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Prepared for McAfee, Inc.

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The Total Economic Impact™ Of McAfee's Network Security Platform's Intrusion Prevention System Single Company Analysis

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The Total Economic Impact™ Of McAfee's Network Security Platform's Intrusion Prevention System

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Executive Summary

In May 2009, McAfee, Inc., commissioned Forrester Research to examine the financial impact and potential return on investment (ROI) that an organization might realize from implementing McAfee's Network Security Platform's Intrusion Prevention System (formerly known as IntruShield) including its Network Security Central Manager. To determine the impact, Forrester examined the specific costs, benefits, flexibility, and risk elements that a McAfee customer, Adena Health System, experienced when it implemented the McAfee Network Security Platform.

Adena Health System is an independent, not-for-profit, and locally controlled organization, serving the needs of 10 counties in south central Ohio and employing more than 2,000 people. Adena's vision is to be the best healthcare system in the nation through innovation and a customer-centered philosophy. The company's IT group is responsible for providing 99.99% uptime on all pieces of equipment for Adena's health system including 200 servers, 2,000 workstations, public and private wireless access points, as well as machines that run highly specialized medical applications for surgical and other procedures.

From interviews conducted by Forrester, it was determined that Adena's use of McAfee's Network Security Platform's Intrusion Prevention System identified and blocked numerous major and minor threats, such as address resolution protocol (ARP) spoofing, malware, denial-of-service attacks, phishing, and peer-to-peer file sharing. The proactive nature of this attack blocking protected Adena's network with the additional benefit of allowing Adena to reclaim precious network bandwidth.

Based on our interviews, Forrester projects a three-year, risk-adjusted total net present value (NPV) of **\$348,617**, representing the net costs and benefits attributed to using the McAfee Network Security Platform's Intrusion Prevention System versus Adena Health's previous security solutions. (See details below in Costs, Benefits, Flexibility, and Risks sections). In addition, the risk-adjusted ROI was a very favorable **142%**, and the payback period was **within five months**.

Purpose

The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of implementing the McAfee Network Security Platform. Forrester's aim is to show the calculations and assumptions that go into the analysis. This study should be seen as a guide to better understand and evaluate the McAfee Network Security Platform.

Methodology

McAfee selected Forrester for this project because of our expertise in network security and Forrester's Total Economic Impact™ (TEI™) analysis methodology. TEI not only measures costs and benefits (areas that are typically accounted for within IT) but also weighs the enabling value of a technology in increasing the effectiveness of overall business processes. Forrester's TEI methodology serves an extremely useful purpose by providing a complete picture of the total economic impact of purchase decisions (see Appendix A for additional information on the TEI methodology).

Approach

Forrester used a 4-step approach for this study:

1. Forrester interviewed McAfee marketing, product management, and sales employees to fully understand the value proposition of the McAfee Network Security Platform.

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2. Using knowledge of the McAfee Network Security Platform and Network Security Central Manager as well as input from existing Forrester research and McAfee, Inc., a Forrester representative conducted in-depth interviews with Brian Young, senior security and systems analyst for Adena Health, to understand the costs, benefits, risks, and flexibility options of using the McAfee Network Security Platform.
3. Forrester constructed a financial value model representative of the data collected in the interviews.
4. Forrester created this study, which represents and examines the estimated value of the findings derived from the customer interview and analysis process and from Forrester’s independent research.

Key Findings

Table 1 represents a summary of the ROI and savings that Adena Health will realize over a three-year period by deploying the McAfee Network Security Platform.

Table 1: Three-Year Summary Financial Results — Adena Health

Summary of financial results	Risk-adjusted
ROI	142%
Payback period	Within five months
Total costs (present value [PV])	(\$244,659)
Total cost savings and benefits (PV)	\$593,276
Total (NPV)	\$348,617

Source: Forrester Research, Inc.

The three-year, risk-adjusted total NPV of **\$348,617** represents the net costs and benefits attributed to using the McAfee Network Security Platform’s Intrusion Prevention System, compared with Adena Health’s previous security solutions (see details below in Costs, Benefits, Flexibility, and Risks sections). In addition, the risk-adjusted ROI was a very favorable **142%**, and the payback period was **within five months**. Forrester Research also identified several significant unquantified business benefits attributed to the McAfee Network Security Platform, which are listed beginning on page 12 of this study.

If a risk-adjusted ROI still demonstrates a compelling business case, it raises confidence that the investment is likely to succeed because the risks that threaten the project have been taken into consideration and quantified. The risk-adjusted numbers should be taken as “realistic” expectations, since they represent the expected value considering risk. Assuming normal success at mitigating risk, the risk-adjusted numbers should more closely reflect the expected outcome of the investment.

The objective of this study is not to illustrate savings that other organizations can obtain by deploying the McAfee Network Security Platform but rather to identify savings and benefits experienced by Adena Health. These results can be used as a guide to allow other organizations to determine the appropriate benefits for their particular environments.

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Disclosures

The reader should be aware of the following disclosures associated with this study:

- The study was commissioned by McAfee, Inc., and delivered by the Forrester Consulting group.
- McAfee and Adena Health reviewed and provided feedback to Forrester, but Forrester maintained editorial control over the study, its findings, and financial data.
- Forrester did not accept any changes to the study that contradicted its findings, obscured the meaning of the study, or changed any of the data collected.
- The customer name for the study (Adena Health) was provided by McAfee, Inc.
- Forrester makes no assumptions as to the potential ROI that other enterprises will receive within their own environments. Forrester strongly advises that the reader use his or her own estimates within the framework provided in the study to determine the appropriateness of implementing the McAfee Network Security Platform.
- This study is not an endorsement by Forrester of McAfee, Inc., or its offerings.
- The study is not a competitive product analysis.

About The McAfee Network Security Platform

According to McAfee, organizations using its Network Security Platform's Intrusion Prevention System (formerly McAfee IntruShield) action-oriented security are automatically able to streamline risk management and meet compliance requirements — while reducing IT resource dependency. With Network Security Platform, customers get:

- Network Intrusion Prevention with independently certified accuracy and performance
- A network-class platform for any enterprise that needs security confidence
- Collaborative security for integrated intelligent protection to defend against attacks and secure network infrastructure
- Broad, accurate, and efficient protection for every network-connected device

Network Security Platform is a single integrated solution that gives organizations insight into network and systems at risks and threats, while providing accurate real-time protection. The time it takes to acknowledge an attack through its final resolution shrinks dramatically.

Network Security Platform makes network security smarter because it collaborates with organizations' security infrastructure and integrates with other McAfee products such as:

- McAfee ePolicy Orchestrator® (ePO®)
- McAfee Network Access Control (MNAC)

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- McAfee Vulnerability Manager

According to McAfee, key **benefits** of McAfee's Network Security Platform include:

- **Comprehensive enterprise wide threat prevention.** Block attacks before they occur with a single security. McAfee Network Security Platform is a single solution for proactive prevention that protects every device on the network.
- **Ability to do more with less.** Bridge network and system with McAfee's Optimized Security Management Framework to streamline security administration activities, leverage the benefits of the existing security ecosystem, and possess integrated network and system security infrastructure delivering efficient collaboration that's more than the sum of its parts.
- **Maintenance of your competitive advantage.** Don't let network threats and exploits interrupt your business operations and affect your competitive advantage. McAfee's high-performance network-class security appliance protects the evolving security and network needs, while delivering enterprise-level performance, reliability, and availability.
- **Smart network and system security integration that delivers real-time security.** Empower your enterprise with real-time security decisions for faster time to protection and faster time to confidence. McAfee Network Security Platform collaborates with McAfee Vulnerability Manager, ePO, and NAC for enhanced protection, visibility, efficiency, and value.

According to McAfee, key **features** of McAfee's Network Security Platform include:

- **Network-class protection for absolute security confidence.** Network Security Platform exceeds Telcordia standards, protects all network-connected devices with a secure network intrusion prevention system (IPS), and defends against current and future threats with dynamic threat and vulnerability updates.
- **Verified 10-Gigabit Ethernet performance.** Address evolving security and network needs with affordable network-class performance and reliability. McAfee Network Security Platform portfolio of high-performance purpose-built platforms protects all locations — from the network core to branch offices. According to McAfee, M-8000 Network IPS 10 Gbps performance is verified by an external independent organization, NSS Labs. (Source: NSS Labs [<http://nsslabs.com/reprints/NSSLabs-NIPS-McAfee-M8000.pdf>])
- **Real-time risk-aware IPS.** Make more informed security decisions through integration with McAfee Vulnerability Manager, which provides real-time threat relevancy on demand. Highly accurate risk relevancy and visibility provide actionable security intelligence.
- **System-aware IPS with McAfee ePO integration.** Leverage your security investment with McAfee Optimized Security Management Framework. This integration of the network and system security infrastructure results in the only system-aware IPS for efficient security collaboration that gives a clear picture of all system and network threats. Integration with McAfee ePO provides real-time visibility into actionable system host details as well as the top host IPS, virus, and spyware events.
- **Dynamic NAC.** Extend the reach and depth of network enforcement with dynamic, zero-day access control. Combined with the Network Security Platform on-board host quarantine capability, MNAC provides continuous pre- and post-admission control for managed, unmanaged, and unmanageable hosts.

Adena Health Selects The McAfee Network Security Platform

Background

Adena Health System, founded in 1895 in Ohio, is a 231-bed facility that serves more than 250,000 residents throughout 10 counties. The company is responsible for providing 99.99% uptime on all pieces of equipment for Adena Health System, including 200 servers, 2,000 workstations, public and private wireless access points, as well as machines that run highly specialized medical applications for surgical and other procedures. Adena's Senior Security and System Analyst Brian Young is a member of a team in charge of Adena's information technologies.

In 2006, two major viruses infiltrated Adena's network and IT systems, causing major havoc and, even worse, medical equipment downtime. Even though the company had an antivirus package deployed on its network, the solution did not detect the viruses (despite both viruses being two years old) and couldn't eliminate either of them. This forced Brian and his team to manually load another antivirus package onto every workstation to clean up the machines.

In addition, Adena hired a network security outsourcing firm to handle remote intrusion detection system (IDS) monitoring and to proactively alert Adena's IT staff of all potential viruses or spyware outbreaks. However, Brian discovered that he spent more time alerting the outsourcing firm about pending security issues than it spent alerting him. After testing the firm's network security services and finding faulty perimeter monitoring, the remote IDS monitoring was turned off.

Faulty antivirus coverage and network security monitoring led Adena to seek a stronger, more proactive, and more manageable security solution.

High-Level Strategic Goals And Objectives

Adena's objectives were to eliminate all viruses and spyware on its network. The company also wanted to reduce its administrators' time deploying antivirus solutions and fighting unnecessary security battles — battles that a comprehensive security program could prevent from occurring in the first place — so it could focus on other pressing IT needs. Also, because Adena's physicians and other medical professionals rely so heavily on the network, protecting it and patient data from malicious intrusion was a top priority and strategic objective.

Adena Health Chooses McAfee Network Security Platform

During the vendor selection process, Adena's technical team set up a three-week trial and invited several security vendors to participate. The test criteria mirrored the security capabilities that Adena requested in the vendors' products: centralized management, simple deployment, and common reporting.

In the end, Adena chose the McAfee Network Security Platform's Intrusion Prevention System because it met all three of Adena's test criteria and subsequently provided benefits in other ways:

- After taking one week to deploy the solution, Adena has not had to deal with any virus outbreaks or spyware issues since.
- In addition to avoiding viruses and spyware, Network Security Platform enabled Adena's users to realize performance gains in everyday computing tasks. Network Security Platform allows Adena to adjust CPU power during virus scans. In addition, McAfee helped Adena's network administrators set up and enforce stricter policies that limit bandwidth and prevent

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users from downloading large peer-to-peer and gaming software on their workstations, which takes up valuable Internet bandwidth for the rest of Adena's users. Even though the policies existed before McAfee, Adena's previous solutions were not capable of enforcing them.

- Since Network Security Platform includes a Web-based management console — McAfee ePO — it allowed the security team to deploy McAfee — quickly and seamlessly networkwide. Now ePO automates all security policies so the IT staff doesn't need to perform manual downloads or cleanups. On a daily basis, the security team uses ePO's common reporting, real-time alerting, and deployment, which has made PC support easier by reducing support calls over the long term. Since ePO can prevent end user modification of security and corporate settings, it has made Adena more secure by guaranteeing that security policies are enforced companywide.

Comments On The Actual McAfee Deployment

Adena is currently using the following McAfee products: VirusScan, AntiSpyware, ePO, SiteAdvisor, GroupShield, and Host IPS (also known as ToPS).

The McAfee solution has been easy to maintain and manage independent of McAfee, with only occasional calls to McAfee with a question if running into a problem with the program. Brian estimates that his security team has made only three calls in three years to the McAfee technical support team.

Adena Health adopted most of McAfee's default values, with some customized values mostly relating to its medical applications.

Adena uses Network Security Platform as its perimeter defense, which encompasses anything connected to the Internet or outside of the firewall, such as vendor and site-to-site virtual private networks (VPNs). Initially, Network Security Platform was set up in monitoring mode to see what type of traffic was going in and out. Once Adena's security staff identified all the malicious traffic, it was put into prevention mode and started blocking and dropping packets.

Since implementing McAfee, and in contrast to using its previous outsourced security provider, Adena has not had any major outbreaks on its network while using McAfee, and there's been no downtime related to viruses or spyware.

Costs, Benefits, Flexibility, And Risks

To calculate the ROI for Adena Health's investment in the McAfee Network Security Platform, Forrester analyzed the costs, benefits, flexibility, and risks associated with deploying the McAfee Network Security Platform.

Costs

The costs associated with selecting, implementing, and maintaining the McAfee Network Security Platform total **\$291,100** for the three-year period of this analysis and include the following expenses:

- **Vendor selection and evaluation: \$4,000.** Internal labor costs were \$4,000. The costs represent 10 days' worth of effort of the security staff to evaluate the capabilities of vendors.

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- **Planning of the implementation: \$2,000.** Internal labor costs were \$2,000. This cost represents five days' worth of effort on the part of the security staff to plan the McAfee deployment. Adena did not use McAfee professional services for preplanning or implementation because of its existing staff's prior use and knowledge of McAfee products. Brian Young suggests that other organizations implementing the McAfee Network Security Platform should consider engaging McAfee's professional services for both pre-implementation planning and implementation assistance.
- **McAfee software product licensing fees: \$45,000.** This includes three-year licensing and the first year's maintenance expenses.
- **McAfee software maintenance fees: \$80,000.** The maintenance fees were \$40,000 annually for 2008 and 2009.
- **McAfee penetration testing: \$10,000.** There was an additional \$10,000 in 2009 for McAfee's security group to perform outside penetration testing of Adena's network.
- **McAfee IntruShield boxes (two): \$80,000.** It was \$40,000 for a series 2700 McAfee IntruShield Network IPS Appliance purchased at implementation and \$40,000 for a series 3000 appliance purchased in 2008. Both prices included maintenance for the respective first years.
- **McAfee IntruShield boxes — maintenance: \$35,000.** Maintenance for 2008 was \$15,000, and for 2009, the cost increased to \$20,000, coinciding with the purchase of the second IntruShield box.
- **Internal management of the McAfee solution: \$35,100.** The cost of managing the McAfee solution was 5 hours per week at \$45 per hour, or \$11,700 annually and \$35,100 over this three-year analysis.

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Table 2: Total Cost Associated With The McAfee Network Security Platform's Intrusion Prevention System At Adena Health

Project costs	Implement- ation costs	2007	2008	2009 projected	Total	PV
Vendor selection and evaluation	\$4,000	\$0	\$0	\$0	\$4,000	\$4,000
Planning the implementation	\$2,000	\$0	\$0	\$0	\$2,000	\$2,000
McAfee software product licensing fees	\$45,000	\$0	\$0	\$0	\$45,000	\$45,000
McAfee software maintenance fees	\$0	\$0	\$40,000	\$40,000	\$80,000	\$67,602
McAfee penetration testing	\$0	\$0	\$0	\$10,000	\$10,000	\$8,929
McAfee IntruShield boxes	\$40,000	\$0	\$40,000	\$0	\$80,000	\$75,714
McAfee IntruShield boxes — maintenance	\$0	\$0	\$15,000	\$20,000	\$35,000	\$26,194
Internal management of McAfee solution	\$0	\$11,700	\$11,700	\$11,700	\$35,100	\$28,101
Total costs	\$91,000	\$11,700	\$106,700	\$81,700	\$291,100	\$257,540

Source: Forrester Research, Inc.

Benefits — Quantified

Adena Health identified four significant and quantifiable benefits totaling **\$871,800** (non-risk-adjusted), resulting from the implementation of the McAfee Network Security Platform. Forrester also discusses several additional benefits beginning on page 12 that Adena Health was not able to quantify.

- Reduction in help desk calls from use of ePO: \$351,000.** McAfee's new ePO allows Brian and his team to deploy McAfee's Network Security Platform Solutions networkwide quickly and seamlessly using one central console. In addition, ePO facilitated an elimination of 10 help desk calls a week for virus and spyware issues. At a cost of \$225 per help desk call multiplied by 10 calls per week, the total annual savings is \$117,000 or \$351,000 over the three years of this analysis. The elimination of these help desk calls helped Adena maintain its security staff of four administrators over the three-year period, in spite of having doubled the number of users and devices supported and doubling the amount of electronics versus paper.
- Cost avoidance of security staff: \$120,000.** The McAfee solution has reduced the number of time-consuming calls related to security issues, allowing the existing security

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staff to absorb twice as many calls, deferring the need to hire one additional security administrator, and saving Adena \$40,000 a year for one tier-one help desk person (fully loaded cost) — or \$120,000 over the three years of this analysis. The four PC security administrators now handle 815 pieces of equipment each, including off-site work at multiple hospitals.

- Savings from avoiding manual downloads for cleanups: \$280,800.** Prior to implementing McAfee's solution, the previous antivirus application required a full-time equivalent (FTE) to spend 40 hours a week supporting this application with site visits to the impacted workstations to force the update or uninstall and reinstall the application — or install another application to clean up the virus. Once the McAfee antivirus software was installed, 99% of the previous cleanup efforts went away, saving one senior security administrator's time and saving Adena one FTE or \$93,600 annually — or \$280,800 over the three years of this analysis.
- Savings from managing signatures, alarms, and policies: \$120,000.** The McAfee devices "check" for emergency signature updates every 15 minutes, and new signatures are automatically deployed immediately to all machines. Normal signature downloads happen at 3:00 p.m., and after console verification, 98% of the machines receive the update within 15 minutes. Compared with its previous security solutions, McAfee afforded Adena the opportunity to save one FTE for the management of signatures, alarms, and updates/patches. With McAfee, Adena is able to fence in the antivirus issues, thereby not having to deploy patches as often, and now has the time to test the patches prior to deployment. Administrators are now able to push out updates via Windows updates. These aggregate efficiencies allow Adena to save an additional FTE at a fully loaded cost of \$40,000 annually — or \$120,000 over the three years of this analysis.

Table 3: Total Benefits Associated With The McAfee Network Security Platform's Intrusion Prevention System At Adena Health (Non-Risk-Adjusted)

Benefits/savings	2007	2008	2009 projected	Total	PV
Reduction in help desk calls from use of ePO	\$117,000	\$117,000	\$117,000	\$351,000	\$281,014
Cost avoidance of security staff	\$40,000	\$40,000	\$40,000	\$120,000	\$96,073
Savings from avoiding manual downloads for cleanups	\$93,600	\$93,600	\$93,600	\$280,800	\$224,811
Savings from managing signatures, alarms, and policies	\$40,000	\$40,000	\$40,000	\$120,000	\$96,073
Total benefits	\$290,600	\$290,600	\$290,600	\$871,800	\$697,972

Source: Forrester Research, Inc.

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Benefits — Unquantified

Adena Health identified the following additional business benefits achieved from using the McAfee solutions. However, it was *not* able to quantify these benefits:

1. **Improving performance and availability.** McAfee solutions have been responsible for an increase in network performance and availability. Since deploying McAfee, Adena has experienced no network downtime.
2. **Enforcing strict policies.** McAfee helps Adena's network administrators set up and enforce stricter policies that prevent users from downloading large peer-to-peer gaming software on their workstations. Adena had the ability to specify certain known games with viruses and have them automatically deleted from the infected systems.
3. **Deferring bandwidth upgrades.** Prior to implementing McAfee, Adena's network was infected with viruses, spyware, and peer-to-peer applications, which created a bottleneck for network bandwidth, CPU time, and memory. After installing McAfee, the bottlenecks cleared up, and the hospital can now consider implementing several video and audio technologies across the network without the need to expand network bandwidth.
4. **Securing patient information.** With a more secure network, Adena will soon be deploying physician and patient portals on the Web, where health records can be reviewed and patients can schedule provider appointments and pay bills online. If the network was not as secure, Adena would not have been able to even consider these portals.
5. **Having one central console.** Now McAfee's ePO automates all security policies so the IT staff doesn't need to perform the annual download or cleanups. Administrators are able to manage the PCs through one central console, initiating scans, working on event logs, deploying a new piece of software, and doing uninstalls and reinstalls.
6. **Complying with HIPAA and patients privacy.** McAfee's Network Security Platform allows Adena to better comply with HIPAA guidelines for patient privacy. Adena has been able to minimize its risk and reduce its liability for litigation by implementing McAfee's antivirus systems and other security measures on the network in order to mitigate its liability from an electronic standpoint.
7. **Complying with HIPAA and patient trust.** The ultimate value of being in compliance with HIPAA is that Adena's patients trust that their privacy will be maintained.
8. **Complying with Sarbanes-Oxley.** McAfee also helps Adena to comply with Sarbanes-Oxley rules for financial and payroll applications.
9. **Ensuring Adena's revenue streams.** If medical equipment such as a computerized axial tomography (CAT) scans cannot be used due to a virus, then that equipment is unavailable for patient use, creating a missed revenue opportunity for Adena as well as the need to reschedule patients impacting patient satisfaction.
10. **Having more strategic focus.** Adena has been able to reallocate security staff resources to higher-level strategic tasks as a result of implementing McAfee's solutions.

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11. **Possessing IntruShield device reliability.** Adena has had one IntruShield device for three years and another for three months with no failures or problems.

Flexibility Options — Agility

Flexibility, as defined by Forrester's TEI methodology, represents investing in additional capacity or agility today that can be turned into business benefits in the future at some additional cost. The McAfee solution offers flexibility to Adena Health because it can be leveraged in the future to implement physician and patient portals where patient information is going to be directly exposed to the Internet through a Web-based portal. Patients and physicians can use the portals to review health records, and patients can schedule appointments with their doctors, pay bills, and conduct this all electronically. If McAfee's solutions were not in place, Adena would not be able to consider doing this project. However, it will now proceed with both portals, which will be implemented in a cheaper, better, faster, and more secure manner because of the McAfee solution.

Adena Health and Forrester believe that there is potential value in having the flexibility to take advantage of McAfee's security features when creating the physician and patient portals. However, Adena Health is not yet ready to quantify the benefits or value of these flexibility options. Therefore, Forrester will not include the value of this flexibility benefit in this analysis.

In some instances, the reader of this study may believe that his or her organization is ready to take advantage of the McAfee Network Security Platform's flexibility and agility, and in that case, the option will have a PV that can be estimated. The flexibility component of TEI captures that value. The value of flexibility is clearly unique to each organization, and the willingness to measure its value varies from company to company (see Appendix A for additional information regarding flexibility).

Risks And Risk Mitigation Strategies

There are two aspects of risk and risk mitigation considered in this study: project risks and the risks associated with the estimates of costs and benefits in a business case. Below is a summary of each.

Project Risk And Mitigation

There are risks associated with IT projects in general and specifically with the McAfee Network Security Platform. However, Brian Young indicated that there were clearly greater risks to the business by not using McAfee's solution than in its implementation. Nonetheless, the reader should keep in mind that the security staff at Adena Health already had prior experience with McAfee at another organization. There are thus two project risks that are cited in implementing the McAfee Network Security Platform:

1. The risk that the IT security staff blocks something that is medically oriented; medical applications are not designed to accept security applications easily so this risk is limited to the healthcare industry.
2. For organizations not having prior experience with McAfee, the main risks are having the internal expertise to manage McAfee's implementation and the subsequent post-implementation issues that normally arise.

Adena Health believes that a McAfee platform deployment will never be risk-free. However, its IT security staff recommends that those organizations without prior McAfee experience work closely with McAfee's professional services before, during, and after implementation to mitigate any project risk.

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Risks Associated With Estimates Of Costs And Benefits

Since the future cannot be accurately predicted, there is risk inherent in any project. Risk assessments provide a range of possible outcomes based on the risks associated with IT projects in general and specific risks relative to moving toward a particular technology solution.

With the benefit of hindsight, Adena Health believes that its investment in the McAfee Network Security Platform's Intrusion Prevention System carried a significantly lower level of risk, compared with its previous security solutions. However, Adena Health's security staff was able to mitigate the risk of benefit realization due to its prior experience with McAfee's solutions. For readers of this study who do not have McAfee experience, there is some uncertainty regarding the benefit estimates. To acknowledge this uncertainty, **Forrester assigned a 15% risk reduction factor** to the benefits outlined above in this study, resulting in the following changes.

Table 4: Total Benefits Associated With The McAfee Network Security Platform's Intrusion Prevention System At Adena Health (Risk-Adjusted)

Benefits/savings	2007	2008	2009 projected	Total	PV
Reduction in help desk calls from use of ePO	\$99,450	\$99,450	\$99,450	\$298,350	\$238,862
Cost avoidance of security staff	\$34,000	\$34,000	\$34,000	\$102,000	\$81,662
Savings from avoiding manual downloads for cleanups	\$79,560	\$79,560	\$79,560	\$238,680	\$191,090
Savings from managing signatures, alarms, and policies	\$34,000	\$34,000	\$34,000	\$102,000	\$81,662
Total benefits	\$247,010	\$247,010	\$247,010	\$741,030	\$593,276

Source: Forrester Research, Inc.

Financial Analysis Summary — Adena Health

Key Findings

Table 5 (repeated from the Executive Summary) represents a summary of the ROI and savings that Adena Health will realize over a three-year period by deploying the McAfee Network Security Platform.

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Table 5: Three-Year Summary Financial Results — Adena Health

Summary of financial results	Risk-adjusted
ROI	142%
Payback period	Within five months
Total costs (present value [PV])	(\$244,659)
Total cost savings and benefits (PV)	\$593,276
Total (NPV)	\$348,617

Source: Forrester Research, Inc.

The three-year risk-adjusted total NPV of **\$348,617** represents the net cost and benefits attributed to using the McAfee Network Security Platform's Intrusion Prevention System, compared with Adena Health's previous security solutions (see details in Costs, Benefits, Flexibility, and Risks sections). In addition, the risk-adjusted ROI was a very favorable **142%**, and the payback period was within **five months**. Forrester Research also identified several significant unquantified business benefits attributed to the McAfee Network Security Platform, which are listed beginning on page 12 of this study.

If a risk-adjusted ROI still demonstrates a compelling business case, it raises confidence that the investment is likely to succeed because the risks that threaten the project have been taken into consideration and quantified. The risk-adjusted numbers should be taken as "realistic" expectations, since they represent the expected value considering risk. Assuming normal success at mitigating risk, the risk-adjusted numbers should more closely reflect the expected outcome of the investment.

Study Conclusions

This study is meant to provide the reader with a framework to examine the costs and benefits of deploying the McAfee Network Security Platform. Based on our in-depth discussions with Adena Health, Forrester projects a three-year risk-adjusted ROI of **142%** and a payback period of **within five months**. The NPV for this investment is **\$348,617** (risk-adjusted).

For Adena Health, a successful, well-planned implementation allowed significant incremental benefits and cost savings to be realized within IT. Adena Health also believes that its investment in the McAfee solution provides it with the agility and the future flexibility to take advantage of adding two Web-based portals for physicians and patients where health records can be reviewed and patients can schedule provider appointments and pay bills online. If the network was not secure, Adena would not have been able to even consider these portals. Although Adena understands the benefits, it's too early for it to quantify these future benefits for this case study.

Overall, other organizations that are likely to see beneficial results using the McAfee Network Security Platform's Intrusion Prevention System have the following characteristics or attributes:

- They depend on their network for their most important business applications.
- They are headcount-restrained IT organizations that want to incorporate 7X24X365 automated intrusion protection security on their networks, while reducing IT resource dependency.

The Total Economic Impact™ Of McAfee's Network Security Platform's Intrusion Prevention System

- They have high-value confidential assets and include banks, credit card companies, governments, retailers, and utilities.
- They are in highly regulated industries such as healthcare, financial services, gaming, and utilities.

For Adena Health, the McAfee Network Security Platform's Intrusion Prevention System carries a relatively low level of risk, a very positive **142%** risk-adjusted ROI, and a fast (within) **five-month** horizon to recoup the investment.

Forrester makes no assumptions regarding the effects of the McAfee Network Security Platform's Intrusion Prevention System at other organizations. This study examines the financial impact attributable to one organization, Adena Health. The underlying objective of this document is to provide guidance to technology decision-makers seeking to identify areas where value can potentially be created by using the McAfee Network Security Platform.

Appendix A: Total Economic Impact™ Overview

Total Economic Impact is a methodology developed by Forrester Research, Inc., 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 senior management and other key business stakeholders.

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

Cost

Costs represent the investment necessary to capture the value, or benefits, of the proposed project. IT or the business units may incur costs. These may be in the form of fully-burdened labor, subcontractors, or materials. Costs consider all the investment and expenses necessary to deliver the value proposed. 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.

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 for analysis of the impact of the technology on the entire organization. The TEI methodology and resulting financial model places equal weight of the measure of benefits to that of costs, allowing for a full examination of the impact 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.

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 initial investment in an enterprisewide upgrade of an office productivity suite can increase standardization (to increase efficiency) and reduce licensing costs. Later, this organization may decide to take advantage of an embedded collaboration feature, which may translate to greater worker productivity if activated. However, this collaboration feature can only be used with an additional investment in user training. The ability to capture the benefit associated with this collaboration feature has a present value that can be estimated. The flexibility component of TEI captures that value using the Black-Scholes option pricing model.

Risk

Risk is the fourth component of the TEI methodology. It is a measurement of the uncertainty of benefit and cost estimates that are 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 applies a probability density function known as "triangular distribution" to the values entered. At minimum, three values are calculated to estimate the underlying range around each cost and benefit.

Appendix B: Glossary

Discount rate: The interest rate used in cash flow analysis to take into account the time value of money. Although the Federal Reserve Bank sets a discount rate, organizations often set a discount rate based on their business and investment environment. Forrester assumes a yearly discount rate of 12% for this analysis. Organizations typically use discount rates between 8% and 15% based on their current environment. Readers are urged to consult their organization 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 an interest rate (the discount rate). The PV of costs and benefits feed into the total net present value of cash flows.

Payback period: The breakeven point for an investment, or 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 Table 2 at the end of the year. Present value (PV) calculations are calculated for each total cost and benefit estimate. Net present value (NPV) calculations are not calculated until the summary tables and are the sum of the initial investment and the discounted cash inflows and outflows in each year.

Example Table

Category	Initial cost	Year 1	Year 2	Year 3	Total

Source: Forrester Research, Inc.

Appendix C: About The Project Manager



Bob Cormier
Principal Consultant

Bob is a principal consultant for Forrester's Total Economic Impact™ (TEI) service. He is a leading expert on deriving business value from technology investments, specializing in advising clients on the TEI framework — services that help organizations understand the overall financial value of IT strategies and investments. He serves the following client roles:

- CIOs and their staffs. Bob serves as a trusted advisor to create consistent, repeatable, and best practice processes to justify and add credibility to technology investments business cases using Forrester's TEI methodology.
- Technology product management and marketing professionals. Bob works with these professionals in their efforts to clearly articulate the unique value proposition of their solutions to prospects and customers using Forrester's TEI methodology.

Bob has authored numerous TEI case studies for Forrester's vendor clients. He has also delivered his acclaimed Justifying Technology Investments (JTI) workshop to more than 800 participants representing 400 organizations.

Bob has more than 25 years experience in the IT and consulting industries. Prior to joining Forrester, he held senior-level positions at two leading eBusiness consulting firms, ZEFER and Cambridge Technology Partners. Bob has successfully led company efforts to optimize financial, operational, and resource planning activities, incorporating leading-edge, professional service automation (PSA) applications and enterprise resource planning (ERP) systems. He has also held senior financial management positions at Digital Equipment and Anixter International.

During his career Bob has consulted with global users and vendors of IT and has been a frequent speaker at conferences, events, and seminars.

Education

Bob earned an M.B.A. from Bentley University and a B.S. in business from the University of New Hampshire. As an adjunct professor, he has taught finance and economics courses for more than 10 years at Southern New Hampshire University and Daniel Webster College.