A Forrester Total Economic Impact™
Study Commissioned By Microsoft
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The Total Economic Impact™ Of The Microsoft 365 E5 Solutions

The Value Of Creating The Modern Workplace

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Benefits And Costs

Total time saved in Year 3 from improved collaboration, business processes, reduced downtime, and access to information across 5,000 total users:

335,000 hours

Total TCO reduction for IT hardware, software, and effort:

$8,641,351

NPV per user:

$4,689

Executive Summary

Microsoft provides a wide range of cloud-based solutions to create and empower the modern workplace. Microsoft 365 Enterprise E5 (Microsoft 365) solutions support many key needs of today's enterprises, such as 1) unlocking creativity through new user interfaces across any device and all platforms to empower employees; 2) collaborating through teamwork solutions that give people the right tools for the task at hand; 3) streamlining IT operations with management tools and automation; and 4) protecting end users, information, and cloud-based solutions with built-in, platform-wide security solutions and signaling.

Microsoft 365 Enterprise E5 is the most feature-rich version of Microsoft 365 and consists of Office 365, Windows 10, and Enterprise Mobility + Security (EMS). It provides the collaboration, productivity, automation, and security features an enterprise customer may need to support its digital business transformation initiatives in a single stock keeping unit (SKU), which streamlines its deployment and utilization. For companies that do not need the full feature set, Microsoft offers different versions, such as the E3 SKU at a lower price point and F1 for firstline workers.

Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) that enterprises may realize by adopting Microsoft 365. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Microsoft 365 on their organizations. To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four customers currently using Microsoft 365 Enterprise E5 and incorporated information from 41 other customers interviewed from other TEI studies using either Microsoft 365 or some of its underlying solutions. We also included data points from another 200 Microsoft 365 Enterprise E5 customers surveyed in 2017 and 101 Office 365 E5 customers surveyed in 2018.

Prior to moving to Microsoft 365, customers typically had a mix of Microsoft and other vendor solutions that were primarily on-premises. This led to disjointed processes, inefficient work practices, and fragmented technology experiences that hampered performance and employee productivity. Users found it difficult to collaborate both inside and outside the four walls of the organization, organizations were still at risk of costly and embarrassing breaches, and IT had difficulty providing business users with the tools that they required.

Key Findings

Quantified benefits. The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the organizations interviewed and surveyed. Forrester has applied those benefits to a composite organization with 5,000 Microsoft 365 users, discussed in greater detail later in the study:

- **Information workers save 100 minutes per week due to improved collaboration and information sharing, specifically around coauthoring and reviewing documents.** The tightly integrated Microsoft 365 solutions enable these information workers to effectively and efficiently collaborate in real time, saving more than $6.30 million over the three years analyzed.

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ROI
123%

Benefits PV
$42.5 million

NPV
$23.4 million

Payback
10 months
after “go-live”

- **Firstline workers save 140 minutes per week from improved tools and information.** Better teamwork, communication, and management of daily activities, including schedule and task management, save firstline workers time, equating to more than $3.29 million over the three years analyzed.
- **Streamlined business processes reduce the time it takes to develop a new product by 14.18 days and save 12,500 hours per year in distribution activities**. Microsoft 365 enables organizations to streamline and transform business processes, leading to an overall improvement in business outcomes. SharePoint, Teams, Skype for Business, and Power BI Pro improve efforts via better collaboration, decreased time spent on key tasks, improved effectiveness, and improved efficiency. Microsoft 365 also enables firstline workers to provide a unique point of view based on customer feedback. Specifically, Forrester studied the reduction in product development cost and time and distribution efficiencies, which yields a savings of more than $1.97 million over the three years analyzed.
- **Information workers save 104 minutes each week with improved online meetings**. Intuitive solutions like Teams and Skype for Business are more effective in their ability to start meetings on time, to share documents and screens, and to allow participants to engage with one another face-to-face. Respondents report that, with Microsoft 365, they can better achieve the desired outcomes of their meetings, resulting in a total savings of $6.56 million over the three years analyzed.
- **The secure remote access features mean highly-mobile workers save 24 minutes per day accessing systems and information.** Of the 5,000 users at the composite organization, 700 fall into this highly-mobile worker category. These employees are typically high-value contributors, such as salespeople and senior managers. The time savings represents a $4.81 million opportunity to deliver more value to the organization.
- **Microsoft 365 reduces downtime by an average of 15.75 hours annually for each user.** With secure access to information, systems, and people from any device, whenever and wherever as needed, each of the 5,000 Microsoft 365 users (across both information workers and firstline workers) can reduce the impact of downtime due to a crashed device. The time savings over three years are worth $1.86 million.
- **Decision makers improve their time-to-decision by 15.6%.** Microsoft 365 solutions like Power BI Pro and MyAnalytics enable executives and key decision makers to quickly discover important trends and valuable insights that directly impact the decisions they make. Microsoft 365 creates better access and visibility into data and helps decision makers collaborate with stakeholders more easily. With Microsoft 365, users can find what they need more easily, collaborate with their peers more efficiently, and make more informed decisions faster than before, resulting in a total savings of $581,806 over the three years analyzed.
- **By Year 3, online meetings replace 350 overnight trips.** Before their investments in Microsoft 365, companies spent a large amount of their budget on travel for face-to-face meetings that they felt would not be effective otherwise. However, with the use of Microsoft 365’s collaboration solutions, respondents can use Skype for Business and Teams for meetings across geographies, ranging from small to large groups, with no travel involved. The total savings over three years are worth $524,887.

> "We used to think of enhanced security and enhanced collaboration as independent. With Microsoft 365, we can gain the collaboration without compromising security."
>
> *Director of classified operations, aerospace*

- **The number and severity of security events are greatly reduced, and compliance is improved**. The identity and access management (IDAM), information protection, threat protection, and security management features in Microsoft 365 reduce the number of successful external and internal security attacks, including security attacks on firstline workers who handle sensitive customer information. This delivers several security-related benefits:
  - The business impact of a breach in terms of lost customers and the cost of communicating with outside parties is worth $408,531 over three years.
  - The number and severity of breaches are reduced, which means less IT security remediation effort, resulting in a three-year savings of $4.00 million.
  - Fewer successful security attacks also mean less user downtime, reducing from 5 hours to 1. This is a three-year savings of $245,787.
  - Compliance with many regulations such as GDPR and HIPPA is better and easier because of the solutions included in Microsoft 365. Additionally, companies save money by not having to build out compliance solutions such as eDiscovery and see lower ongoing compliance-related costs. The three-year savings is $220,170.
- **The time it takes IT to provision a new device is reduced by 75%.** Using Intune and EMS makes it possible to streamline and automate 1,633 device provisioning events per year. The three-year savings is $663,225.
- **Automated application and resource provisioning solutions save 135 minutes per request, and application testing is reduced by 75%.** On average, each information and firstline worker application provisioning request at the composite organization is reduced from 150 minutes down to 15 minutes. Additionally, the IT organization can reduce testing on 50% of the apps in its portfolio by 75%. This results in a combined savings of $2.27 million.
- **Self-help tools replace 75% of the 7,500 password reset calls to the help desk.** Automation tools within EMS empower employees to complete their own password resets, reducing the number of password reset calls to the help desk by 75%. This frees up help desk time and also saves on employee downtime. At $20 per help desk ticket, the help desk savings total $186,048.
- **Third-party security solutions can be replaced with those built into EMS, Windows 10, and Office 365.** Antispam, encryption, mobile device management, and other security solutions are included in EMS, Windows 10, and Office 365 Advanced Security workloads. The reduction in third-party security solutions represents a PV total savings of $1.05 million.
- **With Microsoft 365 solutions, organizations can reduce costs associated with other collaboration software and hardware solutions.** Interviewed and surveyed companies reduced a combination of webconferencing, long-distance, mobile phone, and on-premises technology and support costs by switching to Microsoft 365. Over three years, the total cost reduction is $648,727.

> "Modern communication and collaboration tools like Office 365 are essential for new working relationships and models."
>
> *VP, banking and capital markets*

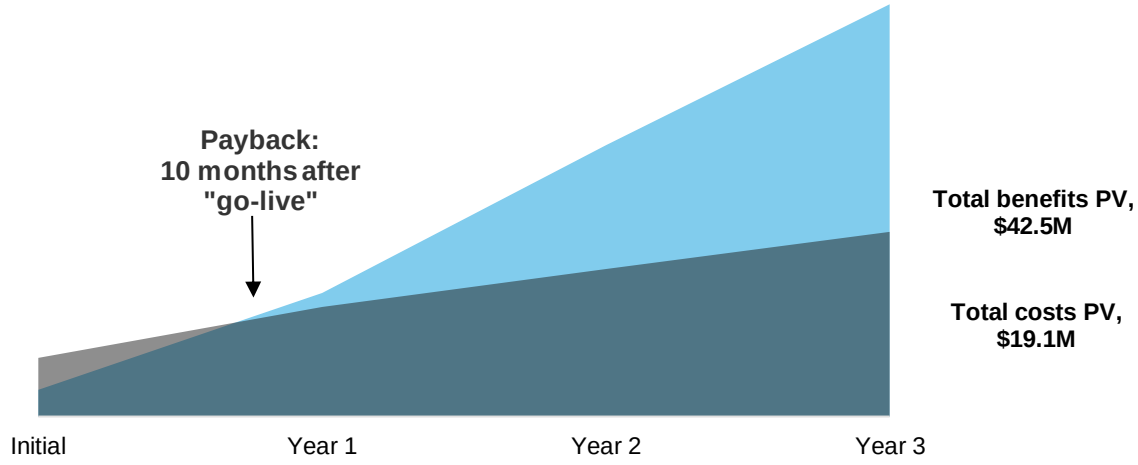
- **On-premises hardware can be retired, and the associated IT deployment and support costs are reduced.** With Microsoft 365, the composite organization can remove $500,000 of on-premises hardware. In addition, six full-time equivalents (FTEs) who previously supported the on-premises hardware and software can be redeployed to higher-value activities. Additionally, Microsoft 365 licenses cost less than the various licenses that would be required for a comparable on-premises Microsoft-based solution. Lastly, the deployment time and costs are less than they are for a comparable on-premises deployment because hardware and software do not need to be installed and because Microsoft's FastTrack services reduce migration time and effort. The three-year savings is $6.94 million.

Costs. The organizations experienced the following risk-adjusted PV costs:

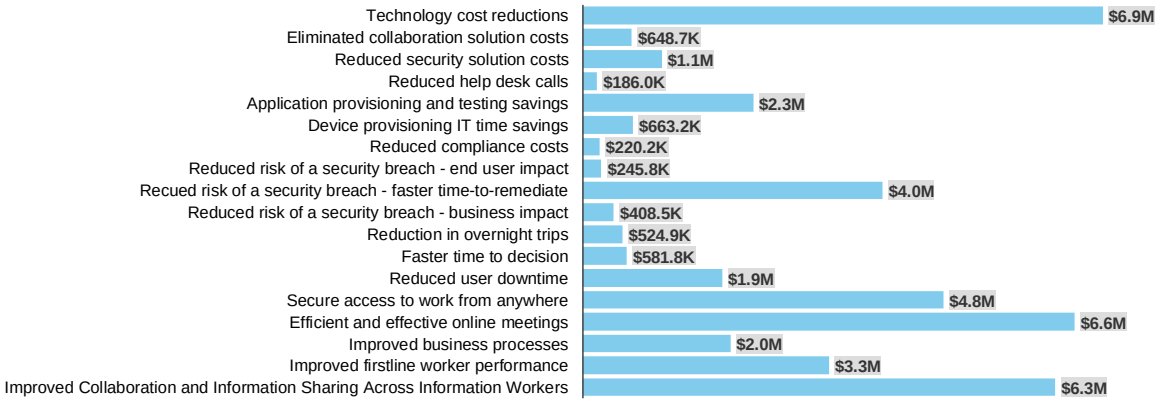
- **Internal planning, implementation, and ongoing support costs total $3.83 million.** For the composite organization, the initial planning and deployment takes 11 months and includes 10 FTE resources to support the project. In the following year, four FTEs continue deployment efforts, primarily SharePoint migrations. Ongoing management requires five FTEs in Year 1 and six in the following years.
- **Deployment and managed services total $6.33 million over the three years analyzed.** Professional services partners help stand up and configure the solutions and then integrate them with other systems. There are also ongoing deployment services to migrate SharePoint sites. Additionally, a managed services contract includes managing SharePoint sites from the partner's offshore support center, security monitoring, and help desk activities.
- **IT and end user training costs an additional $692,597.** An outside professional services organization provides IT training at an average cost of $300 per day of training. Two internal FTEs create end user training; they are responsible for creating company-specific training content, setting up a learning portal in SharePoint, and providing "training the trainer" training to local champions.
- **Licenses are allocated to a total of 5,000 information workers and firstline workers, totaling $7.60 million over three years.** These represent costs paid to Microsoft for the use of the Microsoft 365 solutions. The 3,500 information workers receive Microsoft 365 Enterprise E5 licenses at a cost of $57/month per user — these costs kick in when the solutions start being used in the Initial period. The 1,500 firstline workers receive Microsoft 365 F1 licenses at a cost of $10/month per user.
- **Additional technology costs to support Microsoft 365 totals $635,805.** This includes: replacing 400 computers out of the normal refresh schedule; incremental bandwidth to handle increased voice, video, and document traffic; and active directory federation services (ADFS) servers.

Forrester's synthesis of 41 customer interviews and two surveys totaling 301 companies, and subsequent financial analysis, found that an organization based on these customers experiences benefits of $42.5M over three years versus costs of $19.1M, adding up to a net present value (NPV) of $23.4M, an ROI of 123%, and an internal rate of return (IRR) of 227%.

Financial Summary



Benefits (Three-Year)



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TEI Framework And Methodology

From the information provided in the interviews and survey, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing Microsoft 365 E5 solutions.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that Microsoft 365 Enterprise E5 solutions can have on an organization:

The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

DUE DILIGENCE
Interviewed Microsoft stakeholders and Forrester analysts to gather data relative to Microsoft 365 Enterprise E5 solutions.

CUSTOMER INTERVIEWS AND SURVEY
Interviewed 45 organizations and surveyed 301 organizations using Microsoft 365 Enterprise E5 solutions (or some of its underlying components) to obtain data with respect to costs, benefits, and risks.

COMPOSITE ORGANIZATION
Designed a composite organization based on characteristics of the interviewed and surveyed organizations.

FINANCIAL MODEL FRAMEWORK
Constructed a financial model representative of the interviews and survey using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organizations.

CASE STUDY
Employed four fundamental elements of TEI in modeling Microsoft 365 Enterprise E5's impact: 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 A for additional information on the TEI methodology.

DISCLOSURES

Readers should be aware of the following:

This 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 the Microsoft 365 Enterprise E5 solutions.

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 did not participate in the interviews.

The Microsoft 365 E5 Solutions Customer Journey

Creating The Modern Workplace

In interviews with Microsoft 365 customers, Forrester learned that digital business transformation and creating the modern workplace — for both information and firstline workers — is a top priority. Furthermore, a 2017 Forrester Research report found that increasing innovation is the top priority for both technology and business leaders.[1]

Interviewed customers reported that their most desired business outcomes, as part of creating the modern workplace, include:

- Generating urgency and reducing time-to-market.
- Increasing agility.
- Empowering both information workers and firstline workers to achieve more through better collaboration and communication — both internally and with customers and partners.

"Which of the following technology initiatives is your IT organization prioritizing over the next 12 months?"
(Respondents who selected moderate, high, or critical priority)

Priority	Overall	Tech decision makers	Business decision makers
Increase innovation	86%	88%	83%
Develop or acquire new skills	85%	89%	81%
Deliver IT projects more quickly	82%	88%	74%
Better manage external partners and suppliers	80%	84%	75%
Improve relationship with business partners outside of IT	79%	85%	73%
Cut overall IT costs	77%	82%	69%

Base: 10,430 global technology and 7,847 global business decision makers
Note: The top responses are shown.
Source: Forrester Data Global Business Technographics® Priorities And Journey Survey, 2017

- Supporting different working styles, which often vary by generation, e.g., new ways in which Millennials prefer to work, to make all employees more effective and improve collaboration.
- Generating better intelligence and analytics with a single view into corporate information.
- Moving the needle on whatever matters the most — revenues, profitability, customer growth, and/or stock price.
- Achieving all of these goals while improving security and compliance.

> "Every company has a digital transformation initiative. For us, [Microsoft 365 Enterprise] drives our digital transformation."
>
> *CTO, financial services*

Increasing mobility and collaboration are two of the driving factors behind this effort, according to a Forrester Research survey of 7,249 global information workers.[2] From a mobility perspective, 42% of respondents work from home and 32% work from client sites or during travel. In regard to collaboration, 98% of information workers collaborate or communicate with someone else at work on a weekly basis, and 79% report working with customers, clients, or patients each week.

This means that now, more than ever, the technology solutions that workers have must empower them to work smarter and more collaboratively, but in a way that ensures security and compliance. The companies interviewed and surveyed for this study have told Forrester that this is what Microsoft 365 Enterprise E5 enables them to do.

Interviewed And Surveyed Organizations

For this study, Forrester aggregated findings from 41 customer interviews across eight other TEI studies (see Appendix B) that looked at the value of Microsoft 365 and its underlying solutions. We interviewed four additional companies that are using Microsoft 365, bringing the total number of customer interviews to 45.

- Size ranged from 1,500 to 230,000 employees; the most common ranged from 4,000 to 15,000 employees.

- Geographically, most companies were headquartered in Europe or North America. Several were headquartered in Asia, and many of them had a global presence.
- More than 20 industries are represented. The most common ones were financial services, manufacturing, education, construction, and consumer products.
- The most common roles interviewed were CIO and CTO.

In 2017, Forrester conducted an online survey of companies using Microsoft 365 Enterprise E5 and its underlying components. Survey respondents had the following characteristics:

- The 200 respondents were from North America and UK.
- The average number of Microsoft 365 Enterprise E5 users was 6,890.
- On average, 41% of those were mobile users.

In 2018, Forrester conducted a survey that focused on Office 365 Enterprise E5 customers, which is incorporated into this study. This survey featured 101 respondents who met the following selection criteria:

- All used Office 365 E5 solutions.
- They were headquartered in either North America or the UK.
- They had 2,000 or more employees.
- Respondents were either business or IT decision makers who were directly involved with or supported technology decisions within their organizations.

Key Challenges

The interviewed and surveyed organizations shared several challenges they faced with their previous on-premises solutions that drove them to investigate Microsoft 365 solutions:

- **Organizations wanted to provide users with improved real-time access to their work.** Interviewed and surveyed organizations shared that they struggled to meet their employees' expectations of anytime, anywhere access to information and IT resources. This greatly impacted their information and firstline workers' productivity, creating unnecessary downtime and negatively impacting employees' morale. The organizations sought a solution to provide their employees with the collaboration tools they required to make them more efficient in their day-to-day tasks.
- **The companies wanted to enable and foster innovation.** Many of the interviewed and surveyed organizations needed to drive innovation to improve the bottom line. Yet existing IT infrastructure hampered these organizations. They wanted to make better, faster decisions and drive improvements and innovation in activities like product development. They also wanted to innovate based on direct customer feedback that often resided with firstline workers. However, they struggled to meet these objectives with their existing infrastructure. These organizations understood that, to support business improvements, they needed to invest in technology to support an improved collaborative environment.

> "What we have won from this migration was being able to support growth without jeopardizing infrastructure because Microsoft takes care of it."
>
> *CIO, construction*

- **Global growth created a complex and costly IT environment.** As these organizations grew, collaborated with remote locations, and entered new global markets, they faced an influx of different software solutions and IT infrastructure that was time-consuming and costly to support. These complex IT environments prevented employees across locations from easily collaborating with one another. The organizations required a solution that provided a homogeneous IT landscape that both supported the line of business' needs while creating an easy-to-support IT environment. Organizations saw moving to Windows 10 as part of the modern desktop as a key component of this new, modern IT landscape.
- **Security threats were becoming more frequent and more challenging to contain from C-suite to firstline workers.** IT organizations found it increasingly difficult to identify and contain security breaches. They could not respond to many of the attacks, and once an intruder got into the systems, it could go unnoticed for months. Companies responded by implementing many different security solutions to identify and contain threats faster. This resulted in higher IT costs and an added level of complexity without fundamentally fixing many of the IT security threats.

"The security piece was a driving factor and what really differentiated Microsoft."

CTO, financial services

Key Results

The interviews and survey data revealed several key results from the Microsoft 365 Enterprise E5 solutions investment:

- **Through improved collaboration and communication, all employees — from the C-suite to firstline workers — were empowered to productively and innovatively do their jobs.** In the 2017 survey, Forrester asked respondents if they agreed that Microsoft 365 Enterprise E5 has empowered workers. The results showed that:
    - Eighty percent agreed that Microsoft 365 Enterprise E5 empowered mobile workers.
    - Seventy-nine percent agreed that Microsoft 365 Enterprise E5 empowered information workers.
    - Seventy-one percent agreed that Microsoft 365 Enterprise E5 empowered firstline workers.

  Organizations achieved this empowerment through 1) real-time communication tools such as Skype for Business, Teams, Yammer, and IM; 2) real-time coauthoring with Word, Excel, PowerPoint, and OneNote in Office ProPlus — also played a large role in how individuals worked better together; and 3) better content sharing with SharePoint, Teams, and OneDrive.

"Microsoft has more capabilities for firstline workers than I've seen anyplace else. Microsoft is committed to improving it because these workers are such a big part of businesses everywhere."

CTO, media and publishing

- **Organizations fostered a collaborative culture among globally dispersed workforces.** With employees dispersed across different international offices, organizations found that using Microsoft 365 created a cohesive culture, where, regardless of location, employees felt empowered and included in business decisions. Organizations understood that, to succeed, each employee needed to buy into the company goals. A major way Office 365 creates a collaborative culture is by giving executives better tools to inform and empower all employees regardless of role or location. Organizations also understood that by providing their employees with real-time communication abilities like Yammer, they could create a singular organization, regardless of employee location. One respondent noted that "being able to speak to a colleague in another region with a click of a button" greatly benefited the organization. As the companies grew and brought on new employees, or involved more teams across geographical boundaries, Microsoft 365 played a key role in building team morale.
- **Security and compliance were greatly improved, marking a top goal and a large benefit for companies.** The Microsoft 365 Enterprise E5 SKU, specifically, brings together a broad set of security and compliance tools that make it easier for companies to properly deploy and manage their new Microsoft endpoint security solutions. These solutions cover identity and access management, information protection, threat protection, and security management. The result is fewer breaches, reduced effort to manage security solutions, lower overall remediation costs, and better compliance.
- **Data democratization improved analytics and insight.** Power BI Pro is used to visualize data faster and in different ways, which improves business analysis and outcomes and empowers employees to make better decisions. Sixty-six percent of 2017 Microsoft 365 Enterprise survey respondents reported that the democratization of data helped their organizations.
- **Microsoft 365 tools improved business outcomes.** Affecting business outcomes is the main reason companies spend money on technology solutions. Companies felt that Microsoft 365 had a real, positive impact on their organizations. A big contributor was reduced time-to-market because of process efficiencies and better collaboration. For example, within healthcare, organizations could improve the responsiveness and quality of patient care. Within manufacturing, organizations used improved collaboration to drive better innovation throughout the supply chain management process. Within the financial services sector, organizations could improve customer retention rate by creating a more agile environment to react to changing customer requirements.
- **Cost reductions.** By consolidating on one platform, organizations can reduce costs by retiring or reducing the licenses required for other third-party solutions, such as those associated with other communication and security tools. In addition, organizations can save on capex costs that are no longer needed to support on-premises hardware. Finally, the level of effort to deploy and manage the various solutions is greatly reduced, lowering internal and professional service expenses.

"We have given the analytics tools to everyone — analysts, developers, business owners — and they are using it a lot. This saves time and creates valuable insights."

VP, financial services

"It used to take us a couple of months to analyze a new offering. With the new collaboration tools, we can do it in half the time. Reduced time-to-market brings big financial benefits."

VP, financial services

"Office 365 has led us to reexamine all our business practices, to see where we can gain greater efficiencies."

Corporate VP, IT, financial services

Composite Organization

Based on the interviews and survey, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization is used to present the aggregate financial analysis in the next section. The composite organization that Forrester synthesized from the customer data has the following characteristics:

Description of composite. The composite organization is a global organization with most of its operations in North America and Europe and some offices in Asia Pacific and South America. The organization has 7,000 employees, 5,000 of whom use Microsoft 365 solutions. These include 3,500 information workers and 1,500 firstline workers. The remaining 2,000 employees do not require access to Microsoft 365.

Deployment characteristics. The organization rolled out Microsoft 365 E5 solutions to the 5,000 users in two phases. Phase 1 of the deployment focused on migrating information workers to Windows 10 with EMS to provide a modern desktop with Exchange Online migration. The organization also deployed other security solutions such as Windows Defender Advanced Threat Protection (WDATP). The organization also began to roll out Office 365 solutions, including Word, Excel, OneNote, PowerPoint, Microsoft Teams, Skype for Business, OneDrive, and Yammer. Further, the organization rolled out scheduling and task management, PowerApps and Flow, Power BI Pro, and MyAnalytics for the subset of users who needed them. In addition, the organization deployed SharePoint and began the migration of data and workflows.

Phase 2 of deployment consisted primarily of expanding SharePoint, integrating Power BI Pro into more back-end systems, and expanding the use of security solutions. Remaining firstline workers were moved onto Microsoft 365 too.

Key assumptions:

- 3,500 information workers
- 1,500 firstline workers
- Global offices, a majority of which are in North America and Europe

Analysis Of Benefits

QUANTIFIED BENEFIT DATA AS APPLIED TO THE COMPOSITE

Total Benefits

Ref.	Benefit	Initial	Year 1	Year 2	Year 3	Total	Present Value
Atr	Improved collaboration and information sharing across information workers		$1,550,895	$3,101,791	$3,101,791	$7,754,476	$6,303,789
Btr	Improved firstline worker performance		$808,834	$1,617,668	$1,617,668	$4,044,169	$3,287,597
Ctr	Improved business processes		$134,710	$1,043,148	$1,312,568	$2,490,425	$1,970,720
Dtr	Efficient and effective online meetings		$1,606,952	$3,232,589	$3,232,589	$8,072,130	$6,561,118
Etr	Secure access to work from anywhere		$1,183,414	$2,366,828	$2,366,828	$5,917,070	$4,810,120
Ftr	Reduced user downtime		$748,125	$748,125	$748,125	$2,244,375	$1,860,476
Gtr	Faster time-to-decision		$76,922	$219,777	$439,554	$736,253	$581,806
Htr	Reduction in overnight trips		$112,500	$225,000	$315,000	$652,500	$524,887
Itr	Reduced risk of a security breach — business impact		$124,714	$187,071	$187,071	$498,857	$408,531
Jtr	Recued risk of a security breach — faster time-to-remediate		$1,328,089	$1,770,785	$1,770,785	$4,869,659	$4,001,229
Ktr	Reduced risk of a security breach — end user impact		$98,835	$98,835	$98,835	$296,504	$245,787
Ltr	Reduced compliance costs		$130,071	$64,600	$64,600	$259,271	$220,170
Mtr	Device provisioning IT time savings		$266,693	$266,693	$266,693	$800,078	$663,225
Ntr	Application provisioning and testing savings		$573,882	$976,319	$1,256,838	$2,807,040	$2,272,868
Otr	Reduced help desk calls		$74,813	$74,813	$74,813	$224,438	$186,048
Ptr	Reduced security solution costs		$350,158	$466,878	$466,878	$1,283,913	$1,054,947
Qtr	Eliminated collaboration solution costs		$323,000	$213,750	$237,500	$774,250	$648,727
Rtr	Technology cost reductions	$2,812,896	$1,423,575	$1,794,075	$1,794,075	$7,824,621	$6,937,677
	Total benefits (risk-adjusted)	$2,812,896	$10,916,181	$18,468,743	$19,352,209	$51,550,029	$42,539,722

Improved Collaboration And Information Sharing Across Information Workers

Companies reported significant time savings in collaboration activities through better interactions using Skype for Business, Teams, and Yammer. In addition, SharePoint helps respondents quickly access documents without disturbing other individuals. With Office ProPlus solutions like Word, Excel, and PowerPoint, interviewed users can eliminate version control issues and coauthor documents. Users also noted that these solutions help them avoid rework concerns from accessing older versions of a document. Users can also utilize Teams, Outlook, and Yammer to easily create Groups (as opposed to relying on IT to provide this access), enabling faster access to key collaboration and information sharing features. Respondents noted that anytime, anywhere access across any device (whether a mobile device, desktop, laptop, etc.) increases user efficiency and improves user satisfaction. This benefit was realized by all information workers from the C-suite on down.

From the survey, Forrester learned that:

- Real-time collaboration on document development and review impacted the efficiency and productivity of 80% of respondents.
- Seventy-eight percent of respondents found mobile connection to any email account impactful.
- The consistent look and feel across devices impacted productivity for 73% of respondents.
- Sixty-nine percent found launching Skype for Business/Teams directly from their calendar impacted their productivity.

From our interviews and surveys, Forrester heard the following:

- "These solutions encourage people to communicate more. People were hesitant to collaborate before because it was difficult. Skype for Business becomes a system of engagement in which people are willing and want to use the tools to work better together.
- "Employees are able to collaborate much easier from any location."
- "The Microsoft Teams platform with messaging can keep a thread going. Persistent chat is so much better than email threads. It means I can find the required information without disturbing them with a phone call or email."
- "[Microsoft 365] has helped speed up collaboration immensely by giving people the ability to share ongoing works instantly with each other."
- "Streamlining the document review process has greatly improved our purchase ordering process."
- "It is much easier to find information when it is in the collaboration platform. Each person on my team saves 2 to 3 hours per week. I can also see what other people are working on, which is very useful."

From the survey, Forrester found that respondents previously spent 13.3 hours on real-time coauthoring, development, and review of documents; Microsoft 365 reduced this by 12.5%. For the composite organization, Forrester assumes that:

The table above shows the total of all benefits across the areas listed below, 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 $42.5 million.

"One of the key things we wanted to do was deliver a great end user experience, and I think by and large, we have achieved that."

Architect, professional services

Weekly time savings due to improved collaboration and information sharing: **100 minutes per user**

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- Improved collaboration and information sharing, specifically around coauthoring and reviewing documents, impacts 3,500 information workers.
- Half of this benefit is realized in Year 1 as workers get used to distributed real-time coauthoring.
- The average information worker fully burdened cost (including all benefits and taxes) is $45.63 per hour, or $94,940 annually.
- As not all time saved translates into additional, value-add work, only 25% of this benefit is realized.

The time savings associated with collaboration and information sharing may vary with:

- The number of employees involved.
- The length of time previously spent.
- The hourly salary of employees involved.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of $6.30 million.

Impact risk is the risk that the business or technology needs of the organization may not be met by the investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.

Improved Collaboration And Information Sharing Across Information Workers: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Number of information workers affected		3,500	3,500	3,500
A2	Weekly time savings (hours)	13.3 hours previously*12.5% improvement (rounded) [50% in Year 1]	0.83	1.66	1.66
A3	Total savings from improved collaboration	A1*A2*52 weeks*$45.63 (information worker hourly salary) [50% in Year 1]	$6,892,868	$13,785,736	$13,785,736
A4	Productivity capture		25%	25%	25%
At	Improved collaboration and information sharing across information workers	A3*A4	$1,723,216	$3,446,433	$3,446,433
	Risk adjustment	↓10%			
Atr	Improved collaboration and information sharing across information workers (risk-adjusted)		$1,550,895	$3,101,791	$3,101,791

Improved Firstline Worker Performance

By moving to Microsoft 365, firstline workers are both more effective and efficient. They have the tools and information required to do their jobs better, and they also reduce the time spent on low-value tasks such as shift scheduling. Additionally, using locked down Windows 10S workstations and kiosks reduces distraction and improves device reliability and uptime.

A survey of 92 companies using the F1 SKU revealed the following time savings on common tasks:

Firstline worker activities	Average time per week	Average percent decrease with Microsoft 365 F1
View and check schedule	1.2 hours (73 min)	15.6%

Change or adjust schedule with a coworker	1 hour (60 min)	16.8%
View or check assigned tasks	1.2 hours (69 min)	16.6%
Communicate with manager	1.5 hours (87 min)	15.2%
Review company updates, information	1.6 hours (96 min)	16.5%
Peer communication within immediate team	2.5 hours (152 min)	14.6%
Peer communication outside immediate team	2.4 hours (143 min)	16.2%
Participate in training or onboarding activities	.9 hours (57 min)	19.2%
Base: 92 US and UK respondents Source: A commissioned study conducted by Forrester Consulting on behalf of Microsoft, March 2017		

From the interviews, Forrester heard:

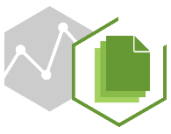
- "Our previous on-premises solution only provided operating manuals. Adding the collaboration piece with the rest of the organization was a big deal."
- "I would tell someone to just do it and make firstline workers more a part of the business."
- "I thought the real benefit was going to be email; instead, it turned out to be all the other productivity components. For example, if you have a quality control meeting, it is important to have the firstline workers involved since they actually do the work, not just manage it. They can now share information, show presentations, and be more creative."
- "I would have thought some of our old timers would have retired after we introduced [Microsoft 365]. Instead, they did a bit more training and are now using it. Our union employees got on board right away too."
- "From an old-world stability standpoint, less time is spent in manual effort when things go down. That equates to cost savings, for example, someone waiting to get their schedule. [These solutions] enable them to do their jobs more efficiently and reduces costs."
- "Employees do a lot of self-training. Now they have access to the content whether in the office or not. How often in the past did we get shop-level employees doing anything more than when on their shift? Now it happens all the time."
- "Previously, up to 40% of their time was spent on administrative activities."

"Giving firstline workers Office licenses increases employee engagement and collaboration."

CIO, IT services

For the financial analysis, Forrester made the following assumptions:

- Fifteen hundred employees are firstline workers who are using Microsoft 365 F1 SKU on Windows 10S devices. They are primarily in call centers and distribution facilities.
- Based on the survey results, each firstline worker saves 28 minutes per day across the activities shown in the table above. Fifty percent of this is achieved in Year 1 as firstline workers become familiar with the tools.
- The average fully burdened cost (including benefits and taxes) is $19.78 per hour.



Weekly firstline worker time savings due to improved tools and information:
140 minutes per user

› Compared to the previous information worker example, a higher productivity capture rate of 50% is used because firstline workers are often doing transactional work and in front of customers.

Firstline worker performance improvements may vary with the type of tools that were initially used and which activities have become streamlined.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of $3.29 million.

Improved Firstline Worker Performance: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Number of firstline workers		1,500	1,500	1,500
B2	Annual hours saved	(28 minutes*5 days)/ 60 minutes [50% in Year 1]	1.165	2.33	2.33
B3	Hourly fully burdened cost	B1*B2*$19.78*52 weeks (rounded) [50% in Year 1]	$1,797,409	$3,594,817	$3,594,817
B4	Productivity capture		50%	50%	50%
Bt	Improved firstline worker performance	B3*B4	$898,704.30	$1,797,408.60	$1,797,408.60
	Risk adjustment	↓10%			
Btr	Improved firstline worker performance (risk-adjusted)		$808,834	$1,617,668	$1,617,668

Improved Business Processes And Outcomes

Microsoft 365 provides better collaboration solutions and analytics to both information workers and firstline workers. Utilizing these solutions improves how teams work with each other as well as with their partners, suppliers, and customers. These solutions enable organizations to streamline and transform business processes, leading to an overall improvement in business outcomes. SharePoint, Teams, Skype for Business, Power BI Pro, and MyAnalytics create improvements via better collaboration, decreased time spent on key tasks, improved effectiveness, and improved efficiency. Organizations are using Microsoft 365 solutions to create agility in their processes, to respond to changing market and customer trends faster, and to generate competitive advantages in the process.

From a survey, Forrester learned that:

› Fifty-six percent of respondents find improved collaboration from Skype for Business, 49% from SharePoint, and 43% from Teams.

› The live, visual dashboards that provide a 360-degree view of the business in Power BI Pro enables 73% of organizations to improve business outcomes.

In interviews, Forrester heard:

› “Teams has definitely helped our time-to-market.”

› “Collaboration with external partners creating products for us is easier and faster compared to using an FTP (File Transfer Protocol) solution.”

> “On the sales side, we have been able to define solutions for customers and get quotes out faster. This is because of Skype for Business and Presence.”
>
> *CIO, manufacturer*

- At one company, discovering business insights with Power BI and sharing them with the teamwork solutions saved 50,000 hours of warehouse labor each year.
- “Skype for Business has definitely helped out our time-to-market.”
- “Yammer helps for lead sharing and closing deals faster. Things move from a lead to an opportunity, to closing faster. One person said that they generated $1.9 million in new opportunities because of these tools.”
- “New product development teams are able to better deal with documents that require multiple authors to input items. Also, since these individuals are typically not at the same site, the revision history increases collaboration because we do not need to focus on the documents but rather on the discussions and the content to be created.”

For the composite organization financial analysis, Forrester included the warehouse and product development examples and assumes that:

- Total warehouse labor savings from Power BI insights and disseminating them with Microsoft Teams total 12,500 hours per year (scaled down to reflect the composite size). This benefit begins in Year 2 when employees are more familiar with Power BI and the teamwork solutions.
- The fully loaded cost of warehouse workers is $19.78 per hour.
- With Microsoft 365, employees can reduce product development time by 13.9%. Half of this benefit is realized in Year 1 as users become used to working with Microsoft 365 eventually incorporate the solution more into their product development process.
- Based on feedback from the survey and interviews, the average cost of development per day is $2,000. This may vary greatly depending on industry and/or product size/effort.

There are many other business processes that can be streamlined and transformed. The reader should consider specific opportunities at their organization to improve processes which are likely to deliver more financial benefits and improved business outcomes than the examples included here. As noted earlier, these can vary based on industry and a company’s individual circumstances. Some examples shared by interviewees:

- A healthcare organization achieved better patient care.
- Manufacturers drove increased product innovation and streamlined supply chain management.
- Financial services companies improved customer retention through better customer service and product innovation.

This savings may be lower depending on which processes are transformed with Microsoft 365 solutions. To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $1.97 million.

Product development time savings:
14.18 days per product development effort

Improved Business Processes: Calculation Table					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
C1	Distribution activity savings	12,500 hours*$19.78 [0% in Year 1]	$0	$247,250	$247,250
C2	Number of product development efforts each year		10	30	40
C3	Hours saved per effort	102 days*13.9% reduction [50% in Year 1]	7.09	14.18	14.18
C4	Product development cost savings	C2*C3*$2,000 per day	$141,800	$850,800	$1,134,400
Ct	Improved business processes	C1+C4	$141,800	$1,098,050	$1,381,650
	Risk adjustment	↓5%			
Ctr	Improved business processes (risk-adjusted)		$134,710	$1,043,148	$1,312,568

Efficient And Effective Online Meetings

Information workers, including the executive team, make heavy, daily use of the online meeting tools within Microsoft 365. Prior to meetings, employees at surveyed organizations can check peers' availability and easily schedule meetings using Outlook and Teams. Respondents even reduce time spent walking to meeting rooms, decreasing the likelihood that a meeting starts late. With the intuitive nature and integration of Skype for Business and Teams, meetings are easier to start on time, as opposed to struggling with other technology. Employees, from the highest levels on down, also find that the meetings themselves are more effective, with the ability to easily share documents and screens and see each other face-to-face. With Microsoft 365, respondents can better achieve the desired outcomes of their meetings.

From the survey, Forrester learned that:

- Eighty-three percent of respondents experience improved effectiveness and efficiency from easier-to-manage document revisions.
- Seventy-eight percent have more secure communication.
- Seventy-seven percent find it easier to text, meet, and call across devices.
- Seventy-five percent of respondents see improved efficiency from improved calendaring.

From our interviews and surveys, Forrester heard the following:

- "Skype for Business saves me at least 20% of my day. Across the organization, I would say the average is 10%. For every 10 people, it's like getting an extra person."
- "Our meetings are much faster. We no longer are waiting around for 5 minutes at the start of every meeting. We typically have 20 people in our meetings, so it really adds up."
- "We have improved how we conduct our meetings, and this has improved our production rate, which has improved our motivation and overall morale."

Weekly time savings due to efficient and effective online meetings:
104 minutes per week

From the survey, Forrester found that respondents previously spent 11.5 hours per week in in-person meetings and that Microsoft 365 reduced this by 15%. For the composite organization, Forrester assumes that:

- All 3,500 information workers regularly participate in meetings and realize efficiencies from improved online meetings.
- Half of this benefit is realized in Year 1 as users become used to working with online meetings and bring it more into their day-to-day activities.
- The same fully burdened cost of $45.63 per hour is used.
- Again, as not all time saved translates into additional, value-add work, only 25% of this benefit is realized.

The time savings due to online meetings will vary with:

- The number of in-person meetings being replaced with online meetings.
- Average salary.
- The number of employees involved.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of $6.56 million.

Efficient And Effective Online Meetings: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Number of information workers affected		3,500	3,500	3,500
D2	Weekly time savings (hours)	11.5 hours previously*15% (50% in Year 1)	0.86	1.73	1.73
D3	Savings from total reduced time	D1*D2*52 weeks*$45.63 (rounded) [50% in Year 1]	$7,142,008	$14,367,062	$14,367,062
D4	Productivity capture		25%	25%	25%
Dt	Efficient and effective online meetings	D3*D4	$1,785,501	$3,591,765	$3,591,765
	Risk adjustment	↓10%			
Dtr	Efficient and effective online meetings (risk-adjusted)		$1,606,952	$3,232,589	$3,232,589

Secure Access To Work From Anywhere

One of the user groups that benefits the most from Microsoft 365 is mobile workers, which can include firstline workers. By using EMS with Azure AD and Microsoft Cloud App Security, companies can manage the risks associated with increased mobility while still providing secure access to information, systems, and people from any device at the time and place of the user's choosing. The tightly integrated security components across Office 365, Windows 10, and EMS mean that users can have a level of access that previously was only available when at an office location. From a survey, Forrester learned that these workers are saving 24 minutes per day because of secure, anytime, anywhere access.

Mobile workers are typically some of the most valuable to an organization — salespeople, senior managers, consultants, etc. Therefore, any improvements they experience in collaboration and

> "Mobile workers have absolutely benefited from Microsoft 365. Being able to share a document from anywhere is the world is tremendous for my sales people."
>
> *CIO, IT services*

productivity have an exceedingly large impact on the organization. In general, these are employees who can easily find jobs at other companies and are willing to move around. Microsoft 365 delivers an increased user satisfaction that helps organizations retain their valuable workforce. Some of what Forrester heard includes:

- "[Microsoft 365] is very useful for mobile workers. They don't need to go to a desktop to access SharePoint. Instead, they can do most of what they need securely on a mobile device. They probably save 10% to 15% of their day."
- "Mobile workers see big benefits with [Microsoft 365]. They travel from property to property and can sign on from wherever they want. This is a tremendous advantage they didn't have before."
- "Connectivity via [Microsoft 365] is much better than with a virtual private network (VPN). I used to get complaints from the head of retail lending that their team was having all sorts of problems when on the road. Now I get zero complaints."
- "This is a very welcome change. People are very happy to have all the new mobile solutions, especially Outlook and SharePoint. Employee satisfaction has improved."

"Mobile workers see big benefits with [Microsoft 365 Enterprise]. They travel from property to property and can sign on from wherever they want. This is a tremendous advantage they didn't have before."

Infrastructure operations team lead, real estate

For the financial analysis, Forrester assumes that:

- Seven hundred users are highly mobile workers who experience this benefit. Half of these users experience the benefit in Year 1.
- Twenty-four minutes (0.4 hours) per day are saved.
- For simplicity and to be conservative, the same $45.63 fully burdened information worker hourly salary is used, even though many of these mobile workers would be paid more.
- A higher 75% productivity capture is applied because these workers tend to be executives, account managers, and other senior resources who make effective and efficient use of their time.

This benefit will vary based on:

- The number of mobile users.
- How employees previously accessed systems and information.
- The extent to which remote access is central to employee's jobs.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $4.81 million.

Secure Access To Work From Anywhere: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
E1	Time savings (hours)	.4 hours*260 days	104	104	104
E2	Number of affected users	A1*20% [50% in Year 1]	350	700	700
E3	Total time savings	E1*E2*$45.63	$1,660,932	$3,321,864	$3,321,864
E4	Productivity capture		75%	75%	75%
Et	Secure access to work from anywhere	E3*E4	$1,245,699	$2,491,398	$2,491,398
	Risk adjustment	↓5%			
Etr	Secure access to work from anywhere (risk-adjusted)		$1,183,414	$2,366,828	$2,366,828

Reduced User Downtime

With secure access to information, systems, and people from any device, whenever and wherever it is needed, each of the 5,000 Microsoft 365 users, across both information workers and firstline workers, can reduce the impact of downtime due to a crashed device (security event-related downtime is discussed later in the study). Our interviews uncovered that downtime due to security events, broken computers, or lost laptops can greatly reduce productivity. With Microsoft 365, employees have access to each of their important documents and applications to stay productive during these incidents. Furthermore, providing Windows 10S devices to firstline workers greatly improves reliability and uptime.

From the survey, Forrester learned that:

- Eighty-four percent of respondents agreed that Microsoft 365 ensures they have secure access to work from anywhere.
- Seventy-eight percent benefit from access to documents in an optimized mobile format.
- Access to Microsoft 365 from any device reduces employee downtime and productivity loss for 49% of respondents.
- Thirty-two percent experience improved productivity due to anytime, anywhere access to documents and files with Microsoft 365.

During our interviews, Forrester heard the following:

- "Office 365 provides us with the confidence that we will not have wasted time or downtime, which helps overall spirit and work production."
- "We have had no downtime since going to the cloud. We used to have two to three days per year. When you don't have email for one day, you just get crazy."

From the survey, Forrester learned that a user was previously affected by an average of 4.5 events per year, which led to about 3.5 hours of downtime for each event. For the composite organization, Forrester assumes that:

- Each of the 5,000 Microsoft 365 users was previously affected by downtime, with information workers experiencing more downtime than firstline workers.
- With Microsoft 365, the composite organization avoids this downtime.
- An average hourly fully loaded salary of $40 represents a blended rate across information workers and firstline workers.
- Again, as not all time saved translates into additional, value-add work, only 25% of this benefit is realized.

Reduced user downtime will be affected by:

- The number of users.
- The number of downtime events in the previous environment.
- The average length of each downtime event.
- The average salary of affected users.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $1.86 million.

Avoided downtime per employee:
15.75 hours per year

Reduced User Downtime: Calculation Table					
Ref.	**Metric**	**Calculation**	**Year 1**	**Year 2**	**Year 3**
F1	Number of Microsoft 365 users affected		5,000	5,000	5,000
F2	Average salary across Microsoft 365 users		$40	$40	$40
F3	Average avoided downtime due to Microsoft 365 (hours)	4.5 events per year per user* 3.5 hours of downtime	15.75	15.75	15.75
F4	Annual cost savings from reduced user downtime	F1*F2*F3	$3,150,000	$3,150,000	$3,150,000
F5	Productivity capture		25%	25%	25%
Ft	Reduced user downtime	F3*F4	$787,500	$787,500	$787,500
	Risk adjustment	↓5%			
Ftr	Reduced user downtime (risk-adjusted)		$748,125	$748,125	$748,125

Faster Time-To-Decision

Across executives and key decision makers, the Microsoft 365 solutions improve decision making. For instance, Power BI Pro enables decision makers to quickly discover important trends and valuable insights that directly impact the decisions they make. With improved data analytics and improved reporting, these decision makers have better access and visibility into key data and are able to make the right decision faster. In addition, workers can more quickly contact and communicate with other individuals across the organization to gain approvals or get opinions, and firstline workers can more easily share data based on customer feedback. With these solutions, users can more easily find what they need, collaborate with their peers, and make informed decisions faster than before.

> "We use Power BI for any type of report that we would have done in a spreadsheet before. It has very good data visualization tools, and it helps us with our manufacturing productivity analysis."
>
> *Director of classified operations, aerospace*

From the survey, Forrester learned that:

- Seventy-eight percent of respondents benefit from Power BI Pro's ability to quickly analyze millions of rows of data.
- The charting feature in Power BI Pro enables 72% of organizations to better visualize trends and relationships.
- Thirty-two percent experience improved productivity due to anytime, anywhere access to documents and files with Microsoft 365.

During our interviews, Forrester heard the following:

- “It is much easier to get and find information, and it is much easier to mine that information. The benefits have been significant.”
- “With the improved business intelligence features, we are better able to evaluate our services, products, and the user impact they have.”
- “Decisions are made faster and better. There is no fear that someone doesn’t understand what others are telling them.”
- “Each user can now easily do a deep dive into relevant data for their area and tease out important aspects of the data. This improves their productivity and positively impacts our ability to review business processes on the fly.”
- “More analytics results are more easily shareable, so staff are sharing, communicating, and using more data together. This is seen in better communication and collaboration.”
- “[Microsoft 365] enables us to have a rapid dissemination of data to all 15 sites of our global business.”

For the composite organization, Forrester assumes that:

- In Year 1, 350 decision makers are impacted by Microsoft 365. By Year 3, this number increases as decision makers become more engaged with Microsoft 365.
- In the previous environment, these decision makers spent many hours per week on decision-making tasks; while more hours were likely spent, Forrester conservatively estimates about 5 of these hours are impacted by Microsoft 365. Half of this benefit is realized in Year 1 as users become used to working with Microsoft 365 and bring it more into their decision-making activities.
- With Microsoft 365, employees can make decisions 15.6% faster than before.
- For the purposes of this calculation, the same fully burdened cost of $45.63 per hour assigned to information workers is used; however, executive salaries may be higher.
- Again, as not all time saved translates into additional, value-add work, only 25% of this benefit is realized.

Faster time-to-decision will be affected by:

- The number of Microsoft 365 users engaged in decision making.
- Which Microsoft 365 solutions they make use of.
- The average salary of affected users.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $581,806.

> “Probably 25% to 30% of people are using Power BI and spending 20% less time than they used to. In the past we might have had three or four people prepare a report that took one and a half weeks. Now it takes one person an afternoon.”
>
> *Director of classified operations, aerospace*

Weekly time savings in decision making:
47 minutes per user

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Faster Time-To-Decision: Calculation Table					
Ref.	**Metric**	**Calculation**	**Year 1**	**Year 2**	**Year 3**
G1	Number of decision makers affected		350	500	1,000
G2	Weekly time savings (hours)	5 hours previously*15.6% improvement [50% in Year 1]	0.39	0.78	0.78
G3	Savings from total reduced time	G1*G2*52 weeks*$45.63	$323,882	$925,376	$1,850,753
G4	Productivity capture		25%	25%	25%
Gt	Faster time-to-decision	G3*G4	$80,970	$231,344	$462,688
	Risk adjustment	↓5%			
Gtr	Faster time-to-decision (risk-adjusted)		$76,922	$219,777	$439,554

Reduction In Overnight Trips

Before their investments in Microsoft 365, companies spent a large amount of their budget on travel for face-to-face meetings that they felt would not be effective otherwise. But with the use of Microsoft 365's collaboration solutions, respondents can use Skype for Business and Teams for meetings across geographies, for small or large groups, with no travel involved. While this calculation focuses primarily on the cost of travel, it is also important to consider the time each employee saves due to the reduction in travel and how much more productivity they gain without the need for overnight trips.

From the survey, Forrester learned that:

- Seventy percent of respondents have reduced travel due to the communication features in Microsoft 365.
- More specifically, 53% of respondents have reduced the cost of travel due to better, more effective online meetings with Microsoft 365.

During our interviews, Forrester heard the following:

- "My organization has reduced travel due to good face-to-face conferencing features."
- "Skype for Business has helped to further reduce travel; this means that people can do their jobs without the associated pain of having to worry about the logistics of a domestic or international trip."
- "I'm saving myself the travel time and the cost of gas with [Microsoft 365]."
- "We now send fewer people to internal conferences. We can send one representative to live-blog from it, and others can communicate in real time to get their questions answered."

For the composite organization, Forrester assumes that:

- In Year 1, based on survey findings, the organization avoids 125 overnight trips due to Microsoft 365. By Year 3, this number increases to 350 as the organization becomes more accustomed to using the conferencing features and grows more confident in its ability to efficiently and effectively use online meeting features to replace overnight trips.

Number of trips avoided annually:
350 trips by Year 3

› Based on feedback from the survey and interviews, the average cost of an overnight trip is $1,000. This may vary depending on length and distance of travel.

The reduction in overnight trips will be affected by:

› The number of trips replaced by Microsoft 365 online meetings.

› The average cost of a trip.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of $524,887.

Reduction In Overnight Trips: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
H1	Number of avoided trips		125	250	350
H2	Average cost		$1,000	$1,000	$1,000
Ht	Reduction in overnight trips	H1*H2	$125,000	$250,000	$350,000
	Risk adjustment	↓10%			
Htr	Reduction in overnight trips (risk-adjusted)		$112,500	$225,000	$315,000

Improved Security And Compliance Benefits

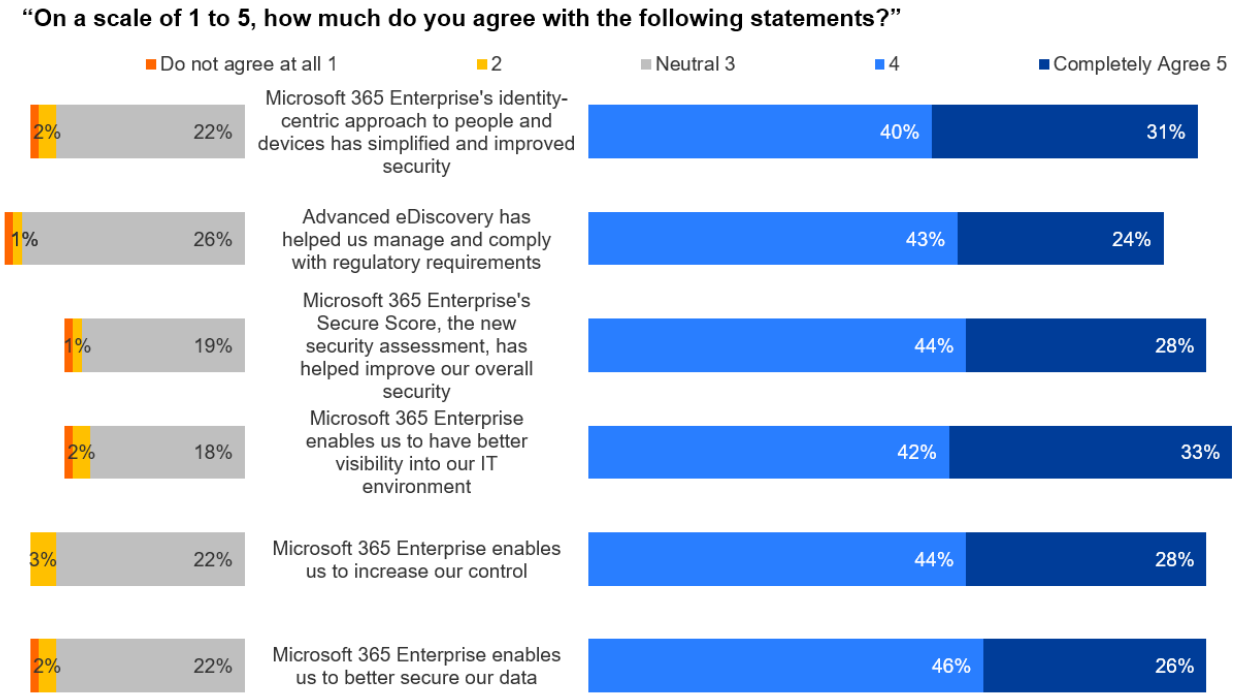
Organizations overwhelmingly cite improved security and compliance as a top benefit of moving to Microsoft 365 Enterprise E5. The suite of security tools across Office 365, Windows 10, and EMS improves security across four main areas:

1. Identity and access management (IDAM).
2. Information protection.
3. Threat protection.
4. Security management.

Together, these solutions reduce the time it takes to detect security-related anomalies, which in turn reduces the number of end user-related security events, the time it takes IT to remediate the issues, and the business impact, e.g., lost customers. In some past instances, with Microsoft 365 ,organizations saw a 100% reduction in the number of end user security incidents they previously experienced. For other organizations, faster identification and remediation of threats reduced the number and severity of successful attacks, which can greatly reduce the hours spent on repairing the situation.

Survey respondents overwhelmingly agree that Microsoft 365 Enterprise E5 improves security in a myriad of ways. EMS (including Azure ATP) and WDATP were the two solutions that provide automated detection and remediation called out most frequently.

> "Advanced protection against security threats and better risk compliance are the major wins for our organization as a result of implementing [Microsoft 365 Enterprise]."
>
> *Survey respondent*



Base: 200 US and UK Microsoft 365 Enterprise users
Source: A commissioned study conducted by Forrester Consulting on behalf of Microsoft, June 2017

EMS includes identity and access management, mobile device and app management, information protection, and advanced threat protection. It supports an organization's move to a cloud platform for business applications and ensures that the devices and users accessing those applications can do so easily and securely. It also 1) enables the changing business environment that requires an organization to secure personal and corporate devices; 2) allows single sign-on for cloud and on-premises applications; and 3) enables organizations to provision and deprovision users rapidly, in support of business growth and flexibility.

In addition to EMS, organizations can use WDATP to reduce time-to-detection and are alerted to these breaches immediately. To understand what is happening on an endpoint, WDATP collects behavior events and sends that data to the cloud analytics service. This uses Microsoft threat intelligence and machine learning techniques to identify potential attacks and provide a detailed timeline to aid investigation into the scope of the breach. Security teams spend less time investigating threats, can act earlier when the scope of the breach is smaller, and can provide more targeted remediation. This reduces the overall response time and the impact on end users.

By identifying more suspicious threats and addressing them faster, organizations can reduce their overall security risk, avoiding costly breaches. And since WDATP is built into Windows 10 within Microsoft 365 Enterprise E5, WDATP is continuously up to date, is invisible to the end user, and requires minimal administrator time for updates. Overall, WDATP allows organizations to more cost-effectively and -efficiently reduce risk while having minimal impact on end users.

From an improved end user security perspective, interviewees shared many examples of how security has improved with Microsoft 365:

> "We've put a strategy in place to offer cloud services and software services. We have completed quite a bit of it on this journey, but EMS is the last piece of the puzzle. It helps us integrate with other services in an easier, quicker, and better way and handles all of our devices."
>
> *CIO, global fitness chain*

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- "[Microsoft 365] has significantly improved security. You have better end-to-end monitoring of what is going on from the admin center. Because of that, you can definitely be a lot more confident in what is happening on the platform."
- "With EMS, the big benefit is its integration with Active Directory. That gives you a lot of security in a very critical area."
- "Previously, there was no security if a device was lost. Now we can remote wipe it, which has helped with compliance."
- "Unified management under [Microsoft 365 Enterprise] makes it easy to know if data is moving out of the organization."
- "By getting more data and visibility, we are able to identify problem areas that we didn't know we had."
- "Data is secured better since user access is limited with [Microsoft 365 Enterprise]."
- "With controlled, uniform access to data, we can control its access much better. Also, by organizing the data through a single interface, we have much better visibility into it."
- "The security that is provided with the encryption software in E5 makes us much safer."
- "The functionality in Exchange Online to report on phishing is a significant upgrade from when we were on-premises."
- "We have seen a decreased level of expressed concerns and actual cases of malware incidents as opposed to the continual escalation prior to adoption [of Microsoft 365]."
- "We have had no security problems to date."
- "By using Exchange Online Protection and Advanced Threat Protection, we can see malware campaigns being removed from our email with Safe Attachments."
- "We can now better monitor and identify risks such as people signing in from unknown places. We are more protected on end user identity and on devices since everything is on ATP."
- "Everyone is using ADFS to connect to the Microsoft solutions and for other corporate authentication. This strengthens our security."
- "I feel more protected in Microsoft's data center than having to host email and documents myself."
- "The security team has done a very good job using Yammer to drive awareness. The functionality in Exchange Online to report on phishing is a significant upgrade from when we were on-premises."
- "By using Exchange Online Protection and Advanced Threat Protection, we can see malware campaigns being removed from our email with Safe Attachments."

> "Before, any antivirus alerts would have to be integrated to a software where the software would then have to correlate with things like our prior EDR tool to get an overall view, whereas now, Microsoft is using ATP much more as a reporting agent for all ATP- and malware-type threats. So, you get everything through the one portal, and you get a much better view of the client machine."
>
> *Senior enterprise architect, security, energy company*

> "We use the Enterprise Mobility Suite to help our increasingly mobile workforce access and share data in a secure fashion on up-to-date devices, so they can work more productively."
>
> *Manager of information technology, automotive company*

For the financial analysis, Forrester includes three security-related benefits, tied to fewer security events and reduced severity, for those that still take place — business impact, time-to-remediation, and end user impact.

Reduced Risk Of A Security Breach — Business Impact

For this benefit, Forrester looks specifically at the business costs associated with a successful security breach. In the 2017 Ponemon Institute's research into the "Cost of Data Breach Study," the average lost customer business from a breach across North America, four Western European countries, and Japan was $1.69 million.[3] The average cost across these same countries to communicate with affected third-parties was $205,000. Together the cost is nearly $1.95 million per incident in business impact. The Ponemon Institute study also found that the annual likelihood of a major security breach is 13.85%.

For the composite organization, Forrester assumes that:

- The average business impact is over $1.89 million.
- The likelihood of a major breach occurring is 13.85% each year.
- Once all of the Microsoft 365 E5 security solutions are in place, the likelihood of a user-related security event is reduced by 75%. This is lower in Year 1 as the last endpoints are secured and the remaining security solutions are fully put into place.

This benefit may vary because:

- The Ponemon Institute data represents global average figures. An organization's actual risk level may differ from these figures based on size, industry, region, and other factors.
- The ability for Microsoft 365 security solutions to detect threats is partially based on visibility into events on the endpoint and the ability to correlate those behaviors. Organizations can choose how long data is retained for analytics.
- Interviewees noted that most threats are introduced via user behavior. Organizations that prioritize security training for users may see lower incident rates and therefore lower risk levels.
- The faster these solutions are deployed, the faster risk reduction will be achieved.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $408,531.

> "Internal audit looks at 15% of the employees every year. By having the data readily available, what might have taken five days now takes one."
>
> *Director of classified operations, aerospace*

Reduced Risk Of A Security Breach — Business Impact: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
I1	Average cost of breach — business impact		$1,895,714	$1,895,714	$1,895,714
I2	Average probability of breach		13.85%	13.85%	13.85%
I3	Reduction in risk due to Microsoft 365		50%	75%	75%
It	Reduced risk of a security breach — business impact	I1*I2*I3	$131,278	$196,917	$196,917
	Risk adjustment	↓5%			
Itr	Reduced risk of a security breach — business impact (risk-adjusted)		$124,714	$187,071	$187,071

Reduced Risk Of A Security Breach — Faster Time-To-Remediate

The security solutions within Microsoft 365 greatly reduce the number of successful end user security attacks. Attacks that are successful are usually found faster when the impact is less severe. That means easier remediation. To calculate the value of this benefit, Forrester assumes that:

- Based on survey results, the composite organization experienced 720 end user security events prior to its investment in Microsoft 365. Based on the survey results of companies using Microsoft 365 and/or Office 365, Forrester estimates that this can be reduced to 150 events with the use of all security tools within Microsoft 365. This results in the elimination of 570 security events annually.
- Before Microsoft 365, the organization spent 129 hours per end user security event on remediation. With Microsoft 365, the composite organization reduces the hours spent on remediation to 40 hours per event, resulting in a time savings of 89 hours per security event.
- To understand the total benefit associated with the reduction in end user security incidents, Forrester calculates out the time saved from completely avoided security incidents, as well as the time saved on remediation for remaining security events. In Year 1, the organization realizes 75% of this benefit as IT becomes more accustomed to leveraging Microsoft 365 security features and they are rolled out to all users and endpoints.
- An average hourly fully loaded salary of $68.75 is used for IT FTEs.
- As not all time saved translates into additional, value-add work, 75% of this benefit is realized. This is higher than the productivity capture for general information worker productivity improvements because IT security employees tend to already be overworked and very focused on their job.

Number of end user security events eliminated: **570 events each year**

The reduction in security events will be affected by:

- The number and severity of attacks.
- The average hourly salary of IT.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $4.00 million.

Reduced Risk Of A Security Breach — Faster Time-To-Remediate: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
J1	Eliminated security events	720-150	570	570	570
J2	IT time savings per event (hours)	129-40	89	89	89
J3	Time saved from avoided security events	J1*40 hours [75% in Year 1]	17,100	22,800	22,800
J4	Time saved on remaining security events	150 events*J2 [75% in Year 1]	10,012.5	13,350	13,350
J5	Total IT savings	(J3+J4)*$68.75	$1,863,984	$2,485,313	$2,485,313
J6	Productivity capture		75%	75%	75%
Jt	Recued risk of a security breach — faster time-to-remediate	J5*J6	$1,397,988	$1,863,984	$1,863,984
	Risk adjustment	↓5%			
Jtr	Recued risk of a security breach — faster time-to-remediate (risk-adjusted)		$1,328,089	$1,770,785	$1,770,785

Reduced Risk Of A Security Breach — End User Impact

The last security impact calculated and associated with fewer and less severe end user-related breaches is end user downtime. Forrester found that:

- Prior to using WDATP and other Microsoft 365 security solutions, organizations struggled to identify the scope of an attack once it had happened. This would lead to more time spent on remediation, including running scans on computers and reimaging machines more often. When machines are reimaged, users lose access to their devices and have to spend time reinstalling settings and recreating lost data.
- With Microsoft 365 security solutions, organizations have visibility into the changes that an attacker has made, allowing the security team to methodically address those specific changes without the need to run scans or reimage machines, reducing the productivity impact for end users.
- Because WDATP is built into the Windows 10 OS, users report fewer performance issues or interruptions. One organization mentioned a dramatic reduction in help desk calls, and another mentioned that updates to its prior endpoint detection and response (EDR) tool would often cause issues that could affect users.
- "One of the big driving factors for moving to Microsoft 365 was the configuration manager for endpoint security. We haven't had a major security event since migrating and can use System Center to reimage badly infected machines if there is a problem."

For the composite organization, Forrester assumes that:

- Most end user downtime is related to reimaging of machines, including the time without a machine and the time spent on customizing reimaged machines and recreating lost data.
- With its prior EDR tool, the composite had less visibility and addressed fewer detections, but threats took longer to identify and therefore more often resulted in reimaging machines. Even when machines weren't reimaged, the organization would spend more time investigating threats, scanning machines, and taking other response actions. On average, users would lose 5 hours of productive time per threat.
- With Microsoft 365, threats are caught earlier, and the response time is shorter. Security teams can identify specific changes that attackers make on affected machines, reducing the need to reimage a machine and allowing for faster remediation and minimal impact to users. On average, each threat results in 1 hour of lost productivity with the Microsoft 365 security solutions.

The reduction in security events will be affected by:

- A range of remediation processes and impacts in both their prior environments and with Microsoft 365, depending on visibility into the impact of threats, user behavior, and corporate policy.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $245,787.

> "Our expectation is that a main benefit will be that WDATP is more of an integrated stack, and so the benefit comes from less impact on the end user in terms of the client OS; less complexity on the endpoint."
>
> *Senior enterprise architect, energy company*

Reduced Risk Of A Security Breach — End User Impact: Calculation Table					
Ref.	**Metric**	**Calculation**	**Year 1**	**Year 2**	**Year 3**
K1	Security events before Microsoft 365	Forrester estimate	720	720	720
K2	Remediation time before Microsoft 365 (hours)		5	5	5
K3	Security events after Microsoft 365	Forrester estimate	150	150	150
K4	Remediation time after Microsoft 365 (hours)		1	1	1
K5	Average information worker fully burdened cost (hourly)		$45.63	$45.63	$45.63
Kt	Reduced risk of a security breach — end user impact	((K1-K3)*(K2-K4))*K5	$104,036	$104,036	$104,036
	Risk adjustment	↓5%			
Ktr	Reduced risk of a security breach — end user impact (risk-adjusted)		$98,835	$98,835	$98,835

Reduced Compliance Costs

Microsoft 365 helps interviewed and surveyed companies improve compliance in several ways. These include more comprehensive risk audits, better policy enforcement, and better eDiscovery for internal and external investigations. Additionally, companies said that compliance-related costs were reduced to both build/deploy compliance solutions and ongoing compliance activities.

From the survey, Forrester learned:

- Compliance-related costs were reduced by 13.6%.
- Time spent on eDiscovery activities decreased by 12.3%.
- Seventy-eight percent of respondents reported “improved enforcement of data retention policies with Microsoft Office 365.”
- Sixty-seven percent benefit from “using Customer Lockbox to meet compliance obligation for data access.”
- Seventy-four percent have “improved audit tracking.”
- Healthcare organizations saw an “18% reduced risk of HIPAA, GDPR, and other regulatory compliance violations and fines,” and “24% increased compliance management efficiencies.”
- Manufacturers saw a “20% improved safety and compliance monitoring and reporting efficiencies.”

Interviewees said:

- “We had a policy where you couldn’t email out any sensitive information. Now with the security in [Microsoft 365], we can be less restrictive because the system intelligently encrypts and sends it and ensures compliance. That is a big value to the business users.”
- “We are using [Microsoft 365] for data loss prevention and rights management. It makes sure that if a document contains sensitive information, it puts rights management against the document and locks it.”
- “Security-related audit points have gone down a lot since we moved to [Microsoft 365], and the severity levels are lower. We used to have a lot of issues when we were on-premises because we had to take shortcuts for speed-to-market.”

> “We have realized some huge benefits for governance, eDiscovery, and search. Being able to easily handle litigation holds has been invaluable.”
>
> *CIO, IT services*

Included Compliance Solutions

- Advanced Data Governance
- Advanced eDiscovery
- Customer Lockbox
- Customer Key
- Compliance Manager
- Office Message Encryption
- Privileged Access Management
- GDPR capabilities, such as Data Service Requests

- "We now have consistent data retention and compliance policies. It is automated, which saves a lot of time and effort."
- "SOX, DLP, GDPR, and email governance compliance has all improved greatly."
- "Audit is happy that these solutions integrate with their audit tools."

> "[Microsoft 365] definitely helps us with GDPR compliance. Otherwise, nothing would be indexed, and we couldn't find it."
>
> *IT architect, consumer products*

For the financial analysis, Forrester included cost savings from not having to build out compliance solutions that are included in Microsoft 365 and from a reduction in ongoing compliance effort and costs. Forrester assumes that:

- The composite organization would have needed additional IT efforts to build out compliance solutions, including encrypted email, data leakage protection, eDiscovery tools, and rights management.
- The organization previously spent $500,000 per year on IT compliance and eDiscovery activities; this is reduced by 13.6%.

Reduced Compliance Costs: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
L1	Eliminated encrypted email project (person-months)	2 months*1.5 FTEs	3.0		
L2	Eliminated data leakage project (person-months)	1 month*1.5 FTEs	1.5		
L3	Eliminated eDiscovery project (person-months)	2 months*1.5 FTEs	3.0		
L4	Eliminated rights management project (person-months)	1 month*2.0 FTEs	2.0		
L5	Eliminated compliance projects	(L1+L2+L3+L4)*($130,000/12 months)	$102,917		
L6	Reduced IT compliance and eDiscovery costs	$500,000*13.6% [50% in Year 1]	$34,000	$68,000	$68,000
Lt	Reduced compliance costs	L5+L6	$136,917	$68,000	$68,000
	Risk adjustment	↓5%			
Ltr	Reduced compliance costs (risk-adjusted)		$130,071	$64,600	$64,600

Device Provisioning IT Time Savings

Intune and other device management solutions in EMS make administering devices faster and automate the provisioning of new devices. The IT organization no longer needs to touch each device. This frees up the IT organization's time and greatly improves end user productivity, especially in the case of new hires and firstline workers who are remote. Additionally, the EMS solutions make "bring-your-own - device" policies more readily enforceable, efficient, and secure. From interviews, Forrester heard:

- "We manage the entire fleet with Intune, including deploying software and pushing security policies."
- "It used to take 3 hours to get a computer ready to ship; now it takes just 21 minutes."

› "We have multiple groups with different categories of students. We can deploy packages based on what a teacher is needing. For example, dictation software for three kids in the southwest corner of the state. We created a group, assigned it, downloaded the software and licenses from [the vendor], and then had Intune deploy it. If we didn't have Intune, students would have had to ship the devices back, or we would contract locally with a mobile device management company to touch the machines."

For the financial analysis, Forrester assumes that:

› Each information worker has 1.2 devices, which are replaced on a three-year refresh schedule. There are 700 shared devices and kiosks for firstline workers, primarily in the call center, replaced on the same schedule.

› Fewer hours (2.5) are spent setting up and delivering a new device.

The savings from streamlined device provisioning will vary with:

› The number of devices being provisioned.

› Any previous outsourcing of new device provisioning activities and/or other provision solutions already in place.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $663,225.

"Previously, device management was entirely manual. That meant we had to touch all the devices. Now we are using Intune for inventory management and pushing out software. It saves us a lot of time. We only have four technicians to support all students and employees."

Director of technology, education

Device Provisioning IT Savings: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
M1	Number of devices added/replaced	((3,500 information workers*1.2 devices)+700 firstline worker devices)/3 years	1,633	1,633	1,633
M2	Savings per device	2.5 hours*$68.75	$171.88	$171.88	$171.88
Mt	Device provisioning IT time savings	M1*M2 (rounded)	$280,729	$280,729	$280,729
	Risk adjustment	↓5%			
Mtr	Device provisioning IT time savings (risk-adjusted)		$266,693	$266,693	$266,693

Application Provisioning And Testing Savings

Application Provisioning

Windows 10 and EMS provide self-service and automation tools for application provisioning. That means users have faster access to the resources they need, and the IT organization does not have to spend as much time working on provisioning activities.

Windows 10

Windows 10 integrates with tools and services such as System Center Configuration Manager (SCCM), Microsoft Intune, the Windows App Store, and the Windows Store for Business. In conjunction with Windows Update for Business, that ensures corporate standards include the latest patches and updates, and end users can search and install many applications when they need them. "It's all about the application," said the senior manager of end user technology for a global food and beverage conglomerate. With Windows 10, users can access the right applications from their app store or other catalogs, and with Azure Active

Directory and SCCM integration, users can ensure they are installing the right versions of the right applications based on their role, team, and department.

With self-service tools, the organization saves significant employee time. End users do not need to wait for IT to respond to their requests, and issues such as downloading the wrong version are greatly reduced.

EMS

Interviewed and surveyed organizations indicated that a key benefit from the EMS implementation is an improvement in end user productivity accessing software-as-a-service (SaaS) applications, including gaining access to and logging into SaaS applications. Previously, companies did not have an easy way to provision groups of users in bulk across thousands of SaaS applications. As a result, business users experienced significant delays in gaining access to the business applications they needed to get their work done. In addition, the IT administrators could leverage existing groups and assign them to SaaS applications using Azure Active Directory Premium.

Following the EMS implementation, the average completion of requests for access to SaaS applications was reduced from five days to immediate access. Before EMS, new employees would have to wait several days from when they started at a company to get access to the proper applications in cases where their managers had not submitted requests on time. With EMS, new employees get immediate access to business applications. In cases where the requests are delayed by the manager, the IT administrator can easily add a new user with appropriate access. Furthermore, EMS eliminates the typical time delay logging into SaaS applications, which hurts the daily productivity of many users.

For the financial analysis, Forrester assumes that:

- On average, each information worker makes four application requests in Year 1 across EMS and Windows 10. This grows to 11 requests by Year 3 as more applications are integrated into the Microsoft 365 solution.
- On average, each firstline worker makes one application request in Year 1. This grows to two requests beginning in Year 2.
- The wait time is reduced from 150 minutes to 15 minutes (a savings of 2.25 hours).
- A $45.63 fully burdened hourly cost is used across the board.
- Twenty-five percent of the total benefit is realized because most users could work on other tasks while waiting for provisioning to complete, even if it meant they were less productive.

Application Testing

Additionally, the standard application testing time required for every major operating system release can be significantly reduced. With the Modern Desktop Windows 10-as-a-service, OS releases are no longer the major, every two- or three-year undertakings that come with new and updated features in virtually every area. Instead, operating system updates come incrementally, around twice a year, and include focused feature updates and additions. Applications that don't interact with a new or updated feature likely don't need significant testing.

The IT systems engineer at a global technology company said: "We're starting to change our approach; instead of telling our application team, 'Here is the list of things to test,' they can focus just on their applications

Application request time reduced from 150 to 15 minutes.

Seventy-five percent reduction in OS-related application testing time with Windows 10-as-a-service

that interact with a new or updated operating system module. Otherwise, you're probably good to go."

For the financial analysis, Forrester assumes:

- The number of applications included in the apps portfolio grows from 200 to 250 from Year 1 to Year 3.
- The original testing time was 40 hours. Now, 50% of the apps can experience shortened testing time as part of the Modern Desktop services. In these instances, the testing time is reduced by 75%.

These benefits will vary based on the several factors:

- The previous tools and automation in place for application provisioning.
- The number of application provisioning requests.
- The number of applications in the portfolio eligible for testing.
- The previous time testing took and savings possible.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $2.27 million.

Application Provisioning And Testing Savings: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
N1	Number of affected information workers	A1	3,500	3,500	3,500
N2	Average requests per information worker		4	8	11
N3	Number of affected firstline workers	B1	1,500	1,500	1,500
N4	Average requests per firstline worker		1	2	2
N5	Application requests	N1*N2+N3*N4	15,500	31,000	41,500
N6	Time savings (hours)	(150 minutes-15 minutes)/60 minutes	2.25	2.25	2.25
N7	Total savings	N5*N6*$45.63	$1,591,346	$3,182,693	$4,260,701
N8	Productivity capture		25%	25%	25%
N9	Information worker savings	N7*N8	$397,837	$795,673	$1,065,175
N10	Number of apps in portfolio		200	225	250
N11	App testing time per application per year (average in hours)		40	40	40
N12	IT fully burdened cost (hourly)		$68.75	$68.75	$68.75
N13	Percentage of apps that can shorten testing with Windows 10-as-a-service		50%	50%	50%
N14	Percentage of time saved with shortened testing		75%	75%	75%
N15	IT savings	N10*N11*N12*N13*N14	$206,250	$232,031	$257,813
Nt	Application provisioning and testing savings	N9+N15	$604,087	$1,027,704	$1,322,988
	Risk adjustment	↓5%			
Ntr	Application provisioning and testing savings (risk-adjusted)		$573,882	$976,319	$1,256,838

Reduced Help Desk Calls

The interviewed and surveyed companies indicated that a key benefit from the EMS implementation was a reduction in call volume to the help desk, specifically for password resets. Prior to EMS, the organizations typically did not provide the option for users to reset their own passwords through a self-service option. As a result, the help desk team spent as much as 25% of its time handling password reset requests. Furthermore, this time delay for password resets also hurt the productivity of the business users who were locked out of their devices and applications while waiting for a response from the help desk. With Microsoft EMS, employees can reset their own passwords, reducing help desk calls and improving user efficiency.

For the financial analysis, Forrester assumes that:

- Each information worker user made six help desk calls a year, 25% of which were password-related.
- Seventy-five percent of the password-related calls can now be resolved using self-service tools.
- The average help desk call cost is $20.

This benefit may be lower if self-service tools already exist. To account for this risk, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $186,048.

Reduced Help Desk Calls: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
O1	Number of password-related calls	A1*6*25%	5,250	5,250	5,250
O2	Number of reduced calls	O1*75%	3,938	3,938	3,938
O3	Cost per call		$20.00	$20.00	$20.00
Ot	Reduced help desk calls	O2*O3	$78,750	$78,750	$78,750
	Risk adjustment	↓5%			
Otr	Reduced help desk calls (risk-adjusted)		$74,813	$74,813	$74,813

Reduced Security Solution Costs

Windows 10, EMS, and Office 365 Advanced Security Workloads such as WDATP provide a lot of the technology solutions that all talk to each other. Organizations previously had to purchase these from multiple vendors and struggled to tie them together. This improves security, as discussed above, and lowers costs by eliminating these third-party solutions and reducing IT support required to integrate and manage the solutions. Having fewer solutions also means that the deployment and integration efforts are lower.

Windows 10 includes new and enhanced features that can replace applications that were purchased from a third-party vendor in the past. “We are using Windows Defender now,” said the senior IT manager for a food and beverage conglomerate. Several interviewed organizations identified both drive encryption and antivirus utilities, along with other applications.

Interviewed and surveyed organizations also indicated that a benefit from the EMS implementation was the reduction in legacy license and infrastructure costs. Prior to EMS, they often had an on-premises, point mobile device management solution, which cost more money to purchase and host than EMS. Because the legacy point solution was not fully SaaS-based, the composite organization also had to spend money on the infrastructure to support it. As a result, the composite organization did not have the efficiencies of an all-SaaS mobility management solution provided by one vendor. With Microsoft EMS, the entire solution is SaaS-based and integrated with Azure Active Directory so that all security and access between applications, devices, and users is seamless.

There are additional advanced security workloads within Microsoft 365 E5, including Windows Defender Advanced Threat Protection, Exchange Online Advanced Threat Protection, Office 365 Cloud App Security, Advanced Security Management, Customer Lockbox, Advanced eDiscovery, Microsoft Advanced Threat Analytics, and Advanced Data Governance solutions. These provide a wide range of benefits across the organization and can replace many third-party solutions and costs.

For the financial analysis, Forrester assumes:

- Each of the 3,500 information workers has on average 1.2 devices. There are another 700 shared computers and kiosk for firstline workers, predominantly in call centers.
- The composite was using a similar EDR tool prior to WDATP, which cost $50 per endpoint per year.
- Hardware and infrastructure costs related to mobile device management (MDM) are reduced by 40%.
- The previous MDM maintenance and license costs of $18 are reduced by 75%.
- For each of the 5,000 users, $30 in desktop/laptop licenses are eliminated.
- Only 75% of the EDR and antivirus savings are realized in Year 1 to allow for previous contracts to be closed out.

This benefit will vary based on several factors, including:

- The previous solutions and negotiated pricing.
- The desire to move to Microsoft 365 security solutions.
- The ability to get out of existing contracts.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $1.05 million.

> "We use the Enterprise Mobility + Security to help our increasingly mobile workforce access and share data in a secure fashion on up-to-date devices, so they can work more productively."
>
> *Chief technical architect, facility management service provider*

Reduced Security Solution Costs: Calculation Table					
REF.	**METRIC**	**CALC.**	**YEAR 1**	**YEAR 2**	**YEAR 3**
P1	Number of endpoint devices	A1*1.2+700	4,900	4,900	4,900
P2	Annual prior EDR solution cost	Per device	$50	$50	$50
P3	EDR savings from WDATP	P1*P2 [75% in Year 1]	$183,750	$245,000	$245,000
P4	MDM solution infrastructure savings	$228,000*40% [75% in Year 1]	$68,400	$91,200	$91,200
P5	MDM solution license savings	3,500 users*$18*75% [75% in Year 1]	$35,438	$47,250	$47,250
P6	MDM savings from EMS	P4+P5	$103,838	$138,450	$138,450
P7	Desktop/laptop/kiosk antivirus savings	3,600 devices*$30 [75% in Year 1]	$81,000	$108,000	$108,000
Pt	Reduced security solution costs	P3+P6+P7	$368,588	$491,450	$491,450
	Risk adjustment	↓5%			
Ptr	Reduced security solution costs (risk-adjusted)		$350,158	$466,878	$466,878

Eliminated Collaboration Solution Costs

Both the interviews and surveys revealed that companies can greatly reduce or eliminate many cost types associated with their previous collaboration solutions by moving to the integrated Microsoft solution. Specifically, organizations can retire third-party collaboration software, including the required on-premises hardware and telecom costs related to mobile and long distance, and minimize the risk of shadow IT often associated with both information workers and firstline workers. With Microsoft 365 solutions like Skype for Business, Teams, Yammer, and IM, organizations no longer must rely on third-party solutions and can save on telecom costs.

From the survey, Forrester learned that:

- Fifty-four percent of respondents reduced expenses related to other associated communication and collaboration technology costs.
- Fifty-two percent of respondents reduced telecom usage charges, such as long-distance calling, line rental, and mobile phone charges.
- Respondents saw a 14.1% reduction in communication and collaboration technology costs.
- Respondents saw a 14.6% reduction in telecom charges.

During our interviews, Forrester heard that:

- "Skype for Business has become our corporate communication channel, and all our field agents are now using it. We have dramatically decreased mobile roaming expenses by at least 70%."
- "We are saving $50,000 to $100,000 per year on our previous video hosting solution alone."
- "All the maintenance costs associated with collaboration solutions go away because it's in the cloud."

> "We will save from $500,000 to $1,000,000 each year in other communication solutions by replacing them with [Microsoft 365]."
>
> *VP, financial services*

Forrester assumes that:

- The composite organization saves $250,000 for an on-premises collaboration solution refresh and upgrades, along with 18% maintenance savings in subsequent years.
- The organization replaces its $80,000-per-year webconferencing solution with Microsoft 365. In Year 1, only 50% of the benefits are realized as the previous solution is phased out.
- The organization spends $50,000 less in Year 1 on long-distance and mobile phone calls by moving them to Microsoft 365 solutions like Skype for Business and Teams. This number increases to $125,000 by Year 3 as employees become more comfortable with the Microsoft 365 offerings.

The savings from eliminated collaboration solution costs will vary with:

- The number and cost of solutions previously in place.
- The geographic reach and number of locations where mobile calls are reduced.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $648,727.

Eliminated Collaboration Solution Costs: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
Q1	Eliminated on-premises hardware	Maintenance at 18% for years 2 and 3	$250,000	$45,000	$45,000
Q2	Eliminated webconferencing solution	[50% in Year 1]	$40,000	$80,000	$80,000
Q3	Reduced telephony costs	[50% in Year 1, 125% in Year 3]	$50,000	$100,000	$125,000
Qt	Eliminated collaboration solution costs	Q1+Q2+Q3	$340,000	$225,000	$250,000
	Risk adjustment	↓5%			
Qtr	Eliminated collaboration solution costs (risk-adjusted)		$323,000	$213,750	$237,500

Technology Cost Reductions

Organizations experience total cost of ownership savings when moving from their on-premises solutions to Microsoft 365. They also find value in consolidating and eliminating solutions from multiple vendors onto a single platform and by reducing the necessary IT support for this solution. Microsoft provides a range of FastTrack services that can reduce deployment cost and effort; these services can also help with adoption of best practices and configuration optimization.

From the survey, Forrester learned that:

- Fifty-two percent of respondents experienced a reduced total cost of ownership.
- The elimination of third-party hardware and software reduced IT and help desk support costs for 49% of respondents.
- Forty-seven percent of respondents saw a reduction in Microsoft licensing costs.

- Thirty-five percent saw savings from the reduction in on-premises hardware required.

During our interviews, Forrester heard the following:

- "The fact that we manage less of our own hardware is significant. We are probably saving $500,000 per year."
- "We have reduced our system administrators and engineers from 10 down to four by moving off-premises."
- "Our goal is to get out of the data center business. We spend around $90,000 on our colocation facility, and that doesn't even include telecoms. I want to get that down to zero over the next five years by moving to SaaS solutions."

Forrester assumes that:

- The composite organization reduces the cost of equivalent on-premises licenses covering all the functionality of Microsoft 365 Enterprise E5 from $975 per year down to $680 ($57x12 months) for the Microsoft 365 Enterprise E5 license. This reduction in licenses only accounts for information workers' licenses, as the firstline workers are added as part of the Microsoft 365 implementation. The Analysis Of Costs section includes the costs associated with Microsoft 365 licensing.
- The organization eliminates the need for $500,000 in hardware that would have been needed at the time of the implementation of Microsoft 365; it also eliminates the ongoing 18% maintenance costs.
- Compared to the on-premises environment, the required headcount is reduced by six FTEs to support and manage the various on-premises hardware and software solutions that are now part of Microsoft 365. The Analysis Of Costs section includes the ongoing IT support costs required for support of Microsoft 365.
- The initial deployment effort for Microsoft 365 is less taxing than the effort for the new on-premises environment that would have been required to replace the previous end-of-life one. As a result, both internal and professional services costs are reduced by 35% for standing up, rolling out, and testing the new solutions. The deployment efforts required for Microsoft 365 are considered in the Analysis Of Costs section.
- There is an additional deployment savings from using Microsoft's FastTrack services to migrate mailboxes and files. An average mailbox migration cost of $40 per information worker is included. For file migration, cost savings include eliminated third-party migration tools ($10,000), Azure servers dedicated to the migration ($10,000), and internal IT effort to set up and manage the third-party migration tool (three IT resources for one month = $35,475). The remainder of internal effort is included in the 35% reduction in deployment costs discussed above.

The savings from technology costs will vary with:

- The reduction in license costs.
- Required on-premises hardware and support.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $6.94 million.

> "However you look at it, moving to [Microsoft 365 Enterprise] drastically reduces costs."
>
> *CTO, financial services*

> "The FastTrack migration service was very helpful and flexible. We moved the largest amount of data at the fastest rate that Microsoft had gone — we pushed them to go very fast, and they worked with us on our problems, instead of sticking with their schedule. They had bounds they were supposed to stay in but quickly worked outside of them so that they could meet our goals."
>
> *Director of service operations, managed cloud computing company*

Technology Cost Reductions: Calculation Table						
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
R1	Reduced licenses	3,500 users*($975-$684)	$933,625	$1,018,500	$1,018,500	$1,018,500
R2	Eliminated on-premises costs — hardware and data center hosting	Maintenance following years at 18%	$500,000	$90,000	$90,000	$90,000
R3	Reduced IT ongoing support	6 FTEs*$130,000 [50% realized in Year 1]		$390,000	$780,000	$780,000
R4	Reduced initial deployment costs	(St+Tt)*35%	$1,331,843			
R5	FastTrack savings — email migration	A1*$40	$140,000			
R6	FastTrack savings — file migration	3 FTEs*$11,825+ $10,000+$10,000	$55,475			
Rt	Technology cost reductions	R1+R2+R3+R4+R5+R6	$2,960,943	$1,498,500	$1,888,500	$1,888,500
	Risk adjustment	↓5%				
Rtr	Technology cost reductions (risk-adjusted)		$2,812,896	$1,423,575	$1,794,075	$1,794,075

Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to implement Microsoft 365 solutions and later realize additional uses and business opportunities, including:

- **Utilizing the newest offerings from Microsoft 365, such as Stream.** Microsoft is continually innovating on new product offerings added to Microsoft 365 solutions. One example is the recent addition of Microsoft Stream. Stream allows users to upload video, and the solution automatically adds captions. Each word is scripted out on the page, so users can search for specific words and fast-forward to the exact spot in the video they are looking for. It also has facial recognition for speakers in the video, which creates a timeline based on the people who speak in the video. With this, users can go directly to the point in the video with the person they are interested in. Solutions such as this will help users maximize their business impacts and save time.
- **Utilizing the accessibility features with Office 365.** Along with innovations around product offerings, Microsoft is also planning to provide inclusive tools for diverse teams, ensuring that digital experiences are accessible to all employees. Leveraging a wide range of assistive technologies, Microsoft is working to enable productivity, collaboration and innovation across all employees with different accessibility needs. For example, Microsoft has a built-in Accessibility Checker in apps like Word, Excel, PowerPoint and Outlook to help employees author accessible content and offers a Presentation Translator add-in for PowerPoint, enabling real-time subtitles with presentations. Leveraging these technologies helps to ensure a productive, inclusive and compliant work environment.
- **Increased adoption of Microsoft 365 security solution.** Microsoft is regularly updating and adding security features to Microsoft 365 E5. Organizations may adopt these features in the future even if they were

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a 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.

not viewed as a good fit at the time of the original Microsoft 365 migration.

- **Increasing the user base and focusing on adoption.** Organizations can further improve the business value they receive by adding additional users or focusing on adoption to gain more traction and see wider efficiency and effectiveness throughout the organization.

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A). None of these flexibility opportunities are included in the financial analysis.

Analysis Of Costs

QUANTIFIED COST DATA AS APPLIED TO THE COMPOSITE

Total Costs

Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Str	Planning, implementation, and ongoing support	$1,310,833	$1,287,000	$858,000	$858,000	$4,313,833	$3,834,552
Ttr	Deployment and managed services	$2,874,960	$1,668,920	$1,072,720	$1,402,720	$7,019,320	$6,332,590
Utr	Training	$210,875	$203,700	$187,950	$187,950	$790,475	$692,597
Vtr	Licensing costs	$1,197,000	$2,574,000	$2,574,000	$2,574,000	$8,919,000	$7,598,157
Wtr	Additional technology costs	$484,050	$61,425	$61,425	$61,425	$668,325	$636,805
	Total costs (risk-adjusted)	$6,077,718	$5,795,045	$4,754,095	$5,084,095	$21,710,953	$19,094,701

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total costs to be a PV of nearly $19.1 million.

Planning, Implementation, And Ongoing Support

The planning and implementation of Microsoft 365 varied greatly depending on the size and complexity of the rollout. The main variables around this complexity involve the number of users and locations. For the 5,000-user composite organization:

- Initial planning and deployment takes 11 months and includes 10 internal FTE resources to support the project. The first 11-month phase consists of standing up the various Microsoft 365 solutions and completing early deployments and migrations. In the following year, four FTEs continue to work on SharePoint migrations, further rolling out Teams and other communication solutions.
- Ongoing support requires six FTEs for each of the following years (five in Year 1). Their roles are largely to support and configure Microsoft 365 solutions, to set up and manage user accounts, and to roll out new solution components. Some of the interviewed and surveyed organizations chose to use managed services from a Microsoft partner for these activities, but the in-house scenario is included as part of this calculation.
- Forrester assumes an average fully burdened annual salary of $130,000 for these IT resources.

These costs can vary with:

- The size of the deployment and the number of locations and solutions included.
- The number of FTEs required for initial deployment and ongoing support.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year risk-adjusted total PV of $3.83 million.

Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the wider the potential range of outcomes for cost estimates.

Planning, Implementation, And Ongoing Support: Calculation Table						
Ref.	**Metric**	**Calculation**	**Initial**	**Year 1**	**Year 2**	**Year 3**
S1	Number of months	Months	11	12	12	12
S2	FTEs involved in planning and implementation		10	4		
S3	FTEs involved in ongoing support			5	6	6
S4	Annual fully burdened salary		$130,000	$130,000	$130,000	$130,000
St	Planning, implementation, and ongoing support	(S2+S3)*S4/(S1/12)	$1,191,667	$1,170,000	$780,000	$780,000
	Risk adjustment	↑10%				
Str	Planning, implementation, and ongoing support (risk-adjusted)		$1,310,833	$1,287,000	$858,000	$858,000

Deployment And Managed Services

The amount of reported professional services varied widely based on company size and the solutions being deployed. The composite organization uses professional services to stand up and configure the solutions and then integrate them with other systems. The professional services partner brings best practices and template solutions to speed up the deployment time.

The organization also uses ongoing deployment services to migrate SharePoint sites and assist with future deployments. Additionally, there is a managed services contract to manage existing SharePoint sites from the partner's offshore support center, and these services grow over time to include security and help desk.

For the composite organization:

- The number of consultants differs by year and effort, with nine FTEs involved with initial deployment, dropping to one and a half by years 2 and 3 of analysis.
- The cost per consultant is $1,200 per day and assumes a total of 22 working days per month.
- Managed services increase over time as additional services are added.

The costs associated with deployment and managed services can differ greatly depending on the required support, size of the organization, and internal IT skills and capacity. To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year risk-adjusted total PV of $6.33 million.

Deployment And Managed Services: Calculation Table						
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
T1	Number of months		11	12	12	12
T2	Number of consultants (FTEs)		9.0	4.0	1.5	1.5
T3	Monthly cost of consultant	$1,200 per day*22 working days per month	$26,400	$26,400	$26,400	$26,400
T4	Managed services cost			$250,000	$500,000	$800,000
Tt	Deployment and managed services	(T1*T2*T3)+T4	$2,613,600	$1,517,200	$975,200	$1,275,200
	Risk adjustment	↑10%				
Ttr	Deployment and managed services (risk-adjusted)		$2,874,960	$1,668,920	$1,072,720	$1,402,720

Training

The interviews and survey revealed that organizations sought training for two reasons: First, the IT department needed training on managing and using the Microsoft 365 solutions; second, training was required for end users to teach them how to use the new Microsoft 365 solutions, teach them the benefits of utilizing the solutions, and drive adoption across the organization.

For the composite organization, Forrester assumes:

- An outside professional services organization provides IT training at an average cost of $300 per day of training.
- Two internal FTEs create end user training. These FTEs are responsible for creating company-specific training content, setting up a learning portal in SharePoint, and providing “training the trainer” training to local champions. This is an ongoing effort to ensure that users are comfortable using all features of the Microsoft 365 solution.

Costs associated with training will vary with:

- The size of the IT team and existing information on the solutions.
- The number of FTEs involved with creating end user training.

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year risk-adjusted total PV of $692,597.

Training: Calculation Table						
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
U1	Number of person-days IT user training		150	80	30	30
U2	Cost per day		$300	$300	$300	$300
U3	End user training	2 FTEs*85,000 [prorated in Initial period]	$155,833	$170,000	$170,000	$170,000
Ut	Training	(U1*U2)+U3	$200,833	$194,000	$179,000	$179,000
	Risk adjustment	↑5%				
Utr	Training (risk-adjusted)		$210,875	$203,700	$187,950	$187,950

Licensing Costs

These represent costs paid to Microsoft for the use of the Microsoft 365 solutions.

For the composite organization, Forrester assumes that:

- The 3,500 information workers receive Microsoft 365 Enterprise E5 licenses at a cost of $57/month per user. In the Initial period, the average length of usage is six months since there is an upfront period of testing and deployment, and then users are migrated over time.
- The 1,500 firstline workers receive Microsoft 365 Enterprise F1 licenses at a cost of $10/month per user.

As list price was used, Forrester made no risk adjustment. The three-year risk-adjusted total PV is $7.60 million.

Licensing Costs: Calculation Table

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
V1	Microsoft 365 Enterprise E5 license cost	$57/month*12 months [6 months in Initial period]	$342	$684	$684	$684
V2	Number of users		3,500	3,500	3,500	3,500
V3	Microsoft 365 F1 license cost	$10/month*12 months		$120	$120	$120
V4	Number of users			1,500	1,500	1,500
Vt	Licensing costs	(V1*V2)+(V3*V4)	$1,197,000	$2,574,000	$2,574,000	$2,574,000
	Risk adjustment	0%				
Vtr	Licensing costs (risk-adjusted)		$1,197,000	$2,574,000	$2,574,000	$2,574,000

Additional Technology Costs

In addition to the costs already listed, interviewed and surveyed respondents needed to replace some computers outside of the normal refresh schedule and add bandwidth for the increased video and voice traffic, as well as the upload and retrieval of documents in the cloud. Many organizations also added ADFS servers to streamline authentication and single sign-on.

For the composite organization, Forrester assumes that:

- Four hundred computers were added out of cycle in the Initial period at an average cost of $1,000
- Incremental bandwidth costs $4,500 per month, prorated during the Initial period.
- The ADFS servers cost $25,000, with a maintenance cost of 18% for subsequent years.

The amount of additional bandwidth required will vary with existing bandwidth, the number of solutions, and the extent to which high-bandwidth solutions such as video conferencing are used. The need to add additional computers outside of the normal refresh schedule will vary depending on how old the existing estate is.

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year risk-adjusted total PV of $636,805.

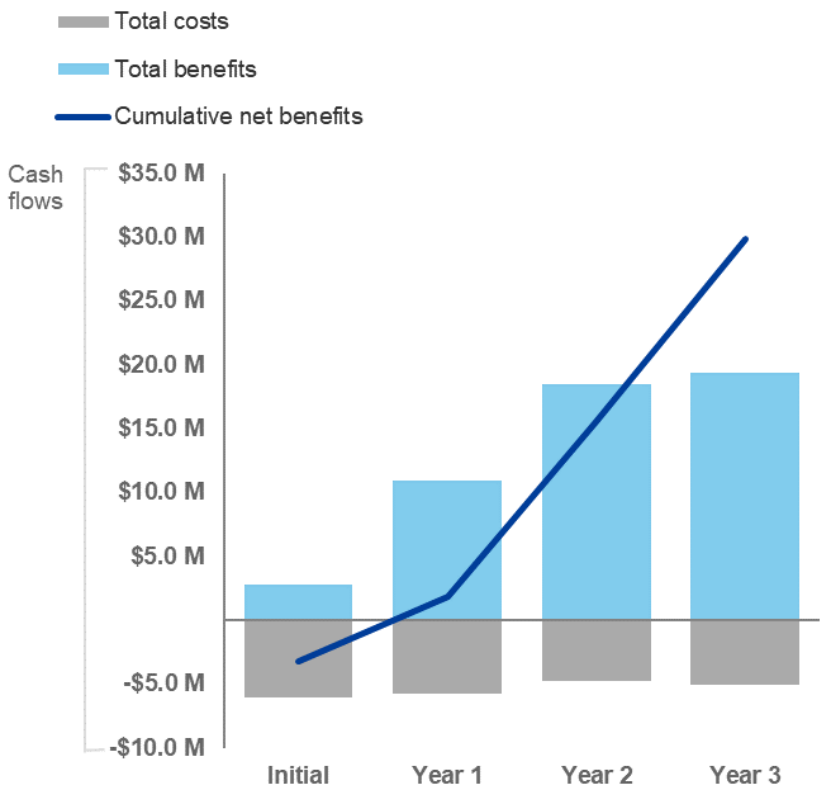
Additional Technology Costs: Calculation Table

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
W1	Out-of-cycle computer refresh	400 computers*$1,000	$400,000			
W2	Incremental bandwidth	$4,500 per month [prorated in Initial period]	$36,000	$54,000	$54,000	$54,000
W3	ADFS servers	Maintenance at 18%	$25,000	$4,500	$4,500	$4,500
Wt	Additional technology costs	W1+W2+W3	$461,000	$58,500	$58,500	$58,500
	Risk adjustment	↑5%				
Wtr	Additional technology costs (risk-adjusted)		$484,050	$61,425	$61,425	$61,425

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, IRR, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost

Cash Flow Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	($6,077,718)	($5,795,045)	($4,754,095)	($5,084,095)	($21,710,953)	($19,094,701)
Total benefits	$2,812,896	$10,916,181	$18,468,743	$19,352,209	$51,550,029	$42,539,722
Net benefits	($3,264,822)	$5,121,136	$13,714,648	$14,268,114	$29,839,076	$23,445,021
ROI/IRR						123%/227%
Payback period after "go-live"						10 months

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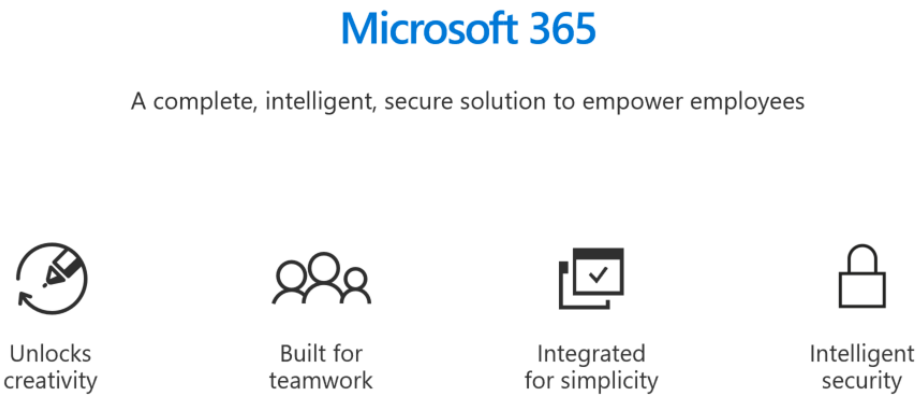
Microsoft 365 Enterprise E5 solutions: Overview

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

Microsoft 365 Enterprise is a complete, intelligent solution that brings together the best of Office 365, Windows 10 Enterprise, and Enterprise Mobility + Security, and empowers everyone to be creative and work securely together.



Unlocks creativity

- Create compelling content with Intelligent apps.
- Work naturally with ink, voice, and touch.
- Visualize information in new ways.
- Connect the experience across devices.

Built for teamwork

- Email and calendar with Exchange.
- Connect to people, content, and apps with SharePoint.
- Voice, video, and chat with Skype for Business and Microsoft Teams.
- Network across the organization with Yammer.
- Coauthor with Office 365 ProPlus.

Integrated for simplicity

- Modern desktop experience.
- Flexible device management.
- Integrated administration tools and insights.
- Built-in compliance solutions.

Intelligent security

- Identity and access management.
- Information protection.
- Threat protection.
- Security management.
- Accelerate GDPR compliance.

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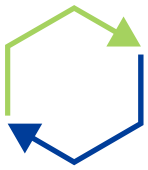
Appendix A: Total Economic Impact

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.

Total Economic Impact Approach

Benefits represent the value delivered to the business by the product. The TEI methodology places 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.

Costs consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.



Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in 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.

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.

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.

Return on investment (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.

Discount rate

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.

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.

Appendix B: Supplemental Material

In addition to the new information collected for this study, from additional customer interviews, data points, and quotes, the following studies were also included in this study:

Related Forrester Research

- "The Total Economic Impact™ Of Office 365 Enterprise E5 Solutions," Forrester Consulting report prepared for Microsoft, July 2018.
- "The Total Economic Impact™ Of Microsoft 365 Teamwork Solutions," Forrester Consulting report prepared for Microsoft, July 2018.
- "The Total Economic Impact™ Of Microsoft 365 Education," Forrester Consulting report prepared for Microsoft, January 2018.
- "Improving Firstline Worker Performance With Microsoft Office 365: A Forrester Total Economic Impact™ Analysis," Forrester Consulting report prepared for Microsoft, September 2017.
- "Achieving Digital Business Transformation With Microsoft 365 Enterprise E5: A Total Economic Impact™ Analysis," Forrester Consulting report prepared for Microsoft, September 2017.
- "The Total Economic Impact™ Of Microsoft Windows Defender Advanced Threat Protection," Forrester Consulting report prepared for Microsoft. July 2017.
- "The Total Economic Impact™ Of Microsoft Windows 10," Forrester Consulting report prepared for Microsoft, December 2016.
- "The Total Economic Impact™ Of Microsoft's Enterprise Mobility Suite," Forrester Consulting report prepared for Microsoft. July 2015.

Appendix C: Endnotes

[1] Source: Forrester Analytics Global Business Technographics® Priorities and Journey Survey, 2017.
[2] Source: Forrester Analytics Global Business Technographics Applications And Collaboration Workforce Survey, 2016.
[3] Source: "2017 Cost of Data Breach Study," Ponemon Institute, June 2017.