A Forrester Total Economic Impact™
Study Commissioned By Microsoft
March 2020

The Total Economic Impact™ Of Microsoft Managed Desktop

Cost Savings And Business Benefits Enabled By Microsoft Managed Desktop

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Project directors:
Jonathan Lipsitz
Edgar Casildo

ABOUT FORRESTER CONSULTING

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Key Benefits

Freed 50% of IT time previously dedicated to endpoint management.

Reduced help desk calls by 35%.

Reduced the time needed to set up end users by 90%.

Executive Summary

Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Microsoft Managed Desktop. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Microsoft Managed Desktop on their organizations.

Microsoft Managed Desktop is a cloud-based IT management and security monitoring service using a custom, "cloud-first" configuration of Windows 10, Office 365 ProPlus, and Microsoft security and compliance technologies. Microsoft Managed Desktop can help organizations improve their user experiences by modernizing and streamlining endpoint management, empowering IT resources to focus on more strategic tasks. Additionally, Microsoft's 24x7 security monitoring and remediation means that IT teams don't have to worry about staffing and training large sets of security experts to safeguard user devices.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed several customers with years of experience on Microsoft Managed Desktop. Interviewed customers cited several challenges in their prior approaches to endpoint management. Their end users felt constrained by device performance issues, instability, and usage restrictions. Their endpoint management professionals struggled to provide users with the freedom and flexibility they needed without compromising device security. Managing their endpoints required several software solutions and a considerable amount of IT bandwidth. The interviewed customers wanted a solution that could provide their end users with a better experience while freeing up IT resources to focus on higher-value activities.

Key Findings

Quantified benefits. The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the companies interviewed and applied to a composite organization with 5,000 user devices:

- **Savings of $4.2 million by consolidating endpoint management and security infrastructure.** By consolidating the management of their Windows devices under Microsoft Managed Desktop, the interviewed organizations were able to reduce the number of third-party endpoint management and security solutions in their environments.
- **Five minutes reclaimed per user per day in improved performance and stability of end user devices.** Faster boot times, fewer crashes, and faster performance of the devices managed by Microsoft Managed Desktop enabled users to be more productive than they were on their previous devices.
- **Fifty percent fewer IT FTE hours required to maintain IT infrastructure.** By relying on Microsoft's update management services to always stay up to date and its 24x7 security monitoring and remediation, the interviewed companies were able to reallocate 50% of their IT FTEs' time to higher-value activities.
- **Ninety percent less time required to set up end users.** By leveraging Microsoft's modern application stack, the interviewed organizations were able to reduce the time needed to set up users on a new device by 90%.

ROI
67%

Benefits PV
$12.4 million

NPV
$5.0 million

Payback
<6 months

› **Thirty-five percent reduction in help desk calls related to device issues.** The increased performance and stability of the devices that Microsoft Managed Desktop managed led to fewer IT help desk calls.

› **Savings of over $313,000 in time required to provision and deploy user devices.** The interviewed customers leverage Microsoft's list of enterprise-ready devices when purchasing new devices, saving IT teams the effort of testing new laptops. Because Microsoft Managed Desktop manages the configuration of their devices, the interviewed customers no longer have to dedicate resources to creating and managing the configuration of their endpoints.

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

› **Microsoft Managed Desktop licensing costs totaling $5.9 million over four years.** The interviewed organizations pay a $50 per month per device licensing cost.

› **Planning, implementation, and ongoing management costs of $1.4 million.** The interviewed organizations spent several months ensuring that Microsoft Managed Desktop met their security needs, preparing their infrastructures for Microsoft Managed Desktop, and determining which devices to purchase.

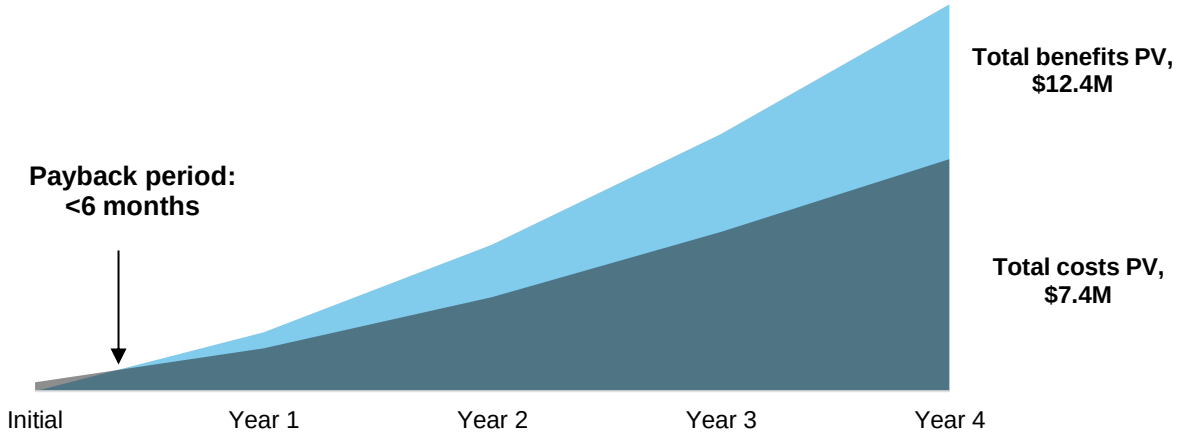
Forrester's interviews with four existing customers and subsequent financial analysis found that a composite organization based on these interviewed organizations would experience benefits of $12.4 million over four years versus costs of $7.4 million, adding up to a net present value (NPV) of $5.0 million and an ROI of 67%.

Unquantified benefits. The interviewed organizations experienced the following benefits, which are not quantified for this study:

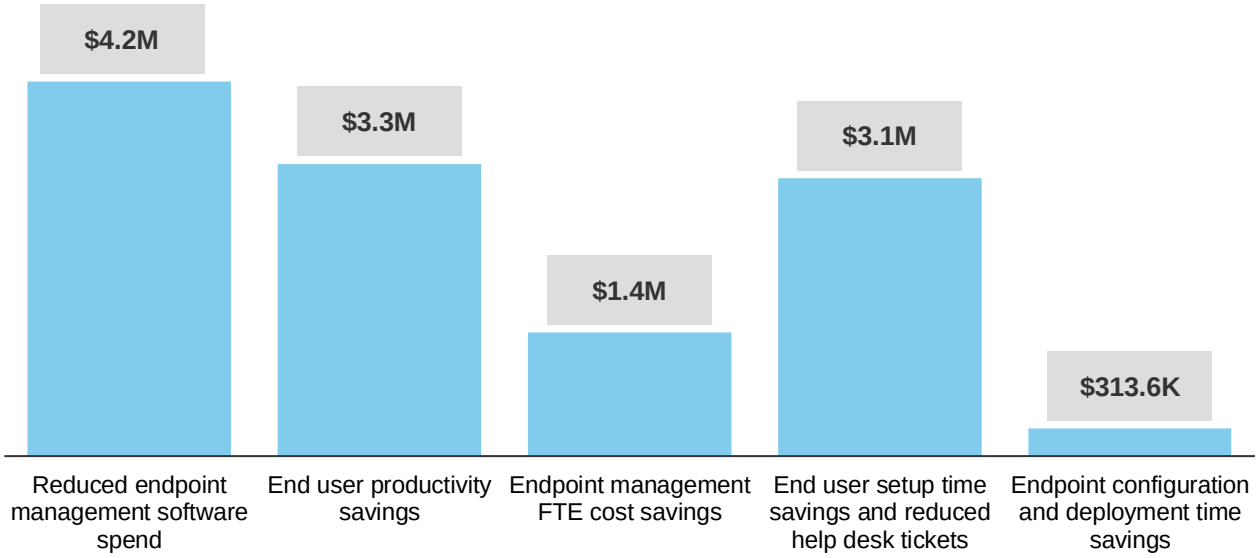
› **Improved employee experience (EX).** The interviewed customers noted that employee satisfaction improved since moving to Microsoft Managed Desktop. Though the interviewed customers were in the process of fully measuring employee satisfaction and its impact on their organizations, Forrester reports that improved EX can lead to: 1) better work performance; 2) higher discretionary effort; 3) lower employee turnover; and 4) reduced recruiting costs.[1]

› **Increased confidence in the security of their environments.** Every interviewee believed that moving to Microsoft Managed Desktop increased their endpoint protection, reducing the risk of a security breach.

Financial Summary



Benefits (Four-Year)



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TEI Framework And Methodology

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing Microsoft Managed Desktop.

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 Managed Desktop 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 Managed Desktop.

CUSTOMER INTERVIEWS
Interviewed four organizations using Microsoft Managed Desktop to obtain data with respect to costs, benefits, and risks.

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

FINANCIAL MODEL FRAMEWORK
Constructed a financial model representative of the interviews 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 Managed Desktop'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 Microsoft Managed Desktop.

Microsoft reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

Microsoft provided the customer names for the interviews but did not participate in the interviews.

The Microsoft Managed Desktop Customer Journey

BEFORE AND AFTER THE MICROSOFT MANAGED DESKTOP INVESTMENT

Interviewed Organizations

For this study, Forrester conducted four interviews with Microsoft Managed Desktop customers. Interviewed customers include the following:

INDUSTRY	REGION	INTERVIEWEE	NUMBER OF DEVICES TO BE MANAGED BY MICROSOFT MANAGED DESKTOP
Utility	APAC	Principal IT architect, Cloud solutions architect	500
Agriculture	North America	IT analyst	160
Healthcare provider	North America	Vice president of IT	200
Financial services	EMEA	Digital workplace director	90,000

Interviewed customers started from varying legacy environments and migrated to Microsoft Managed Desktop for a variety of use cases:

- **The agriculture and healthcare companies were new companies that wanted to get to market quickly.** These two organizations wanted a solution that could meet their security and management needs and allow them to focus on their business objectives. The vice president of IT for the healthcare provider explained: “We’re a small company working in the healthcare space, providing healthcare services. We just [didn’t] have the time to set up a security organization and secure our endpoints on top of meeting regulatory policies and regulations. We felt that our fastest path to production or speed-to-market was to leverage [Microsoft Managed Desktop] to secure our workstations.”

  The agriculture company had already moved to a modern device management environment. However, the IT analyst noted additional resource savings and security improvements after moving to Microsoft Managed Desktop.
- **The utility company needed a solution that could support its digital transformation.** An increasing reliance on technology, growing user needs, and regulatory requirements, pushed the utility company to move away from its existing virtual desktop infrastructure (VDI). The principal IT architect said: “We’re moving from a very paper-driven organization to a digitized one. Users needed to have access to their content on their devices, but the limited connectivity in some locations made our move towards digitization near impossible.” Additionally, the cost of the company’s previous environment had outpaced the benefits

it provided. “We were finding that our environment didn’t keep up with the technology changes that were occurring in the market. Meanwhile, the cost to maintain our environment was beginning to become a very heavy burden on us.”

- **The financial services firm wanted to focus on the end user experience.** The financial services firm believed that the flexibility and agility that Microsoft Managed Desktop provides would support efforts to improve its end users’ experience. The digital workplace director stated: “We believe that we need to provide up-to-date modern [solutions] for [our employees] to be able to compete in terms of attracting and retaining talent. So we’re providing upgraded devices, upgraded applications, and constantly upgraded technology. We don’t see investing in [Microsoft Managed Desktop] as [fixing our] technical delivery because we have a proven track record of executing technical deliveries at a very high level. [Investing in Microsoft Managed Desktop] is about transforming the culture of our organization.”

Key Challenges

Prior to moving to Microsoft Managed Desktop, the interviewed customers noted that their existing endpoints (and the infrastructure the companies used to protect and maintain those endpoints) were slow, required a high touch to maintain, and left their end users feeling restricted. The customers said that they:

- **Struggled to provide a high-quality user experience.** Long boot times, poor performance, and the number of security restrictions in place made it difficult for users to do their jobs. That left them frustrated and, as one interviewee noted, it increased the amount of shadow IT. The principal IT architect said: “In our previous environment, it was very difficult for us to give a user a device that fit their needs. Users felt very limited and restricted in what they could do.” The interviewed customers believed that they needed to provide their end users with a better experience while maintaining or improving their current security standards.
- **Allocated more resources on imaging and provisioning processes than they wanted.** Previously, the interviewed organizations spent significant amounts of time identifying the computers that best met their needs, creating standard operating environments (SOEs), and configuring new devices. The organizations wanted to move away from this high-touch deployment process to a zero-touch deployment process that would give them more control over their endpoints and enable them to address their end users’ needs.
- **Struggled to secure their environments efficiently.** Prior to adopting Microsoft Managed Desktop, the interviewed organizations relied on multiple solutions for endpoint threat prevention, detection, and response. Managing these various solutions and consolidating the information between them was difficult and time-consuming. This unnecessary complexity increased the risk of a security breach. According to Forrester, 27% of enterprise security decision makers believe the complexity of their IT environments is the biggest IT security challenge for their organizations.[2] Additionally, the interviewed customers had to dedicate a significant number of FTEs to audit, patch, and update their endpoints. The customers wanted to streamline their security stack while also enabling their IT teams to do higher-value work.

> “Security was by far the biggest reason we chose to move to Microsoft Managed Desktop. We felt that Microsoft had the best security out there. The cloud-based security, from our perspective, is more fully tested — and it has a greater breadth in capabilities than anything else out there.”
>
> *Vice president of IT, healthcare provider*

> “Our users feel unshackled. Our security features aren’t in their face, restricting them.”
>
> *Cloud solutions architect, utility company*

Solution Requirements

The interviewed organizations searched for a solution that could:

- Increase the functionality and capabilities of their endpoints and enable users to be more productive.
- Reduce the time, effort, and cost of managing endpoints.
- Consolidate their management and security stack, simplifying their IT environment.
- Increase security.

> "We're creating greater engagement. The [employees] who have moved to their Microsoft Managed Desktop devices say they love their [new] devices. They feel more valued, and that's a really good thing to be able to deliver to drive a cultural change.
>
> *Digital workplace director, financial services*

Key Results

The interviews revealed that key results from Microsoft Managed Desktop:

- **Improved user satisfaction and productivity.** With Microsoft Managed Desktop, the interviewed organizations can improve the performance and stability of their devices, improving end user productivity. Users reclaim more productive time through faster boot times and fewer system failures. Additionally, by adopting a modern application stack, users can focus on doing their jobs without feeling constrained by security protocols.
- **Reduced the time spent sourcing, configuring, and deploying devices.** The interviewed customers reduced the time spent testing, purchasing, and imaging new computers. By leveraging Microsoft's list of approved devices, IT teams were able to more efficiently select the best devices for their organizations. Moreover, Microsoft Managed Desktop eliminates the need for organizations to create and maintain SOEs. Instead, organizations can move to a zero-touch deployment model and save a significant amount of IT time on device configuration. Additionally, by moving to an evergreen desktop model managed by Microsoft Managed Desktop, organizations can dedicate less time and resources to maintain their desktop configurations, manage security or policy changes, or test and release new feature sets.
- **Empowered their IT teams.** Moving to Microsoft Managed Desktop freed up a substantial amount of IT time and enabled IT administrators to spend more time on new initiatives, learning, and leveraging the new tools Microsoft offered. The principal IT architect for the utility company said: "We had to catch up a significant amount in a few areas. I'm not saying that was a bad thing. In fact, it's fantastic. [Moving to Microsoft Managed Desktop] dramatically reinvigorated our organization from an IT perspective. It's allowed us to start using and doing new things that we never had the opportunity or visibility to do before." The vice president of IT explained that the company is able to focus on higher-priority tasks. "I'm not worrying about our security on our devices. I'm worried about other things. [For example], how am I going to lock down an ePrescription application?"

> "Having Microsoft's security baseline and having it managed by Microsoft is very nice. I don't have to worry about making tweaks or changing configurations, Microsoft does that."
>
> *Cloud solutions architect, utility company*

- **Improved endpoint security by consolidating endpoint protection under Microsoft Managed Desktop.** Moving to Microsoft Managed Desktop consolidated endpoint threat prevention, detection, and response under one platform. Further, by relying on Microsoft's security experts to maintain their security environments, the interviewed organizations could redirect internal resources to other IT security challenges or avoid having to hire the right security experts — something that can be very time-consuming and difficult for many organizations. Since moving to Microsoft Managed Desktop, the interviewees noted that their devices are now always up to date on all the security patches and updates, reducing the risk of a security breach.

Composite Organization

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

Description of the composite. A global, multibillion-dollar business-to-consumer organization that provides sales, customer support, and service/warranty support for its consumer products in high volume. The organization has $1.5 billion in revenue and 5,000 Windows desktops and laptops. The organization replaces a third of its endpoints to Microsoft Managed Desktop each year as part of its three-year replacement cycle.

Key assumptions

$1.5B annual revenue

5,000 Windows devices

1,250 devices moved to Microsoft Managed Desktop annually

Analysis Of Benefits

QUANTIFIED BENEFIT DATA AS APPLIED TO THE COMPOSITE

Total Benefits

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	TOTAL	PRESENT VALUE
Atr	Reduced endpoint management software spend	$560,500	$1,121,000	$1,681,500	$2,242,000	$5,605,000	$4,230,644
Btr	End user productivity savings	$437,396	$874,792	$1,312,188	$1,749,583	$4,373,958	$3,301,456
Ctr	Endpoint management FTE cost savings	$185,250	$370,500	$555,750	$741,000	$1,852,500	$1,398,264
Dtr	End user setup time savings and reduced help desk tickets	$789,925	$935,394	$1,080,863	$1,226,331	$4,032,513	$3,140,835
Etr	Endpoint configuration and deployment time savings	$107,534	$90,244	$90,244	$107,534	$395,556	$313,589
	Total benefits (risk-adjusted)	$2,080,605	$3,391,930	$4,720,544	$6,066,448	$16,259,527	$12,384,788

The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over four years, the composite organization expects risk-adjusted total benefits to be a PV of more than $12.3 million.

Reduced Endpoint Management And Security Software Spend

Organizations can eliminate third-party security and device management solutions by moving to Microsoft Managed Desktop. By consolidating their endpoint security and management security stacks through Microsoft Managed Desktop, the interviewed organizations were able to eliminate spending on antivirus, endpoint detection and response (EDR), patch management, encryption, data loss prevention, and Windows device management software.

The interviewed organizations were able to reduce their security and management spends while improving the security of their endpoints through Microsoft's threat detection technology and 24x7 monitoring and remediation abilities. Interviewed customers reported:

› “We felt that being 100% cloud-based by moving our endpoint management to Microsoft Managed Desktop, Office 365 E5, and Azure would provide us with the best security mechanism.”

- "We believe that moving from [performing audits, patching, and updating] ourselves, to having a central [platform through Microsoft Managed Desktop] will drive efficiencies."
- "We have significant, tangible savings by taking out a variety of [management] and security tools."
- "We have significantly reduced the number of agents that run on our user's endpoints."
- "Before, we'd have 10 different tools doing what Microsoft Managed Desktop does. They all had different consoles, and they didn't necessarily all talk to each other. The nice thing about the Microsoft stack and Microsoft Managed Desktop is that it's all fully integrated together. The alerts and tools feed into each other."
- "Microsoft Managed Desktop covers all our compliance concerns, from SOC 2 to HITRUST out of the box."

The ability to simplify an IT environment through Microsoft Managed Desktop is a key benefit. Forrester reports that "enterprise security decision makers cite the complexity of their IT environment as a top challenge more often (34%) than anything else."[3] By consolidating endpoint management under Microsoft Managed Desktop and simplifying their IT environments, organizations can reduce one of the key challenges in securing their endpoints.

Forrester assumes for the composite analysis:

- The composite organization eliminates third-party tools with Microsoft Managed Desktop. On average, the combined cost of these third-party tools for the organization is $30 per user per year in license and infrastructure costs. The organization reduces spending for every endpoint that Microsoft Managed Desktop now manages. By Year 4, Microsoft Managed Desktop manages 100% of the organization's laptops and desktops.
- By simplifying the overall environment and shifting management to Microsoft, the organization reduces its IT administration effort. In the previous environment, two FTEs maintained the platform. In the new environment (in the cost section below), one FTE is needed, resulting in a savings of one FTE who can work on other activities. The average fully burdened IT compensation (including all benefits and taxes) is $130,000 annually.

The following risks can affect this benefit estimate:

- The number and price of previous third-party solutions.
- The number of solutions Microsoft Managed Desktop can replace.
- The number of FTEs required to manage these solutions.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a four-year risk-adjusted total PV of $4,230,644.

Microsoft Managed Desktop:

- Simplifies endpoint management.
- Reduces software spend.
- Improves endpoint security.

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.

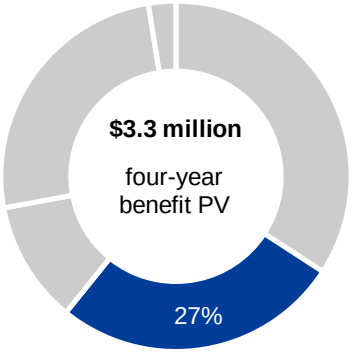
Reduced Endpoint Management Software Spend: Calculation Table						
REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4
A1	Endpoints	Assumption	1,250	2,500	3,750	5,000
A2	Monthly licensing spend per device avoided due to Microsoft Managed Desktop	Assumption	$35	$35	$35	$35
A3	IT FTEs deflected by Microsoft Managed Desktop	Assumption	0.5	1.0	1.5	2.0
A4	IT FTE salary	Assumption	$130,000	$130,000	$130,000	$130,000
At	Reduced endpoint management software spend	A1*A2*12+(A3*A4)	$590,000	$1,180,000	$1,770,000	$2,360,000
	Risk adjustment	↓5%				
Atr	Reduced endpoint management software spend (risk-adjusted)		$560,500	$1,121,000	$1,681,500	$2,242,000

End User Productivity Savings

The interviewees said securing their environments and empowering their end users to be more productive were the two main drivers in adopting Microsoft Managed Desktop. The companies strongly believed they could improve their end user experiences by adopting modern management solutions. The digital workplace director said: "We believe that we need to provide up-to-date, modern [solutions] for [our employees] to be able to compete in terms of attracting and retaining talent. So we're providing upgraded devices, upgraded applications, and constantly upgraded technology."

Before Microsoft Managed Desktop, many of the interviewees had to sacrifice end user productivity for the sake of security. However, they believed adopting Microsoft Managed Desktop would not only improve their security but also empower their end users. The cloud solutions architect for the utility company said, "Historically, we had heavy restrictions on our end-users, limiting their ability to do their jobs, making them unhappy."

After moving to Microsoft Managed Desktop, the interviewed organizations were able to modernize their application stacks, making it easier for their end users to do their jobs. The same interviewee said that after moving to Microsoft Managed Desktop: "We've moved to a completely greenfield [environment]. We're releasing the user to be able to do what they need to do their work." The improved performance and stability that Microsoft Managed Desktop offers further empowered the interviewed organizations' employees to perform their jobs. The vice president of IT for the healthcare provider said: "[Our nurses] can focus on their patients more because of Microsoft Managed Desktop and the Surface Go. [Our nurses] say they can focus more on our patients instead of having to focus on [setting up their computers]. They hit the



End user productivity savings: 27% of total benefits

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power button, open their applications, and start working. . . . [Microsoft Managed Desktop] enabled our nurses to see 50% more patients than they could before — all while supplying better care to our patients."

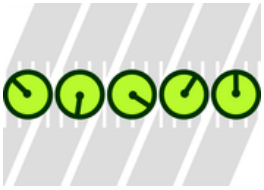
Other interviewed customers said:

- "Previously, our end users would spend 10 to 20 minutes every day waiting for their computers to boot [and] logging to their computers and applications."
- "Our users are telling us, 'I can do more of what I want to do.' They don't feel that IT is stopping them from doing what they want, and I hope that would lead to less shadow IT. [Because] if we just try to control them and stop them, they're just going to find a way to do it anyway. So now we're working with our end users more because we're using our technology smarter, and we're getting good feedback from that."

In modeling the impact Microsoft Managed Desktop had on end user productivity, Forrester assumes that:

- On average, each end user saves 5 minutes each day due to the increased performance and stability of their endpoints with Microsoft Managed Desktop. Of those five minutes saved, Forrester assumes that 50% (2.5 minutes) of that time is redirected towards work.
- Fully burdened salary of $38 per hour.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a four-year risk-adjusted total PV of $3.3 million.



Five minutes saved per user per day due to improved endpoint performance and stability

End User Productivity Savings: Calculation Table

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4
B1	End users	Assumption	1,250	2,500	3,750	5,000
B2	Daily minutes saved per day	Based on customer interviews	5.0	5.0	5.0	5.0
B3	Productivity recapture		50%	50%	50%	50%
B4	Blended end user salary	Assumption	$38	$38	$38	$38
Bt	End user productivity savings	B1*B2*260/60*B3*B4	$514,583	$1,029,167	$1,543,750	$2,058,333
	Risk adjustment	↓15%				
Btr	End user productivity savings (risk-adjusted)		$437,396	$874,792	$1,312,188	$1,749,583

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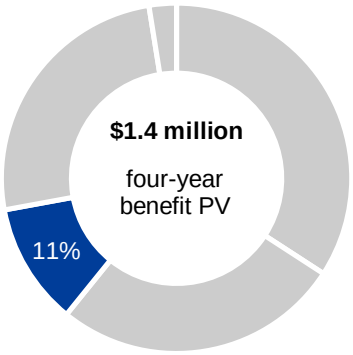
Endpoint Management FTE Cost Savings

Access to the security experts provided by Microsoft was a key benefit for several of the interviewed customers who either found the prospect of building out the necessary security capabilities daunting or had no interest in building those capabilities and would rather focus on their core competencies. This is a common concern for companies. Forrester reports that 28% of security decision makers primarily working in endpoint, data, or mobile security believe the unavailability of security employees with the right skills was the biggest IT security challenge for their firm. Additionally, 24% thought the lack of security staff was the biggest challenge. Meanwhile, 22% of respondents cited “day-to-day tactical activities taking up too much time” as the biggest IT security obstacle. By moving to Microsoft Managed Desktop, the interviewed customers were able to reduce the time spent on:

- Auditing, updating, and patching computers.
- Updating their security baselines.
- Remediating security issues on endpoints.
- Creating, testing, releasing security policies.

The interviewed customers can now focus on strategic IT challenges within their organizations such as: building a culture of data stewardship, complying with new privacy laws, getting companywide buy-in, or any of the other top IT challenges listed below.



Endpoint management FTE cost savings: 11% of total benefits

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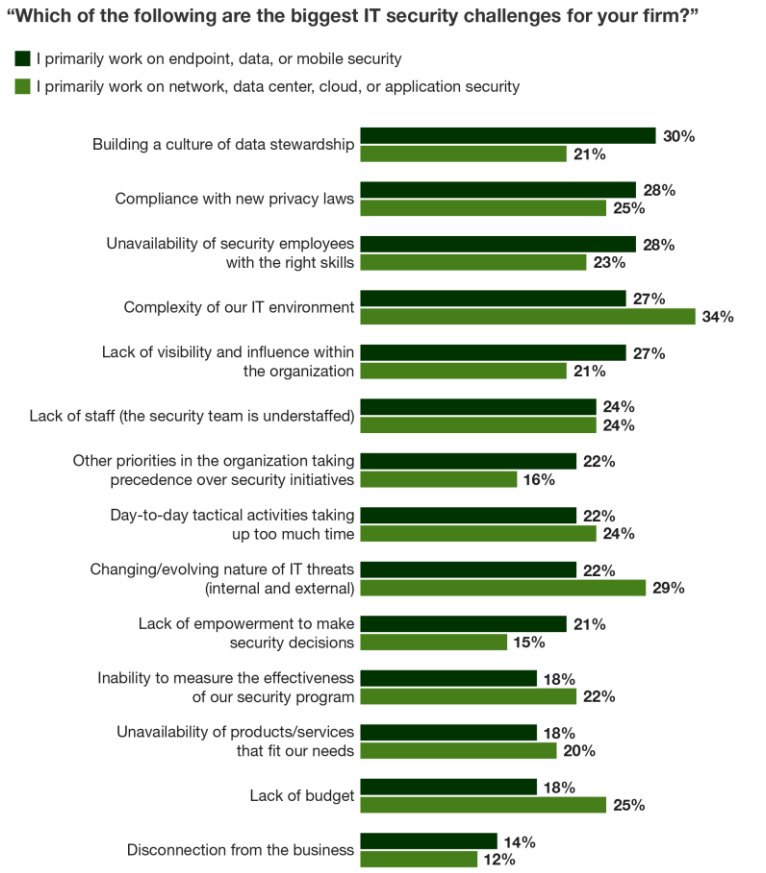
FORRESTER® **ANALYTICS**

Endpoint And Network Security Decision Makers Rank Their Challenges Differently

The State Of Endpoint Security, 2019



Base: 139 to 297 global security decision makers at firms with 1,000 or more employees
Source: Forrester Analytics Global Business Technographics® Security Survey, 2018

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The interviewed customers said:

- "From a security perspective, we believe [Microsoft Managed Desktop] will make us more secure. Part of the reason is that we can't compete with how much Microsoft invests in security."
- "We're three months ahead of [our parent company] in terms of updating and patching our computers. We're always getting the latest security patches with zero to very minimal input or impact on our IT staff."
- "Patch management has been a great benefit. I think we were better than most organizations about patching and updating systems. However, even though it was relatively automated, IT members still struggled with keeping on top of [patching and updating systems]. So not having to worry about that at all is great."
- "It would cost me three to five times what I pay for Microsoft Managed Desktop if I had to replicate what it provides. Half of that would be to replicate O365 E5, and half of that would be to replicate Microsoft Managed Desktop."

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› "Having Microsoft's security baseline and having it managed by Microsoft is very nice. I don't have to worry about making tweaks or changing configurations. Microsoft does that."

For the composite organization, Forrester assumes that:

› The composite organization dedicates an average of 1.5 IT FTEs per 1,000 endpoints on auditing, patching, and updating activities.

› The composite organization has 2.5 FTEs dedicated to testing and preparing new features, drivers, and Windows 10 updates.

› An additional two IT FTEs focus on researching security threats and monitoring the organization's environment for security threats.

› After migrating management to Microsoft Managed Desktop, Microsoft manages these activities and reduces the time that IT FTEs need to spend on these activities by 50%.

This benefit will vary based on:

› The number of FTEs required to manage an organization's endpoints.

› The number of FTEs focused on endpoint security management.

› The speed at which an organization moves to Microsoft Managed Desktop.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a four-year risk-adjusted total PV of $1,398,264.

Endpoint management time savings:

50% reduction in time

Endpoint Management FTE Cost Savings: Calculation Table

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4
C1	FTEs dedicated to auditing, patching, remediating security issues, and creating policies	Assumption	12	12	12	12
C2	Reduction in FTEs required due to Microsoft Managed Desktop	Assumption	50%	50%	50%	50%
C3	IT FTEs affected by Microsoft Managed Desktop	Based on customer interviews	25%	50%	75%	100%
C4	Average IT FTE fully burdened salary	Assumption	$130,000	$130,000	$130,000	$130,000
Ct	Endpoint management FTE cost savings	C1*C2*C3*C4	$195,000	$390,000	$585,000	$780,000
	Risk adjustment	↓5%				
Ctr	Endpoint management FTE cost savings (risk-adjusted)		$185,250	$370,500	$555,750	$741,000

End User Setup Time Savings And Reduced Help Desk Tickets

Setting up a new user on their device(s) required a significant amount of time and effort for both IT administrators and users. IT administrators would have to spend time configuring a new endpoint to meet the needs of a specific end user. Meanwhile, end users would struggle to be productive after getting their new devices.

Previously, IT organizations would have numerous images that they would need to create and maintain for different end users, increasing the likelihood of an OS-related issue during setup.

By moving to Microsoft Managed Desktop, the interviewed customers moved to a modern environment, reducing the time and effort needed to get a user set up on a new device. Microsoft maintains one OS version, and components like Autopilot, Windows Hello, and self-service portals make the setup process substantially faster.

The vice president of IT for the healthcare provider noted that, since moving to Microsoft Managed Desktop, "[People's responses have been,] 'Oh wow. Hey, everything is here basically.' You don't have to spend two, three, or four days trying to get back to baseline after your device has been swapped out." The digital workplace director shared this sentiment and said: "The migration experience is much easier because we're using Microsoft Managed Desktop. You switch on your device, enter your credentials, and you automatically pull down the applications you need."

The interviewed customers noted a marked improvement in both the stability of the OS and in the hardware since moving to Microsoft Managed Desktop, resulting in a reduction in support ticket requests. Since moving to Microsoft Managed Desktop, the interviewed customers noted that end users experienced fewer system crashes, blue screens, and hardware failures. One interviewee said: "Forty to 50% of tickets would be related to the operating system, the computer [hardware], or the image. We don't have anything [with Microsoft Managed Desktop]."

For this benefit, Forrester assumes:

- On average, end users spend four hours over several days with IT administrators to get set up on a new computer. This time is spent transferring files, ensuring that the user has all of the applications they need, remediating any hardware or OS related issues, and discussing any differences between their previous and new computer.
- With Microsoft Managed Desktop, the number of OS and hardware related issues discovered during setup is reduced. Additionally, the various components in Windows 10 reduce the time both parties need to spend to get set up.
- In the prior environment, the composite organization received an average of seven help desk calls per user per year related to the operating system and hardware performance. With Microsoft Managed Desktop, help desk calls are reduced by 35%.
- The cost to resolve a call is $50. This assumes that the combined hourly labor cost for a help desk agent and an end ,user is $100 per hour and that the average help desk ticket takes 30 minutes to resolve.

The time savings organizations recognize from moving to Microsoft Managed Desktop will vary based on:

50% reduction in time spent on endpoint management

90% reduction in time required to set up end users

35% reduction in help desk calls regarding device system and performance issues

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- IT and end user salaries.
- The organization's existing adoption of modern management solutions.
- How long it takes users to get set up on a new device.
- The average number of help desk calls related to OS and hardware issues.
- The cost to resolve a help desk call.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a four-year risk-adjusted total PV of $3,140,835.

End User Setup Time Savings And Reduced Help Desk Tickets: Calculation Table

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4
D1	Annual endpoints configured	Four-year replacement cycle assumed	1,250	1,250	1,250	1,250
D2	Average time required to set up a user on a new laptop	Assumption	6	6	6	6
D3	Reduction in time needed to setup users on new laptops	Assumption	90%	90%	90%	90%
D4	Average fully burdened IT salary		$62.50	$62.50	$62.50	$62.50
D5	Average fully burdened employee salary		$38	$38	$38	$38
D6	IT admin time savings	D1*D2*D3*D4	$421,875	$421,875	$421,875	$421,875
D7	End user time savings	D1*D2*D3*D5	$256,500	$256,500	$256,500	$256,500
D8	Number of help desk calls related to Microsoft products (prior state)		8,750	17,500	26,250	35,000
D9	Reduction in calls		35%	35%	35%	35%
D10	Cost per call		$50	$50	$50	$50
D11	Reduced call volume	D8*D9*D10	$153,125	$306,250	$459,375	$612,500
Dt	End user setup time savings and reduced help desk tickets	D6+D7+D11	$831,500	$984,625	$1,137,750	$1,290,875
	Risk adjustment	↓5%				
Dtr	End user setup time savings and reduced help desk tickets (risk-adjusted)		$789,925	$935,394	$1,080,863	$1,226,331

Endpoint Configuration And Deployment Time Savings

By moving to Microsoft Managed Desktop, the interviewed organizations were able to reduce or eliminate the time spent testing, purchasing, and imaging new computers. Instead of IT departments researching and testing different devices from multiple vendors to find the devices that meet their organizations' needs, they can rely on a list of devices that Microsoft has already tested and certified to meet enterprise-level performance requirements.

Moreover, IT teams don't have to worry about creating images, maintaining them for their devices, or applying those images on new devices. The IT architect for the utility provider explained the benefit this has for both their IT department and their end users. "It used to take someone two to three months to create an SOE after we bought a new model laptop. We couldn't start rolling out new laptops before we did that. With Microsoft Managed Desktop, that burden is gone. When we buy a new device, we make sure it's enrolled in Microsoft Managed Desktop, then we just have our users log in. We know that they're going to have a consistent experience across the board because the new device will have all our policies."

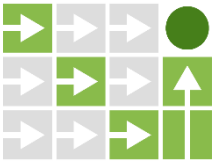
In measuring these time savings, Forrester assumes that:

- Prior to migrating to Microsoft Managed Desktop, the composite organization dedicates:
  - Thirty-five percent of an IT FTE's time every three years to research, test, and compare different devices from multiple vendors to determine what to purchase for the next three years.
  - Thirty-five percent of an IT FTE's time to create and maintain the images for their devices, create and update policies, and test and release new features every year.
- By moving to Microsoft Managed Desktop, the composite organization is able to reduce the time spent on purchasing and testing new endpoints by 40%. Additionally, the IT administrators spend 80% less time managing device policies.
- Before moving to Microsoft Managed Desktop, it took one FTE 45 minutes to configure a new endpoint. Microsoft Managed Desktop eliminates these efforts.

The magnitude of this benefit will vary based on:

- The time an organization dedicates to determining which devices it should purchase.
- The number of new devices configured every year.
- Whether organizations are currently leveraging zero-touch configuration tools.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a four-year risk-adjusted total PV of $313,590.



40% reduction in time spent on endpoint procurement and testing

80% reduction in time spent on managing device policies

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Endpoint Identification And Image Creation Time Savings: Calculation Table						
REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4
E1	Hours required to identify new endpoints and create and test images	Based on customer interviews	1,456	728	728	1,456
E2	Percent of time saved with Microsoft Managed Desktop	Based on customer interviews	60%	80%	80%	60%
E3	Hours saved with Microsoft Managed Desktop	E1*E2	873.6	582.4	582.4	873.6
E4	Average fully burdened IT admin salary	Industry average	$62.50	$62.50	$62.50	$62.50
E5	Endpoint identification and image creation time savings	E3*E4	$54,600	$36,400	$36,400	$54,600
E6	Annual endpoints configured	Four-year replacement cycle assumed	1,250	1,250	1,250	1,250
E7	Hours required to image endpoints with previous solution	45 minutes	0.75	0.75	0.75	0.75
E8	Endpoint configuration and deployment time savings	E6*E7*E4	$58,594	$58,594	$58,594	$58,594
Et	Endpoint configuration and deployment time savings	E5+E8	$113,194	$94,994	$94,994	$113,194
	Risk adjustment	↓5%				
Etr	Endpoint configuration and deployment time savings (risk-adjusted)		$107,534	$90,244	$90,244	$107,534

Unquantified Benefits

Interviewees also identified a variety of benefits that could not be quantified for this study. Their organizations saw:

- **Improved employee experience.** In addition to the productivity benefits outlined above, the interviewees also noted that employee satisfaction improved after moving to Microsoft Managed Desktop. Though the interviewed customers were in the process of measuring employee satisfaction and its impact on their organizations, Forrester reports that improved employee experience can lead to: 1) better work performance; 2) higher discretionary effort; 3) lower employee turnover; and 4) reduced recruiting costs.[4]
- **Reduced risk of security breaches.** Every interviewee believed that moving to Microsoft Managed Desktop improved their organization's security. While the interviewees didn't have all the necessary information to quantify this benefit, an organization could measure this by calculating the cost and probability of a security breach. According to the Ponemon Institute, the average total cost of a security breach can cost:
    - $2.74 million for organizations with less than 500 employees.
    - $2.65 million for organizations with 500 to 1,000 employees.

- $3.63 million for organizations with 1,001 to 5,000 employees.
- $4.41 million for organizations with 5,001 to 10,000 employees.
- $4.35 million for organizations with 10,001 to 25,000 employees.
- $5.11 million for organizations with 10,001 to 25,000 employees.

Additionally, the Ponemon Institute estimates the probability of a data breach over the next two years is 14.8% per year.[5]

Estimate Your Reduced Risk of a Security Breach

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4
X1	Average total cost of a breach without security automation	Based on Ponemon Institute research	$x,xxx,xxx	$x,xxx,xxx	$x,xxx,xxx	$x,xxx,xxx
X2	Probability of a breach	Based on Ponemon Institute research	14.8%	14.8%	14.8%	14.8%
X3	Reduced probability of a data breach based on improved endpoint security	Based on reader estimate	xx%	xx%	xx%	xx%
Xt	Reduced risk of a security breach	X1*X2*X3	$xxx,xxx	$xxx,xxx	$xxx,xxx	$xxx,xxx
	Risk adjustment	↓15%				
Xtr	Reduced risk of a security breach (risk-adjusted)		$xxx,xxx	$xxx,xxx	$xxx,xxx	$xxx,xxx

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 Managed Desktop and later realize additional uses and business opportunities, including:

- **Additional help desk savings by adopting Microsoft Managed Desktop help desk support.** Organizations could further reduce their help desk costs by shifting their help desk operations to Microsoft Managed Desktop.
- **Adoption of the newest offerings from Microsoft 365 faster as they are released.** Microsoft is continually innovating on new product offerings added to Microsoft 365 solutions. Because devices will always be up-to-date, organizations can take advantage of these offerings immediately and save time spent updating devices and testing and deploying new Microsoft 365 features.

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A).

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.

Analysis Of Costs

QUANTIFIED COST DATA AS APPLIED TO THE COMPOSITE

Total Costs

REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	TOTAL	PRESENT VALUE
Ftr	Microsoft Managed Desktop licensing costs	$0	$787,500	$1,575,000	$2,362,500	$3,150,000	$7,875,000	$5,944,036
Gtr	Planning, implementation and ongoing management costs	$280,000	$409,500	$409,500	$409,500	$273,000	$1,781,500	$1,484,829
	Total costs (risk-adjusted)	$280,000	$1,197,000	$1,984,500	$2,772,000	$3,423,000	$9,656,500	$7,428,865

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over four years, the composite organization expects risk-adjusted total costs to be a PV of more than $7.4 million.

Microsoft Managed Desktop Licensing Costs

The composite organization incurs monthly fees per device. Please note that this does not constitute a quote. Readers should contact Microsoft for a quote.

Based on the customer interviews, Forrester assumes that:

- The composite organization pays monthly fees of $50 per month per device.
- The composite organization increases the number of Microsoft Managed Desktop devices in its organization by 1,250 per year.
- By Year 4, the composite organization has 5,000 devices managed under Microsoft Managed Desktop.

Licensing fees will vary from organization to organization based on:

- The pace of device enrollment.

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a four-year, risk-adjusted total PV of $5,944,036.

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.

Microsoft Managed Desktop Licensing Costs: Calculation Table							
REF.	METRIC	CALCULATION	INITIAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4
F1	Microsoft Managed Desktop licensing costs	$50/month/year		$750,000	$1,500,000	$2,250,000	$3,000,000
Ft	Microsoft Managed Desktop licensing costs	F1		$750,000	$1,500,000	$2,250,000	$3,000,000
	Risk adjustment	↑5%					
Ftr	Microsoft Managed Desktop licensing costs (risk-adjusted)		$0	$787,500	$1,575,000	$2,362,500	$3,150,000

Planning, Implementation, And Ongoing Management Costs

Planning, implementation, and deployment costs vary significantly based on an organization's size, environment, and the number of devices. Forrester calculated the internal labor costs associated with implementing and managing Microsoft Managed Desktop, along with third-party costs.

The initial planning and implementing phases require organizations to:

- Map their existing security and management solutions and industry-specific regulations to ensure that Microsoft Managed Desktop meets their needs.
- Once this is complete, organizations then perform additional security tests during their proof of concept phase.
- Specify and qualify new hardware.
- Architect their environments to enable Microsoft Managed Desktop enrollment, which includes configuring their networks, legacy on-premises mapped drives, Active Directory, and other components of their infrastructures.

After preparing their organizations for Microsoft Managed Desktop, the interviewed customers dedicated several FTEs to:

- Manage their Microsoft Managed Desktop environments.
- Maintain and package existing and new applications.
- Assist IT and end users with the rollout of Microsoft Managed Desktop devices.

For the composite analysis, Forrester assumes:

- The composite organization dedicates 2.5 FTEs for five months to ensure Microsoft Managed Desktop meets its security needs, source and test new Microsoft Managed Desktop devices, configure its infrastructure to meet Microsoft Managed Desktop requirements, prepare company-specific applications for Microsoft Managed Desktop, and perform a proof of concept (PoC).
- To help with the implementation phase, the composite organization engages with a Microsoft partner.
- After completing the initial implementation phase, the composite organization dedicates four FTEs to manage its Microsoft Managed Desktop environment, support new Microsoft Managed Desktop users, and create and manage company-specific applications.

Five months
Total implementation and deployment time

The following risks can affect this cost estimate:

- The size and scope of the deployment.
- The number of prerequisites for Microsoft Managed Desktop an organization meets.
- The mix of professional services and internal labor used to implement and maintain Microsoft Managed Desktop.

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a four-year risk-adjusted total PV of $1,484,829.

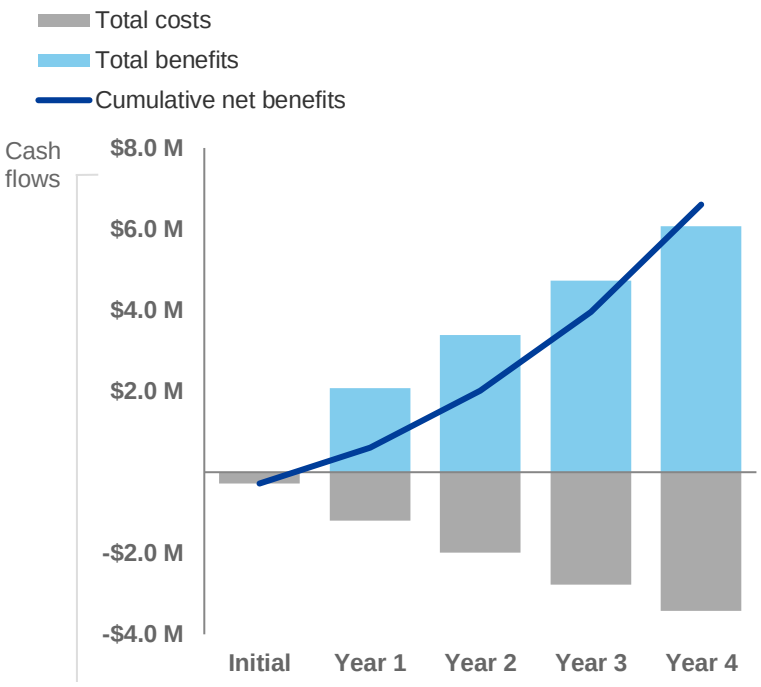
Planning, Implementation And Ongoing Management Costs: Calculation Table

REF.	METRIC	CALCULATION	INITIAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4
G1	IT FTEs dedicated to planning and implementation	Composite	4.0	0.0	0.0	0.0	0.0
G2	Months spent on the planning and implementation phase	Based on customer interviews	5	0	0	0	0
G3	IT FTEs dedicated to ongoing management	Composite		3.00	3.00	3.00	2.00
G4	Average fully burned IT salary	Assumption	$130,000	$130,000	$130,000	$130,000	$130,000
G5	Internal labor costs	(G1*G2/12)+G3)*G4	$216,667	$390,000	$390,000	$390,000	$260,000
G6	Professional services	Composite	$50,000				
Gt	Planning, implementation, and ongoing management costs	G5+G6	$266,667	$390,000	$390,000	$390,000	$260,000
	Risk adjustment	↑5%					
Gtr	Planning, implementation, and ongoing management costs (risk-adjusted)		$280,000	$409,500	$409,500	$409,500	$273,000

Financial Summary

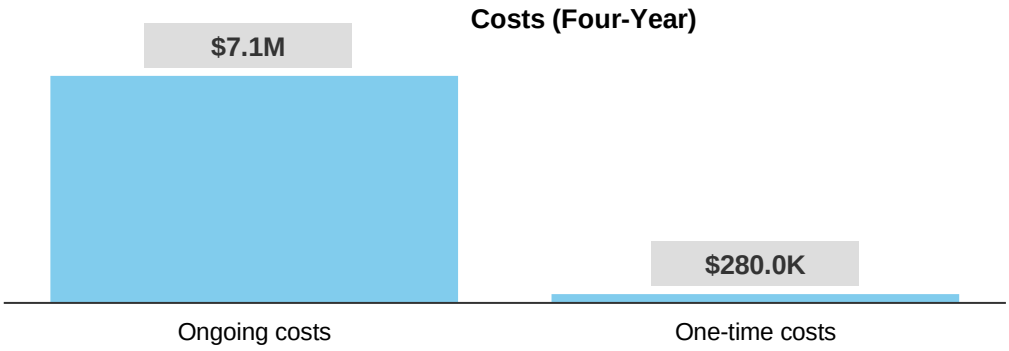
CONSOLIDATED FOUR-YEAR RISK-ADJUSTED METRICS

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, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.



	INITIAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	TOTAL	PRESENT VALUE
Total costs	($280,000)	($1,197,000)	($1,984,500)	($2,772,000)	($3,423,000)	($9,656,500)	($7,428,865)
Total benefits	$0	$2,080,605	$3,391,930	$4,720,544	$6,066,449	$16,259,528	$12,384,789
Net benefits	($280,000)	$883,605	$1,407,430	$1,948,544	$2,643,449	$6,603,028	$4,955,924
ROI							67%
Payback period (months)							<6

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Microsoft Managed Desktop: Overview

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

Offload the time you spend managing your PCs to Microsoft Managed Desktop and refocus as much as **55% of your IT time.**[1]

For organizations seeking to accelerate their digital transformation, Microsoft Managed Desktop is a cloud-based IT management and security monitoring service that improves productivity by delighting users and empowering IT to focus on core business goals.

Microsoft Managed Desktop customers enjoy fantastic device experiences that are always up-to-date, secure and monitored, with actionable service insights for IT and device users.

Delight end users

Give your users a more secure and productive environment to get work done by providing modern desktop capabilities across Windows 10 and Office 365 ProPlus.

Users hit the ground running with pre-approved modern devices that meet Microsoft enterprise support and security standards and deliver benefits across boot time, battery life, and uptime.[2]

23 sec	7.6 hr	1.5
Boot time	Battery life	Crashes per year

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24/7 security monitoring with Microsoft Managed Desktop

Microsoft Managed Desktop users surveyed were **31%[2] more likely** to agree that they have the necessary tools and technology to work effectively.[3]

Stop playing catch-up and complete your digital transformation with Microsoft Managed Desktop

Empower IT

Avoid complex migrations and update cycles by getting current and staying current with the latest technology, delivered to your desktops from the cloud.

Microsoft Managed Desktop is delivered by a team of professionals that provide health monitoring and end-user support. You'll receive new Microsoft 365 features as soon as they're released without interruption to your environment.

- Hardware qualified by Microsoft
- Cloud configured to work out of the box
- Settings and data are stateless
- Office and apps onboard
- End user support
- Always up to date

Deliver expert security

The features inside Microsoft 365 and Microsoft Defender ATP combine with Microsoft Managed Desktop to provide a fully monitored, continuously evolving security platform.

- Security operations team
- ITIL based service interlock
- Health monitoring
- Standard user only
- Evolving security posture
- Built in, not bolted on

Learn more about how Microsoft Managed Desktop can help your organization and how to get started at **aka.ms/MMDnow**

1 Analysis based on Microsoft WDG Research and Intelligence Report - Enterprise IT Management Investments, November 2019 • **2** MMD Customer Aggregate on Surface Hardware vs Windows 10 Commercial aggregate, Microsoft Graph, June 2019 • **3** Microsoft + Qualtrics PC Experience Program, October 2019 (N = 477) • © 2019 Microsoft. All rights reserved.

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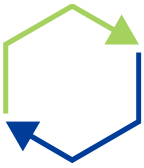
Appendix A: Total Economic Impact

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: Endnotes

[1] Source: “Why EX? Why Now?,” Forrester Research, Inc., November 27, 2018.

[2] Source: “The State Of Endpoint Security, 2019,” Forrester Research, Inc., January 22, 2019

[3] Source: “The State Of Endpoint Security, 2019,” Forrester Research, Inc., January 22, 2019.

[4] Source: “Why EX? Why Now?,” Forrester Research, Inc., November 27, 2018.

[5] Source: “2019 Cost of a Data Breach Study,” Ponemon Institute, LLC, April 2019.