The Total Economic Impact Of Microsoft Office 365 For Government Organizations

Government organizations are employing cloud technologies to transform how they serve citizens, improve internal operations, and tackle 21st century challenges. These include providing anytime, anywhere access to information and tools; meeting increased expectations of citizens and employees; improving connectivity and information sharing between departments; providing leaders with greater insights and oversight; and managing a host of new risks to protect sensitive data. These changes need to take place in an environment where available resources have been greatly reduced.

Forrester Consulting looked at ways governments benefit from Microsoft Office 365 — the cloud-based version of Office Professional Plus, Exchange, Skype for Business (formerly Lync), SharePoint, Yammer, and OneDrive — and found it lowered the solution total cost of ownership (TCO), increased government employee productivity and efficiency, improved citizen services, enabled governments to complete more projects with fewer resources, and improved IT security and compliance. Specifically, government organizations shared areas where Office 365 helped them improve:

› Approving business and construction licenses.

› Applying for grants and tracking existing grant results.

› Processing vendor contracts and invoices.

› Processing property tax payment.

› Answering citizen inquiries.

More information on improved business processes can be found in the Appendix, which quantifies benefits defined in Microsoft's Value Discovery Workshop methodology.

To explore potential benefits of using Office 365 in a government organization, Forrester created a composite organization that had the characteristics of the interviewed and surveyed organizations. The composite organization was a state agency, and it moved 10,000 users from an on-premises 2007 version of Microsoft solutions to Office 365 in the cloud. The Total Economic Impact™ study looks at the financial impacts to the composite organization.

Key Findings

Forrester's study yielded the following key findings for the composite organization:

ROI: 113%	IRR: 350%	NPV: $6.6 million	NPV per user: $666

METHODOLOGY

Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study to provide business and IT leaders with an understanding of how governments can benefit by moving from an on-premises Microsoft Office solution to Microsoft Office 365.

To achieve these objectives, Forrester conducted three in-depth phone interviews with a US federal government agency, county government, and a US territory . Forrester also conducted an online survey with 31 government organizations that have migrated to Office 365.

Forrester then designed a composite organization based on the characteristics of these companies. A representative financial model was constructed using the TEI methodology.

Lastly, Forrester risk-adjusted the financial model based on issues and concerns the surveyed organizations highlighted. Some cost and benefit 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.

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The Five Benefit Pillars And Results Summary

Forrester looked at government mission and IT benefits across five broad areas. These pillars, as Microsoft defines them, encompass government transformation, cost savings, and employee productivity gains. In each pillar, we explored the various ways that the interviewed and surveyed government organizations have benefited from moving their employees to Office 365. We also included at least one example from each pillar in the ROI analysis portion of the study. All of the responding government agencies experienced benefits across the areas highlighted in Figure 1.

Figure 1
Microsoft Office 365 Benefit Pillars And Risk-Adjusted Financial Benefits

Pillar	How Quantified In Study	Financial Impact	Goal
Technology	Reduce hardware, software, and IT labor costs	$2,636,801	**Reduce costs**, increase agility, and provide the tools to work efficiently.
Mobility	Increase worker efficiency with anytime access	$2,143,359	Enable field and case workers to **work from anywhere** on almost any device.
Control & Compliance	Lower compliance costs	1,050,860	**Protect citizen data** and information, and ensure policy and regulatory compliance.
Business Intelligence	Save money through better decisions from more timely access to data	$733,789	Gain insights into spending, budgets, and economic data to **make better policy decisions.**
Real-time Communication	Improve process efficiency and user productivity	1,128,469	**Deliver better citizen services** with collaborative tools.

Source: Forrester Research, Inc.

The financial results calculated in the Benefits and Costs sections can be used to determine the return on investment (ROI), internal rate of return (IRR), net present value (NPV), and payback period for the composite state agency's investment in Microsoft Office 365.

The table below shows the risk-adjusted ROI, IRR, NPV, and payback period values.

Results Summary

	Initial	Year 1	Year 2	Year 3	Total	PV
Costs	($1,838,270)	($1,882,695)	($1,647,695)	($1,301,195)	($6,669,855)	($5,889,149)
Benefits	$1,466,640	$2,724,539	$4,156,109	$6,884,554	$15,231,842	$12,550,761
Net benefits	**($371,631)**	**$841,844**	**$2,508,414**	**$5,583,359**	**$8,561,987**	**$6,661,612**
ROI	113%					
IRR	350%					
Payback period	Six months (after go-live)					

Source: Forrester Research, Inc.

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The graph below shows the risk-adjusted cash flow.

Risk-Adjusted Cash Flow

Financial Analysis (risk-adjusted)
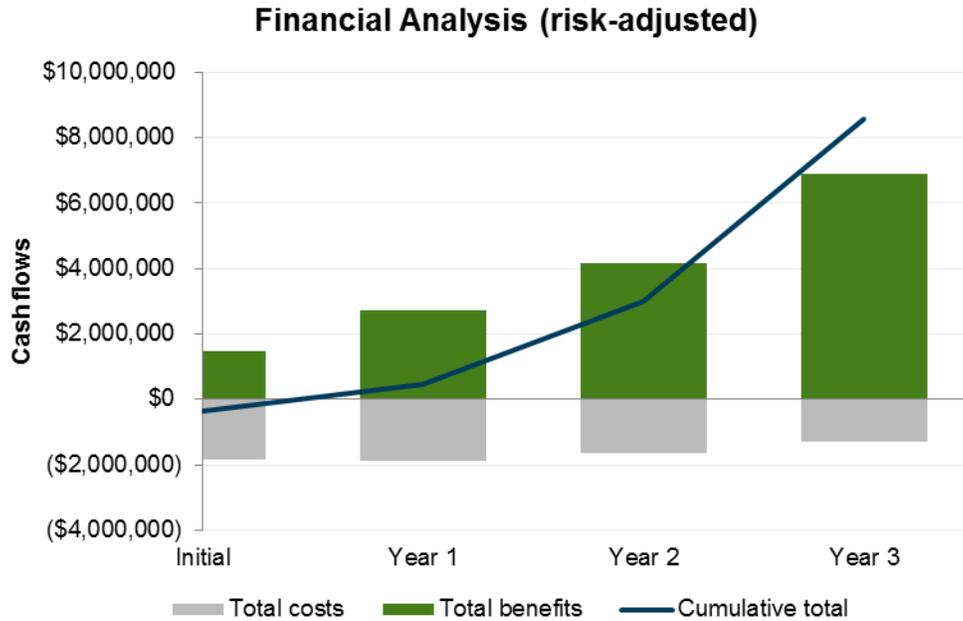
Source: Forrester Research, Inc.

Benefits

For each of the above pillars, the interviewed government agencies and online survey respondents spoke to multiple benefits. In each area, Forrester quantified at least one benefit that is specifically highlighted and comprises the ROI analysis component of this study.

Technology Benefits

In interviewing and surveying government agencies, Forrester uncovered that these agencies realized the following benefits by moving to Office 365 compared with an on-premises solution:

> A 16.4% reduction in Microsoft licensing costs.

> A 17.25% reduction in third-party license and software costs, e.g., other email solutions and antispam software.

> A 16.7% reduction in IT support costs for legacy systems.

"Out of a team of 17 IT support staff, we probably would have needed to add four more had we not moved to Office 365."

~Deputy CIO, federal agency

In addition, Forrester quantified five benefit areas within the technology pillar:

> **The government composite agency avoided adding new infrastructure hardware.** The move from the 2007 version of the Microsoft solutions to the Office 365 cloud-based solution meant that new infrastructure did not need to be purchased, installed, and maintained. In total, 85 highly virtualized physical servers were not added over the life of the study, and storage area network (SAN) requirements were reduced by half. This benefit also includes an annual $750 saving per server, which includes data center hosting costs and labor to maintain, update, and patch the physical servers. The total three-year risk-adjusted savings to purchase, maintain, and host the hardware amounted to $1,604,363.

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> ❯ **Server licenses for various Microsoft solutions were no longer needed.** An on-premises solution comparable to Office 365 would have required 500 Windows Server licenses, 34 Exchange Server licenses, five Skype for Business Server license, and 20 SharePoint licenses. The total three-year risk-adjusted avoided purchase cost plus annual maintenance totaled $188,259.

> ❯ **The implementation effort was 42% less than for a comparable on-premises solution.** Had a traditional on-premises deployment of Microsoft 2013 solutions been implemented within the government agency, the internal effort and professional services fees would have been 50% and 40% greater, respectively. This total three-year risk-adjusted savings across all phases equaled $638,875.

> ❯ **The personnel required to support the solution was reduced significantly.** The total number of personnel required to maintain and grow the Microsoft solutions — Office Professional Plus, Exchange, Skype, SharePoint, Yammer, and OneDrive — in terms of system administration and managing user accounts was reduced significantly. This was in the form of avoiding additional hires as well as redeploying an existing system administrator who could focus on other, higher-value activities. The total three-year risk-adjusted associated savings was $1,045,000.

> ❯ **Reduced end user computing costs.** The composite state agency was spending, on average, $1,200 for each new PC or laptop as part of the refresh cycle. Each year, 2,500 computers were replaced at a lower cost of $860. This was accomplished by purchasing lower-spec machines since files could be stored in the cloud and a lot of the computing power took place in the cloud. The total three-year risk-adjusted associated savings was $2,422,500.

In the interviews, Forrester heard more specifics about some of the technology benefits achieved, such as simplifying the process of adding infrastructure to meet changing demands. As one agency told us: "Space was a huge challenge. Mailboxes grew much bigger than originally planned. Office 365 took care of that. From a networking and IT perspective, it was all very easy."

Table 1 below highlights the total quantified technology benefits for our composite government agency.

Table 1
Total Technology Benefits

Ref.	Benefit Category	Initial	Year 1	Year 2	Year 3
Atr	Avoided back-end hardware	$924,638	$237,375	$216,675	$225,675
Btr	Avoided Microsoft Server licenses	$102,627	$46,682	$19,475	$19,475
Ctr	Reduced implementation effort	$439,375	$199,500	$0	$0
Dtr	Reduced IT support effort	$0	$285,000	$380,000	$380,000
Etr	Reduced end user computing costs	$0	$807,500	$807,500	$807,500
	Total technology benefits	$1,466,640	$1,576,057	$1,423,650	$1,432,650

Source: Forrester Research, Inc.

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Mobility Benefits

The interviews uncovered that these government agencies benefited from improved productivity for mobile workers, as well as anywhere, anytime access to information for all employees. The agencies reported that there are many different user types that can benefit from this. For example, improved access to email provides benefits to many employees who check it from home. "The old Unix system on our mobile devices was going through a web browser. We now have Outlook available on every platform, which saves all users time," said one interviewee.

Another interviewed government agency reported significant travel savings between distant locations. This travel reduction was in addition to savings already realized from webconferencing solutions. Workers could get the needed information from systems at other locations without having to physically travel there.

From the survey, Forrester learned that 52% of the government agencies said mobile access has created greater end user productivity due to improved communications and knowledge sharing; 45% said it has led to a decrease in the time it takes to conduct daily business; and 32% reported that their mobile users are affected less by PC crashes, as they can access all the material from their mobile device.

For the financial analysis, Forrester looked at improved productivity for 250 mobile workers, growing to 450 by Year 3 of the study. This group comprises mainly elected officials, high-ranking administrators, and inspectors within the government. Their productivity is improved by reducing time to access systems and information since a VPN is no longer needed because of direct access via IPv4 and IPv6, and they can access these systems from wherever they are, even at remote sites. Office 365 also provides these users with a more seamless user experience across devices with less downtime, which also improves their mobile productivity.

In Year 1 of the study, the weekly time savings is 1.25 hours. This increases to 3.75 hours per week by Year 3 as Skype and SharePoint are fully integrated and employees become more comfortable working in this new paradigm. This productivity gain can be used to provide better services, or it can be a source of cost savings through avoided additional hiring. Forrester discounted this benefit by 50% since not all productivity gains translate into additional work.

As there are a variety of forces that could affect productivity outcomes within a government agency, this benefit was risk-adjusted and reduced by 15%. The risk-adjusted total benefit resulting over the three years was $2,596,484. Table 2 highlights how this benefit was calculated.

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Table 2
Increased Mobile Worker Productivity

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
F1	Number of workers		250	350	450
F2	Hours per day saved with use of Office 365 on mobile devices		0.25	0.50	0.75
F3	Average hourly salary	$85,000/2,000 hours	$42.50	$42.50	$42.50
F4	Number of work days per year		250	250	250
F5	Percent of benefit realized		50%	50%	50%
Ft	Increased mobile worker productivity	F1*F2*F3*F4*F5	$332,031	$929,688	$1,792,969
	Risk adjustment	↓15%			
Ftr	**Increased mobile worker productivity (risk-adjusted)**		**$282,227**	**$790,234**	**$1,524,023**

Source: Forrester Research, Inc.

Forrester also looked at how employees needed to make fewer trips to another location to access systems and information repositories locally. These trips can often require an overnight stay. In Year 2 of the study, 300 trips are avoided, and this increases to 450 in Year 3. The average cost of these trips — including transportation, accommodation, and per diem — averages out to $1,000. The number of trips and cost per trip can vary greatly, so this benefit was risk-adjusted and reduced by 10%. The risk-adjusted total benefit resulting over the three years was $675,000.

Table 3
Reduced Travel

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
G1	Number of reduced trips			300	450
G2	Average cost per trip			$1,000	$1,000
Gt	Reduced travel	G1*G2		$300,000	$450,000
	Risk adjustment	↓10%			
Gtr	**Reduced travel (risk-adjusted)**			**$270,000**	**$405,000**

Source: Forrester Research, Inc.

Control And Compliance Benefits

Control and compliance includes regulatory compliance, eDiscovery, audit, policy management, and other similar activities. For government agencies, meeting data retention/archiving and disaster recovery requirements was especially important. Thirty-nine percent of survey respondents have seen improved enforcement of data retention policies with Office 365. Nineteen percent reported reduced eDiscovery time,

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and 48% said it was easier to manage policies across all device types. Additionally, one-quarter of the surveyed agencies have seen fewer data breaches and have been able to eliminate other control and compliance solutions.

In the survey and interviews, Forrester heard that Office 365 helped with meeting compliance requirements for:

› Data processing agreements (DPAs).

› ISO 27001.

› European Union (EU) Model Clauses.

› US–EU Safe Harbor framework.

› Family Educational Rights and Privacy Act (FERPA).

› Sarbanes-Oxley (SOX).

› PCI.

› OSHA.

› Federal Information Security Management Act (FISMA).

› FedRAMP.

"eDiscovery is significantly easier. With all the open record requests we get, we've gone from days of effort per request down to 30 minutes. "

~Deputy CIO, county government

Performing eDiscovery activities to comply with public requests for information, e.g. the Freedom of Information Act, can be very time consuming. Forrester calculated an example of reduced effort on the part of the IT organization to search email accounts for requested information. The composite state agency receives 400 open record requests in Year 1 and increases to 550 by Year 3, which requires the IT team to search through employees' email accounts. In the past, this could take a couple of hours of effort per user account spread out over multiple days. With Office 365, this has been reduced to 30 minutes. While the nature of eDiscovery efforts may vary, Forrester believes that most organizations would need to do some of these activities. To compensate for this variance, this benefit was risk-adjusted and reduced by 5%. The risk-adjusted total benefit over the three years was $1,549,688.

Table 4
eDiscovery IT Team Savings

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
H1	Number of eDiscovery requests		400	500	550
H2	Average included employee inboxes		15	15	15
H3	Time savings per inbox (hours)	(2 hours -> 30 minutes)	1.5	1.5	1.5
H4	Total IT team time savings (hours)	H1*H2*H3	9,000	11,250	12,375
H5	Hourly average fully burdened IT salary	$100,000/2,000 hours	$50	$50	$50
Ht	eDiscovery IT team savings	H4*H5	$450,000	$562,500	$618,750
	Risk adjustment	↓5%			
Htr	**eDiscovery IT team savings (risk-adjusted)**		**$427,500**	**$534,375**	**$587,813**

Source: Forrester Research, Inc.

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Interviewed agencies also reported fewer IT security events from phishing and other email-related vulnerabilities. One interviewee said: "In the past, we had phishing and spearfishing problems. That has now gone away. The first thing I did when I got here was organize the cleanup of a massive threat."

For the composite state agency, Forrester included two security events per year that required a large IT response. Each of these events took two weeks; this includes the time it takes to recover from the event, as well as the time to put the necessary patches and protections in place to close that vulnerability and be compliant with security mandates. The response team consisted of six full-time equivalents (FTEs). The number and types of events that take place will vary across organizations. To compensate for this variance, this benefit was risk-adjusted and reduced by 10%. The risk-adjusted total benefit over the three years was $124,610.

Table 5
Security Attack IT Team Savings

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
I1	Events per year		2	2	2
I2	Weeks to clean up		2	2	2
I3	Number of IT FTEs involved		6	6	6
I4	Weekly average fully burdened IT salary	$100,000/52 weeks	$1,923	$1,923	$1,923
It	Security attack IT team savings	I1*I2*I3*I4	$46,152	$46,152	$46,152
	Risk adjustment	↓10%			
Gtr	**Security attack IT team savings (risk-adjusted)**		**$41,537**	**$41,537**	**$41,537**

Source: Forrester Research, Inc.

The last area we looked at in the control and compliance pillar is reduced disaster recovery (DR) and business continuity costs. This was a very strong benefit for the interviewed organizations. Email systems are generally considered mission critical and more often than not lack adequate business continuity and disaster recovery capabilities.

One of the interviewees who speaks regularly with his peers at other government agencies explained why they should not worry about data protection and control. "When I speak with people, they say they are scared of losing control of their infrastructure and data. My first response back to them is, 'Can your data center pass the federal data center requirements'? Everyone's answer is no. I know this because I've been in government a long time. A government IT department can't hope to stay compliant the way a big IT firm can. We can't deliver the same reliability, redundancy, and security as Microsoft."

"Moving applications and infrastructure onto cloud platforms provides robust business continuity and DR capabilities without having to budget for it."

~CITO, US territory

The most interesting DR example Forrester heard was: "About a month ago a lawn mower hit a fire hydrant. That hyrdant was on a water pipe attached to a mainline 25 feet below ground. Facilities came to us and

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said they were shutting down water to our building, which includes the data center chillers. We had to shut the whole data center down on a Friday afternoon and didn't go back online until Monday afternoon. The only system, other than 911, that worked was email because it was in Microsoft's data center. Employees that were using OneDrive also had access to all of their files."

The amount of savings reported by the interviewees for third-party DR solutions for email ranged from $100,000 to $200,000. This benefit began in Year 2 after the existing contract ended. We risk-adjusted this down 5% because the amount spent on DR solutions varies, resulting in a three-year risk-adjusted savings of $332,500.

Table 6
Eliminated External DR Costs

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
J1	Number of reduced trips			$175,000	$175,000
Jt	Eliminated external DR costs	=J1		$175,000	$175,000
	Risk adjustment	↓5%			
Jtr	**Eliminated external DR costs (risk-adjusted)**			**$166,250**	**$166,250**

Source: Forrester Research, Inc.

Business Intelligence Benefits

The importance of business intelligence and the value of data within a government agency has become more important over the past several years. Greater and better access to information and the ability to take intelligent action on it enables governments to do better planning, create more effective budgets, make more informed decisions, and deliver improved services to all constituencies — citizens/residents, businesses, partners, and employees. Nearly half of the survey respondents said that "employee performance has improved because they have access to company portals and actionable information anytime, anywhere."

Twenty-nine percent of survey respondents reported a decrease in "time-to-decision" and said that the average reduction was 18%. One interviewee said: "We can now get the relevant information to people without wasting time. This gives them what they need to do their jobs better."

For the composite state agency, Forrester looked at the increased productivity of 200 government employees (increasing to 600 by Year 3) who spend a good portion of their day making decisions or completing analyses. These include elected officials, high-level administrators, budget analysts, and budget planners. In Year 1, these workers see an average savings of 45 minutes per week. As they become more comfortable working with the features and utilize Office 365 more to aid their decision-making process, this increases to 3.75 hours per week by Year 3. This time savings can be used to complete additional value-add work as well as avoid the need for new hires. It can lead to faster time-to-delivery and higher citizen satisfaction, as impactful decisions are being made more quickly. Because not all time savings result in added work, Forrester discounted this benefit by 50%. Table 7 shows how this was calculated.

Since the number of affected employees as a proportion of all employees varies greatly from one organization to another, this benefit was risk-adjusted and reduced by 15%. The risk-adjusted total benefit over the three years was $2,619,063.

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Table 7
Reduced Decision-Making Time

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
K1	Number of affected workers		200	400	600
K2	Hours saved per day		0.15	0.25	0.75
K3	Workdays per year		250	250	250
K4	Total man-days saved	K1*K2/8 hours*K3	938	3,125	14,063
K5	Average daily salary	$85,000/250 workdays	$340	$340	$340
K6	Total potential savings	K4*K5	$318,750	$1,062,500	$4,781,250
K7	Percent of benefit realized		50%	50%	50%
Kt	Reduced decision-making time	K6*K7	$159,375	$531,250	$2,390,625
	Risk adjustment	↓15%			
Ktr	**Reduced decision-making time (risk-adjusted)**		**$135,469**	**$451,563**	**$2,032,031**

Source: Forrester Research, Inc.

Real-Time Communications Benefits

The way individuals live their personal lives in terms of using online social interaction services and other real-time communication tools is affecting how people communicate and collaborate in the workplace. A major component of Office 365 is enabling these interactions to improve knowledge sharing, collaboration, and productivity. Interviewed government agencies reported that the real-time communication tools and features improve their workplace. These features enable them to better manage cases and social services and conduct virtual town hall meetings.

The interviewed agencies shared with us the variety of ways they are using these features to improve their business. For example, we heard that "providing the latest versions of Microsoft software makes the employees more efficient." We also heard that "SharePoint as a collaboration platform gave the employees the opportunity to streamline and automate processes."

"We are seeing a lot more ad hoc communications amongst employees. They will hop on a Skype meeting for 15 minutes to get something done right away instead of scheduling it for some time in the future. We used to not see any of this."

~Deputy CIO, county government

The interviewed agencies are also using Office 365 tools to make it easier for citizens to reach government offices. One of the interviewed organizations is using Skype as part of a "unified telecom system. The public can reach any agency by calling one phone number."

There are many ways that the real-time communication features of Office 365 can have an impact on an organization. For the quantified portion of the real-time communication benefits pillar, Forrester looked

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directly at the improvement of processing and approving new business licenses and construction permit applications as well as the direct cost savings for eliminated communication technologies. However, it is important to note that these real-time communication features have the potential to affect a variety of tasks and processes across government organizations, which can lead to cost savings or improved services to the public. While those returns can be huge, for the purpose of this analysis, we took a much more conservative approach to evaluating the benefits associated with real-time communication. Readers should take the other potential savings and additional revenue into consideration when evaluating the ROI of Office 365 for their organization.

Additionally, the investment in Office 365 eliminated the need for the composite state agency to continue to invest in webconferencing solutions provided by other vendors. Instead, scheduled and ad hoc meetings are completed using Skype and Yammer.

These benefits should be realizable by all organizations previously using other solutions for webconferencing or audioconferencing. Because costs vary based on usage and geographic reach, this benefit was risk-adjusted and reduced by 10%. The risk-adjusted total benefit over the three years was $135,000.

Table 8
Eliminated Communication Technology

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
L1	Eliminated webconferencing solutions		$50,000	$50,000	$50,000
Lt	Eliminated communication technology	=L1	$50,000	$50,000	$50,000
	Risk adjustment	↓10%			
Ltr	**Eliminated communication technology (risk-adjusted)**		**$45,000**	**$45,000**	**$45,000**

Source: Forrester Research, Inc.

With the use of real-time communication features, the composite state agency was able to save time processing and approving license applications. These were applications for new businesses as well as construction permits. These approvals require input and action from multiple individuals across several departments. Prior to the implementation of Office 365, approving applications could take weeks of elapsed time and involve emailing documents or sending physical copies via interoffice mail. Now, with Office 365, the appropriate parties are able to quickly find the details and documents they need and collaborate in real time to make changes and arrive at a decision. Office 365 also allows the organization to have multiple people working on the same file at the same time, cutting down dramatically on the elapsed time.

The model assumes that the composite state agency processes 1,000 applications in Year 1, and that it grows to 3,000 by Year 3. The actual work time it takes to complete the review of an application was reduced from 7 hours to 1 hour. The actual elapsed time was much greater, which results in lengthy delays for citizens and businesses.

To compensate for the variety of process times and types of processes that can be streamlined, the benefit was risk-adjusted and reduced by 15%. The risk-adjusted total benefit over the three years was $1,300,500.

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Table 9
Reduced Time Spent Processing License Applications

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
M1	Number of license requests received		1,000	2,000	3,000
M2	Average hourly salary	$85,000/2,000 hours	$42.50	$42.50	$42.50
M3	Hours spent reviewing and approving license before Office 365		7	7	7
M4	Hours spent reviewing and approving license after Office 365		1	1	1
Mt	Reduced time spent processing license applications	M1*M2*(M3-M4)	$255,000	$510,000	$765,000
	Risk adjustment	↓15%			
Mtr	**Reduced time spent processing license applications (risk-adjusted)**		**$216,750**	**$433,500**	**$650,250**

Source: Forrester Research, Inc.

Total Quantified Benefits

The total quantified benefits, as well as present values (PVs) discounted at 10%, are shown in the table below. Over three years, the composite state agency expects risk-adjusted total benefits to be a PV of over $12.5 million.
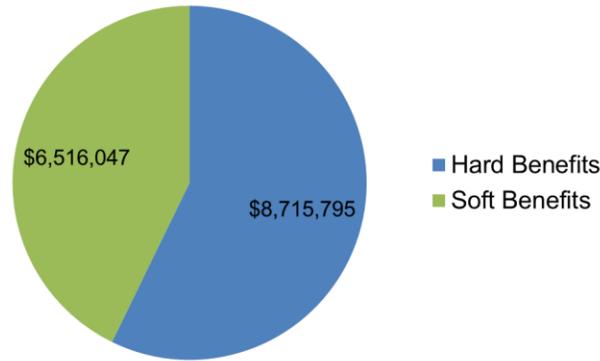
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Table 10
Total Quantified Benefits (Risk-Adjusted)

Ref.	Benefit Category	Initial	Year 1	Year 2	Year 3	Total	Present Value
Atr	Avoided back-end hardware	$924,638	$237,375	$216,675	$225,675	$1,604,363	$1,489,056
Btr	Avoided Microsoft Server licenses	$102,627	$46,682	$19,475	$19,475	$188,259	$175,792
Ctr	Reduced implementation effort	$439,375	$199,500	$0	$0	$638,875	$620,739
Dtr	Reduced IT support effort	$0	$285,000	$380,000	$380,000	$1,045,000	$858,640
Etr	Reduced end user computing costs	$0	$807,500	$807,500	$807,500	$2,422,500	$2,008,133
Ftr	Increased mobile worker productivity	$0	$282,227	$790,234	$1,524,023	$2,596,484	$2,054,677
Gtr	Reduced travel	$0	$0	$270,000	$405,000	$675,000	$527,423
Htr	eDiscovery IT team savings	$0	$427,500	$534,375	$587,813	$1,549,688	$1,271,901
Itr	Security attack IT team savings	$0	$41,537	$41,537	$41,537	$124,610	$103,296
Jtr	Eliminated external DR costs	$0	$0	$166,250	$166,250	$332,500	$262,303
Ktr	Reduced decision-making time	$0	$135,469	$451,563	$2,032,031	$2,619,063	$2,023,041
Ltr	Eliminated communication technology	$0	$45,000	$45,000	$45,000	$135,000	$111,908
Mtr	Reduced time spent processing license applications	$0	$216,750	$433,500	$650,250	$1,300,500	$1,043,852
	Total benefits (risk-adjusted)	**$1,466,640**	**$2,724,539**	**$4,156,109**	**$6,884,554**	**$15,231,842**	**$12,550,761**

Source: Forrester Research, Inc.

While all of the benefits included in the ROI analysis are very important, Forrester looked at the soft benefits versus hard benefits delivered by Office 365. Hard benefits include specific, external cost savings such as reduced license payments to Microsoft and discreet labor savings such as reduced implementation time. Soft savings include general process efficiency gains that can improve the productivity of many workers; this included Ftr, Ktr, and Mtr in Table 10 above. Approximately 57% of the benefits included fall into the hard category.

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Hard Versus Soft Benefits

Pie chart comparing Hard Benefits and Soft Benefits:
- Hard Benefits: $8,715,795
- Soft Benefits: $6,516,047

Source: Forrester Research, Inc.

Costs

The quantified costs include:

› **Internal implementation labor.** The full deployment of Office 365 was undertaken in two phases. Phase one, completed in the initial period, consisted of standing up the Office 365 solution, migrating all email accounts and users to Exchange Online from Exchange 2007 on-premises, moving all users to Office 365 Professional Plus from Office Professional Plus 2007 local clients, and deploying OneDrive for all users. Nine internal FTEs worked on this for seven months. Phase two, completed in Year 1, consisted of a completely new deployment of Skype for Business and Yammer, as well as migrating from SharePoint 2007 on-premises to the latest version of SharePoint Online. Six FTEs worked on this for six months. The total internal implementation labor, risk-adjusted up 10%, was $907,500.

› **Professional services.** The composite state agency used Microsoft professional services during both phases of deployment. Professional services were used to properly set up the solutions and help with any challenges. A small amount of professional services was used in years 2 and 3 for making changes to systems and processes as new Office 365 features rolled out. The total professional services cost, risk-adjusted up 15%, was $862,500.

› **Training.** Training was required for the IT team on the new and updated solutions being deployed, as well as some training on the differences in administering Office 365 compared with on-premises versions. Eighty days of IT training took place in the initial period to train the entire IT organization, with 50 additional training days in years 1 and 2. Additionally, three internal employees provided user training to the rest of the composite state agency. In total, the external training charges for IT and the internal costs for user training, risk-adjusted up 10%, amounted to $1,049,400.

› **Ongoing system administration.** The Benefits section describes the number of system administrator positions that did not need to be added or could be reassigned. The remaining system administration team consisted of four FTEs in Year 1, and the team grew to six FTEs by Year 2 to handle additional requirements with the overall greater usage and additional users. The three-year associated costs, risk-adjusted up 5%, were $1.68 million.

› **Incremental Microsoft licenses.** For individual user licenses, Office 365 was compared with the Software Assurance (SA) pricing model to provide the best apple-to-apple comparison of a solution that always has users on the latest version of Microsoft technologies. Office 365 cost $47.88 more per year for each user compared with the Software Assurance licenses. The accumulated additional cost over three years was $1,759,590.

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> **Federation hardware.** The composite state agency desired to use identity federation for improved single sign-on (SSO) internally and with partner/customer companies. This required the installation and ongoing maintenance of two Active Directory Federation Services (ADFS) servers. The three-year cost to purchase, maintain, and host the servers was $41,265.

> **Additional bandwidth.** Moving to Office 365 resulted in a net increase of bandwidth required. Some areas, such as Exchange, saw a reduction, while other areas, such as a new deployment of Skype for Business, saw an increase. There was also additional bandwidth required during the initial data migrations. Over three years, $369,600 in additional bandwidth was required.

Total Costs

The total costs, as well as present values (PVs) discounted at 10%, are shown in the table below. Over three years, the composite government expects risk-adjusted total costs to be a PV of $5.9 million.

Table 11
Total Costs (Risk-Adjusted)

Ref.	Cost Category	Initial	Year 1	Year 2	Year 3	Total	Present Value
Ntr	Internal implementation labor	$577,500	$330,000	$0	$0	$907,500	$877,500
Otr	Professional service fees	$575,000	$172,500	$57,500	$57,500	$862,500	$822,539
Ptr	Training costs	$356,400	$346,500	$346,500	$0	$1,049,400	$957,764
Qtr	Ongoing system administration	$0	$420,000	$630,000	$630,000	$1,680,000	$1,375,808
Rtr	Incremental Microsoft licenses	$251,370	$502,740	$502,740	$502,740	$1,759,590	$1,501,610
Str	Federation hardware	$25,200	$5,355	$5,355	$5,355	$41,265	$38,517
Ttr	Additional bandwidth	$52,800	$105,600	$105,600	$105,600	$369,600	$315,412
	Total costs (risk-adjusted)	**$1,838,270**	**$1,882,695**	**$1,647,695**	**$1,301,195**	**$6,669,855**	**$5,889,149**

Source: Forrester Research, Inc.

About Microsoft Office 365

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

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

Specific feature-related benefits include:

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

› **Extend your reach with simple, more secure file sharing.** Office 365 makes it easy to more securely share files with coworkers, customers, and partners. Work together on documents that are always current and accessible from virtually anywhere.

› **You get one familiar experience, even on the go.** Office 365 mobile apps let you view and edit your Word, Excel, and PowerPoint files and more on your mobile device. And when you get back to your desk, there they are, with content and formatting intact.

› **Create docs from any browser.** With the touch-friendly applications of Office Online, you can create, edit, and share your Office files from any browser. You can even share and work on docs at the same time as others and avoid versioning hassles later.

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

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DISCLOSURES

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

› Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Microsoft Office 365.

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

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. Readers are urged to consult their respective organizations to determine the most appropriate discount rate to use in their own environment.

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

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

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

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

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

ABOUT FORRESTER CONSULTING

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

ABOUT TEI

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

http://www.forrester.com/marketing/product/consulting/tei.html

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Appendix — Value Discovery Workshop

According to Microsoft, the Value Discovery Workshop is "a tool to help [companies] make the business case for Office 365. This tool will help create a step-by-step assessment of process improvement opportunities tied to business objectives/needs, identify the relevant Office 365 capabilities, and automatically generate the right set of customized workshop content."[1] Forrester surveyed more than 500 organizations across multiple industries to assess how these processes have improved and define specific KPI and financial impacts. Specifically, Forrester looked at the impact that Office 365's capabilities have on the time and labor involved with each process. Below is a summary of the findings.

For government organizations, Microsoft specifically investigated the government leader, government employee, and government field worker roles. Microsoft identified benefits across 9 process areas. Tables 12 to 14 show the mean results for each process improvement by role.

Table 10
Summary Value Of Discovery Workshop Improvements — Government Leader

Process	Hours Per Week Before Office 365	Percent Reduction In Hours	Number Of FTEs Before Office 365	Percent Reduction In FTEs	Financial Impact (Risk-Adjusted)
Discover insights to identify trends	15.0	16.8%	175	38.0%	$2,033,472
Discover content and context to quickly make informed decisions	30.0	25.5%	125	13.0%	$1,407,400
Conduct meetings from anywhere, anytime to get work done	12.2	9.7%	45	10.2%	$166,111
Communicate securely to ensure privacy	15	20.5%	175	20.5%	$1,545,495
Manage client privacy and security	20.0	16.8%	175	38.0%	$2,711,296
Secure access to work from anywhere	19.0	13.0%	53	12.8%	$388,879
Collaborate in real time on document development and review	10.0	11.3%	60	7.7%	$174,047
Find and leverage collective intelligence to produce higher-impact deliverables	11.5%	23.0%	175	20.5%	$1,248,877
Protect sensitive client information to ensure compliance	25.0	13.0%	75	13.0%	$729,300

Source: Forrester Research, Inc.

Survey respondents shared the following specific statements about how processes improve:

› "[Office 365 enables us to understand data and trends involving assaults."

› "[It's] easy to set up meetings with teleworking employees and multiple offices."

› "[I have] no concerns when accessing sensitive data from wherever I am."

› "[We can] easily search and collaborate together."

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[1] More information on Microsoft's Value Discovery Workshop methodology and deliverables can be found at www.valuediscoveryworkshop.com.

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Table 11
Summary Value Of Discovery Workshop Improvements — Government Employee

Process	Hours Per Week Before Office 365	Percent Reduction In Hours	Number Of FTEs Before Office 365	Percent Reduction In FTEs	Financial Impact (Risk-Adjusted)
Discover insights to identify trends	8.0	8.0%	31	5.0%	$39,997
Discover content and context to quickly make informed decisions	8.5	6.3%	128	13.7%	$2,033,472
Conduct meetings from anywhere, anytime to get work done	4.3	8.3%	307	14%	$357,184
Communicate securely to ensure privacy	5.5	12.1%	31	3.3%	$32,738
Manage client privacy and security	4.0	5.6%	99	7.6%	$64,752
Secure access to work from anywhere	2.0	7.0%	228	14.8%	$121,198
Collaborate in real time on document development and review	7.0	12.9%	137	14.3%	$311,249
Find and leverage collective intelligence to produce higher-impact deliverables	8.0	13.0%	75	13.0%	$186,705
Protect sensitive client information to ensure compliance	7.0	7.1%	30.5	4.3%	$30,320

Source: Forrester Research, Inc.

Survey respondents shared the following specific statements about how processes improve:

› "Makes it easy for me to quickly get information from other departments and string together conversations and share ideas."

› "[Office 365] helps us have more hearings remotely."

› "Allows me to work on documents and then save them to the cloud without worrying about their security."

› "I trust Microsoft Office 365 when using email and skype to communicate with coworkers."

› "It secures SSN across the Internet, we can get more info out safer."

› "[Office 365] protects our data and facilitates the public portal."

› "We can use SharePoint to collaborate on documents and have an audit trail of changes which saves time and makes work more efficient."

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Table 12
Summary Value Of Discovery Workshop Improvements — Government Field Worker

Process	Hours Per Week Before Office 365	Percent Reduction In Hours	Number Of FTEs Before Office 365	Percent Reduction In FTEs	Financial Impact (Risk-Adjusted)
Discover insights to identify trends	3.5	13.0%	31	13.0%	$24,213
Discover content and context to quickly make informed decisions	6.0	11.5%	53	9.0%	$56,823
Conduct meetings from anywhere, anytime to get work done	2.5	4.3%	425	36.5%	$382,691
Communicate securely to ensure privacy	8.0	14.3%	375	38.0%	$1,290,690
Manage client privacy and security	13.0	7.8%	103	12.8%	$240,943
Secure access to work from anywhere	5.0	8.5%	103	21.5%	$133,191
Collaborate in real time on document development and review	8.0	6.2%	60	13.0%	$81,051
Find and leverage collective intelligence to produce higher-impact deliverables	8.0	8.0%	75	13.0%	$109,940
Protect sensitive client information to ensure compliance	3.5	2.5%	31	13.0%	$15,115

Source: Forrester Research, Inc.

Survey respondents shared the following specific statements about how processes improve:

› "[Office 365] helps me find out what things work best and identify best practices."

› "It makes it easier to locate data."

› "Easily bring staff together [from] different locations."

› "[I'm able to send personal information on emails."

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