpose of this study is to provide readers at “corporate account” organizations (150 to 2,000 users) with a framework to evaluate the potential financial impact of Office 365 on their organizations.

To better understand the benefits, costs, and risks associated with an Office 365 implementation, Forrester interviewed four existing customers with multiple years of experience using Office 365 and conducted an online survey with 72 organizations also using Office 365.

Office 365 is the software-as-a-service (SaaS) version of

Microsoft business products including Office Professional Plus, Exchange, Lync, SharePoint, Yammer, and OneDrive.

Prior to moving to Office 365, customers had implemented various solution components in a traditional on-premises model. With Office 365, customers were able to accelerate the deployment of the latest versions of Microsoft solutions, decrease technology costs, increase business and IT user productivity, stay up to date with the latest features and solutions, and improve collaboration between groups and users.

Our interviews with four existing customers, online survey responses from 72 organizations, and subsequent financial analysis found that a composite organization (an organization involved in the distribution, sales, and service of restaurant equipment that moved from an on-premises 2010 version solution to Office 365 in the cloud) based on these interviewed and surveyed companies experienced the risk-adjusted ROI, IRR, benefits, and costs shown in Figure 2. See Appendix A for a description of the composite organization.<sup>1</sup>

The composite organization analysis points to total present value benefits of \$3.4 million versus total present value costs of \$1.3 million, resulting in a net present value (NPV) of \$2.1 million.

**FIGURE 2**

### Financial Summary Showing Three-Year Risk-Adjusted Results



Source: Forrester Research, Inc.

Forrester looked at benefits across a wide range of areas, or “pillars,” that Microsoft has defined. In each pillar, Forrester quantified one or more of the benefits. The other benefits that the interviewed and surveyed customers described but could not be quantified for the study are included in the discussion later in this study. Readers should take these other benefits into consideration when evaluating the total value that Office 365 can deliver to their organization.

FIGURE 3

## Microsoft Office 365 Benefit Pillars

**Technology**

Includes hardware and software savings as well as reduced IT effort. It also covers improved uptime, disaster recovery capabilities, and IT security.

**Mobility**

Considers how workers having anywhere anytime access to information and applications improves worker efficiency resulting in faster time to market,

**Control & Compliance**

Looks at lowering compliance cost and effort by using built-in industry standards and best practices.

**Business Intelligence**

Looks at opportunities to make better decisions through more timely access to data across multiple repositories. Reduction in decision times can lead to increased worker productivity.

**Enterprise Social**

Considers how collaboration has improved and business processes have been shortened by using social features built into Office 365 to improve communication.

Source: Forrester Research, Inc.

› **Benefits.** The composite organization experienced the following quantifiable risk-adjusted benefits that represent those experienced by the interviewed and surveyed companies:

- **Technology:**

- **The organization avoided adding new infrastructure hardware.** The move from the 2010 version of the Microsoft solutions to the Office 365 cloud-based solution meant that new infrastructure did not need to be purchased, installed, and maintained. In total, 24 highly virtualized physical servers were not added over the life of the study, and storage area network (SAN) requirements were reduced by half. The total savings to purchase, maintain, and host the hardware amounted to \$575,123.
- **Server licenses for various Microsoft solutions were no longer needed.** An on-premises solution comparable to Office 365 would have required 39 Windows Server licenses, four Exchange Server licenses, one Lync Server license, and four SharePoint licenses. The avoided purchase cost plus annual maintenance totaled \$19,321.

- **The implementation effort was 45% less than for a comparable on-premises solution.** The Office 365 implementation consisted of two phases (see the Costs section for more detail). Had a traditional on-premises deployment of Microsoft 2013 solutions been implemented, the internal effort and professional services fees would have been 50% and 40% greater, respectively. This savings across all phases equaled \$166,317.
- **The manpower required to support the solution was reduced significantly.** The total number of resources required to maintain and grow the Microsoft solutions — Office Professional Plus, Exchange, Lync, SharePoint, Yammer, and OneDrive — was reduced significantly. Much of this was in the form of avoiding additional hires as well as redeploying an existing system administrator who could focus on other, higher-value activities. The three-year associated savings was \$498,750.

- **Mobility:**

- **Highly mobile employees save 1 hour per day by Year 3.** Out of the knowledge workers using Office 365, the sales team and service technicians are on the road the vast majority of their time. They save a lot of time from not having to use VPNs to access systems and having better collaboration tools and access to information. This increased productivity grows from a quarter hour per day in Year 1 up to 1 hour per day in Year 3 as more Office 365 solutions such as Lync and SharePoint are rolled out and as the users become more comfortable using them. The total productivity savings, discounted 50% since not all productivity gains result in more work accomplished, was \$2.1 million.

- **Control and compliance:**

- **Using Office 365 eliminated the need to undertake two projects that would have otherwise been required.** Office 365 had all of the required features and security that eliminated the need for additional projects to deploy encrypted email and data leakage capabilities. In total, 4.5 man-months were saved, with a corresponding cost avoidance of \$35,625.

- **Business intelligence:**

- **Decision-makers make faster, better decisions because of more timely access to information.** A subset of users — executive leadership, managers, and analysts — see a reduction in time required to hunt or wait for information in order to make the best decisions possible. The daily savings is 30 minutes per day by Year 3. The productivity opportunity, discounted 50% since not all productivity gains result in more work accomplished, totaled \$453,223.

- **Enterprise social:**

- **Third-party social/collaboration tools are eliminated since they come standard within Office 365.** There is a hard savings by discontinuing the use of other tools and moving communications from traditional telephones to Internet-based solutions. Combined, the composite organization saved \$209,250 over three years.
- **Social and collaboration features make processes more efficient.** The composite organization's sales staff was also able to save time on their sales presentation creation. The process used to take 40 hours. With the use of Office 365, they are able to quickly find and access the information they need as well as have multiple individuals editing the same document at the same time. In Year 1, the time spent on this process was cut in half, and by Year 3 the process had been cut down to a single day. The total savings over the three years was \$158,950.

› **Costs.** The composite organization experienced the following risk-adjusted costs:

- **Internal implementation labor.** The full deployment of Office 365 was completed in two phases. Phase one, completed in the initial period, consisted of standing up the Office 365 solution, migrating all email accounts and users to Exchange Online from Exchange 2010 on-premises, moving all users to Office 365 Professional Plus from Office Professional Plus 2010 local clients, and deploying OneDrive for all users. Phase two, completed in Year 1, consisted of a completely new deployment of Lync and Yammer, as well as migrating from SharePoint 2010 on-premises to the latest version of SharePoint Online. Total internal implementation labor was \$311,667.
- **Professional services.** The composite organization used Microsoft Professional Services during all phases of deployment. Professional services were used to properly set up the solutions and help with any especially challenging areas. The total professional services cost was \$144,000.
- **Training.** Training was required for the IT team on the new and updated solutions being deployed, as well as some training on the differences in administering Office 365 compared with on-premises versions. Sixty days of IT training took place in the initial period, with additional training, involving significantly less man-days, in years 1 and 2. Additionally, one internal employee provided user training to the rest of the composite organization. In total, the external training charges for IT and the internal costs for user training amounted to \$280,350.
- **Ongoing system administration.** The Benefits section describes the number of system administrator positions that did not need to be added or could be reassigned. The remaining system administration team consisted of one fulltime equivalent (FTE) in Year 1, and the team grew to two FTEs by Year 3 to handle additional requirements with the overall greater usage and additional users. The three-year associated costs were \$630,000.
- **Incremental Microsoft licenses.** For individual user licenses, Office 365 was compared with the Software Assurance (SA) pricing model to provide the best apple-to-apple comparison of a solution that always has users on the latest version of Microsoft technologies. Office 365 cost \$24.12 more per year for each user compared with the Software Assurance licenses. The accumulated additional cost over three years was \$51,855.
- **Additional bandwidth.** Moving to Office 365 resulted in a net increase of bandwidth required. Some areas, such as Exchange, saw a reduction, while other areas, such as a new deployment of Lync, saw an increase. There was also additional bandwidth required during the initial data migrations. Over three years, \$105,600 in additional bandwidth was required.

## Disclosures

The reader should be aware of the following:

- › The study is commissioned by Microsoft and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.
- › Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Microsoft Office 365.
- › 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.
- › Microsoft provided the customer names for the interviews but did not participate in the interviews.

## TEI Framework And Methodology

### INTRODUCTION

From the information provided in the interviews, Forrester has constructed a Total Economic Impact (TEI) framework for those organizations considering implementing Microsoft Office 365. 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 Office 365 can have on an organization (see Figure 4). Specifically, we:

- › Interviewed Microsoft marketing, sales, and consulting personnel, along with Forrester analysts, to gather data relative to Office 365 and the marketplace for productivity solutions.
- › Interviewed four organizations and surveyed 72 organizations online that currently use Microsoft Office 365 and have 150 to 2,000 employees to obtain data with respect to costs, benefits, and risks.
- › Designed a composite organization based on characteristics of the interviewed/surveyed organizations (see Appendix A).
- › Constructed a financial model representative of the interviews/surveys using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews/surveys as applied to the composite organization.
- › Risk-adjusted the financial model based on issues and concerns the interviewed organizations highlighted. Risk adjustment is a key part of the TEI methodology. While interviewed organizations provided cost and benefit estimates, some categories included a broad range of responses or had a number of outside forces that might have affected the results. For that reason, some cost and benefit totals have been risk-adjusted and are detailed in each relevant section.

Forrester employed four fundamental elements of TEI in modeling the Microsoft Office service: benefits, costs, flexibility, and risks.

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

**FIGURE 4**  
**TEI Approach**



Source: Forrester Research, Inc.

## Analysis

### COMPOSITE ORGANIZATION

For this study, Forrester conducted a total of four interviews with representatives from the following companies, which are Microsoft customers based in various countries around the world:

- › **Global biotech and pharmaceutical research organization.** This organization is based in the US. The organization has 1,500 employees scattered all over the world, all of whom are Office 365 users. The majority of its employees work from home offices. Previously, the organization was using older Microsoft solutions, including Exchange 2003. In 2011, updating its IT infrastructure was a key business initiative, and the organization wanted to invest in technology that would provide it with the latest features and solutions in order to support its very mobile workforce.
- › **Global organization in the oil and gas industry.** This organization has 1,950 employees across 30 countries. Three hundred of its employees are field agents and salespeople who regularly travel throughout the world. Before the organization deployed Office 365, each office was largely in charge of its own IT infrastructure, leading to very little standardization across the organization. There was concern about the cost of doing this, so a cloud-based approach was key for the company. The organization deployed Office 365 to create a common platform for itself while managing the cost of deployment.
- › **Luxury car manufacturer.** This company is based in the UK with operations throughout Europe, Asia, and North America. The organization has about 3,000 employees, 1,950 of whom have Office 365 licenses. Prior to its investment in Office 365, the organization was using older Microsoft on-premises solutions.
- › **A durable machine services company.** This is a US-based organization providing sales and service of laundry systems to a variety of organizations, such as property management companies and universities. It has over 900 employees across the US and Canada. A key part of its business is acquisitions, including three acquisitions in as many months. Of its employee base, about 75% are field operations and consistently use mobile access. Previous to its Office 365 implementation, it had a number of disparate organizations on different systems. By deploying Office 365, it was able to provide a unified platform across all its offices.

In addition to the interviews, Forrester conducted an online survey of 72 organizations with 150 to 2,000 employees in North America and the UK that have deployed Microsoft Office 365. Online survey participants included line-of-business and IT professionals who make, influence, or have knowledge around decisions related to technology.

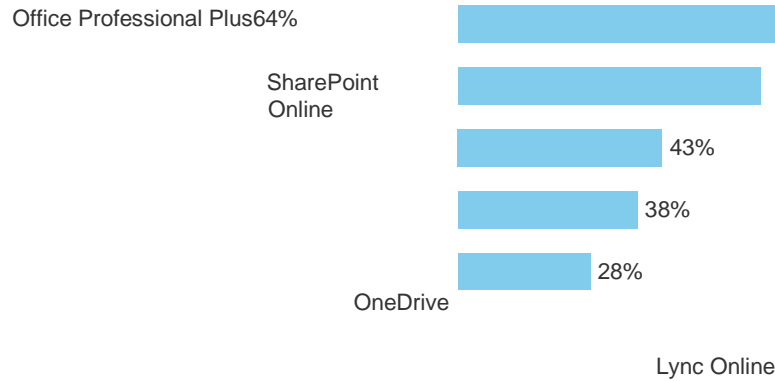
The majority of survey respondents were organizations with 500 to 1,000 Office 365 users. Sixty-nine percent of the organizations were planning to add additional users over the next year. Office 365 solution components in use varied across organizations, as described in Figure 5.

**FIGURE 5**  
**Office 365 Solution Components In Use**

“Which of the following products are you currently using?”

Exchange Online 67%





Base: 72 North American and UK organizations that currently use Office 365 products

Source: Forrester Research, Inc.

Based on the interviews and online surveys, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization that Forrester synthesized from these results represents an organization with the following characteristics:

- › It is a US-based organization involved in the distribution, sales, and service of restaurant equipment.
- › It has operations in North America and Europe.
- › Forrester named the composite organization Acme Corporation.
- › By Year 3 of the study, there were a total of 930 employees — 750 knowledge workers and another 180 working in warehousing, transportation, and other support roles. Note that the organization started with 465 knowledge workers in Year 1; through acquisitions that took place throughout the rollout of Office 365, Acme grew the number to the total of 750 workers.
- › The 750 knowledge workers are spread between six offices. Of these 750 workers, 400 of them are sales and service employees who are mobile workers and on the road most of the time. All knowledge workers are migrated to Office 365 in this study.

Table 1 shows the Office 365 solution components in use by the composite organization, when they were added, and what they replace.

**TABLE 1**  
**Office 365 Solution Components**

| Office 365 Component                 | When Added                 | What Was Replaced                            |
|--------------------------------------|----------------------------|----------------------------------------------|
| Office 365 Professional Plus — cloud | Phase one (initial period) | 2010 Office Professional Plus — local client |
| Exchange Online                      | Phase one (initial period) | 2010 Exchange — on-premises                  |
| SharePoint Online                    | Phase two (Year 1)         | 2010 SharePoint — on-premises                |
| 2013 Lync Online                     | Phase two (Year 1)         | None                                         |

|          |                            |      |
|----------|----------------------------|------|
| Yammer   | Phase two (Year 1)         | None |
| OneDrive | Phase one (initial period) | None |

Source: Forrester Research, Inc.

## INTERVIEW HIGHLIGHTS

The composite organization faced similar challenges and opportunities as the interviewed companies. Moving to Office 365 delivered immediate and sustainable benefits.

The IT organization looked at strategic options to address the following challenges and opportunities:

- › Support for mobile users and mobile initiatives was becoming very important. This included the need to adopt bring-your-owndevice (BYOD) policies.
- › It was necessary to deploy a solution to improve internal collaboration and productivity.
- › supported by its small IT team.

The IT team then evaluated several options — cloud-based and on-premises — to select the one that best met the

- › The company needed to deploy a solution that would integrate easily into the multiple offices and the offices of newly acquired organizations, along with support the large number of mobile employees.

- › The company wanted to move as much to the cloud as possible as a way to reduce costs and provide a solution that was easily

organization's needs. Selection criteria included:

- › Fit with business priorities.
- › Fit with existing infrastructure.
- › Total cost of ownership.
- › Features and functionality.
- › Ease of deployment.

Office 365 was selected as the best option by the composite organization. The various solution components were deployed in two phases as outlined in Table 1.

*“Before Office 365, we had no centralized way of reporting, no way of seeing what was going on across our different offices. Office 365 created visibility into pieces of the*

*business that was never there before.”*

~IT program manager

Moving to Office 365 delivered many benefits described throughout the study. At a high level, the organization achieved the following results:

- › **Lower total cost of ownership (TCO).** The total cost of ownership for Office 365 compared with a comparable onpremises solution was significantly lower.
- Contributing elements

*“Cloud was a huge factor. Cloud delivery solved a number of headaches for us — collaboration headaches, architecture and server rack headaches, [and] VPN and network access headaches.*

~CIO

- › **Increased collaboration.** The social collaboration features of Microsoft Office 365 have improved the organization’s

*“We had a need for business collaboration. We needed*

were the elimination of capital expenditures on hardware and software, less effort to deploy and maintain the solution, taking advantage of included capabilities that eliminated other third-party solution costs, and the ability to very efficiently deploy the latest features going forward. Our interviewees highlighted the fact that, when investing in IT, they expect to get the most bang for their buck and leverage all the available features and functionality in an effort to keep their costs down.

- › **Higher productivity.** Higher levels of productivity were achieved by all Office 365 users. This was especially pronounced for highly mobile workers and those who are very dependent on data to make important decisions. Productivity has increased, sales cycle time has been reduced, and business agility has improved.

- › **Increase visibility across the organization.** By standardizing all the locations and employees on Office 365, the organization was able to gain visibility into the processes across the organization. By creating a more unified platform, users were able to better support each other and create a more productive work environment.

- › **Greater focus on strategic priorities.** For the IT organization, considerably less time is spent on blocking and tackling activities such as deploying and patching servers. This frees up their time to work on projects that deliver true business value. This, in turn, means that business users have the solutions and support they need to focus on business priorities.

*video, we needed document collaboration, we needed to get our mobile workforce up to speed . . . we needed to evolve.*

*Office 365 made us say, ‘Wow!’”*

~CIO

collaboration between users. These features have also created a listening platform for the organization to be more in touch with its employees around the globe and have allowed the users to feel more connected to the culture of the organization, regardless of location.

## BENEFITS

The composite organization experienced a number of quantified and unquantified benefits in this case study that align to each of the Microsoft benefit pillars:

- › Technology.
- › Mobility.
- › Control & compliance.

- › Business intelligence.
- › Enterprise social.

For each of these pillars, the interviewed companies and online survey respondents spoke to multiple benefits. In each area, Forrester quantified at least one benefit that is specifically highlighted and comprises the ROI analysis component of this study. Benefits that could not be quantified or are very specific and excluded from the ROI analysis are also discussed in each area, and relevant online survey results are presented.

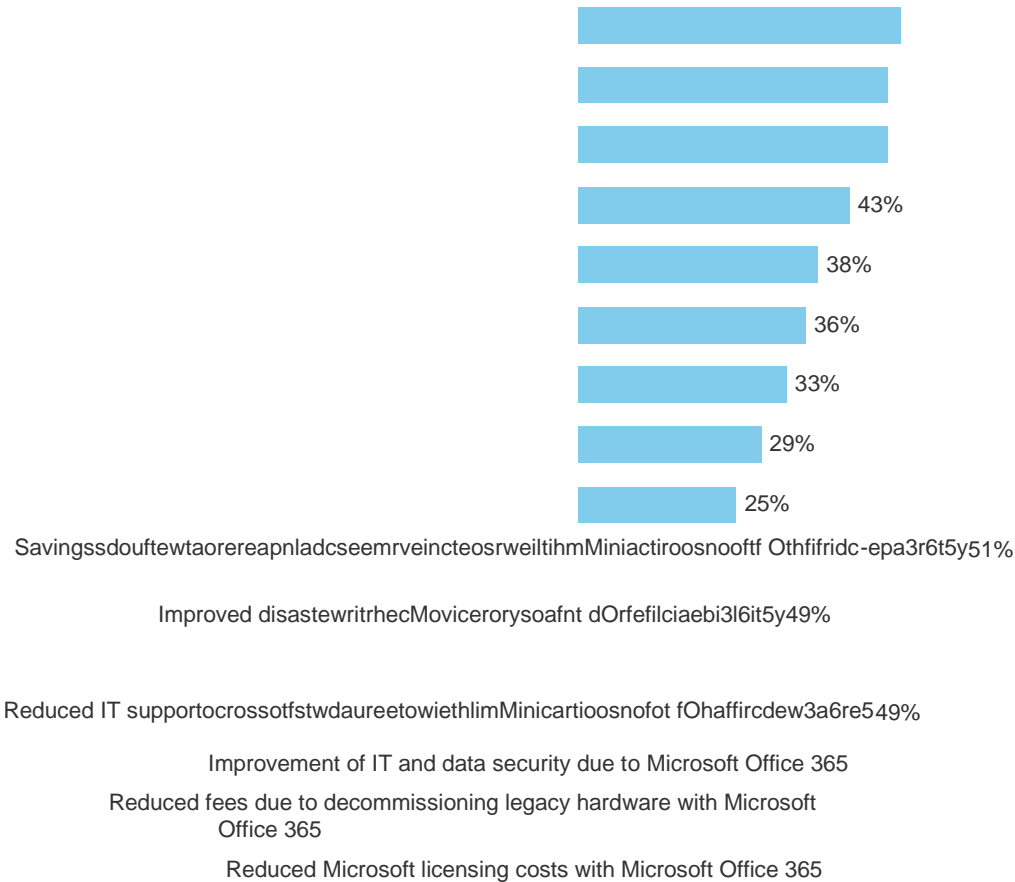
### Technology

The technology pillar includes many infrastructure- and IT operations-related benefits. Some of these benefits can overlap with ones in other pillars. Where this occurred for quantified benefits included in the study, that benefit was only included under the pillar that made the greatest contribution. For example, eliminated web conferencing solutions are included under the enterprise social pillar and not the technology pillar.

Figure 6 shows areas in which the online survey respondents expected to realize technology pillar benefits.

**FIGURE 6**  
**Technology Benefits**

**“Which of the following benefit areas has your organization received/do you expect your organization to receive from your investment in Microsoft Office 365?”**  
(Select all that apply)



Reduced training costs with Microsoft Office 365

Lower telecom costs through greater use of Skype or Lync

Reduced cost of purchasing devices due to BYOD plan with Microsoft Office 365

Base: 72 North American and UK organizations that currently use Office 365 products  
Source: Forrester Research, Inc.

Additional online survey questions looked into some of the benefit categories in greater detail. By averaging the answers from all respondents, Forrester found that in aggregate, the composite organization realized the following benefits by moving to Office 365 compared with an on-premises solution:

- › 12.3% reduction in Microsoft licensing costs (26 respondents).
- › 10.5% reduction in third-party license and software costs, e.g., other email packages (37 respondents).
- › 9.7% reduction in IT support costs for legacy systems (35 respondents).

In the interviews, Forrester heard more specifics about some of the benefits achieved. Some of the most important comments and examples were:

- › Users are bringing more of their own devices into the workplace. Since an Office 365 user license is good for up to five devices, costs have come down and users are happier. One organization told us: “We see a lot of people wanting the latest phones, the latest tablets, and they all want something different. So, when they bring in their own device, they are happier and helping me keep my costs in check.” Office 365 is available on iPads, which was viewed as very positive.
- › All of the interviewed companies saved money on back-end hardware and hosting. One company said: “It’s much cheaper. We compared with different possible on-premises solutions, and the cloud solution was almost four times cheaper than to start developing and implementing an on-premises solution.”
- › Interviewed companies reported less downtime and better overall performance. One organization discussed how it experienced significant issues with its old email platform, and estimated it saw 2 hours of downtime each week. Additionally, the organization found that “everybody was experiencing significant performance issues, and that led to increased pressure on our IT staff.” Now, the organization has considerably improved performance and experiences little to no downtime.
- › Disaster recovery capabilities are now part of the Office 365 hosted solution. “Office 365 has been a real strategic benefit for us, and it minimizes our risk from a disaster recovery perspective.”
- › One company interviewed told us how it saved a lot of money on third-party software costs. With its Office 365 deployment, it did not need to deploy antivirus software or PDF software. This led to a \$100,000-a-year savings.

Forrester quantified four benefit areas within the technology pillar.

#### ★ Avoided Back-End Hardware

The composite organization was planning a migration from 2010 versions of Microsoft solutions and an introduction of new ones, as explained in the composite organization description. The number of servers required is based primarily on the

number of users. The following server types would be needed: Windows Servers, Exchange Servers, Lync Servers, and SharePoint Servers. They would be needed in both production and data recovery (DR) data centers. The servers would all be deployed in a virtualized environment with, on average, three virtual machines (VMs) per physical server. Costs are avoided for the initial purchase, ongoing maintenance, and internal hosting.

Additionally, the SAN requirements were greatly reduced. Inbox sizes were increased without having to add any storage. Greater use of SharePoint did not require additional storage since all of the information resides in Microsoft's cloud. In total, SAN requirements were reduced by 50%.

Interviewed organizations provided a broad range of back-end hardware that did not need to be added. This can also vary based on where in its life cycle existing hardware is. To compensate for this range, this benefit was risk-adjusted and reduced by 10%. The risk-adjusted total benefit resulting from eliminated back-end infrastructure over the three years was \$575,123. See the section on Risks for more detail.

TABLE 2

## Avoided Back-End Hardware

| Ref. | Metric                                         | Calculation                                | Initial   | Year 1   | Year 2   | Year 3   |
|------|------------------------------------------------|--------------------------------------------|-----------|----------|----------|----------|
| A1   | Number of users added                          |                                            | 465       | 0        | 135      | 150      |
| A2   | Total number of users                          | A2 [previous period] + A1 [current period] | 465       | 465      | 600      | 750      |
| A3   | Number of users per Windows Server             |                                            | 20        | 20       | 20       | 20       |
| A4   | Number of virtual Windows Servers not added    | A2/A3 [rounded up] - A4 [previous periods] | 24        | 0        | 7        | 8        |
| A5   | Number of users per Exchange Server            |                                            | 300       | 300      | 300      | 300      |
| A6   | Number of virtual Exchange Servers not added   | A2/A5 [rounded up] - A6 [previous periods] | 2         | 0        | 1        | 1        |
| A7   | Number of users per Lync Server                |                                            |           | 1,600    | 1,600    | 1,600    |
| A8   | Number of virtual Lync Servers not added       | A2/A7 [rounded up] - A8 [previous periods] |           | 1        | 0        | 0        |
| A9   | Number of users per SharePoint Server          |                                            |           | 500      | 500      | 500      |
| A10  | Number of virtual SharePoint Servers not added | A2/A9 [rounded up] - A10 [previous]        |           | 1        | 2        | 1        |
| A11  | Total virtual servers not added — primary      | A4+A6+A8+A10                               | 26        | 2        | 10       | 10       |
| A12  | Total virtual servers not added — DR           | A11*50%                                    | 13        | 1        | 5        | 5        |
| A13  | Average number of VMs per physical server      |                                            | 3         | 3        | 3        | 3        |
| A14  | Number of physical servers not added           | (A11+A12)/A13 [rounded up]                 | 13        | 1        | 5        | 5        |
| A15  | Cost per physical server                       |                                            | \$12,000  | \$12,000 | \$12,000 | \$12,000 |
| A16  | Added physical server costs avoided            | A14*A15                                    | \$156,000 | \$12,000 | \$60,000 | \$60,000 |

|     |                                              |                                                                           |           |          |           |           |
|-----|----------------------------------------------|---------------------------------------------------------------------------|-----------|----------|-----------|-----------|
| A17 | Annual maintenance avoided                   | A16 [through current year] * 10%                                          |           | \$16,800 | \$22,800  | \$28,800  |
| A18 | Avoided hosting costs                        | A14 [through current year]*\$750<br>per year (5 months in initial period) | \$4,875   | \$10,500 | \$14,250  | \$18,000  |
| A19 | Total server-related savings                 | A16+A17+A18                                                               | \$160,875 | \$39,300 | \$97,050  | \$106,800 |
| A20 | Annual SAN savings                           |                                                                           | \$25,000  | \$50,000 | \$75,000  | \$85,000  |
| At  | Avoided back-end hardware                    | A19+A20                                                                   | \$185,875 | \$89,300 | \$172,050 | \$191,800 |
|     | Risk adjustment                              |                                                                           | ↓ 10%     |          |           |           |
| Atr | Avoided back-end hardware<br>(risk-adjusted) |                                                                           | \$167,288 | \$80,370 | \$154,845 | \$172,620 |

Source: Forrester Research, Inc.

### ★ Avoided Microsoft Server Licenses

Eliminating the need for on-premises servers reduces the corresponding server license costs for various Microsoft solutions. The savings includes the initial purchase price and ongoing maintenance. One company told us, “I think by the time all was said and done, we probably saved \$150,000 to \$200,000 between the licenses and the servers.” The savings realized by the composite organization is similar to the savings expressed by the interviewed companies.

This benefit was risk-adjusted and reduced by 10% to match the risk adjustment for the avoided back-end hardware benefit. The risk-adjusted total benefit resulting from avoided Microsoft Server licenses over the three years was \$19,321.

**TABLE 3**  
**Avoided Microsoft Server Licenses**

| Ref. | Metric                                           | Calculation                       | Initial | Year 1  | Year 2  | Year 3  |
|------|--------------------------------------------------|-----------------------------------|---------|---------|---------|---------|
| B1   | Number of Windows Server licenses not added      | =A4                               | 24      | 0       | 7       | 8       |
| B2   | Cost per license                                 |                                   | \$174   | \$174   | \$174   | \$174   |
| B3   | Number of Exchange Enterprise licenses not added | =A6                               | 2       | 0       | 1       | 1       |
| B4   | Cost per license                                 |                                   | \$795   | \$795   | \$795   | \$795   |
| B5   | Number of Lync licenses not added                | =A8                               | 0       | 1       | 0       | 0       |
| B6   | Cost per license                                 |                                   | \$716   | \$716   | \$716   | \$716   |
| B7   | Number of SharePoint licenses not added          | =A10                              | 0       | 1       | 2       | 1       |
| B8   | Cost per license                                 |                                   | \$1,334 | \$1,334 | \$1,334 | \$1,334 |
| B9   | Total avoided license costs                      | B1*B2+B3*B4+B5*B6+B7*B8           | \$5,766 | \$2,050 | \$4,681 | \$3,521 |
| B10  | Avoided maintenance costs                        | B9 [through current year]<br>*15% |         | \$1,172 | \$1,875 | \$2,403 |
| Bt   | Avoided Microsoft Server licenses                | B9+B10                            | \$5,766 | \$3,222 | \$6,556 | \$5,924 |
|      | Risk adjustment                                  |                                   | ↓ 10%   |         |         |         |

|     |                                                   |         |         |         |         |
|-----|---------------------------------------------------|---------|---------|---------|---------|
| Btr | Avoided Microsoft Server licenses (risk-adjusted) | \$5,189 | \$2,900 | \$5,900 | \$5,331 |
|-----|---------------------------------------------------|---------|---------|---------|---------|

Source: Forrester Research, Inc.

### ★ Reduced Implementation Effort

The full Office 365 deployment was completed by the composite organization in two phases. Phase one was completed in the initial period and consisted of migrating users to Exchange Online, moving all users to the cloud edition of Office Professional Plus, and doing a net-new deployment of OneDrive. Phase two consisted of a net-new Lync Online and Yammer deployment, along with a SharePoint migration from a 2010 SharePoint on-premises deployment to SharePoint Online.

Details on the time and costs for these efforts can be found in the Costs section of this study. Interviewed companies said that had they moved to a new on-premises solution instead, the effort would have been much greater. One interviewed company told us that “trying to implement something like this on-premises would have taken at least twice as many months, and involved a lot more people.”

For the composite organization, Forrester estimates that an on-premises deployment would have required 50% more internal effort. An on-premises deployment would have required 40% more professional services in the initial period and 50% more in subsequent years.

This benefit can vary greatly depending on which, if any, Microsoft solutions were previously in use; the level of in-house expertise to manage the implementation and migration; and the overall size of the deployment. To compensate, this benefit was risk-adjusted and reduced by 15%. The risk-adjusted total benefit over the three years was \$166,317.

**TABLE 4**

#### Reduced Implementation Effort

| Ref. | Metric                                       | Calculation      | Initial   | Year 1   |
|------|----------------------------------------------|------------------|-----------|----------|
| C1   | Reduced internal effort                      | $Jt \times 50\%$ | \$100,000 | \$41,667 |
| C2   | Reduced consulting fees                      | $Kt \times 40\%$ | \$24,000  | \$30,000 |
| Ct   | Reduced implementation effort                | $C1 + C2$        | \$124,000 | \$71,667 |
|      | Risk adjustment                              |                  | ↓ 15%     |          |
| Ctr  | Reduced implementation effort (riskadjusted) |                  | \$105,400 | \$60,917 |

Source: Forrester Research, Inc.

### ★ Reduced IT Support Effort

Moving Microsoft Office solutions to the cloud reduces the work required by the IT team to maintain the technologies and support users. We heard from interviewed customers:

- › “It is very simple to manage. We don’t have to spend a lot of time on it; we don’t have to worry about it.”



› “We don’t have to have as many people on-site [and] don’t have the cost of actually having someone on-site [who] would need to support it. We don’t need the extra resources.”

› “We’ve cut down on the IT team’s time supporting this. It frees people up to do the more interesting things. “

› “The ongoing maintenance and deployment of future upgrades will be pretty simple. It’s a big savings, but it also saves our

IT team frustration, ensures our customer satisfaction is not impacted, and just overall helps with the team’s morale.”

The composite organization was able to redeploy a system administrator who previously supported Exchange.

Additionally, the company avoided hiring for a Lync and SharePoint administrator. The size and cost of the remaining support team can be found in the Costs section of this study.

No user help desk savings were included in the study. While the effort would decrease for email-related inquiries, it increased in other areas because new solutions were deployed (Lync) or user adoption increased (SharePoint). It was assumed that these savings and increases netted each other out.

This benefit can vary depending on how thinly stretched the existing support team was and whether new solutions are being added or only replacing old ones. To compensate, this benefit was risk-adjusted and reduced by 5%. The risk-adjusted total benefit over the three years was \$498,750.

**TABLE 5**  
**Reduced IT Support Effort**

| Ref. | Metric                                           | Calculation | Initial | Year 1    | Year 2    | Year 3    |
|------|--------------------------------------------------|-------------|---------|-----------|-----------|-----------|
| D1   | Number of Exchange administrators redeployed     |             |         | 1.00      | 1.00      | 1.00      |
| D2   | Number of Lync administrators not added          |             |         | 0.25      | 0.25      | 0.25      |
| D3   | Number of SharePoint administrators not added    |             |         |           | 0.75      | 0.75      |
| D4   | Total number of affected administrator positions | D1+D2+D3    |         | 1.25      | 2.00      | 2.00      |
| D5   | Annual fully burdened cost                       |             |         | \$100,000 | \$100,000 | \$100,000 |
| Dt   | Reduced IT support effort                        | D4*D5       |         | \$125,000 | \$200,000 | \$200,000 |
|      | Risk adjustment                                  |             |         | ↓ 5%      |           |           |
| Dtr  | Reduced implementation effort (risk-adjusted)    |             |         | \$118,750 | \$190,000 | \$190,000 |

Source: Forrester Research, Inc.

### *Mobility*

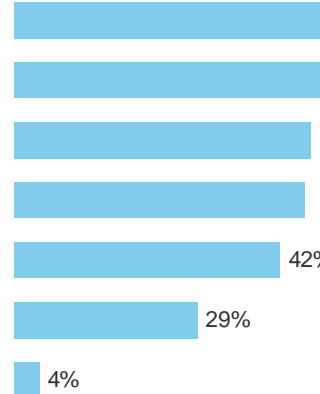
Office 365 provides significant benefits to mobile workers by giving them access to information and colleagues from practically anywhere. Figure 7 shows which benefits the online survey respondents have realized.

**FIGURE 7**  
**Mobility Benefits**

**“Which of the following statements do you agree with, in regards to the mobility options available with Microsoft Office 365?”**

(Select all that apply)

Mobile access has improved worker effectiveness and efficiency that led to a decrease in the time it takes to do daily business processes



Mobile access has improved worker effectiveness and efficiency that led to a decrease in the time it takes to do daily business processes

Employee access to mobile devices has improved productivity 47%

When employees have mobile access, we see less downtime when their computer crashes 46%

Because our employees have mobile access, we see less downtime when their computer crashes

We have seen improved mobile data security (e.g., because we can remote wipe data from lost devices)

None of the above

Base: 72 North American and UK organizations that currently use Office 365 products

Source: Forrester Research, Inc.

The interviewed companies provided some specific examples of benefits:

- › “Many of our employees are home-based — about 60% of our organization. Office 365 means that they can do anything from home that they’d be able to do in the office.”
- › “Seventy-five percent of our staff is field operations — sales, technicians, installation. Having mobile access means they are more productive and don’t have to wait around for an answer when they are in the field.”
- › “Mobile access has completely changed the way we do business. With so many people traveling, staying connected is key to our business.”

### ★ Increased Mobile Worker Productivity

For the financial analysis, Forrester looked at improved productivity for the 300 mobile workers. This group comprises primarily sales and service technicians. As Acme continued to grow and acquire new companies, additional mobile workers were added in years 2 and 3, resulting in a total of 400 mobile workers by Year 3. On average, they are travelling

four days a week, 45 weeks a year. Their productivity is improved by reducing time to access systems and information since a VPN is no longer needed, and by having a more seamless user experience with less downtime.

In Year 1 of the study, the daily savings is a quarter of an hour. This increases to 1 hour per day by Year 3 as Lync and SharePoint are fully integrated and as users become more comfortable working in this new paradigm. This productivity gain can be used to close additional sales and service more customers, or it can be a source of cost savings through avoided additional hiring. Forrester discounted this benefit by 50% since not all productivity gains translate into additional work.

Because not all organizations have a mobile workforce and not all productivity gains result in additional value-add activities, this benefit was risk-adjusted and reduced by 15%. The risk-adjusted total benefit resulting over the three years was \$2,113,313.

**TABLE 5**  
**Increased Mobile Worker Productivity**

| Ref. | Metric                                               | Calculation           | Initial | Year 1    | Year 2      | Year 3      |
|------|------------------------------------------------------|-----------------------|---------|-----------|-------------|-------------|
| E1   | Number of mobile workers                             |                       |         | 300       | 350         | 400         |
| E2   | Number of days on the road                           | 4 days*45 weeks       |         | 180       | 180         | 180         |
| E3   | Hours saved per user day                             |                       |         | 0.25      | 0.50        | 1.00        |
| E4   | Hours saved per user per year                        | E2*E3                 |         | 45        | 90          | 180         |
| E5   | Total man-days saved                                 | E1*E4/8 hours         |         | 1,688     | 3,938       | 9,000       |
| E6   | Average fully burdened daily cost                    | \$85,000/250 workdays |         | \$340     | \$340       | \$340       |
| E7   | Total potential productivity gain                    | E5*E6                 |         | \$573,750 | \$1,338,750 | \$3,060,000 |
| E8   | % of benefit realized                                |                       |         | 50%       | 50%         | 50%         |
| Et   | Increased mobile worker productivity                 | E7*E8                 |         | \$286,875 | \$669,375   | \$1,530,000 |
|      | Risk adjustment                                      |                       |         | ↓ 15%     |             |             |
| Etr  | Increased mobile worker productivity (risk-adjusted) |                       |         | \$243,844 | \$568,969   | \$1,300,500 |

Source: Forrester Research, Inc.

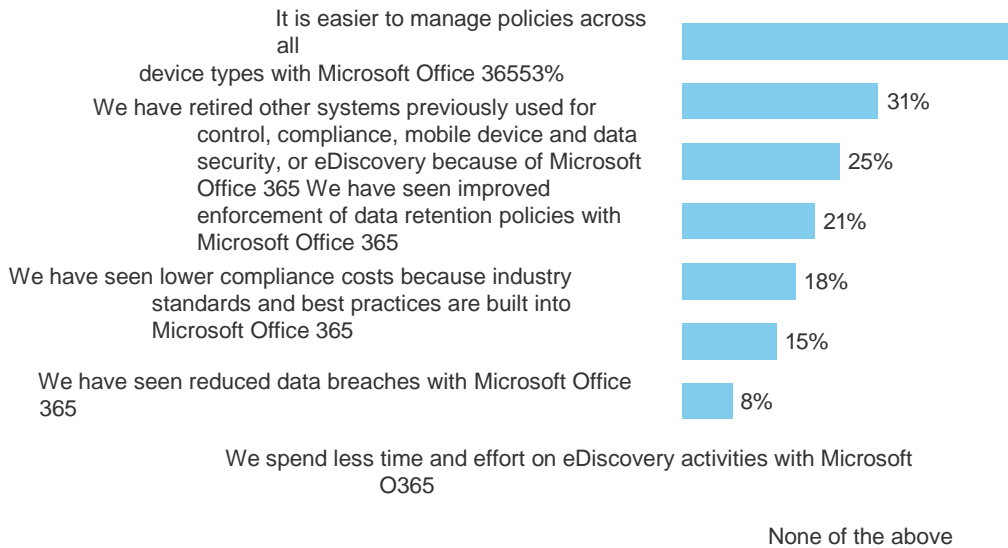
### Control And Compliance

Control and compliance includes regulatory compliance, eDiscovery, audit, policy management, and other similar activities. Online survey respondents realized numerous benefits, as shown in Figure 8.

**FIGURE 8**  
**Control & Compliance Benefits**

**“Looking at the following statements about control and compliance, which do you agree your organization has seen from your investment in Microsoft Office 365?”**

(Select all that apply)



Base: 72 North American and UK organizations that currently use Office 365 products

Source: Forrester Research, Inc.

Further analysis of the online survey findings showed that, on average, the respondents reduced compliance costs by 8.5% and reduced time spent on eDiscovery efforts by 7.9%. Additionally, they reported that the number of data breaches and the cost of those breaches have decreased as well.

### ★ Avoided Control And Compliance Efforts

In the customer interviews, Forrester learned that many of the capabilities included in Office 365 would have needed to be added separately had the companies stuck with an on-premises solution. For the composite organization, Forrester calculated the avoided labor costs of implementing these solutions. Specifically, we looked at projects for encrypted email and data leakage. There may be additional savings for removed third-party systems or ongoing support; since these can vary greatly depending on individual requirements, these potential savings were excluded. Readers should take the other potential cost avoidances into consideration when evaluating the ROI of Office 365 on their organization.

While the nature of additional projects required to backfill features included in Office 365 can vary, Forrester believes that most organizations would need to do some of them. To compensate for this variance, this benefit was risk-adjusted and reduced by 5%. The risk-adjusted total benefit over the three years was \$35,625.

**TABLE 6**

#### Avoided Control And Compliance Efforts

| Ref. | Metric                             | Calculation | Year 1 |
|------|------------------------------------|-------------|--------|
| F1   | Encrypted email — number of months |             | 2.0    |
| F2   | Encrypted email — number of FTEs   |             | 1.5    |
| F3   | Data leakage — number of months    |             | 1.0    |

|     |                                                        |                                 |          |
|-----|--------------------------------------------------------|---------------------------------|----------|
| F4  | Data leakage — number of FTEs                          |                                 | 1.5      |
| F5  | Total man-months of effort saved                       | $(F1 \cdot F2) + (F3 \cdot F4)$ | 4.5      |
| F6  | Monthly average fully burdened cost                    | \$100,000/12 months             | \$8,333  |
| Ft  | Avoided control and compliance efforts                 | $F5 \cdot F6$                   | \$37,500 |
|     | Risk adjustment                                        |                                 | ↓ 5%     |
| Ftr | Avoided control and compliance efforts (risk-adjusted) |                                 | \$35,625 |

Source: Forrester Research, Inc.

### Business Intelligence

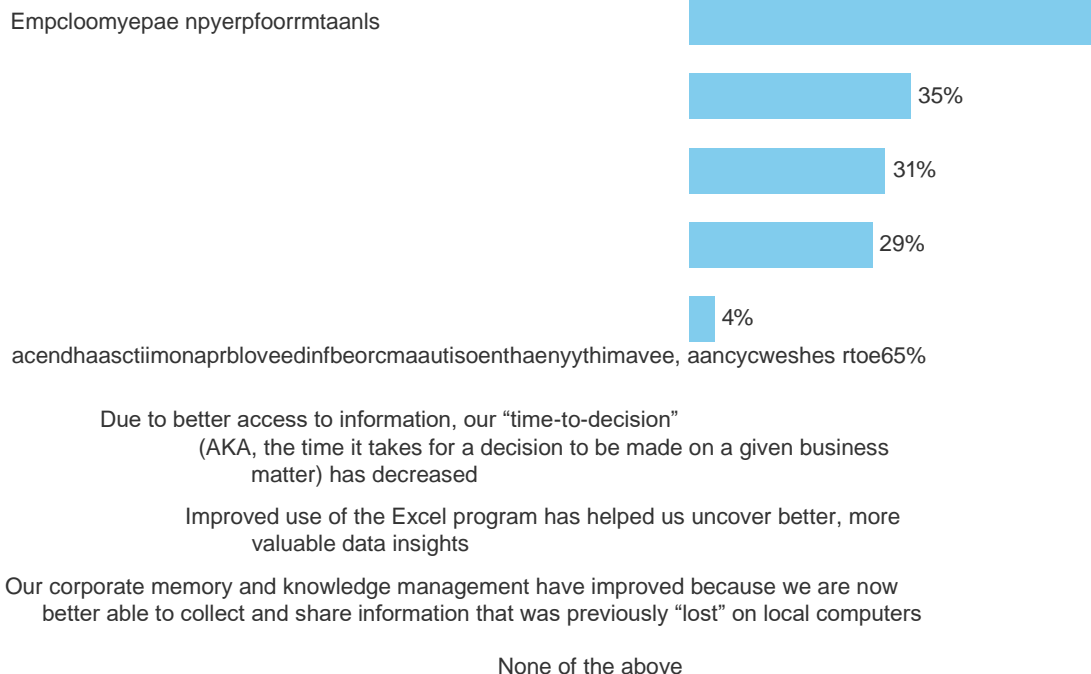
The importance of business intelligence and the value of data within an organization have become more important in the past several years. Nearly every industry and company speaks regularly about the role “big data” will play going forward. The surveyed companies were asked which business intelligence-related benefits they have realized, and the results are summarized in Figure 9. Respondents also said that, on average, Office 365 has led to a 10.4% decrease in time-to-decision.

**FIGURE 9**

### Business Intelligence Benefits

**“Looking at the following statements about business intelligence, which do you agree your organization has seen from your investment with Microsoft Office 365?”**

(Select all that apply)



Base: 72 North American and UK organizations that currently use Office 365 products

Source: Forrester Research, Inc.

Interviewed companies described how the elimination of multiple repositories and the ability to find information more quickly has resulted in demonstrable benefits. Interviewees told us:

- › “We can now make quicker decisions regarding supply chain and quicker, more accurate decision-making in times of contingency or high business demand, or times when quick, informed, and accurate decisions need to be made”.
- › “The cycle time for us to get an answer, distribute the new insight and convert that into action — it’s from weeks down to literally minutes or hours. Office 365 has enabled faster decision-making for us”.
- › “Office 365 has created real-time data for us. You can really get the correct, real-time information, which is crucial for our decision-makers.”

### ★ Reduced Decision-Making Time

For the composite organization, Forrester looked at the increased productivity of 55 users (increasing to 85 by Year 3) who spend a good portion of their day making decisions or completing analyses. These include executive leadership, managers, and analysts. In Year 1, these workers see an average savings of 9 minutes per day. As the decision-makers become more comfortable working with the Office 365 features and utilize Office 365 more to aid their decision-making process, this increases to 30 minutes per day by Year 3. This time savings can be used to complete additional value-add work as well as avoid the need for new hires. It can lead to faster time-to-market and higher customer satisfaction, as impactful decisions are being made more quickly. Because not all time savings result in added work, Forrester discounted this benefit by 50%.

Since the number of decision-makers as a proportion of all employees varies greatly from one organization to another, this benefit was risk-adjusted and reduced by 15%. The risk-adjusted total benefit over the three years was \$453,223.

**TABLE 7**

#### Reduced Decision-Making Time

| Ref. | Metric                     | Calculation                        | Year 1    | Year 2    | Year 3    |
|------|----------------------------|------------------------------------|-----------|-----------|-----------|
| G1   | Number of affected workers |                                    | 55        | 70        | 85        |
| G2   | Hours saved per day        |                                    | 0.15      | 0.25      | 0.50      |
| G3   | Workdays per year          |                                    | 250       | 250       | 250       |
| G4   | Total man-days saved       | $G1 * G2 * G3 / 8 \text{ hours}$   | 258       | 547       | 1,328     |
| G5   | Fully burdened daily cost  | $\$125,000 / 250 \text{ workdays}$ | \$500     | \$500     | \$500     |
| G6   | Total potential savings    | $G4 * G5$                          | \$128,906 | \$273,438 | \$664,063 |
| G7   | % of benefit realized      |                                    | 50%       | 50%       | 50%       |

|     |                                              |       |          |           |           |
|-----|----------------------------------------------|-------|----------|-----------|-----------|
| Gt  | Reduced decisionmaking time                  | G6*G7 | \$64,453 | \$136,719 | \$332,031 |
|     | Risk adjustment                              |       |          | ↓ 15%     |           |
| Gtr | Reduced decision-making time (risk-adjusted) |       | \$54,785 | \$116,211 | \$282,227 |

Source: Forrester Research, Inc.

Enterprise Social

The way individuals live their personal lives in terms of using online social interaction services is affecting how people communicate and collaborate in the workplace. A major component of Office 365 is enabling these social interactions to improve knowledge sharing, collaboration, and productivity. Figure 10 shows that online survey respondents realized a number of benefits from various Office 365 social components included in the solutions.

**FIGURE 10**  
**Enterprise Social Results Capabilities Deliver Greater Collaboration**



Base: 72 North American and UK organizations that currently use Office 365 products  
Source: Forrester Research, Inc.

The interviewed companies shared the many ways that the social and collaboration features of Office 365 improve their workplace and company performance. For example, one organization we spoke with had a large population of employees who worked from home, and the organization used the social networking and collaboration capabilities of Office 365 to create a more connected, engaged workforce and stronger corporate culture. “With our people who work from home, the tools enhanced our culture. The informal communication capability of Yammer and Lync . . . it makes people feel connected, like they are part of something. It’s been a big win for us. The success has been overwhelming.” Another told us: “Because our organization is spread out so globally, many of our employees only knew each other by a name or email address, nothing more. Now, all of us, with Lync, with Yammer . . . we can see each other, we can video and chat in real time, [and] we can share presentations. It makes it so much more personable.”

In addition to Office 365 creating a more positive, connected workforce and culture, the interviewed organizations also spoke of how Office 365 allowed management and decision-makers to be more connected to the workforce and learn and hear about important internal conversations:

- › “Office 365 collaboration features have given management greater insight into our employees’ thought processes around key business issues.”
  - › “[The features] allow the organization to keep a finger on the pulse of concerns among our users of Office 365.”
- Organizations also shared with us how the collaboration features in Office 365 allowed their employees to share and react more quickly to important information and new data, and therefore create more business agility and make smarter business decisions. These features also help the organization be more innovative and creative, and they ultimately help the organizations create ideas to grow the business. Forrester heard from these organizations:
- › “Our ability to see the data in real time has helped a bunch. We have integrated the cloud SharePoint into web dashboards that we use all the time. We can collaborate and work together more quickly now.”
  - › “They are able to assess information and data more quickly and reliably, and in return make better and quicker decisions.”
  - › “Our sales team uses Yammer to aid their sales process. They’ll ask, ‘Hey, does anybody have background on this or [has] anybody ever worked for this client before?’ They are able to quickly poll the organization to gather new intelligence.  
They are able to pull information much, much quicker.”
  - › “As our usage of Yammer has gone up, we’ve seen people posting information, things that we never thought of that would be a use case. So we have techs posting videos of them fixing washers and dryers. We have service folks posting success stories that they have, and all of a sudden it’s just organically developed into almost a knowledge base for us. Yammer is where our team members are just posting really meaningful and useful content.”
  - › “We see opportunities much earlier, and can take these on and help to realize them. We have greater collaboration at all levels in our business and with our suppliers and customers, too.”

Additionally, the social aspect of Office 365 has resulted in direct cost savings, as organizations are able to eliminate unnecessary long-distance telephone costs. One interviewee told us: “We had many issues with roaming expenses because of our traveling field agents across the Middle East and Asia. Lync has become our corporate communication channel, and all our field agents are now using Lync. We have dramatically decreased our mobile roaming expenses by at least 70%.” Another interviewee told us how they are saving money on physical infrastructure needs: “We’ve employed a lot of new people, which has brought a constraint on office space and parking at our main office building. So IT was tasked



with finding a way for people to easily work from different locations and home offices. Lync for that has been ideal. And it means we don't need to worry about the infrastructure. As long as there is an Internet connection, they can do their job and have access to all the data they need."

There are many ways that the social and collaboration features of Office 365 could have an impact on an organization. For the quantified portion of the enterprise social benefits pillar, Forrester looked directly at the improvement of a specific process due to better collaboration as well as the direct cost savings for eliminated communication technologies. However, it is important to note that these social and collaboration features have the potential to affect a variety of tasks and processes across the organization, which can lead to savings or additional revenue for the company. While those returns can be huge, for the purpose of this analysis, we took a much more conservative approach to evaluating the benefits associated with enterprise social. Readers should take the other potential savings and additional revenue into consideration when evaluating the ROI of Office 365 for their organization.

### ★ Eliminated Communication Technologies

The investment in Office 365 eliminated the need for the composite organization to continue to invest in webconferencing solutions provided by other vendors. These organizations previously relied heavily on long-distance phone calls and spent many dollars on roaming fees to support their global mobile workers. With Office 365, the composite organization was able to reduce long-distance, roaming, and teleconference solution costs, as users have more scheduled and ad hoc meetings using Lync and Yammer.

These benefits should be realizable by all organizations previously using other solutions for webconferencing or audioconferencing. Because the amount of long-distance phone usage varies based on geographic reach, this benefit was risk-adjusted and reduced by 10%. The risk-adjusted total benefit over the three years was \$209,250.

**TABLE 8**  
**Eliminated Communication Technologies**

| Ref. | Metric                                                | Calculation | Year 1   | Year 2   | Year 3   |
|------|-------------------------------------------------------|-------------|----------|----------|----------|
| H1   | Eliminated webconferencing solutions                  |             | \$15,000 | \$17,500 | \$20,000 |
| H2   | Eliminated long-distance and roaming phone charges    |             | \$50,000 | \$60,000 | \$70,000 |
| Ht   | Eliminated communication technologies                 | H1 + H2     | \$65,000 | \$77,500 | \$90,000 |
|      | Risk adjustment                                       |             | ↓ 10%    |          |          |
| Htr  | Eliminated communication technologies (risk-adjusted) |             | \$58,500 | \$69,750 | \$81,000 |

Source: Forrester Research, Inc.

### ★ Reduced Time On Enterprise Sales Presentation Creation Due To Collaboration Features

With the use of collaboration features, the composite organization was able to save time on its sales presentation creation. The model assumes that each year, the composite organization creates sales presentations for a certain number of large enterprise prospective clients. These enterprise presentations require certain sales team members to work together on the presentation. Prior to the implementation of Office 365, the sales teams would spend a week on each sales presentation, emailing the files back and forth, waiting on others and hunting for the additional information to include in the presentation. Now, with Office 365, they are able to quickly find the details they need. Office 365 also allows them to have multiple

people working on the same file at the same time, cutting down dramatically on the time spent to create these presentations.

The model assumes that in Year 1, the composite organization creates 30 of these enterprise sales presentations; with the acquisition of the two companies, the number of prospects as well as the number of sales staff increase, and by Year 3 the composite organization is creating 50 of these presentations a year. Similar to the experiences of the interviewed organizations, in Year 1, the composite organization's sales team cut the time spent on creating these documents in half, and by Year 3 it had the process down to a single day as users became more comfortable working with the collaboration features. To compensate for the variety of adoption challenges and other variations experienced by different organizations, the benefit was risk-adjusted and reduced by 15%. The risk-adjusted total benefit over the three years was \$158,950.

**TABLE 10**

**Reduced Time On Enterprise Sales Presentation Creation Due To Collaboration Features**

| Ref. | Metric                                                                    | Calculation                            | Year 1   | Year 2   | Year 3   |
|------|---------------------------------------------------------------------------|----------------------------------------|----------|----------|----------|
| I1   | Number of sales presentations per year                                    |                                        | 30       | 40       | 50       |
| I2   | Average hourly sales salary                                               | \$110,000/(250 workdays*8 hours a day) | \$55     | \$55     | \$55     |
| I3   | Time spent creating sales presentations before Office 365 (hours)         |                                        | 40       | 40       | 40       |
| I4   | Time spent creating sales presentations after Office 365 (hours)          |                                        | 20       | 10       | 8        |
| It   | Reduced time on sales presentation creation due to collaboration features | I1*I2*(I3-I4)                          | \$33,000 | \$66,000 | \$88,000 |
|      | Risk adjustment                                                           |                                        | ↓15%     |          |          |
| Itr  | Reduced decision-making time (risk-adjusted)                              |                                        | \$28,050 | \$56,100 | \$74,800 |

Source: Forrester Research, Inc.

### Total Quantified Benefits

Table 11 shows the total of all benefits across all of the pillars, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total benefits to be a PV of \$3.4 million, or \$4,590 per user.

**TABLE 11**

**Total Quantified Benefits (Risk-Adjusted)**

| Ref. | Benefit                              | Initial   | Year 1    | Year 2    | Year 3      | Total       | Present Value |
|------|--------------------------------------|-----------|-----------|-----------|-------------|-------------|---------------|
| Atr  | Avoided back-end hardware            | \$167,288 | \$80,370  | \$154,845 | \$172,620   | \$575,123   | \$498,014     |
| Btr  | Avoided Microsoft Server licenses    | \$5,189   | \$2,900   | \$5,900   | \$5,331     | \$19,321    | \$16,707      |
| Ctr  | Reduced implementation effort        | \$105,400 | \$60,917  | \$0       | \$0         | \$166,317   | \$160,779     |
| Dtr  | Reduced IT support effort            | \$0       | \$118,750 | \$190,000 | \$190,000   | \$498,750   | \$407,729     |
| Etr  | Increased mobile worker productivity | \$0       | \$243,844 | \$568,969 | \$1,300,500 | \$2,113,313 | \$1,668,983   |

|                                       |                                                                                      |           |           |             |             |             |             |
|---------------------------------------|--------------------------------------------------------------------------------------|-----------|-----------|-------------|-------------|-------------|-------------|
| Ftr                                   | Avoided control and compliance efforts                                               | \$0       | \$35,625  | \$0         | \$0         | \$35,625    | \$32,386    |
| Gtr                                   | Reduced decision-making time                                                         | \$0       | \$54,785  | \$116,211   | \$282,227   | \$453,223   | \$357,888   |
| Htr                                   | Eliminated communication technologies                                                | \$0       | \$58,500  | \$69,750    | \$81,000    | \$209,250   | \$171,683   |
| Itr                                   | Reduced time on enterprise sales presentation creation due to collaboration features | \$0       | \$28,050  | \$56,100    | \$74,800    | \$158,950   | \$128,062   |
| <b>Total benefits (risk-adjusted)</b> |                                                                                      | \$277,877 | \$683,741 | \$1,161,775 | \$2,106,478 | \$4,229,870 | \$3,442,232 |

Source: Forrester Research, Inc.

## COSTS

The composite organization experienced a number of costs associated with the Office 365 solution:

- › Internal implementation labor.
- › Professional services.
- › Training.
- › Ongoing system administration.
- › Incremental Microsoft licenses.
- › Incremental bandwidth.

These represent the mix of internal and external costs experienced by the composite organization for initial planning, implementation, and ongoing maintenance associated with the solution.

### 💰 Internal Implementation Labor

The composite organization's implementation of Office 365 consisted of two phases:

- › The first phase was the initial deployment. It consisted of planning and the implementation of Exchange Online, Office Professional Plus Online, and OneDrive. There was a brief pilot for some users in the IT department and then a rollout to knowledge-based users. This phase lasted six months, and the internal team consisted of four FTEs (excluding trainers, who are discussed separately).
- › The second phase followed shortly afterward (in Year 1 of the study). It consisted of completely new implementations of Lync Online and Yammer, as well as the migration to SharePoint Online. This phase lasted four months and consisted of two and a half FTEs (excluding trainers, who are discussed separately).

The total effort to implement Office 365 will vary depending on which components are being used and how many users are involved. Additionally, some organizations may choose to use more (or less) professional services, which may decrease (or increase) the amount of internal effort. To compensate, this cost was risk-adjusted up by 10%. The risk-adjusted cost over the three years was \$311,667.

**TABLE 12**  
**Internal Implementation Labor**

| Ref. | Metric                                        | Calculation         | Initial   | Year 1   |
|------|-----------------------------------------------|---------------------|-----------|----------|
| J1   | Number of internal FTEs                       |                     | 4.0       | 2.5      |
| J2   | Number of months                              |                     | 6.0       | 4.0      |
| J3   | Average monthly fully burdened cost           | \$100,000/12 months | \$8,333   | \$8,333  |
| Jt   | Internal implementation labor                 | $J1 * J2 * J3$      | \$200,000 | \$83,333 |
|      | Risk adjustment                               |                     | ↑ 10%     |          |
| Jtr  | Internal implementation labor (risk-adjusted) |                     | \$220,000 | \$91,667 |

Source: Forrester Research, Inc.

### 💰 Professional Services

The composite organization used Microsoft's consulting services as part of the implementations. The consultants brought best practices and focused on system integration and solution configuration. The composite organization's IT team was able to learn quickly from the consultants to do a lot of the daily operations work in-house very quickly.

The level of outside assistance required varies greatly. Factors to consider are spare capacity within the internal IT organization to work on the project, previous experience with Microsoft solutions, and the overall size and complexity of the deployment. To compensate, this cost was risk-adjusted up by 20%. The risk-adjusted cost over the three years was \$144,000.

**TABLE 13**  
**Professional Services**

| Ref. | Metric                                | Calculation | Initial  | Year 1   |
|------|---------------------------------------|-------------|----------|----------|
| K1   | Consulting fees                       |             | \$60,000 | \$60,000 |
| Kt   | Professional services                 | =K1         | \$60,000 | \$60,000 |
|      | Risk adjustment                       |             | ↑ 20%    |          |
| Ktr  | Professional services (risk-adjusted) |             | \$72,000 | \$72,000 |

Source: Forrester Research, Inc.

### 🎓 Training

All of the interviewed companies needed training for their IT teams. End user training depended on if the company was on a previous, on-premises version of the solution. If so, much of the transition was invisible to users. If there are new solutions, such as Lync and Yammer in the case of the composite organization, end user training is likely to be needed.

The IT team required 60 man-days of training to come fully up to speed on implementing and managing the Office 365 solutions during the initial phase. In years 1 and 2 of the study, there was an additional 40 man-days of training to learn about new solutions and upgrades. For end user training, an internal FTE was trained up by the IT team and provided training to the rest of the organization on an ongoing basis over the life of the study.

The cost of training will vary based on how many IT resources and end users need to be trained. If completely new solutions are being introduced, this will require more training. If more professional services will be used, the training costs may be lower. To compensate, this cost was risk-adjusted up by 5%. The risk-adjusted cost over the three years was \$280,350.

TABLE

14

## Training

| Ref. | Metric                                    | Calculation                 | Initial  | Year 1   | Year 2   |
|------|-------------------------------------------|-----------------------------|----------|----------|----------|
| L1   | Number of man-days of technology training |                             | 60       | 40       | 40       |
| L2   | Cost per day — technology training        |                             | \$300    | \$300    | \$300    |
| L3   | User training                             | 1 FTE trainer *<br>\$75,000 | \$75,000 | \$75,000 | \$75,000 |
| Lt   | Training                                  | $L1 * L2 + L3$              | \$93,000 | \$87,000 | \$87,000 |
|      | Risk adjustment                           |                             | ↑ 5%     |          |          |
| Ltr  | Training (risk-adjusted)                  |                             | \$97,650 | \$91,350 | \$91,350 |

Source: Forrester Research, Inc.

### ➤ Ongoing System Administration

The Benefits section describes the number and types of system administrator positions that can be redeployed or not added. There was still the need for a system administration team to deal with user administration, configuration, and setup of new features. Initially, one FTE supported these efforts; as more users were added in years 2 and 3 as part of the composite organization's acquisitions, additional IT staff was added. In addition, our organization outsourced some of its help desk support, similar to what we heard from our interviewed organizations. It is estimated that the organization spends \$50,000 a year on Office 365-focused help desk support.

Internal team size will vary based on the solution components in use and the size of the deployment. To compensate, this cost was risk-adjusted up by 5%. The risk-adjusted cost over the three years was \$630,000.

TABLE 15

## Ongoing System Administration

| Ref. | Metric                                        | Calculation    | Initial   | Year 1    | Year 2    | Year 3    |
|------|-----------------------------------------------|----------------|-----------|-----------|-----------|-----------|
| M1   | Number of FTEs                                |                |           | 1.00      | 1.50      | 2.00      |
| M2   | Annual fully burdened cost                    |                |           | \$100,000 | \$100,000 | \$100,000 |
| M3   | Outsourced help desk support for Office 365   |                |           | \$50,000  | \$50,000  | \$50,000  |
| Mt   | Ongoing system administration                 | $M1 * M2 + M3$ |           | \$150,000 | \$200,000 | \$250,000 |
|      | Risk adjustment                               |                |           | ↑ 5%      |           |           |
| Mtr  | Ongoing system administration (risk-adjusted) |                | \$157,500 | \$210,000 | \$262,500 |           |

Source: Forrester Research, Inc.

### Incremental Microsoft Licenses

In order to have as much of an apple-to-apple comparison as possible, this study compares Office 365 with Microsoft's Software Assurance licensing model. In the SA model, customers pay an annual fee that entitles them to all upgrades and the latest solutions. In the previous solution, there was an ECAL and Office license required for each user. In the Office 365 model, E3 and ECAL Bridge to Office 365 licenses are required for each user.

There are many different license types that the reader's organization may be moving from. Forrester recommends working with your Microsoft account representative to fully understand the original pricing and the new pricing under Office 365. Forrester risk-adjusted this cost up by 5% to account for some organizations that may have had lower Software Assurance license costs. The risk-adjusted cost over the three years was \$51,855.

**TABLE 16**  
**Incremental Microsoft Licenses**

| Ref. | Metric                                       | Calculation                 | Initial  | Year 1   | Year 2    | Year 3   |
|------|----------------------------------------------|-----------------------------|----------|----------|-----------|----------|
| N1   | Number of users                              | =A2                         | 465      | 465      | 600       | 750      |
| N2   | Office 365 license per user                  | Initial period for 6 months | \$104.22 | \$208.44 | \$208.44  | \$208.44 |
| N3   | Previous Software Assurance license per user |                             | \$92.16  | \$184.32 | \$184.32  | \$184.32 |
| Nt   | Incremental Microsoft licenses               | $N1*(N2-N3)$                | \$5,608  | \$11,216 | \$14,472  | \$18,090 |
|      | Risk adjustment                              |                             | ↑ 5%     |          |           |          |
| Ntr  | Incremental Microsoft licenses (risk-        |                             | \$5,888  | \$11,777 | \$15,196  | \$18,995 |
|      |                                              |                             |          |          | adjusted) |          |

Source: Forrester Research, Inc.

### Incremental Bandwidth

Moving to Office 365 required, in aggregate, more bandwidth. Exchange required less bandwidth than previous versions. The addition of Lync increased the total bandwidth required. More bandwidth was required during the Exchange and SharePoint migrations.

How much, if any, additional bandwidth required will depend on the size of existing "pipes" and if new solutions are being added. To compensate, this cost was risk-adjusted up by 10%. The risk-adjusted cost over the three years was \$105,600.

| Incremental Bandwidth |                                       |             |          |          |          |          |
|-----------------------|---------------------------------------|-------------|----------|----------|----------|----------|
| Ref.                  | Metric                                | Calculation | Initial  | Year 1   | Year 2   | Year 3   |
| O1                    | Number of months                      |             | 6        | 12       | 12       | 12       |
| O2                    | Additional monthly cost               |             | \$2,000  | \$2,000  | \$2,500  | \$2,500  |
| Ot                    | Additional bandwidth                  | $O1 * O2$   | \$12,000 | \$24,000 | \$30,000 | \$30,000 |
|                       | Risk adjustment                       |             |          | ↑ 10%    |          |          |
| Otr                   | Incremental bandwidth (risk-adjusted) |             | \$13,200 | \$26,400 | \$33,000 | \$33,000 |

## TABLE

Source: Forrester Research, Inc.

### Total Costs

Table 18 shows the total of all costs as well as associated present values, discounted at 10%. Over three years, the composite organization expects total costs to total a present value of a little more than \$1.3 million, or \$1,792 per user.

**TABLE 18**  
**Total Costs (Risk-Adjusted)**

| Ref. | Cost                               | Initial          | Year 1           | Year 2           | Year 3           | Total              | Present Value      |
|------|------------------------------------|------------------|------------------|------------------|------------------|--------------------|--------------------|
| Jtr  | Internal implementation labor      | \$220,000        | \$91,667         | \$0              | \$0              | \$311,667          | \$303,333          |
| Ktr  | Professional services              | \$72,000         | \$72,000         | \$0              | \$0              | \$144,000          | \$137,455          |
| Ltr  | Training                           | \$97,650         | \$91,350         | \$91,350         | \$0              | \$280,350          | \$256,191          |
| Mtr  | Ongoing system administration      | \$0              | \$157,500        | \$210,000        | \$262,500        | \$630,000          | \$513,956          |
| Ntr  | Incremental Microsoft licenses     | \$5,888          | \$11,777         | \$15,196         | \$18,995         | \$51,855           | \$43,423           |
| Otr  | Incremental bandwidth              | \$13,200         | \$26,400         | \$33,000         | \$33,000         | \$105,600          | \$89,266           |
|      | <b>Total costs (risk-adjusted)</b> | <b>\$408,738</b> | <b>\$450,693</b> | <b>\$349,546</b> | <b>\$314,495</b> | <b>\$1,523,472</b> | <b>\$1,343,624</b> |

Source: Forrester Research, Inc.

### FLEXIBILITY

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for some future additional investment. This provides an organization with the “right” 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 implement Office 365 and later realize additional uses and business opportunities. Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix B).

Moving to Office 365 makes organizations inherently more flexible. IT organizations can more quickly provision users and roll out the latest features to make workers more productive.

The composite organization is looking into providing Office 365 logistics workers. It is also planning to roll out Office 365 to any additional organizations it acquires. None of the associated flexibility benefits were included in the ROI analysis.



## RISKS

Forrester defines two types of risk associated with this analysis: “implementation risk” and “impact risk.” Implementation risk is the risk that a proposed investment in Office 365 may deviate from the original or expected requirements, resulting in higher costs than anticipated. Impact risk refers to the risk that the business or technology needs of the organization may not be met by the investment in Office 365, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for cost and benefit estimates.

Table 19 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates for the composite organization. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

TABLE

19

## Benefit And Cost Risk Adjustments

| Benefits                                                                  | Adjustment |
|---------------------------------------------------------------------------|------------|
| Avoided back-end hardware                                                 | ↓ 10%      |
| Avoided Microsoft Server licenses                                         | ↓ 10%      |
| Reduced implementation effort                                             | ↓ 15%      |
| Reduced IT support effort                                                 | ↓ 5%       |
| Increased mobile worker productivity                                      | ↓ 15%      |
| Avoided control and compliance efforts                                    | ↓ 5%       |
| Reduced decision-making time                                              | ↓ 15%      |
| Eliminated communication technologies                                     | ↓ 10%      |
| Reduced time on sales presentation creation due to collaboration features | ↓ 15%      |
| Costs                                                                     | Adjustment |
| Internal implementation labor                                             | ↑ 10%      |
| Professional services                                                     | ↑ 20%      |
| Training                                                                  | ↑ 5%       |
| Ongoing system administration                                             | ↑ 5%       |
| Incremental Microsoft licenses                                            | ↑ 5%       |
| Additional bandwidth                                                      | ↑ 10%      |

Source: Forrester Research, Inc.

Quantitatively capturing implementation risk and impact risk by directly adjusting the financial estimates results provides more meaningful and accurate estimates and a more accurate projection of the ROI. In general, risks affect costs by raising the original estimates, and they affect benefits by reducing the original estimates. The risk-adjusted numbers should be taken as “realistic” expectations since they represent the expected values considering risk.

## Financial Summary

The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, IRR, NPV, and payback period for the composite organization's investment in Office 365.

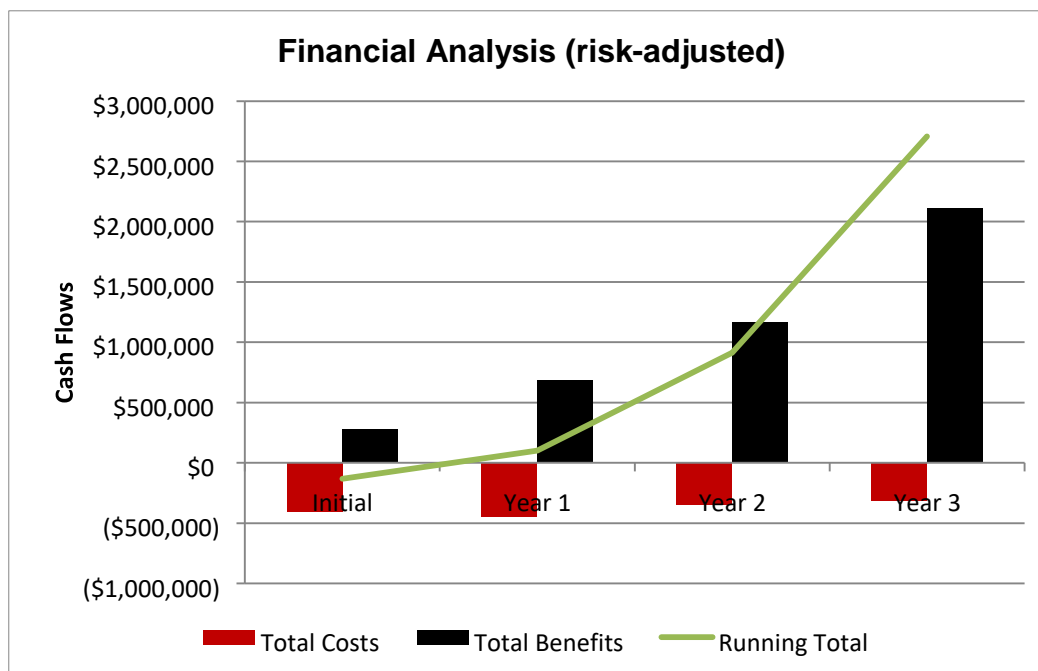
Table 20 below shows the risk-adjusted ROI, IRR, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Table 19 in the Risks section to the unadjusted results in each relevant cost and benefit section.

**TABLE 20**  
**Cash Flow (Risk-Adjusted)**

|                | <b>Initial</b> | <b>Year 1</b> | <b>Year 2</b> | <b>Year 3</b> | <b>Total</b>  | <b>Present Value</b> |
|----------------|----------------|---------------|---------------|---------------|---------------|----------------------|
| Costs          | (\$408,738)    | (\$450,693)   | (\$349,546)   | (\$314,495)   | (\$1,523,472) | (\$1,343,624)        |
| Benefits       | \$277,877      | \$683,741     | \$1,161,775   | \$2,106,478   | \$4,229,870   | \$3,442,232          |
| Net benefits   | (\$130,861)    | \$233,047     | \$812,229     | \$1,791,983   | \$2,706,399   | \$2,098,607          |
| ROI            | 156%           |               |               |               |               |                      |
| IRR            | 311%           |               |               |               |               |                      |
| Payback period | 6.7 months     |               |               |               |               |                      |

Source: Forrester Research, Inc.

**FIGURE 11**  
**Cash Flow Chart (Risk-Adjusted)**



Source: Forrester Research, Inc.

## Microsoft Office 365: Overview

The following information is provided by Microsoft. Forrester has not validated any claims and does not endorse Microsoft or its offerings.

Office 365 is the same Office you already know and use every day — and then some. Because Office 365 is powered by the cloud, you can get to your applications and files from virtually anywhere — such as a PC, Mac, and select mobile devices — and they're always up to date. Same goes for updates to features — you get them automatically. Business-class email and calendaring put you in sync and help you avoid communication glitches. With business-class email and shared calendars that you can get to from virtually anywhere, people stay in sync and on schedule. Specific feature-related benefits include:

- › **Online conferencing puts everyone on the same page.** With online conferencing, distance really isn't an issue. Need to get everyone together? Host an online meeting complete with real-time note-taking and screen sharing.

- › **Extend your reach with simple, more secure file sharing.** Office 365 makes it easy to more securely share files with coworkers, customers, and partners. Work together on documents that are always current and accessible from virtually anywhere.
- › **Build your online presence, minus the hosting fees.** More effectively market your business with a public website that's easy to set up and update. It's DIY with online tools and absolutely zero hosting fees.
- › **You get one familiar experience, even on the go.** Office 365 mobile apps let you view and edit your Word, Excel, and PowerPoint files and more on your mobile device. And when you get back to your desk, there they are, with content and formatting intact.
- › **Create docs from any browser.** With the touch-friendly applications of Office Online, you can create, edit, and share your Office files from any browser. You can even share and work on docs at the same time as others and avoid versioning hassles later.
- › **You get security, compliance, and privacy you can trust.** Security, compliance, and privacy in the cloud? Yes. And Microsoft is continually making improvements in Office 365 to earn and maintain your trust.

## A: Composite Organization Description

Based on interviews with four Corporate Account customers and a survey of 72 additional enterprise customers currently using Office 365, Forrester constructed a composite organization that encompasses characteristics heard across the interviews. Forrester then 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 the 2010 version of various Microsoft solutions with Microsoft Office 365, this Forrester study illustrates the financial impact of using Microsoft Office 365 for a typical enterprise customer.

Forrester named the composite organization Acme Corporation. Acme is involved in the distribution, sales, and service of restaurant equipment. The company is headquartered in the US with divisions in North America and Europe. There are a total of 930 employees: 750 knowledge workers and another 180 working in warehousing, transportation, and other support roles.

The 750 knowledge workers are spread between six offices. Of these 750 workers, 400 of them are sales and service employees who are mobile workers and on the road most of the time. All knowledge workers are migrated to Office 365 in this study. Below is a summary of the previous and new Microsoft deployment.

**TABLE 21**  
**Composite Organization Solution Components**

## Appendix

| Product                      | Previous Version                             | Office 365 Deployment                |
|------------------------------|----------------------------------------------|--------------------------------------|
| Office 365 Professional Plus | 2010 Office Professional Plus — local client | Office 365 Professional Plus — cloud |
| Exchange                     | 2010 Exchange — on-premises                  | Exchange Online                      |
| SharePoint                   | 2010 SharePoint — on-premises                | SharePoint Online                    |
| Lync                         | None                                         | 2013 Lync Online                     |
| Yammer                       | None                                         | Yammer                               |
| OneDrive                     | None                                         | OneDrive                             |

Source: Forrester Research, Inc.

Acme Corporation decided to upgrade to Office 365 versus a traditional on-premises deployment as a means to reduce TCO, improve employee productivity and support greater collaboration among groups and users, and create visibility into the various offices around the globe. As part of its overall business goals, Acme has acquired two additional businesses throughout its rollout of Office 365. Office 365 allows Acme to quickly provision the new employees, creating visibility across the organization and ensuring all offices are on a standard set of solutions.

## Appendix

### B: Total Economic Impact™ Overview

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decisionmaking 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, flexibility, and risks.

#### 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.

#### 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. However, having the ability to capture that benefit has a PV that can be estimated. The flexibility component of TEI captures that value.

#### RISKS

Risks measure 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 risk factors are based on a probability density function known as "triangular distribution" to the values entered. At a minimum, three values are calculated to estimate the risk factor around each cost and benefit.

Appendix

C: Glossary

**Discount rate:** The interest rate used in cash flow analysis to take into account the time value of money. Companies set their own 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 respective organizations 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 NPV of cash flows.

**Payback period:** The breakeven point for an investment. This is 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.

**Internal rate of return (IRR):** The interest rate that will bring a series of cash flows (positive and negative) to an NPV of zero.

A NOTE ON CASH FLOW TABLES

The following is a note on the cash flow tables used in this study (see the example table below). 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 the Framework Assumptions section) at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations are not calculated until the summary tables are the sum of the initial investment and the discounted cash flows in each year.

Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.

TABLE [EXAMPLE]

Example Table

| Ref. | Metric | Calculation | Year 1 | Year 2 | Year 3 |
|------|--------|-------------|--------|--------|--------|
|      |        |             |        |        |        |

Source: Forrester Research, Inc.



## Appendix

### Appendix D: Endnotes

<sup>1</sup> Forrester risk-adjusts the summary financial metrics to take into account the potential uncertainty of the cost and benefit estimates. For more information, see the section on Risks.