A Forrester Total Economic Impact™ Study

Commissioned By Microsoft

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The Total Economic Impact™ Of Microsoft's Enterprise Mobility Suite

Cost Savings And Business Benefits Enabled By The Enterprise Mobility Suite

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Executive Summary

Microsoft Enterprise Mobility Suite improves productivity while reducing risk.

The benefits for a composite organization of 12,500 employees, based on customer interviews, include the following:

- **Provide business users access to applications 25% more quickly, increasing their productivity.**
- **Reduce security risk by $390,000 annually.**
- **Deflect help desk calls 75% of the time for password reset questions.**

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 the Enterprise Mobility Suite (EMS). The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of EMS on their organizations, to support the increasing mobility of employees and improve their productivity while protecting the company against security incidents.

To better understand the benefits, costs, and risks associated with an Enterprise Mobility Suite implementation, Forrester interviewed several customers with experience using EMS. The suite, which includes identity and access management, mobile device and app management, and information protection, 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 supports the changing business environment that requires an organization to secure personal and corporate devices, allows single sign-on for cloud and on-premises applications, and gives organizations the ability to provision and deprovision users rapidly, in support of business growth and flexibility.

Prior to EMS, customers had implemented a combination of products, including Microsoft Active Directory and Office 365, along with a point solution for mobile device management from an outside vendor. However, the lack of integration between the MDM solution and the organization's general identity management made it more difficult and time consuming to secure mobile devices and apps, exposing the company to risk. Furthermore, the organizations wanted to support a cloud business environment that could adapt to changes in user access and additions of new cloud-based apps, and flex to include partners and customers in secure ways. IT staff struggled to balance the demands of an increasingly mobile workforce with the security measures to fill gaps around device management, application access, and file exchange. With EMS, customers were able to manage all cloud and on-premises applications, user groups, and devices with a single suite of tools while reducing costs. Said one IT innovation manager: "Microsoft EMS actually empowers the user, rather than takes away from them. It's secure without being overly annoying. In the world we live in today, you have to stay ahead of the game — it's more about the proactive than the reactive measures."

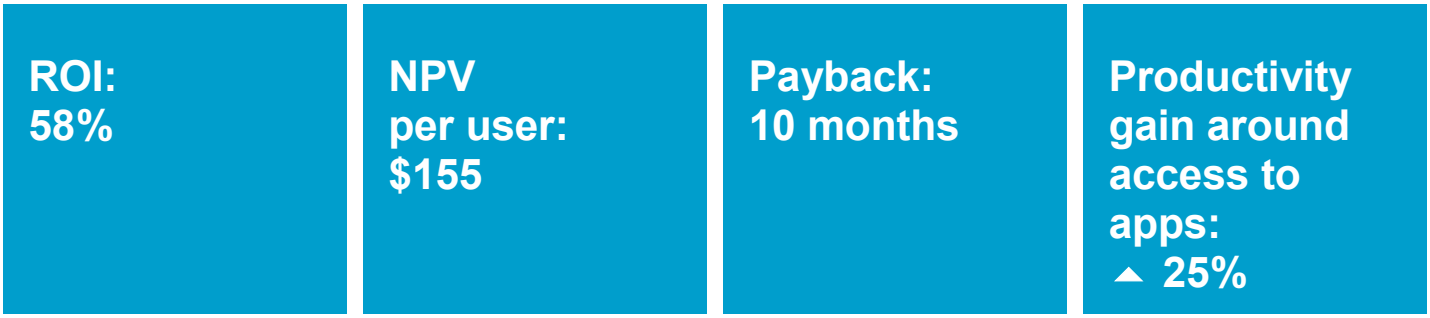
MICROSOFT EMS IMPROVES PRODUCTIVITY WHILE REDUCING RISK

Our interviews with four existing customers and subsequent financial analysis found that a composite organization based on these interviewed organizations experienced the risk-adjusted ROI, productivity benefits, and payback period shown in Figure 1. See Appendix A for a description of the composite organization.

The composite organization analysis points to benefits of $1.7 million per year versus implementation costs of $828,000, adding up to a net present value (NPV) of $1.55 million.

This translates to benefits of more than $420 per user, implementation costs of less than $7 per user, and an NPV of $155 per user. With Enterprise Mobility Suite, employees got access to applications and devices 25% to 40% more quickly, and the composite organization experienced additional savings in security risk avoidance and reduced infrastructure costs.

FIGURE 1
Financial Summary Showing Three-Year Risk-Adjusted Results



Source: Forrester Research, Inc.

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

- **Improved end user productivity getting access and logging into software-as-a-service (SaaS) applications.** New business users can get access to SaaS applications 25% more quickly. Changes to existing users' access were also improved by the same degree. The time it takes to log into applications decreased from 6 seconds to instantaneous because of single sign-on capability. Combined, all of these factors improved end user productivity.
- **Security cost risk avoidance.** Microsoft EMS reduces the risk of an internal or external security incident occurring that would require a costly recovery. These incidents range in their impact, but the security enabled by the authentication and access and information protection provided by Microsoft EMS saves over $390,000 annually.
- **Reduced legacy license and infrastructure costs for enterprise mobility management.** Because Microsoft EMS displaces on-premises mobile device management tools, the organization recovers license and infrastructure costs that would be directed to another provider.
- **Reduction in call volume to the help desk, resulting in cost savings.** The majority of calls to the help desk are for password resets. With Microsoft EMS, calls can be deflected 75% of the time because of user self-service capabilities regarding forgotten passwords.
- **Improved mobile device registry and access, reducing work for the business and IT.** Microsoft EMS provides the ability to register for, enroll in, and manage mobile devices from a self-service portal. This decreases IT and business user costs for registrations. Devices can be registered 40% more quickly.
- **Reduced administrative efforts for IT staff managing mobile devices.** With Microsoft EMS, IT provisions and deprovisions users automatically, reducing their workload. IT employees spend 35% less time building integrations between cloud and on-premises applications because of the pre-integrations within the Microsoft EMS solution.

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

- **Software licensing fees of $828,000 annually, or $6.90 per user.** These are annual recurring fees paid to Microsoft for access to Azure Active Directory Premium, Microsoft Intune, and Azure Rights Management.
- **Implementation and professional services fees of $580,000.** This is an initial fee. Approximately three-quarters of these implementation costs are incurred by the organization's IT staff, and one-third is paid to outside consultants.
- **Training fees of $84,000.** These are initial fees that are assumed to be about 10% of the one-year software license costs. This internal cost and effort is the result of both internal IT staff and end user training.

Disclosures

The reader should be aware of the following:

› The study is commissioned by Microsoft and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

› Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Microsoft/Enterprise Mobility Suite.

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

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

TEI Framework And Methodology

INTRODUCTION

From the information provided in the interviews, Forrester has constructed a Total Economic Impact (TEI) framework for those organizations considering implementing the Enterprise Mobility Suite. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision, to help organizations understand how to take advantage of specific benefits, reduce costs, and improve the overall business goals of winning, serving, and retaining customers.

APPROACH AND METHODOLOGY

Forrester took a multistep approach to evaluate the impact that the Enterprise Mobility Suite (EMS) can have on an organization (see Figure 2). Specifically, we:

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

Forrester employed four fundamental elements of TEI in modeling Microsoft's suite: benefits, costs, flexibility, and risks.

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

FIGURE 2

TEI Approach

Source: Forrester Research, Inc.

Analysis

COMPOSITE ORGANIZATION

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

- One of the largest facility management services providers in the United States, with 120,000 employees and about $5 billion in revenue.
- A $5 billion construction company that provides general contracting, construction management, and design/build services to clients nationwide, with offices throughout North America and 6,000 employees.
- The largest Nordic fitness chain, with revenue of around $500 million and 7,500 full-time employees and 2,500 part-time or hourly employees.
- One of the largest school districts in the United States, with around 150,000 students and 5,000 employees.

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

> *"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

- It is a US-based organization.
- It has 10,000 full-time employees and 2,500 part-time, temporary, or acquired employees in a given year.
- With thousands of devices under management, the organization had an incumbent mobile device management solution in place and decided to pursue an alternative. Not all employees need to have their devices managed because of their job role or function.
- It has about four acquisitions per year, Each acquisition adds devices to be provisioned and users who need access.
- A healthy network of partners, suppliers, and customers need to get access to corporate applications and occasionally have an email address with the corporate domain.

After implementing Office 365 as part of a larger cloud strategy, this organization decided to purchase Microsoft Enterprise Mobility Suite to enable and complete its move to cloud. Because the organization had an existing relationship with Microsoft and could receive a significant price advantage from a price-per-user perspective that was much more compelling than point products from multiple vendors (including the MDM solution in place), it purchased EMS and began deployment:

- Implementation started two years ago with the move to Office 365.
- One year ago, when the organization was renewing its contract with Microsoft, it added the Enterprise Mobility Suite, which was made available for immediate use. The goal of the implementation was to be able to be more agile in adopting new

technologies, provide services and apps securely and quickly to users and their devices, and consolidate quickly with other businesses for short-term projects or as part of an acquisition.

- The first step in the implementation was to use Azure Active Directory for about 20% of the organization to complete the integration architecture and to add IT services quickly into the IT portfolio. Simultaneously, they used single sign-on for apps for 100% of the organization.
- Next, the organization added Intune for the users who have mobile devices that are used for corporate purposes.
- The organization uses the Azure Rights Management feature with its most sensitive documents and employees, but sees the opportunity to use it more extensively in the years to come.
- Although the end users did not require extensive end user training because the tools are intuitive, the rate of change for the available services and applications requires the organization to provide ongoing training and support, especially in advance of updates to the software and services.

"With our cloud strategy supported by EMS, we can be more agile and adapt better to new devices and the Internet of Things. We can deliver better quality without growing our department and do everything with more 'I' and less 'T.'"

~ Chief technology strategist, construction firm

INTERVIEW HIGHLIGHTS

The organization implemented Microsoft EMS to meet its many corporate objectives, highlighted below.

Situation

Like many organizations today, the composite organization faced a rapidly changing workforce and business environment. The business users were relying on mobile devices increasingly to complete job tasks and access corporate applications while on the move. On a regular basis, they interact and collaborate with a network of customers, partners, and part-time/contract employees with whom they want to share data and files. Furthermore, they rely on SaaS-based applications outside of the corporate domain to fill in the gaps when they need business applications not offered internally, such as file sharing or social media. With the proliferation of devices and applications in use throughout the organization and not all of them securely managed, the organization saw the opportunity to improve access to applications in a more secure way that could benefit the business user and IT simultaneously. The organization had the following objectives in seeking out an enterprise mobility management suite:

- Round out and enable managed mobile productivity with Office 365 while also replacing an on-premises mobile device management solution.
- Secure devices (personal and corporate) and control the apps on these devices with appropriate flexibility. The organization wanted to empower business users to perform more self-service activities, such as password resets and requests for access to various apps, including corporate mobile apps on an app exchange.
- Provide employees with one identity that works across cloud and on-premises applications, to decrease the amount of time business users spend logging into SaaS applications with multiple login credentials and shorten the wait time to get access to core applications to complete their jobs.

- Enable the IT organization to perform device management across devices in the cloud, simplifying the management tasks associated with the process.
- Reduce the exposure to security risk around incidents by protecting the data and devices that could expose the organization to vulnerabilities if in the wrong hands. This includes using Cloud App Discover to identify "shadow IT" apps that could put the company at risk (while also reducing costs).
- Enable interim workers (partners, suppliers, etc.) to have a secure, joint email and working space.

Solution

The composite organization selected Enterprise Mobility Suite for its ability to integrate easily with existing Microsoft and Windows products, its comprehensive security features, and its cloud-based mobile device management capabilities. Furthermore, the simplified license provided a complete enterprise mobility solution at a lower cost than three unique point products.

Results

The interview revealed that:

- **Business and IT productivity increased (along with satisfaction).** The most significant benefits experienced were around the increased productivity of business end users and IT staff as it relates to accessing applications and using mobile devices. As a result of Microsoft EMS, they could access apps more easily and quickly on their devices.
- **The composite organization saw an avoidance of common security incidents.** The composite organization was able to reduce its exposure to common security incidents that require costly inquiry for resolution. Through the multifactor authentication features and the ability to rapidly release security policies for employees, customers, and partners, the organization could protect sensitive data from getting into the wrong hands. It could also identify shadow IT and incorporate it into the cloud infrastructure when appropriate.
- **A reduction in infrastructure and management costs resulted from an easy-to-use cloud-based solution.** The composite organization described Enterprise Mobility Suite as a very robust cloud offering that reduced the workload of the IT staff. As a result of the Enterprise Mobility Suite implementation, many tasks of the IT staff were automated, such as provisioning and deprovisioning users and resetting passwords. Because the solution is cloud-based, the organization also saved in infrastructure costs. Prior to Microsoft EMS, it hosted a mobile device management solution that required infrastructure and operations resources.

> *"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."*
>
> ~ Chief technical architect, facility management service provider

BENEFITS

The composite organization experienced a number of quantified benefits in this case study:

- Improved access to SaaS applications, resulting in increased end user productivity.
- Security cost risk avoidance.
- Reduced legacy license and infrastructure costs for enterprise mobility management.
- Reduction in call volume to the help desk, resulting in cost savings.
- Improved mobile device registry and access, reducing work for the business and IT.
- Reduced administrative efforts for IT staff managing mobile devices.

Another important benefit mentioned by the composite organization was an increase in flexibility and usability while providing increased security. The end users did not feel hampered by the EMS features and, in many cases, were able to get access more easily to sensitive documents and applications without having to go through other people or steps.

Improved Access to SaaS Applications, Resulting In Increased End User Productivity

The composite organization indicated that a key benefit from the Enterprise Mobility Suite implementation was an improvement in end user productivity accessing SaaS applications, including gaining access to and logging into SaaS applications. Prior to Enterprise Mobility Suite, the composite organization 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 in Active Directory and assign them to SaaS applications using Azure Active Directory Premium.

Following the Enterprise Mobility Suite implementation, the composite organization reduced average completion of requests for access to SaaS applications from five days to immediate access. Before Enterprise Mobility Suite, 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 Enterprise Mobility Suite, 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, the typical time delay logging into SaaS applications, which hurts the daily productivity of many users, is eliminated with EMS. As a result, with an average number of five apps per user that employees are logging into, the composite organization saved $755,000 per year. At a wage of $40 per hour for each business user, the total benefit resulting from improved end user productivity accessing SaaS applications over the three years was $1.87 million.

Interviewed organizations from a variety of industries provided a broad range of impact to business productivity. The types of employees vary, and a delay to access applications will affect employees differently as well. To compensate, this benefit was risk-adjusted and reduced by 20%. The risk-adjusted total benefit resulting from improved end user productivity accessing SaaS applications over the three years was $1.5 million. See the section on Risks for more detail.

TABLE 1
Improved Access to SaaS Applications, Resulting In Increased End User Productivity

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
	Gaining access to apps					
A1	Length of delay in gaining access	5 days		5	5	5
A2	Number of new users	Total users * turnover rate		1,375	1,375	1,375
A3	Number of changes in users			500	500	500
A4	Productivity impact	25%		25%	25%	25%
A5	Daily rate for business users	$320 @ $40/hr.		$320	$320	$320
A6	**Subtotal**	A1*(A2+A3)*A4*A5		$750,000	$750,000	$750,000
	Logging in to apps					
A6	Log in	6 seconds		6	6	6
A7	Number of users	12,500		12,500	12,500	12,500
A8	Number of apps per user	5		5	5	5
A9	Productivity captured	20%		20%	20%	20%
A10	Business days per year	255		255	255	255
A11	**Subtotal**	A6/3600*A7*A8*A9*A10		$5312.50	$5312.50	$5312.50
At	End user productivity gains	A6+A11	$0	$754,250	$754,250	$754,250
	Risk adjustment	↓ 20%				
Atr	**End user productivity gains (risk-adjusted)**		**$0**	**$603,400**	**$603,400**	**$603,400**

Source: Forrester Research, Inc.

Security Cost Risk Avoidance

The composite organization indicated that a key benefit from the Enterprise Mobility Suite implementation was a reduction in risk of a security incident that would require a costly recovery. Prior to Enterprise Mobility Suite, the composite organization had standard authentication measures in place but lacked two-factor authentication for a specific user community, such as senior-level managers with access to sensitive financial or business data. As a result, the composite organization was exposed to internal and external incidents that, at a minimum, would require costly investigation and, at a maximum, could decrease stock value, damage brand reputation, and cause the organization to lose business. With Microsoft EMS, the IT administrators can choose from a variety of authentication options to secure Microsoft and third-party applications. Furthermore, they are able to view detailed logs and reports to reduce the potential threat of an incident occurring. The total benefit resulting from security cost risk avoidance over the three years was $1,087,998 (present value).

Interviewed organizations provided a broad range of security threats, since they represent different industries with unique brand and product price points. To compensate, this benefit was risk-adjusted and reduced by 10%. The risk-adjusted total benefit resulting from security cost risk avoidance over the three years was $979,198. See the section on Risks for more detail.

TABLE 2
Security Cost Risk Avoidance

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
	Multifactor authentication					
B1	Percentage of users who require two-factor authentication	10% to 15%		1,250	1,250	1,250
B2	Probability of a security incident (internal event)	0.75% — Forrester Research		0.75%	0.75%	0.75%
B3	Average cost to recover from a security incident — internal incident	$10,000		$20,000	$20,000	$20,000
B4	Average cost to recover from a security incident — external incident	$250,000		$250,000	$250,000	$250,000
B5	Probability of a security incident — external event	0.08% — Ponemon Institute		0.08%	0.08%	0.08%
Bt	Security risk cost avoidance	(B1*B2*B3)+(B1*B4*B5)		$437,500	$437,500	$437,500
	Risk adjustment	↓ 10%				
Btr	**Security risk cost avoidance (risk-adjusted)**			**$393,750**	**$393,750**	**$393,750**

Source: Forrester Research, Inc.

Reduced Legacy License And Infrastructure Costs

The composite organization indicated that a key benefit from the Enterprise Mobility Suite implementation was the reduction in legacy license and infrastructure costs. Prior to Enterprise Mobility Suite, the composite organization had an on-premises, point mobile device management solution, which cost more money to purchase and host than Microsoft 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 provided by 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. The total benefit resulting from reduced legacy license and infrastructure costs over the three years was $890,293.

TABLE 3
Reduced Legacy License And Infrastructure Costs

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
C1	Current infrastructure spend — legacy, on-premises MDM solution	$570,000		$570,000	$570,000	$570,000
C2	Estimated percent reduction in hardware, software, and infrastructure administration costs	40%		40%	40%	40%
C3	Annual maintenance and license spend — legacy MDM solution	$18 * 10,000 device users		$180,000	$180,000	$180,000
C4	Estimated reduction in spend with EMS replacement	75%		75%	75%	75%
C5	Cost of moving from one MDM platform to another (deploy and retrain IT pros and information workers)			$5,000	$5,000	$5,000
Ct	Reduced infrastructure and legacy license costs due to SaaS offering — MDM	(C1*C2)+(C3*C4)-C5	$0	$358,000	$358,000	$358,000
	Risk adjustment	0%				
Ctr	**Reduced infrastructure and legacy license costs due to SaaS offering — MDM (risk-adjusted)**		**$0**	**$358,000**	**$358,000**	**$358,000**

Source: Forrester Research, Inc.

Reduction In Call Volume To The Help Desk, Resulting In Cost Savings

The composite organization indicated that a key benefit from the Enterprise Mobility Suite implementation was a reduction in call volume to the help desk, specifically for password resets. Prior to Enterprise Mobility Suite, the composite organization 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. The total benefit resulting from a reduction in call volume to the help desk over the three years was $699,427.

TABLE 4
Reduced Call Volume To The Help Desk, Reducing Costs

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
D1	Number of calls per user per year	6		75,000	75,000	75,000
D2	Percent of calls related to forgotten passwords	25%		25%	25%	25%
D3	Cost per call	$20		$20	$20	$20
D4	Percent of calls deflected	75%		75%	75%	75%
Dt	Improved help desk call deflection	D1*D2*D3*D4	$0	$281,250	$281,250	$281,250
	Risk adjustment	0%				
Dtr	**Improved help desk call deflection (risk-adjusted)**		**$0**	**$281,250**	**$281,250**	**$281,250**

Source: Forrester Research, Inc.

Improved Mobile Device Registry And Access

The composite organization indicated that a key benefit from the Enterprise Mobility Suite implementation was the ability to register mobile devices for business end users more easily. Prior to Enterprise Mobility Suite, the composite organization had a point mobile device management solution, which required integration with Active Directory to register new devices and users. Because the legacy point solution was not a Microsoft product, the composite organization had to spend additional time to register devices and users. This cost both IT and the business because business users had to wait for device registration and IT had to do extra work to add new devices to its Active Directory. With annual device growth expected year over year, the composite organization could gain efficiencies to keep up with that growing demand. With Microsoft EMS, mobile device registry is seamless because of Azure Active Directory, and security and access between applications, devices, and users is also seamless. The total benefit resulting from improved mobile device registry and access over the three years was $87,273.

TABLE 5
Improved Mobile Device Registry And Access

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
E1	Number of employees			12,500	12,500	12,500
E2	Corporate mobile devices per employee			80%	80%	80%
E3	Total devices	10,000		10,000	11,000	12,100
E4	Annual device growth	10%		10%	10%	10%
E5	Number of registration requests per device owner per year			0.10	0.10	0.10
E6	Average time to register (hours)			8	8	8
E7	IT cost per registration			$35	$35	$35
E8	BU cost per registration			$45	$45	$45
E9	Estimated time reduction			40%	40%	40%
Et	Improved mobile device registry/access	E3*E5*(E7+E8)*E9	$0	$32,000	$35,200	$38,720
	Risk adjustment	0%				
Etr	**Improved mobile device registry/access (risk-adjusted)**		**$0**	**$32,000**	**$35,200**	**$38,720**

Source: Forrester Research, Inc.

Reduced Administrative Efforts For IT Staff Managing Mobile Devices And Cloud Apps

The composite organization indicated that a key benefit from the Enterprise Mobility Suite implementation was the reduced administration efforts for the IT staff managing mobile devices. Prior to Enterprise Mobility Suite, the composite organization had to provision and deprovision users manually because of a lack of integration with the Active Directory. The average user accesses five apps, so the effort to perform these tasks more manually took a significant toll on the IT staff, considering that it took a few minutes for them to provision each app. This multiplies quickly when considering the growing number of apps in use and changes in user population due to annual turnover and acquisitions. Furthermore, the IT organization had to spend time building integrations between its corporate directories and the cloud-based apps that users were accessing. With Microsoft EMS, users can be provisioned and deprovisioned with limited involvement from the IT team. EMS has pre-built integrations with over 2,500 applications, and since the average organization uses about 15 apps, these organizations save time by having those integrations available out of the box. The IT team can also see details of usage patterns of both sanctioned and nonsanctioned apps and determine when it needs to bring certain apps (e.g., consumer apps that gain popularity and become business productivity tools) under IT management. The total benefit resulting from reduced administrative efforts for IT staff managing mobile devices over the three years was $56,297.

TABLE 6
Reduced Administrative Efforts For IT Staff Managing Mobile Devices And Cloud Apps

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
Reduced Time to Provision Apps						
F1	Users to provision and deprovision users and apps annually	Based on average annual turnover rate of 11% combined with user growth due to acquisitions or part-time/temporary users		3,500	3,500	3,500
F2	Time spent per app (manual)	120 seconds				
F3	Time spent per app (automated)	5 seconds				
F4	Time saved (in minutes)			1.9	1.9	1.9
F5	Average number of apps per user	5		5	5	5
F6	IT staff rate	$40		$0.68	$0.68	$0.68
Reduced integration time because of pre-integrated applications						
F8	Number of pre-integrated applications (estimated at about five to 15 apps)	2,500				
F9	IT team size	10		10	10	10
F10	Percent of time integrating on-premises and cloud applications	20%		20%	20%	20%
F11	Percent improvement in time	35%		35%	35%	35%
F12	Hourly cost	$40		$40	$40	$40
Ft	Reduced administration costs	(F1*F4*F5*F6)+(F9*F10*F11*F12)	$0	$22,638	$22,638	$22,638
	Risk adjustment	0%				

Ftr	**Reduced administration costs (risk-adjusted)**	**$0**	**$22,638**	**$22,638**	**$22,638**

Source: Forrester Research, Inc.

Total Benefits

Table 7 shows the total of all benefits across the six areas listed above, 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 $4.2 million, or $336 per user.

TABLE 7
Total Benefits (Risk-Adjusted)

Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	End user productivity gains	$603,400	$603,400	$603,400	$1,810,200	$1,500,566
Btr	Security cost risk avoidance	$393,750	$393,750	$393,750	$1,181,250	$979,198
Ctr	Reduced legacy license and infrastructure costs	$358,000	$358,000	$358,000	$1,074,000	$890,293
Dtr	Reduction in call volume to the help desk, resulting in cost savings	$281,250	$281,250	$281,250	$843,750	$699,427
Etr	Improved mobile device registry and access	$32,000	$35,200	$38,720	$105,920	$87,273
Ftr	Reduced administrative efforts for IT staff managing mobile devices and cloud apps	$22,638	$22,638	$22,638	$67,914	$56,297
	Total benefits	**$1,691,038**	**$1,694,238**	**$1,697,758**	**$5,083,034**	**$4,213,055**

Source: Forrester Research, Inc.

COSTS

The composite organization experienced a number of costs associated with the Enterprise Mobility Suite solution:

- Software licensing fees.
- Implementation and professional services fees.
- Training fees.

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

Software Licensing Fees

Software licensing fees for Enterprise Mobility Suite were incurred on a monthly recurring basis over three years. This price includes Azure Active Directory Premium, Intune, Azure Rights Management (cloud services), and Windows Server CAL and System Center Configuration Manager. During initial implementation, the composite organization incurred software licensing fees for Azure Active Directory Premium, Intune, and Azure RMS, for a total of $2,000,000 (present value) in software licensing fees, or about $6.90 per user.

TABLE 8
Software Licensing Fees

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
G1	Number of users			10,000	10,000	10,000
G2	Price per user/per month			$6.90	$6.90	$6.90
G3	Monthly recurring fee			12	12	12
Gt	Software licensing fees	G1*G2*G3		$828,000	$828,000	$828,000
	Risk adjustment	0%				
Gtr	**Software licensing fees (risk-adjusted)**			**$828,000**	**$828,000**	**$828,000**

Source: Forrester Research, Inc.

Implementation And Professional Services Fees

In the initial year of using Microsoft EMS, the composite organization incurred an implementation and professional services fee that is a combination of internal IT labor fees and the assistance of outside consultants to implement the suite. The implementation and professional services fees included cataloging applications for user provisioning and creating policies for device management. Typically, the implementation fee is about 70% of the total license fee in Year 1, which amounts to $580,000.

TABLE 9
Implementation And Professional Services Fees

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
H1	Implementation and professional services fees			$580,000		
Ht	Implementation and professional services fees			$580,000	$0	$0
	Risk adjustment	0%				
Htr	**Implementation and professional services fees (risk-adjusted)**		**$0**	**$580,000**	**$0**	**$0**

Source: Forrester Research, Inc.

Training Fees

The composite organization incurred a training fee of $84,000. This training fee is an initial, internal cost, and the effort is the result of both internal IT staff and end user training.

TABLE 10
Training Fees

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
I1	Training fees			$84,000		
It	Training fees			$84,000	$0	$0
	Risk adjustment	0%				
Itr	**Training fees (risk-adjusted)**		**$0**	**$84,000**	**$0**	**$0**

Source: Forrester Research, Inc.

Total Costs

Table 11 shows the total of all costs as well as associated present values, discounted at 10%. Over three years, the composite organization expects total costs to total a net present value of a little more than $2.6 million, or $266 per user.

TABLE 11
Total Costs (Risk-Adjusted)

Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Gtr	Software licensing fees	$828,000	$828,000	$828,000	$2,484,000	$2,059,113
Htr	Implementation and professional services fees	$580,000	$0	$0	$580,000	$527,273
Itr	Training fees	$84,000	$0	$0	$84,000	$76,364
	Total costs	**$1,492,000**	**$828,000**	**$828,000**	**$3,148,000**	**$2,662,750**

Source: Forrester Research, Inc.

FLEXIBILITY

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for some future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so. There are multiple scenarios in which a customer might choose to implement Enterprise Mobility Suite and later realize additional uses and business opportunities. Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix B).

There are several features of the Microsoft EMS that have the potential to improve security risk avoidance. The full use of those features among the various business users may result in a wide range of additional expected benefits for an organization. Those additional benefits are captured in the table below, based on a composite organization of 10,000 users.

TABLE 12
Additional Benefits That May Be Realized With Microsoft EMS

Feature	Description	Organizational Impact IT/BU	Benefit Category	Potential Impact
Protect sensitive data and applications Get advanced security reports and alerts	Monitor and protect access to your cloud applications by viewing detailed logs showing more advanced anomalies and inconsistent access pattern reports. Advanced reports are machine learning-based and can help you gain new insights to improve access security and respond to potential threats.	BU	Security risk	Up to $80 million in additional cost avoidance
Share data more securely	Azure RMS logging information is available to you in near real time, so that you can continuously monitor your company's use of RMS. Within 15 minutes of an RMS-initiated action, 99.9% of logs are available.	BU (HR, sales, finance, R&D, partners)	Improved data protection	$60,000
Share data with anyone	Have the ability to track and share documents with groups inside and outside the organization. Specifically, this benefit focuses on the ability to validate that a user or group has reviewed and been given credentials around a particular document. The benefit is realized through reducing the amount of time individual users spend tracking and seeking documentation approval.	BU	Improved team productivity due to document tracking	$43,000
Save time with custom policy templates compliant with key industry standards	EMS provides a predefined set of templates to help IT organizations get up to speed quicker around common policy requests.	IT	Improved data protection administrati on	$6,000

Source: Forrester Research, Inc.

RISKS

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

TABLE 13
Benefit And Cost Risk Adjustments

Benefits	Adjustment
Improved end user productivity accessing SaaS applications	↓ 20%
Security risk cost avoidance	↓ 10%

Source: Forrester Research, Inc.

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

The following impact risks that affect benefits are identified as part of the analysis:

- **Improved end user productivity accessing SaaS applications.** Interviewed organizations from a variety of industries provided a broad range of impacts to business productivity, since the types of employees vary, and a delay to access applications will affect employees differently as well. To compensate, this benefit was risk-adjusted and reduced by 20%.
- **Security risk cost avoidance.** Interviewed organizations provided a broad range of security threats, since they represent different industries with unique brand and product price points. To compensate, this benefit was risk-adjusted and reduced by 10%.

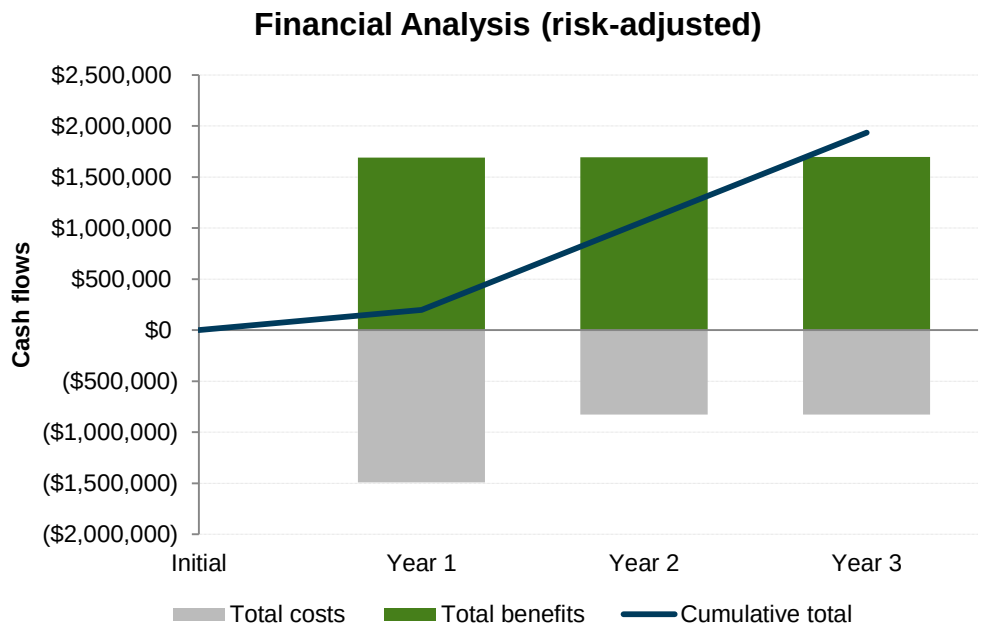
Table 13 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates for the composite organization. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

Financial Summary

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 in Enterprise Mobility Suite.

Table 14 below shows the risk-adjusted ROI, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Table 13 in the Risks section to the unadjusted results in each relevant cost and benefit section.

FIGURE 3
Cash Flow Chart (Risk-Adjusted)



Source: Forrester Research, Inc.

TABLE 14
Cash Flow (Risk-Adjusted)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Costs		($1,492,000)	($828,000)	($828,000)	($3,148,000)	($2,662,750)
Benefits		$1,691,038	$1,694,238	$1,697,758	$5,083,034	$4,213,055
Net benefits		**$199,038**	**$866,238**	**$869,758**	**$1,935,034**	**$1,550,305**
ROI						**58%**
Payback period						**10 months**

Source: Forrester Research, Inc.

Microsoft Enterprise Mobility Suite: Overview

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

With the Enterprise Mobility Suite, Microsoft provides the most comprehensive enterprise mobility cloud solution, which is designed to protect across four key areas:

- Users/identities delivered by Azure Active Directory Premium.
- Devices (including mobile devices and PCs) delivered by Microsoft Intune.
- Apps delivered by Microsoft Intune.
- Data delivered by Azure Rights Management.

Microsoft continues to set itself apart in the enterprise mobility industry because EMS:

- **Protects Office better.** EMS is designed to protect your Microsoft Office email, files, and apps.
- **Delivers enterprise-grade cloud identity.** You will have one integrated identity platform across users, devices, apps, and data.
- **Is more flexible.** Microsoft's cloud services are simple to set up, always up to date, and connect to your on-premises data center.
- **Is comprehensive.** Microsoft protects iOS, Android, Windows, and over 2,500 popular SaaS apps.
- **Saves you money.** EMS costs up to 50% less than buying standalone solutions from other vendors.

Appendix A: Composite Organization Description

For this TEI study, Forrester has created a composite organization to illustrate the quantifiable benefits and costs of implementing Enterprise Mobility Suite. The composite company is intended to represent a US-based organization with 10,000 full-time employees and 2,500 part-time, temporary, or acquired employees and is based on characteristics of the interviewed customers.

In purchasing Enterprise Mobility Suite, the composite company has the following objectives:

- Round out and enable its cloud offering of Office 365 and replace its on-premises MDM solution.
- Provide the right tools and information for employees who have their own devices or are part-time or hourly workers.
- Leverage multifactor authentication and rapid release of security policies to help secure the most critical and sensitive applications, such as financial systems and those with personally identifiable information.
- Provide self-service for password resets to reduce help desk call volume.
- Offer corporate mobile apps to employees more easily through an app exchange
- Enable interim workers (partners, suppliers, etc.) to have a secure, joint email and working space.
- Use Cloud App Discover to identify shadow IT apps that could put the company at risk and increase costs.
- Provide employees with one identity that works across cloud and on-premises applications.
- Support company acquisitions with instant pushes of applications and services (with IT located off site). Avoid end users struggling to gain the right permissions to use applications.
- Lighten the infrastructure demands and remain more agile to grow and expand the business.

For the purpose of the analysis, Forrester assumes that the organization is already using Microsoft's Active Directory and may also be moving toward rolling out Microsoft Office 365 as part of its cloud strategy.

FRAMEWORK ASSUMPTIONS

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

Appendix B: Total Economic Impact™ Overview

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

The TEI methodology consists of four components to evaluate investment value: benefits, costs, flexibility, and risks.

BENEFITS

Benefits represent the value delivered to the user organization — IT and/or business units — by the proposed product or project. Often, product or project justification exercises focus just on IT cost and cost reduction, leaving little room to analyze the effect of the technology on the entire organization. The TEI methodology and the resulting financial model place equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization. Calculation of benefit estimates involves a clear dialogue with the user organization to understand the specific value that is created. In addition, Forrester also requires that there be a clear line of accountability established between the measurement and justification of benefit estimates after the project has been completed. This ensures that benefit estimates tie back directly to the bottom line.

COSTS

Costs represent the investment necessary to capture the value, or benefits, of the proposed project. IT or the business units may incur costs in the form of fully burdened labor, subcontractors, or materials. Costs consider all the investments and expenses necessary to deliver the proposed value. In addition, the cost category within TEI captures any incremental costs over the existing environment for ongoing costs associated with the solution. All costs must be tied to the benefits that are created.

FLEXIBILITY

Within the TEI methodology, direct benefits represent one part of the investment value. While direct benefits can typically be the primary way to justify a project, Forrester believes that organizations should be able to measure the strategic value of an investment. Flexibility represents the value that can be obtained for some future additional investment building on top of the initial investment already made. For instance, an investment in an enterprisewide upgrade of an office productivity suite can potentially increase standardization (to increase efficiency) and reduce licensing costs. However, an embedded collaboration feature may translate to greater worker productivity if activated. The collaboration can only be used with additional investment in training at some future point. However, having the ability to capture that benefit has a PV that can be estimated. The flexibility component of TEI captures that value.

RISKS

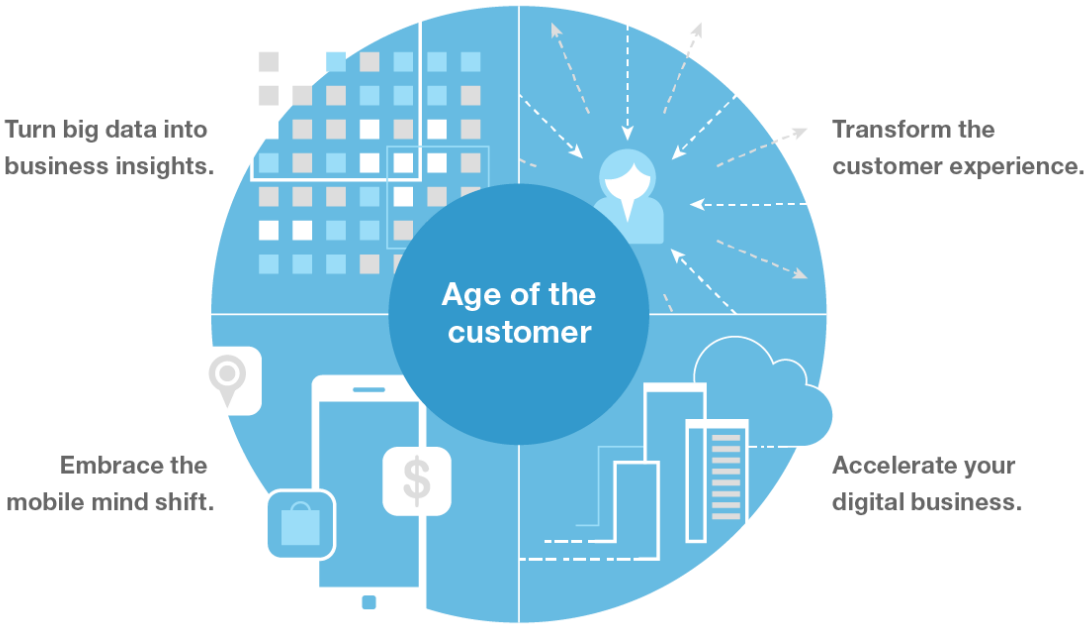
Risks measure the uncertainty of benefit and cost estimates contained within the investment. Uncertainty is measured in two ways: 1) the likelihood that the cost and benefit estimates will meet the original projections and 2) the likelihood that the estimates will be measured and tracked over time. TEI risk factors are based on a probability density function known as "triangular distribution" to the values entered. At a minimum, three values are calculated to estimate the risk factor around each cost and benefit.

Appendix C: Forrester And The Age Of The Customer

Your technology-empowered customers now know more than you do about your products and services, pricing, and reputation. Your competitors can copy or undermine the moves you take to compete. The only way to win, serve, and retain customers is to become customer-obsessed.

A customer-obsessed enterprise focuses its strategy, energy, and budget on processes that enhance knowledge of and engagement with customers and prioritizes these over maintaining traditional competitive barriers.

CMOs and CIOs must work together to create this companywide transformation.



Forrester has a four-part blueprint for strategy in the age of the customer, including the following imperatives to help establish new competitive advantages:

Transform the customer experience to gain sustainable competitive advantage.

Accelerate your digital business with new technology strategies that fuel business growth.

Embrace the mobile mind shift by giving customers what they want, when they want it.

Turn (big) data into business insights through innovative analytics.

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Appendix D: Glossary

Discount rate: The interest rate used in cash flow analysis to take into account the time value of money. Companies set their own discount rate based on their business and investment environment. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult their respective organizations to determine the most appropriate discount rate to use in their own environment.

Net present value (NPV): The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.

Present value (PV): The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.

Payback period: The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

Return on investment (ROI): A measure of a project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits minus costs) by costs.

A NOTE ON CASH FLOW TABLES

The following is a note on the cash flow tables used in this study (see the example table below). The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1. Those costs are not discounted. All other cash flows in years 1 through 3 are discounted using the discount rate (shown in the Framework Assumptions section) at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations are not calculated until the summary tables are the sum of the initial investment and the discounted cash flows in each year.

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

TABLE [EXAMPLE]
Example Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3

Source: Forrester Research, Inc.