A Forrester Total Economic Impact™ Study

Commissioned By

Microsoft

Project Director:
Jonathan W. Lipsitz

Project Contributor:
Adrienne Capaldo

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The Total Economic Impact™ Of Microsoft Office 365

Very Large Enterprise Customers

FORRESTER®

Table Of Contents

ABOUT FORRESTER CONSULTING

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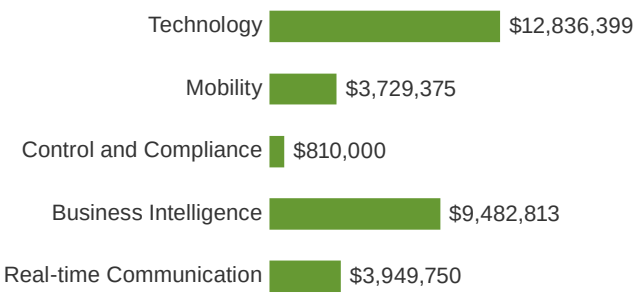
Executive Summary

Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) very large enterprises may realize by deploying Office 365. The purpose of this study is to provide readers at large organizations (more than 20,000 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 conducted an online survey with 66 large organizations using Office 365 and a follow-up interview with one existing customer. Office 365 is the software-as-a-service (SaaS) version of Microsoft business products including Office Professional Plus, Exchange, Skype for Business (formerly Lync), SharePoint, Yammer, and OneDrive.

FIGURE 1
Benefits Summary By Pillar — Risk-Adjusted Results



Source: Forrester Research, Inc.

Prior to moving to Office 365, customers had implemented various solution components from Microsoft and other vendors in a traditional on-premises model. With Office 365, customers were able to accelerate the deployment of the latest versions of Microsoft solutions, replace solutions from other vendors, decrease technology costs, increase business and IT user productivity, and stay up to date with the latest features and solutions. Said the interviewed CIO: "One of the major benefits is that, in most cases, we let Microsoft push out updates directly. I have been amazed how many new capabilities they release. And, it's not just in Windows. It's on the iPad, Surface, Android, etc. They really have done a tremendous job introducing new capabilities."

Our online survey responses from 66 organizations and subsequent financial analysis found that a composite organization (a US-based manufacturer of high-end industrial tools that moved from an on-premises 2007 version solution to Office 365 in the cloud for 25,000 initial users) experienced the risk-adjusted ROI, IRR, benefits, and costs shown in Figure 2.[1] See Appendix A for a description of the composite organization.

The composite organization analysis points to total benefits of $30.8 million versus total costs of $12.8 million, resulting in a net present value (NPV) of $14 million.

FIGURE 2
Financial Summary Showing Three-Year Risk-Adjusted Results

ROI: 124%	IRR: 299%	NPV per user: $560	Payback: eight months after go-live

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 surveyed and interviewed customers described but could not be quantified for this study are included in the discussion later in the 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

Source: Forrester Research, Inc.

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

- **Technology:**
  - **The organization avoided adding new infrastructure hardware for an on-premises Microsoft solution.** The move from the 2007 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, 174 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 $3,715,191.
  - **Server licenses for various Microsoft solutions were no longer needed.** An on-premises solution comparable to Office 365 would have required 1,300 Windows Server licenses, 16 Skype Server licenses, and 52 SharePoint licenses. The avoided purchase cost plus annual maintenance totaled $376,233.
  - **A server refresh, ongoing user licenses, and an outsourced support contract for another vendor's email system were eliminated.** Savings associated with email/Exchange Online are treated separately since the composite organization moved from a non-Microsoft email solution. This solution was due for a hardware

technology refresh. Additionally, the email system licenses, which were a per-user monthly license that included all hosting and support, were also eliminated. The avoided cost to upgrade the technology and for the ongoing user system licenses and outsourced management totaled $3,507,950.

- **The per-device cost for user PCs and laptops were reduced for both the ongoing refresh cycle and supplying new employees with a computer.** The composite organization was able to get lower-spec PCs and laptops for its knowledge workers at a savings of $125 each. This included replacement devices based on a four-year refresh cycle and devices purchased for new hires. The reduced purchase costs totaled $2,221,875.
- **The implementation effort was 30% 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 30% greater. This savings across all phases equaled $747,150.
- **The effort required to support the solution was reduced by approximately 40%.** The total number of resources required to maintain and grow the Microsoft solutions — Office Professional Plus, Exchange, Skype for Business, SharePoint, Yammer, and OneDrive — was reduced from 17 down to 10 full-time employees (FTEs) supporting geographies around the world. Much of this was in the form of avoiding additional hires as well as redeploying three existing system administrators who could focus on other, higher-value activities. The three-year associated savings was $2,268,000.

- **Mobility:**
  - **Seven hundred and fifty travelling salespeople saved 30 minutes per day by Year 3 of the study.** Out of the knowledge workers using Office 365, 750 salespeople 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 email. This increased productivity grows from a quarter of an hour per day in Year 1 up to a half hour per day in Year 2 as more Office 365 solutions such as 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 $3,729,375.
- **Control and Compliance:**
  - **Using Office 365 reduced effort associated with enforcement of data retention policies, eDiscovery, policy management across all device types, and data breach analysis and remediation.** Office 365 has built in the tools and best practices to streamline these control and compliance operations. This resulted in significant time savings and eliminated costs for other solutions. In total, the three-year savings was $810,000.
- **Business Intelligence:**
  - **Engineers make faster, better solution design decisions because of more timely access to information.** Solution engineers are able to complete the specifications for custom solutions faster by having better access to previous designs across the entire organization. Fifteen minutes per day is saved in Year 1 of the study, and this increases to 75 minutes per day by Year 3. The productivity opportunity, discounted 50% since not all productivity gains result in more work accomplished, totaled $9,482,813.
- **Real-time Communication:**
  - **Third-party collaboration/communication tools are eliminated since they come standard within Office 365.** In addition to the productivity gains that collaboration tools deliver, there is a hard savings by discontinuing the use of other tools and by moving communications from landlines and mobile telephones to Internet-based solutions. Combined, these changes saved the composite organization $2,113,750 over three years.
  - **Real-time communication features improve productivity and make processes more efficient.** Forrester included one example of a process that is improved through greater use of real-time communication tools. The

composite organization engineers are dependent on internal systems to complete their work. When these systems are down or performing poorly, they are unable to effectively complete their work. These teams, as well as IT support staff, use the communication tools built into Skype for Business, Yammer, and other Office 365 solutions to troubleshoot problems faster. The number of incidents that are more quickly resolved increases over the life of the study as Skype for Business, Yammer, and other tools see greater usage to solve these problems. The total savings over the three years was $1,836,000.

› **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, setting up Exchange Online and migrating mailboxes from another email system, moving all users to Office 365 Professional Plus from Office Professional Plus 2007 local clients, and deploying OneDrive for all users. Phase two, completed in Year 1, consisted of a completely new deployment of Skype and Yammer and a migration from SharePoint 2007 on-premises to the latest version of SharePoint Online. Total internal implementation labor was $2,016,000.
- **Professional services.** The composite organization used Microsoft Professional Services during both phases of deployment. Professional services were used to help properly stand up the solutions, create and deploy optimized configurations, and assist with all data migrations. There were also some ongoing professional services to assist with new features and solutions rolled out under the Office 365 umbrella. The total professional services cost was $1.5 million.
- **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. Three hundred and fifty man-days of IT training took place during the two implementation phases, with additional training, involving significantly fewer man-days, in years 2 and 3. Additionally, five internal employees 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 $2,004,750.
- **Ongoing system administration.** The Benefits section described the number of system administrator positions that did not need to be added or could be reassigned. The remaining system administration team consisted of 10 FTEs to administer the various components of Office 365. The team supports solutions globally, with members in North America, Europe, and Asia. The three-year associated costs were $3.96 million.
- **Incremental Microsoft licenses.** For individual user licenses, Office 365 was compared with the Software Assurance 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 (SA) licenses. The accumulated additional cost over three years was $2,412,302.
- **Federation hardware.** The composite organization desired to use identity federation for improved single sign-on (SSO) internally and with partner/customer companies. This required the installation and ongoing maintenance of six Active Directory Federation Services (ADFS) servers: two each in North America, Asia, and Europe. The three-year cost to purchase, maintain, and host the servers was $123,795.
- **Additional bandwidth.** Moving to Office 365 resulted in a net increase of bandwidth required. Some areas saw a reduction, e.g., Exchange versus the previous email solution, while other areas saw an increase, e.g., a new deployment of Skype. There was also additional bandwidth required during the initial data migrations. Over three years, $810,000 in additional bandwidth was required.

The financial results presented above include a mix of hard benefits, e.g., eliminated technology, and soft benefits, e.g., worker productivity. Forrester recalculated the NPV, ROI, IRR, and payback period without any of the productivity gains included. The result is an NPV of $2.1 million, ROI of 19%, IRR of 86%, and a payback period of 16 months. This demonstrates that a reader's organization can achieve all of the benefits associated with Office 365 and a positive financial

outcome without incurring incremental costs even when the business transformation productivity benefits are excluded from the analysis.

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 name for the interview but did not participate in the interview.

TEI Framework And Methodology

INTRODUCTION

From the information provided in the online survey and follow-up interview, 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.
- Surveyed 66 organizations online that currently use Microsoft Office 365 and have 20,000 or more employees to obtain data with respect to costs, benefits, and risks.
- Designed a composite organization based on characteristics of the surveyed organizations (see Appendix A).
- Constructed a financial model representative of the surveys and follow-up interview using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the surveys as applied to the composite organization.
- Risk-adjusted the financial model based on issues and concerns the surveyed and interviewed organizations highlighted. Risk adjustment is a key part of the TEI methodology. While surveyed and 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.

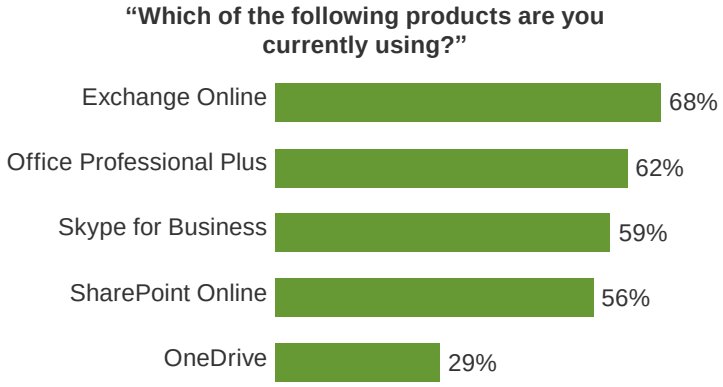
Analysis

COMPOSITE ORGANIZATION

Forrester built a composite organization based on an online survey of 66 organizations with 20,000 to more than 100,000 employees in North America and the UK that have deployed Microsoft Office 365. All of the participants were involved in the Office 365 selection process and included line-of-business and IT professionals who make, influence, or have knowledge around decisions related to technology. Nineteen of the respondents were from the financial services sector, and the remainder were split across many industries. The follow-up interview was with a manufacturing company with operations in more than 50 countries and revenues in excess of $3 billion.

On average, the survey respondents had 28,915 Office 365 users. Seventy-one percent of the organizations were planning to add additional users over the next year. Office 365 solution components in use varied across organizations.

FIGURE 5
Office 365 Solution Components In Use



Base: 66 North American and UK organizations that currently use Office 365 products
Source: Forrester Research, Inc.

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 manufacturer that sells and services high-end industrial tools in 75 countries across North America, Europe, and Asia.
- The rollout was for all knowledge workers around the world.
- At the time Office 365 was deployed, there were 32,000 employees. Of these, 25,000 were knowledge workers and the remainder was factory, warehouse, and distribution employees. All knowledge workers were moved to Office 365, and there were some new hires added in years 2 and 3.

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)	2007 Office Professional Plus — local client
Exchange Online	Phase one (initial period)	Non-Microsoft email solution
SharePoint Online	Phase two	2007 SharePoint — on-premises
Skype for Business	Phase two (Year 1)	None
Yammer	Phase two (Year 1)	None
OneDrive	Phase one (initial period)	None

Source: Forrester Research, Inc.

SURVEY AND INTERVIEW HIGHLIGHTS

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

The composite organization was interested in making greater use of cloud solutions. It had conducted some experiments and worked with the legal and audit team to convince them that this was a fine approach from a security and privacy perspective. To move forward, the IT organization looked at strategic options to address the following challenges and opportunities:

- Increased collaboration was a primary objective. Existing solutions did not allow for collaboration across all teams around the world.
- The IT organization wanted to consolidate multiple solutions into a single one to improve performance and reduce support difficulties.
- There was a desire to move from a capex to opex funding model to make budgeting more predictable and balanced across years.
- The company wanted to use more outsourcing as a way to reduce costs.
- A desired outcome was to reduce time-to-market with new solutions and to improve overall agility.

The IT team then evaluated several options — cloud-based and on-premises — to select the one that best met the organization's needs. Selection criteria included:

- Fit with business priorities.
- Alignment with technology road map.
- Features and functionality.
- Enterprise security.
- Ease of deployment.
- Level of comfort with cloud provider's capabilities and reliability.

Office 365 was selected as the best option by the composite organization. The Office 365 contract was negotiated as part of the EA renegotiation. The various solution components were deployed in two phases as outlined in the composite organization description above.

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 similar on-premises solution was significantly lower. Contributing elements were the elimination of capital expenditures on hardware and software, less effort to deploy and maintain the solutions, easier support for global operations, and the ability to very efficiently deploy the latest features going forward.
- **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.
- **Improved mobility.** Mobility for nearly all knowledge workers is very important. In addition to workers who are regularly on the road, office-based workers can work from home out of hours if needed or if storms prohibit them from coming into the office. Additionally, having Presence on their mobile devices means they can better collaborate in real time when away from their desk.

> *"Our material scientists make or break us in terms of competitiveness. Office 365 makes them more productive, which helps us immensely."*
>
> ~CIO

- **Faster time-to-market.** Engineering teams can more quickly design customer solutions through tighter internal collaboration as well as by working better with the sales organization and customers. Skype and Yammer are especially useful for solution engineers to ping their peers to find out what has worked in similar situations.
- **Increased employee satisfaction.** Same as the interviewed company, the composite organization has seen increased employee satisfaction because of greater collaboration. According to the interviewee, every year the organization conducts a Voice of the Employee survey, and the study showed that "employees like that they can collaborate more. Additionally, internal benchmarking shows that 100% of respondents are satisfied or extremely satisfied with Microsoft collaboration tools."

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 and Compliance.
- Business Intelligence.
- Real-time Communication.

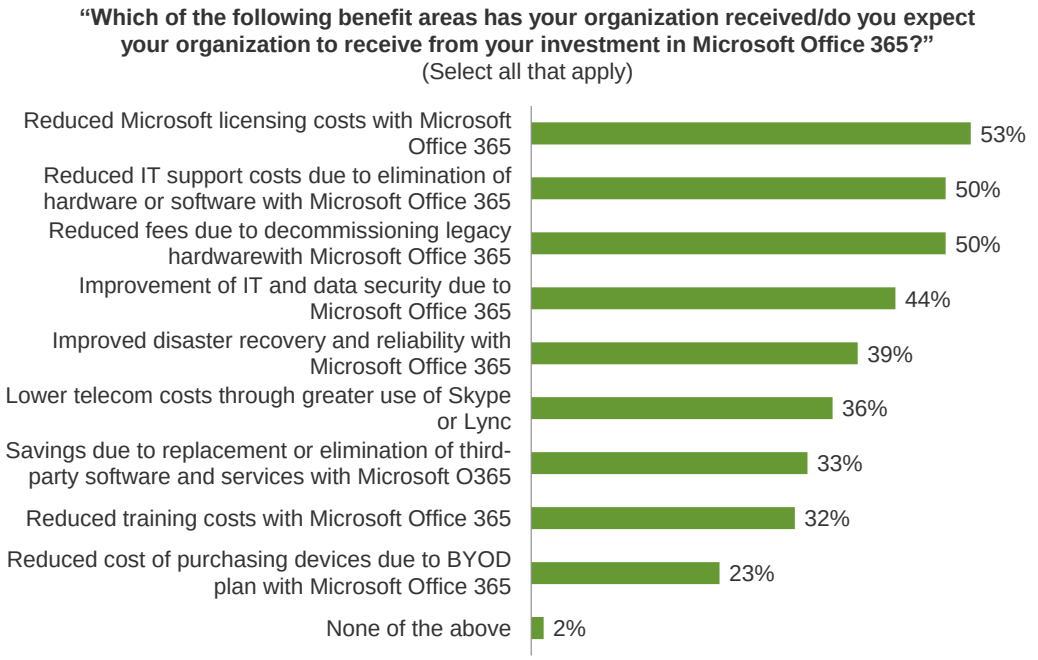
For each of these pillars, the online survey respondents spoke to multiple benefits. For each area, Forrester quantified at least one benefit that is specifically highlighted and comprises the ROI analysis component of this study. Benefits that could not be quantified or are very specific and excluded 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 webconferencing solutions are included under the real-time communication 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



Base: 66 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 they realized the following benefits by moving to Office 365 compared with an on-premises solution:

- 12.2% reduction in Microsoft licensing costs (35 respondents).
- 11.6% reduction in third-party license and software costs, e.g., other email packages (22 respondents).
- 10.9% reduction in IT support costs for legacy systems (33 respondents).

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

- "Software costs overall have gone down. It is a nice benefit that the Office 365 license can be used on multiple devices."
- "We are getting a lot more capability for the same money."

- "The amount of electricity we used in the data center has decreased as lot. We used to use the entire second floor of our building, and now we have close to nothing."
- "We acquired a couple of companies along the way. In the past we would have needed to stand up more services and add more IT support people. With Office 365 we didn't have to do any of these things."
- "Users don't have any downtime when we are rolling out new capabilities. In the past, major rollouts would require 1 to 2 hours of downtime for the user."

Forrester quantified six benefit areas within the technology pillar.

Avoided Microsoft Solution Back-End Hardware

The composite organization was planning a companywide migration from 2007 versions of Microsoft solutions and an introduction of new ones as explained in the composite organization description. The previous infrastructure was due for life-cycle replacement and would not have been large enough to handle the added solutions such as Skype for Business.

The number of servers required is based primarily on the number of users. The following server types would be needed: Windows Servers, Skype Servers, and SharePoint Servers. They would be needed in both production and disaster recovery (DR) data centers. The servers would all be deployed in a highly virtualized environment with, on average, 12 VMs per physical server. In total, this comes out to 30 servers over the life of the study. Costs are avoided for the initial purchase, ongoing maintenance, and internal hosting. Exchange Servers are not included here because the composite organization was using a non-Microsoft email system, and the associated benefit is covered separately later in the study.

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%.

Surveyed 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 15%. The risk-adjusted total benefit resulting from eliminated Microsoft back-end infrastructure over the three years was $3,715,191. See the section on Risks for more detail.

TABLE 2
Avoided Microsoft Solution Back-End Hardware

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
A1	Number of users added		25,000	0	500	500
A2	Total number of users	A2[previous period] + A1 [current period]	25,000	25,000	25,500	26,000
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 period]	1,250	0	25	25
A5	Number of users per Skype Server			1,600	1,600	1,600
A6	Number of virtual Skype Servers not added	A2/A5[rounded up] - A6 [previous]		16	0	0
A7	Number of users per SharePoint Server			500	500	500
A8	Number of virtual SharePoint Servers not added	A2/A7[rounded up] - A8 [previous]		50	1	1
A9	Total virtual servers not added — primary	A4+A6+A8	1,250	66	26	26
A10	Total virtual servers not added — DR	A9*50%	625	33	13	13
A11	Average number of VMs per physical server		12	12	12	12
A12	Number of physical servers not added	(A9+A10)/A11[rounded up]	157	9	4	4
A13	Cost per physical server		$12,000	$12,000	$12,000	$12,000
A14	Added physical server costs avoided	A12*A13	$1,884,000	$108,000	$48,000	$48,000
A15	Annual maintenance avoided	A14[through current year] * 10%		$199,200	$204,000	$208,800
A16	Avoided hosting cots	A12[through current year]*$750 per year (9 months in initial period)	$88,313	$124,500	$127,500	$130,500
A17	Total server-related savings	A14+A15+A16	$1,972,313	$431,700	$379,500	$387,300
A18	Annual SAN savings			$350,000	$400,000	$450,000
At	Avoided Microsoft solution back-end hardware	A17+A18	$1,972,313	$781,700	$779,500	$837,300
	Risk adjustment		↓ 15%			
Atr	Avoided Microsoft solution back-end hardware (risk-adjusted)		$1,676,466	$664,445	$662,575	$711,705

Source: Forrester Research, Inc.

Avoided Microsoft Server Licenses

Eliminating the need (or nearly so in the case of a hybrid deployment) for on-premises servers reduces the corresponding server license costs for various Microsoft solutions. The savings includes the initial purchase price and ongoing maintenance. The savings realized by the composite organization is similar to the savings expressed by the surveyed companies.

This benefit was risk-adjusted and reduced by 15% 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 $60,060.

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	1,250	0	25	25
B2	Cost per license		$174	$174	$174	$174
B3	Number of Skype licenses not added	= A6	0	16	0	0
B4	Cost per license		$716	$716	$716	$716
B5	Number of SharePoint licenses not added	= A8	0	50	1	1
B6	Cost per license		$1,334	$1,334	$1,334	$1,334
B7	Total avoided license costs	B1*B2+B3*B4+B5*B6	$217,500	$78,156	$5,684	$5,684
B8	Avoided maintenance costs	B7[through current year] *15%		$44,348	$45,201	$46,054
Bt	Avoided Microsoft server licenses	B7+B8	$217,500	$122,504	$50,885	$51,738
	Risk adjustment		↓ 15%			
Btr	Avoided Microsoft server licenses (risk-adjusted)		$184,875	$104,129	$43,252	$43,977

Source: Forrester Research, Inc.

Eliminated Third-Party Email System

In addition to the replacement of on-premises Microsoft solutions described above, an email system from another technology vendor was also replaced. The timing of the Office 365 implementation was chosen to coincide with the life-cycle replacement time for this email system. By moving to Exchange Online, the composite organization avoided replacing servers and the associated maintenance. For the software licenses, the composite organization had an outsourcing license that covered the technology, support, and administration. This monthly per-user license was also eliminated.

This benefit was risk-adjusted and reduced by 15% to account for the wide range in third-party system costs reported by survey respondents. The risk-adjusted total benefit over the three years was $3,507,950.

TABLE 4
Eliminated Third-Party Email System

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
C1	Eliminated hardware refresh costs			$350,000		
C2	Annual maintenance	C1*10%		$35,000	$35,000	$35,000
C3	Eliminated software licenses	A2*$4*12 months		$1,200,000	$1,224,000	$1,248,000
Ct	Eliminated third-party email system	C1+C2+C3		$1,585,000	$1,259,000	$1,283,000
	Risk adjustment			↓ 15%		
Ctr	Eliminated third-party email system (risk-adjusted)			$1,347,250	$1,070,150	$1,090,550

Source: Forrester Research, Inc.

Reduced End User Computer Refresh Costs

The composite organization was able to purchase lower-spec PCs and laptops for employees after moving to Office 365. This was primarily for storage since documents could be stored in the cloud in OneDrive and SharePoint. Devices were refreshed on a four-year cycle. Additionally, computers purchased for new employees could also be ordered to the lower specification. The average savings per computer was $125.

This benefit was risk-adjusted and reduced by 10% to account for the range in similar savings reported by survey respondents. The risk-adjusted total benefit over the three years was $2,221,875.

TABLE 5
Reduced End User Computer Refresh Costs

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
D1	Added PCs/laptops for new hires				500	500
D2	Number of PCs/laptops refreshed	A2[Initial]/4		6,250	6,250	6,250
D3	Savings per device			$125	$125	$125
Dt	Reduced end user computer refresh costs	(D1+D2)*D3		$781,250	$843,750	$843,750
	Risk adjustment			↓ 10%		
Dtr	Reduced end user computer refresh costs (risk-adjusted)			$703,125	$759,375	$759,375

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 all users to Exchange Online, moving all users to Office Professional Plus — cloud edition, and doing a net-new deployment of OneDrive. Phase two was completed the next year and consisted of a net-new Skype and Yammer deployment as well as a SharePoint migration from a 2007 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. Companies said that had they moved to a new on-premises solution as part of their refresh, the effort would have been much greater. For the composite organization, Forrester estimates that an on-premises deployment would have required 30% more internal effort and professional services in the initial period and 30% more in subsequent years. There was also some consulting used in years 2 and 3 of the study for rollout of new features, and there is a corresponding savings shown here.

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; as well as 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 $747,150.

TABLE 6
Reduced Implementation Effort

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
E1	Reduced internal effort	Lt*30%	$324,000	$180,000	$0	$0
E2	Reduced consulting fees	Mt*30%	$210,000	$105,000	$30,000	$30,000
Et	Reduced implementation effort	E1+E2	$534,000	$285,000	$30,000	$30,000
	Risk adjustment		↓ 15%			
Etr	Reduced implementation effort (risk-adjusted)		$453,900	$242,250	$25,500	$25,500

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. The interviewed customer reported its internal support team reducing from five to two FTEs.

The composite organization was able to redeploy some existing system administrators who previously supported the on-premises solutions. Additionally, there were avoided future hires for added solutions and to support growth. 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 decreased for email-related inquiries, it increased in other areas because new solutions were deployed (Skype) 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 10%. The risk-adjusted total benefit over the three years was $2,268,000.

TABLE 7
Reduced IT Support Effort

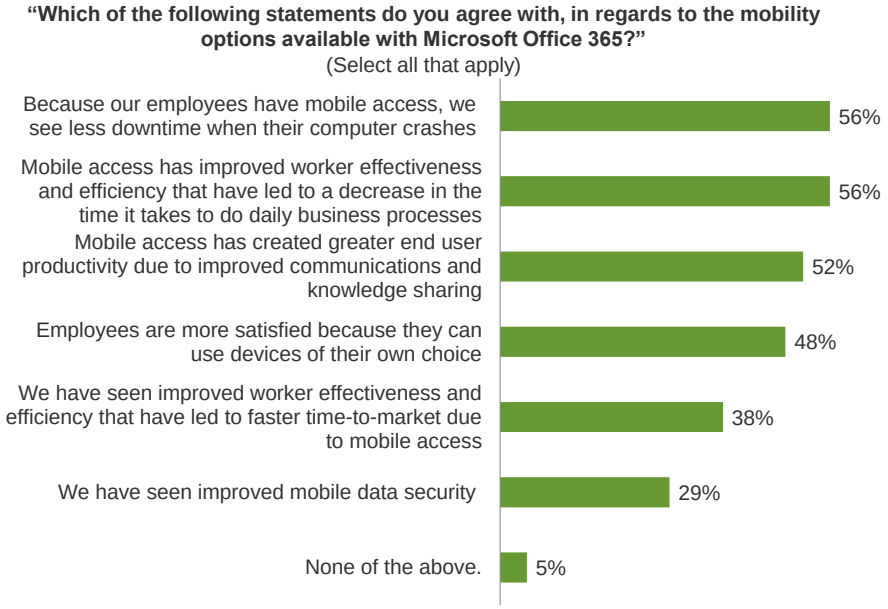
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
F1	Number of email administrators not added			3.0	3.0	3.0
F2	Number of Skype administrators not added			2.0	2.0	2.0
F3	Number of SharePoint administrators not added			2.0	2.0	2.0
F4	Total number of affected administrator positions	F1+F2+F3		7.0	7.0	7.0
F5	Annual fully burdened cost			$120,000	$120,000	$120,000
Ft	Reduced IT support effort	F4*F5		$840,000	$840,000	$840,000
	Risk adjustment			↓ 10%		
Dtr	Reduced IT support effort (risk-adjusted)			$756,000	$756,000	$756,000

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



Base: 66 North American and UK organizations that currently use Office 365 products

Source: Forrester Research, Inc.

The interviewed company provided some specific examples of benefits:

- "We have encouraged people to use [Skype] on their mobile devices. Others can see if colleagues are available via Presence, which is a huge benefit."
- "All hourly employees now have access to company information on their phones for free."
- "We have 1,500 company paid devices and 2,500 more BYOD devices connected. Everyone is now available more."

Increased Mobile Worker Productivity

For the financial analysis, Forrester looked at improved productivity for the 750 (by Year 3) highly mobile salespeople. 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.

"Our salespeople are saving time since they don't need a VPN to answer email. This affects hundreds of people. They are easily saving 30 minutes a day and respond to customers faster."
~CIO

In Year 1 of the study, the daily savings is a quarter of an hour. This increases to a half hour per day by Year 2 as Skype 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 or 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 $3,729,375.

TABLE 8
Increased Mobile Worker Productivity

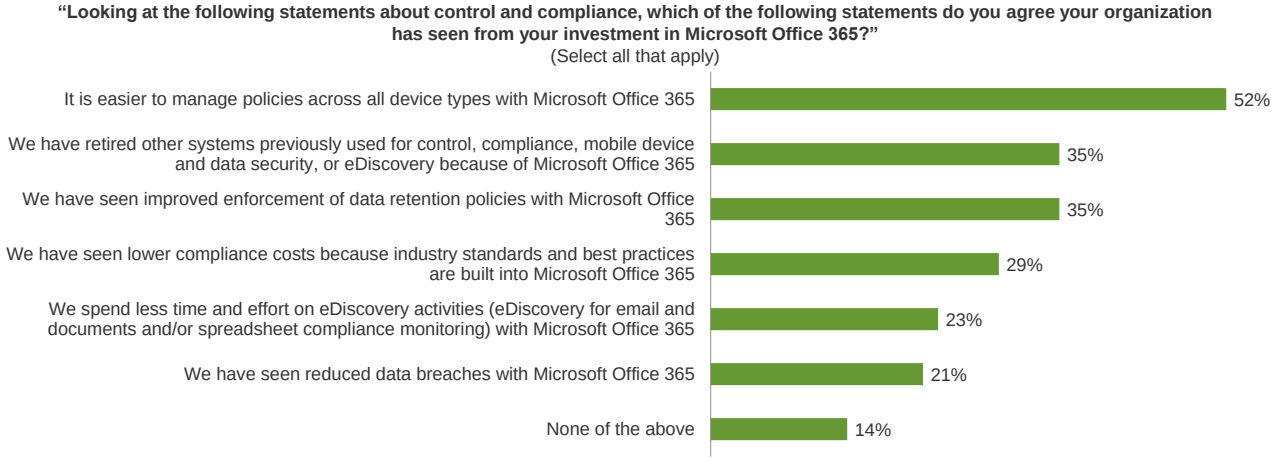
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
G1	Number of travelling sales people affected			450	650	750
G2	Number of days on the road	4 days * 45 weeks		180	180	180
G3	Hours saved per user day			0.25	0.50	0.50
G4	Hours saved per user per year	G2*G3		45	90	90
G5	Total work-days saved	G1*G4/8 hours		2,531	7,313	8,438
G6	Fully burdened daily cost	$120,000/250 workdays		$480	$480	$480
G7	Total potential productivity gain	G5*G6		$1,215,000	$3,510,000	$4,050,000
G8	Percentage of benefit realized			50%	50%	50%
Gt	Increased mobile worker productivity	G7*G8		$607,500	$1,755,000	$2,025,000
	Risk adjustment			↓ 15%		
Gtr	Increased mobile worker productivity (risk-adjusted)			$516,375	$1,491,750	$1,721,250

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 And Compliance Benefits



Base: 66 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 9.9% with an average savings of $1.2 million and reduced time spent on eDiscovery efforts by 9.8%. Additionally, they reported that the number of data breaches and the cost of those breaches have decreased by 77% and 76%, respectively.

Avoided Control And Compliance Efforts

Forrester looked at survey responses from companies with approximately 25,000 users to determine what the likely annual control and compliance savings would be for the benefits shown in Figure 8. This came out to $450,000 per year. Forrester shows this benefit ramping up over time as users become more familiar with the solutions, and as audit and compliance teams are willing to dispense with the previous, more manual processes and systems.

To compensate for the variance in survey responses, this benefit was risk-adjusted and reduced by 10%. The risk-adjusted total benefit over the three years was $810,000.

TABLE 9
Avoided Control and Compliance Efforts

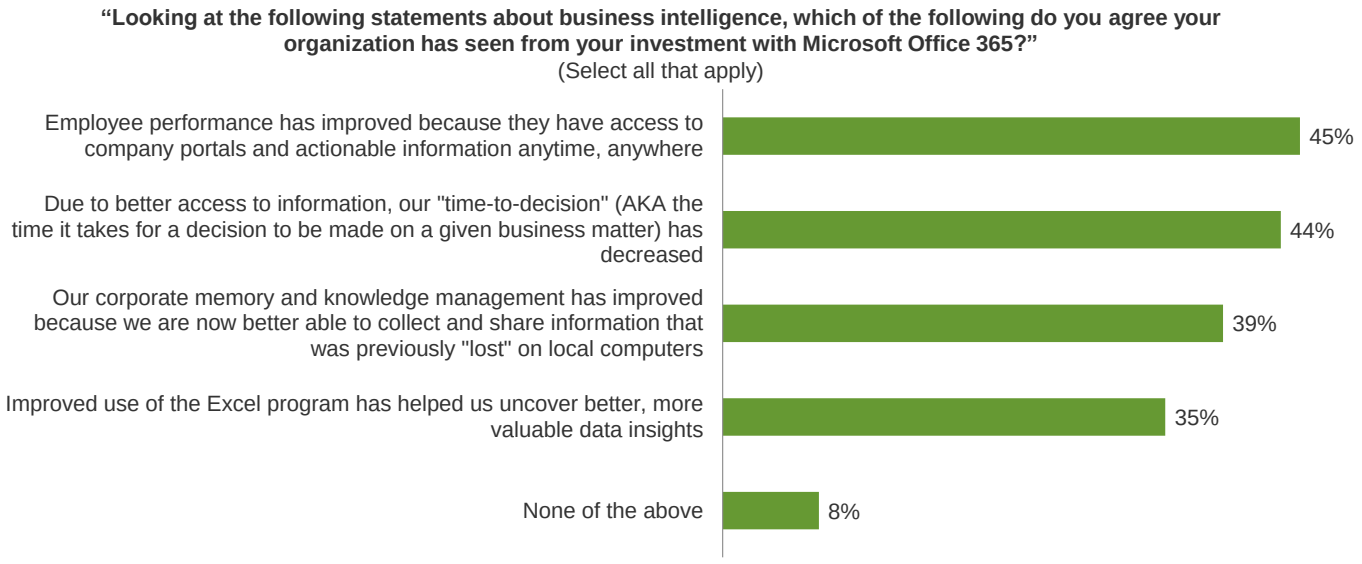
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
H1	Annual compliance savings — effort and systems			$150,000	$300,000	$450,000
Ht	Reduced ongoing compliance costs	= H1		$150,000	$300,000	$450,000
	Risk adjustment			↓ 10%		
Htr	Reduced ongoing compliance costs (risk-adjusted)			$135,000	$270,000	$405,000

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 13% decrease in time-to-decision.

FIGURE 9
Business Intelligence Benefits



Base: 66 North American and UK organizations that currently use Office 365 products
Source: Forrester Research, Inc.

The interviewed company described how business intelligence is improving and the importance of it to the company. “We are implementing new ways for our employees to collect and use information. We actually have a project underway with

Microsoft to use OneNote with SharePoint and OneDrive for better knowledge retention and usage. I'm very excited about OneNote tied to OneDrive. It is especially helpful for our communities of practice to define the best customer solutions."

Reduced Design Time

For the composite organization, Forrester looked at the increased productivity of 400 engineers (increasing to 1,250 by Year 3) who spend a good portion of their day designing custom solutions for large customers. By having access to all past designs completed by everyone in the company and good metatagging of everything, they can complete their designs and reviews faster. The number of affected users increases as SharePoint is used in more parts of the business.

In Year 1, these workers see an average savings of 15 minutes per day. This increases to 45 minutes per day by Year 3 as the tools become more widely used and as the information in SharePoint expands. This time savings can be used to complete additional value-add work as well as avoid the need for new hires. Because not all time savings result in added work, Forrester discounted this benefit by 50%.

Since the number of employees who can benefit from a business intelligence solution 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 $9,482,813.

TABLE 10
Reduced Design Time

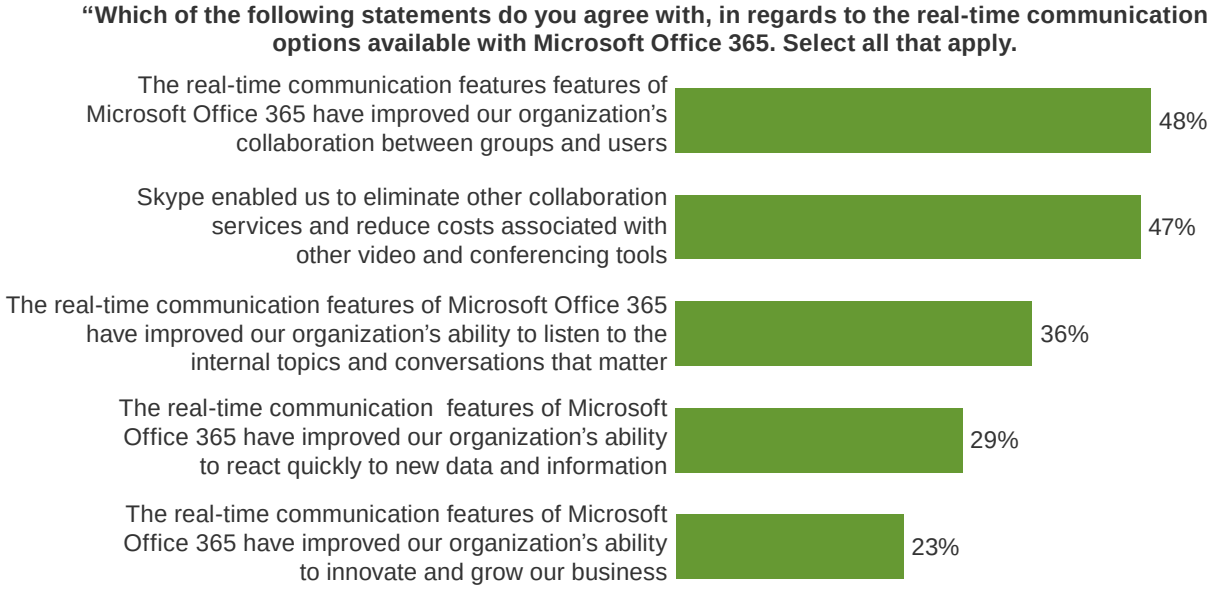
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
I1	Number of affected resources			400	900	1,250
I2	Hours saved per day			0.25	0.50	0.75
I3	Workdays per year			250	250	250
I4	Total workdays saved	I1*I2*I3/8 hours		3,125	14,063	29,297
I5	Fully burdened daily cost	=G6		$480	$480	$480
I6	Total potential savings	I4*I5		$1,500,000	$6,750,000	$14,062,500
I7	Percentage of benefit realized			50%	50%	50%
It	Reduced design time	I6*I7		$750,000	$3,375,000	$7,031,250
	Risk adjustment				↓ 15%	
Itr	Reduced design time (risk-adjusted)			$637,500	$2,868,750	$5,976,563

Source: Forrester Research, Inc.

Real-time Communication

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

FIGURE 10
Office 365 Capabilities Deliver Greater Collaboration Through Real-time Communication



Base: 66 North American and UK organizations that currently use Office 365 products
Source: Forrester Research, Inc.

Skype for Business has been an especially powerful tool for the interviewed companies. By providing IM, audio, video, and conference calling features integrated into Microsoft Office applications, users can more quickly and seamlessly work together without disruptions to the natural flow of work. The interviewed company shared ways that the real-time communication features of Office 365 improve its workplace and company performance. Examples included:

- "Skype and Presence have resulted in faster time to market through greater collaboration and better information sharing."
- "Our custom solutions process has changed dramatically. There is not more sharing going on between sales, solution engineers, and customers. This is predominantly through Skype and SharePoint."

> *"On the sales side we have been able to define solutions for customers and get quotes out faster. This is because of [Skype] and Presence."*
>
> ~CIO

- "A Yammer group was set up when implementing a new CAD solution. When people had issues they would post to it, and the community would respond. It was phenomenal — people getting answers from around the world."
- "Yammer is used to talk up sales successes across the company. It is a huge motivator."
- "We will do more with OneNote. From a collaboration perspective it is a way of life. It is especially important for working with customers on big projects."

Additionally, the real-time communication 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: "Telephony usage within Office 365 will explode from fuller integration with Skype and Lync. There will be more pervasive conversation from anytime and anywhere. From a speed to respond perspective, this will be huge."

There are many ways that the real-time communication features of Office 365 could have an impact on an organization. For the quantified portion of the real-time communication 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 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 very large, for the purpose of this analysis, we took a much more conservative approach to evaluating the real-time communication benefits. 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 Skype 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 5%. The risk-adjusted total benefit over the three years was $2,113,750.

TABLE 11
Eliminated Communication Technologies

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
J1	Eliminated webconferencing solutions			$75,000	$200,000	$200,000
J2	Eliminated long-distance phone charges			$250,000	$750,000	$750,000
Jt	Eliminated communication technologies	J1+J2		$325,000	$950,000	$950,000
	Risk adjustment			↓ 5%		
Jtr	Eliminated communication technologies (risk-adjusted)			$308,750	$902,500	$902,500

Source: Forrester Research, Inc.

Reduced Downtime During Engineering Troubleshooting

With the use of collaboration features, the composite organization was able to reduce the time required to fix engineering systems. These system downtimes affect a lot of high-value engineers. Through the use of Skype, Yammer and other real-time communication tools within Office 365, a global team was able to more quickly resolve problems.

The number of incidents that are more quickly resolved using real-time communication tools increases over the life of the study as more people and teams make better use of the tools. The time savings for each incident is 1 hour, and the number of affected engineers increases significantly as these solutions more universally adopted.

Because not all productivity gains translate to increased output, this benefit was discounted 50%. To further 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 $1,836,000.

TABLE 12
Reduced Downtime During Engineering Troubleshooting

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
K1	Number of times Office 365 reduces time-to-solve			5	20	30
K2	Reduced time-to-solve (hours)			1	1	1
K3	Number of affected engineers			400	1,100	1,600
K4	Total workdays saved	K1*K2*K3/8 hours		250	2,750	6,000
K5	Fully burdened daily cost	=G6		$480	$480	$480
K6	Total potential savings	K4*K5		$120,000	$1,320,000	$2,880,000
K7	Percentage of benefit realized			50%	50%	50%
Kt	Reduced downtime during engineering troubleshooting	K6*K7		$60,000	$660,000	$1,440,000
	Risk adjustment			🡻 15%		
Ktr	Reduced downtime during engineering troubleshooting (risk-adjusted)			$51,000	$561,000	$1,224,000

Source: Forrester Research, Inc.

Total Quantified Benefits

Table 13 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 more than $25.3 million, or $973 per user.

TABLE 13
Total Quantified Benefits (Risk-Adjusted)

Ref.	Benefit	Initial	Year 1	Year 2	Year 3	Total	Present Value
Atr	Avoided Microsoft solution back-end hardware	$1,676,466	$664,445	$662,575	$711,705	$3,715,191	$3,362,804
Btr	Avoided Microsoft server licenses	$184,875	$104,129	$43,252	$43,977	$376,233	$348,324
Ctr	Eliminated third-party email system	$0	$1,347,250	$1,070,150	$1,090,550	$3,507,950	$2,928,541
Dtr	Reduced end user computer refresh costs	$0	$703,125	$759,375	$759,375	$2,221,875	$1,837,317
Etr	Reduced implementation effort	$453,900	$242,250	$25,500	$25,500	$747,150	$714,360
Ftr	Reduced IT support effort	$0	$756,000	$756,000	$756,000	$2,268,000	$1,880,060
Gtr	Increased mobile worker productivity	$0	$516,375	$1,491,750	$1,721,250	$3,729,375	$2,995,484
Htr	Reduced ongoing compliance costs	$0	$135,000	$270,000	$405,000	$810,000	$650,150
Itr	Reduced design time	$0	$637,500	$2,868,750	$5,976,563	$9,482,813	$7,440,693
Jtr	Eliminated communication technologies	$0	$308,750	$902,500	$902,500	$2,113,750	$1,704,611
Ktr	Reduced downtime during engineering troubleshooting	$0	$51,000	$561,000	$1,224,000	$1,836,000	$1,429,609
	Total benefits	**$2,315,241**	**$5,465,824**	**$9,410,852**	**$13,616,419**	**$30,808,336**	**$25,291,953**

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.
- Federation hardware.
- 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 pilot for some users in the IT department and then a rollout to all global users. This phase lasted 10 months, and the internal team consisted of nine FTEs (excluding trainers, who are discussed separately). The majority of the effort was spent migrating the email system and user mailboxes.
- The second phase followed shortly afterwards (in Year 1 of the study). It consisted of completely new implementations of Skype Online and Yammer and a migration to SharePoint Online. This phase lasted 10 months and consisted of six FTEs (excluding trainers, who are discussed separately). The majority of the effort was migrating old SharePoint sites onto the new platform.

The interviewed company accelerated its planned rollout schedule because "people liked Office 365 so much."

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 fewer) professional services, which may decrease (or increase) the amount of internal effort. To compensate, this cost was risk-adjusted up by 20%. The risk-adjusted cost over the three years was $2,016,000.

TABLE 14
Internal Implementation Labor

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
L1	Number of internal FTEs		12	10		
L2	Number of months		9	6		
L3	Average monthly fully burdened cost	$120,000/12 months	$10,000	$10,000		
Lt	Internal implementation labor	L1*L2*L3	$1,080,000	$600,000		
	Risk adjustment		↑ 20%			
ltr	Internal implementation labor (risk-adjusted)		$1,296,000	$720,000		

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, solution configuration, and the more challenging aspects of fine tuning the solution to the composite organization's needs. 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. There were some additional professional services in years 2 and 3 of the study to assist with rollout of new features and to make configuration changes based on changing business processes and business needs.

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 $1,500,000.

TABLE 15
Professional Services

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
M1	Consulting fees		$700,000	$350,000	$100,000	$100,000
Mt	Professional services	= M1	$700,000	$350,000	$100,000	$100,000
	Risk adjustment		↑ 20%			
Mtr	Professional services (risk-adjusted)		$840,000	$420,000	$120,000	$120,000

Source: Forrester Research, Inc.

Training

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 Skype and Yammer in the case of the composite organization, end user training is likely to be needed.

The IT team required 350 man-days of training to come fully up to speed on implementing and managing the Office 365 solutions during the initial phase and in Year 1. By investing in training upfront, it was able to reduce its ongoing professional service needs. In years 2 and 3 of the study, there was an additional 50 man-days of training to learn about new features and upgrades. For end user training, five internal FTEs were 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 10%. The risk-adjusted cost over the three years was $2,004,750.

TABLE 16
Training

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
N1	Number of man-days technology training		250	100	50	50
N2	Cost per day — technology training		$300	$300	$300	$300
N3	User training	5 FTE trainers * $90,000	$337,500	$450,000	$450,000	$450,000
Nt	Training	N1*N2+N3	$412,500	$480,000	$465,000	$465,000
	Risk adjustment		↑ 10%			
Ntr	Training (risk-adjusted)		$453,750	$528,000	$511,500	$511,500

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, albeit roughly 40% of the size, to deal with user administration, configuration, and setup of new features. This team is split between the North American, European, and Asian operations.

Internal team size will vary based on the solution components in use, the size of the deployment, and the geographic spread. To compensate, this cost was risk-adjusted up by 10%. The risk-adjusted cost over the three years was $3,960,000.

TABLE 17
Ongoing System Administration

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
O1	Number of FTEs			10	10	10
O2	Annual fully burdened cost			$120,000	$120,000	$120,000
Ot	Ongoing system administration	O1*O2		$1,200,000	$1,200,000	$1,200,000
	Risk adjustment			↑ 10%		
Otr	Ongoing system administration (risk-adjusted)			$1,320,000	$1,320,000	$1,320,000

Source: Forrester Research, Inc.

Incremental Microsoft Licenses

In order to have as much of an apples-to-apples 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 $2,412,302.

TABLE 18
Incremental Microsoft Licenses

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
P1	Number of users	= A2	25,000	25,000	25,500	26,000
P2	Office 365 license per user	Initial period for 9 months	$156.33	$208.44	$208.44	$208.44
P3	Previous Software Assurance license per user	Initial period for 9 months	$138.24	$184.32	$184.32	$184.32
Pt	Incremental Microsoft licenses	P1*(P2-P3)	$452,250	$603,000	$615,060	$627,120
	Risk adjustment		↑ 5%			
Ptr	Incremental Microsoft licenses (risk-adjusted)		$474,863	$633,150	$645,813	$658,476

Source: Forrester Research, Inc.

Federation Hardware

The composite organization wanted to use federated identity with customers, partners, and suppliers for SSO. This required some infrastructure to support federated identity. It added two federated AD servers into its data centers in North America, Europe, and Asia for high availability. This required the upfront purchase as well as ongoing maintenance and internal hosting cost allocation.

If federated identity is not required, this cost can be completely eliminated. Forrester risk-adjusted this cost up by 5% for organizations that want to use federated identity. The risk-adjusted cost over the three years was $123,795.

TABLE 19
Federation Hardware

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
Q1	Number of federated AD servers added		6			
Q2	Server costs	Q1*$12,000	$72,000			
Q3	Annual maintenance	Q2*15%		$10,800	$10,800	$10,800
Q4	Internal hosting costs	Q1*$750		$4,500	$4,500	$4,500
Qt	Federation hardware	Q2+Q3+Q4	$72,000	$15,300	$15,300	$15,300
	Risk adjustment		↑ 5%			
Qtr	Federation hardware (risk-adjusted)		$75,600	$16,065	$16,065	$16,065

Source: Forrester Research, Inc.

Incremental Bandwidth

Moving to Office 365 required, in aggregate, more bandwidth. Exchange required less bandwidth than the previous email solution. The addition of Skype 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 connections and if new solutions are being added. To compensate, this cost was risk-adjusted up by 20%. The risk-adjusted cost over the three years was $810,000.

TABLE 20
Incremental Bandwidth

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
R1	Number of months		9	12	12	12
R2	Additional monthly cost		$15,000	$15,000	$15,000	$15,000
Rt	Additional bandwidth	R1 * R2	$135,000	$180,000	$180,000	$180,000
	Risk adjustment			↑ 20%		
Rtr	Incremental bandwidth (risk-adjusted)		$162,000	$216,000	$216,000	$216,000

Source: Forrester Research, Inc.

Total Costs

Table 21 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 approximately $11.3 million, or $434 per user.

TABLE 21
Total Costs (Risk-Adjusted)

Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Ltr	Internal implementation labor	$1,296,000	$720,000	$0	$0	$2,016,000	$1,950,545
Mtr	Professional services	$840,000	$420,000	$120,000	$120,000	$1,500,000	$1,411,150
Ntr	Training fees	$453,750	$528,000	$511,500	$511,500	$2,004,750	$1,740,775
Otr	Ongoing system administration	$0	$1,320,000	$1,320,000	$1,320,000	$3,960,000	$3,282,645
Ptr	Incremental Microsoft licenses	$474,863	$633,150	$645,813	$658,476	$2,412,302	$2,078,906
Qtr	Federation hardware	$75,600	$16,065	$16,065	$16,065	$123,795	$115,551
Rtr	Incremental bandwidth	$162,000	$216,000	$216,000	$216,000	$810,000	$699,160
	Total costs	**$3,302,213**	**$3,853,215**	**$2,829,378**	**$2,842,041**	**$12,826,847**	**$11,278,732**

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, and they can more quickly respond to customers' needs and changing business dynamics. 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 to manufacturing and logistics workers via kiosks. It is also planning to increase integration of Skype into engineering configuration systems so that engineers can better collaborate with sales and with customers. 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 22 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 22
Benefit And Cost Risk Adjustments

Benefits	Adjustment
Avoided Microsoft solution back-end hardware	↓ 15%
Avoided Microsoft server licenses	↓ 15%
Eliminated third-party email system	↓ 15%
Reduced end user computer refresh costs	↓ 10%
Reduced implementation effort	↓ 15%
Reduced IT support effort	↓ 10%
Increased mobile worker productivity	↓ 15%
Reduced ongoing compliance costs	↓ 10%
Reduced time-to-decision	↓ 15%
Eliminated communication technologies	↓ 5%
Reduced downtime during engineering troubleshooting	↓ 15%

Costs	Adjustment
Internal implementation labor	↑ 20%
Professional services	↑ 20%
Training	↑ 10%
Ongoing system administration	↑ 10%
Incremental Microsoft licenses	↑ 5%
Federation hardware	↑ 5%
Incremental bandwidth	↑ 20%

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 23 below shows the risk adjusted ROI, IRR, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Table 22 in the Risks section to the unadjusted results in each relevant cost and benefit section.

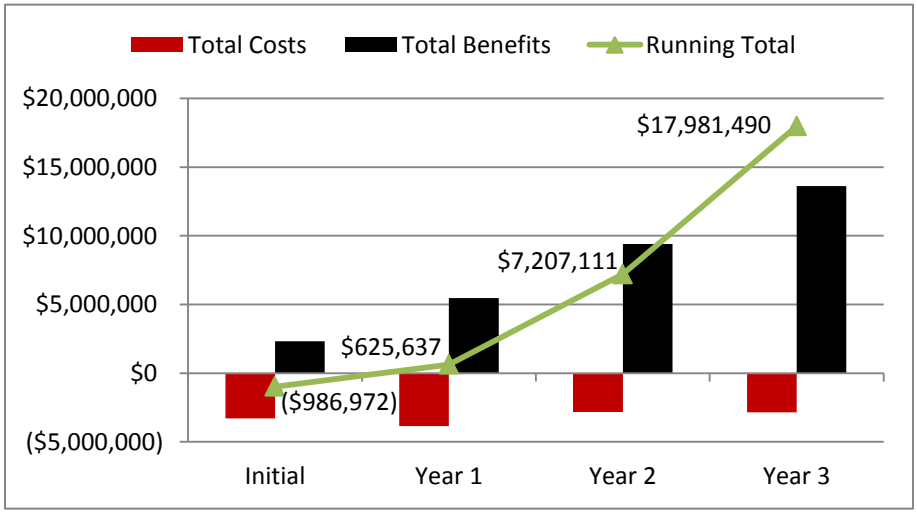
TABLE 23
Cash Flow (Risk-Adjusted)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Costs	($3,302,213)	($3,853,215)	($2,829,378)	($2,842,041)	($12,826,847)	($11,278,732)
Benefits	$2,315,241	$5,465,824	$9,410,852	$13,616,419	$30,808,336	$25,291,953
Net benefits	($986,972)	$1,612,609	$6,581,474	$10,774,378	$17,981,490	$14,013,221
ROI	124%					
IRR	299%					
Payback period	eight months					

Source: Forrester Research, Inc.

In calculating the financial results without any of the business transformation productivity gains, which may be viewed as "soft," Forrester found the composite organization achieved an NPV of $2.1 million, ROI of 19%, IRR of 86%, and a payback period of 16 months. This demonstrates that a reader's organization can achieve all of the benefits associated with Office 365 and a positive financial outcome without incurring incremental costs even when the business transformation productivity benefits are excluded from the analysis.

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 co-workers, 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.
- **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.
- **Security, compliance, and privacy you can trust.** Do you get security, compliance, and privacy in the cloud? Yes. And Microsoft is continually making improvements in Office 365 to earn and maintain your trust.

Appendix A: Composite Organization Description

Based on a survey of 66 enterprise customers with more than 20,000 users currently using Office 365, Forrester constructed a composite organization that encompasses characteristics uncovered in the survey. Forrester then created a TEI financial framework and an associated ROI analysis for this composite company. By aggregating the findings from the customers and portraying a composite organization that has benefited from replacing its on-premises deployment of the 2007 version of various Microsoft solutions and another email system with Microsoft Office 365, this Forrester study illustrates the financial impact of using Microsoft Office 365 for a typical enterprise customer.

The composite organization is a US-based manufacturer that sells and services high-end industrial tools in 75 countries across North America, Europe, and Asia. Office 365 was rolled out to 25,000 knowledge workers out of a total employee count of 32,000. The remaining 7,000 employees work in the factories, warehouses, or shipping. New knowledge workers were added in years 2 and 3 of the study. Below is a summary of the previous and new Microsoft deployment.

TABLE 24
Composite Organization Solution Components

Office 365 Component	When Added	What Was Replaced
Office 365 Professional Plus — cloud	Phase one (initial period)	2007 Office Professional Plus — local client
Exchange Online	Phase one (initial period)	Non-Microsoft email solution
SharePoint Online	Phase two	2007 SharePoint — on-premises
Skype for Business	Phase two (Year 1)	None
Yammer	Phase two (Year 1)	None
OneDrive	Phase one (initial period)	None

Source: Forrester Research, Inc.

The composite organization decided that it was time to upgrade the 2007 versions of SharePoint and Office Professional Plus to take advantage of new features. It also decided that it would benefit from adding Skype. It was interested in Office 365 versus a traditional on-premises deployment as a means to reduce TCO, convert much of the costs from capex to opex, and improve user productivity and collaboration. This study explores the benefits the composite organization achieved compared with an equivalent on-premises deployment.

Appendix B: Total Economic Impact™ Overview

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

The TEI methodology consists of four components to evaluate investment value: benefits, costs, 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 enterprise-wide upgrade of an office productivity suite can potentially increase standardization (to increase efficiency) and reduce licensing costs. However, an embedded collaboration feature may translate to greater worker productivity if activated. The collaboration can only be used with additional investment in training at some future point. 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 a 10% discount rate 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 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 D: Endnotes

[1] 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.