The Total Economic Impact™ Of IBM Identity And Access Management Services

Cost Savings And Business Benefits Enabled By IBM's Professional And Managed Services For Identity And Access Management

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Benefits And Costs

Reduced cloud migration costs:
86%
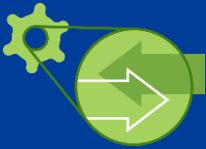
Reduced downtime:
95%

Reduced help desk requests:
60%

Reduced maintenance:
96%

Executive Summary

Identity and access management (IAM) helps businesses provide their employees, partners, and customers access to important applications without sacrificing security or user experience. In recent years, IAM has evolved from a purely security-focused technology into an essential technology that helps companies understand and engage with customers across every step of their journey. A key driver of this transformation is identity-as-a-service (IDaaS) or cloud IAM, a simpler and faster software-as-a-service alternative to an on-premises IAM deployment. In fact, Forrester expects IDaaS to grow at a 14.1% compound annual growth rate over the next five years as more businesses look to reap the benefits of cloud computing.[1]

However, not all IDaaS models are built the same. Some providers only offer basic upkeep and maintenance for IAM software, while others can work across different types of applications and offer end-to-end services to both bring an IAM workload to a cloud environment and then help manage and optimize applications over time.

IBM's Identity and Access Management Services (also referred to as IBM IAM Services) provides a holistic suite of services designed to address the challenges associated with IAM workloads, including: 1) developing a strategy to optimize the performance and cost of IAM applications; 2) maintaining and managing a diverse IAM stack; 3) deploying IAM applications to the cloud under an IDaaS model; and 4) refactoring, rearchitecting, and developing new solutions to deliver business outcomes. IBM commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential ROI enterprises may realize by deploying IBM's Identity and Access Management Services. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of IBM's IAM Services on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed an enterprise health insurance company with several years of experience using IBM's IAM Services. Prior to the engagement, the interviewed customer ran an on-premises IAM environment with multiple IAM point solutions for use cases such as privileged access management and user authentication. However, running and maintaining an on-premises IAM environment became increasingly costly and burdensome over time, leading the organization to explore the option of moving its IAM applications to the public cloud. After evaluating the time and cost required to execute this migration internally, the organization opted to collaborate with IBM to expedite and facilitate the process. The findings below demonstrate what this organization experienced by leveraging IBM's IAM services to migrate and manage its IAM workloads rather than doing so solely with internal IT resources.

Key Findings

Quantified benefits. The interviewed organization experienced the following risk-adjusted present value (PV) quantified benefits:

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ROI
101%

Benefits PV
$5,474,890

NPV
$2,749,211

Payback
15 months

› **86% lower costs to onboard an IAM application onto the public cloud.** IBM's engineers and architects helped to facilitate the technical components of the migration while project managers helped to align business lines and IT around a common set of objectives. The resulting labor cost savings amounted to a three-year PV of $1.9M.

› **95% reduction in downtime on IAM workloads.** IBM's managed services ensured that minimum uptime SLAs could be maintained and IAM workloads would be updated, patched, and deployed correctly. Across 4,400 employees, the average user avoided 18 hours of lost productivity annually, resulting in labor cost savings of $1.9M over three years.

› **60% reduction in help desk support requests.** By moving to single sign-on (SSO) and automating IAM change request processes, the organization reduced the volume of help desk requests related to cases such as onboarding, offboarding, rights modification, and password resets, lowering support costs by a three-year PV of $1.3M.

› **96% reduction in maintenance hours to support IAM software and hardware.** IBM's managed services, coupled with reduced hardware needed for cloud solutions, meant that the organization only needed a single employee to spend 20% of their time providing basic software upkeep. The ensuing time savings totaled a three-year PV of $323K.

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

› Heightened security posture.

› Knowledge transfer.

› End user time savings.

› Improved planning and budgeting.

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

› **IBM professional and managed services fees of $2.7M.** This fee accounts for all services delivered over three years, including migration strategy and assessment services, migration execution, and managed identity services.

Over three years, the interviewed organization experienced benefits of $5,474,890 versus costs of $2,725,679, adding up to a net present value (NPV) of $2,749,211 and an ROI of 101%.

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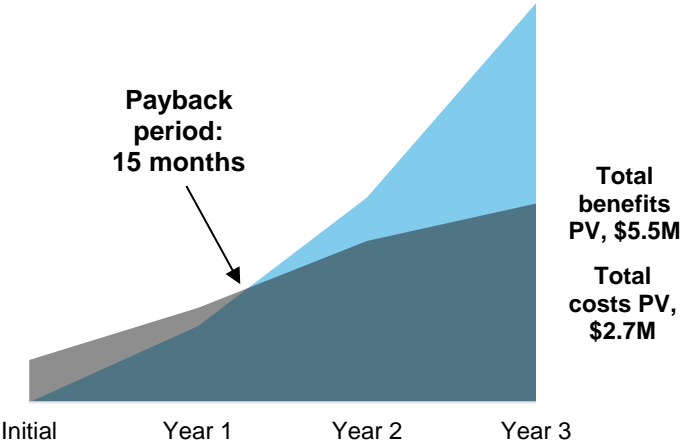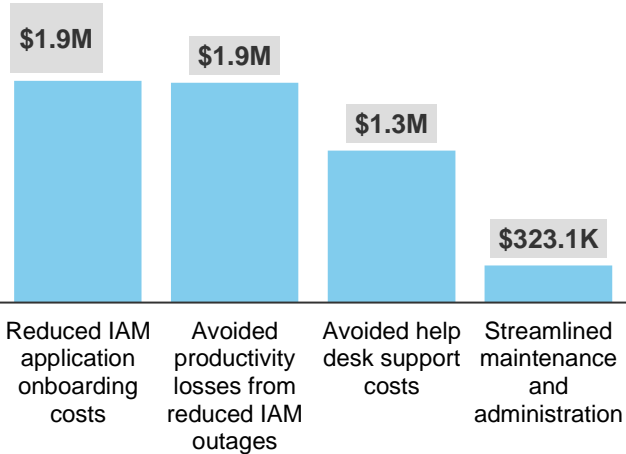
Financial Summary

Payback period: 15 months

Total benefits PV, $5.5M

Total costs PV, $2.7M

Initial | Year 1 | Year 2 | Year 3

Benefits (Three-Year)

$1.9M	$1.9M	$1.3M	$323.1K
Reduced IAM application onboarding costs	Avoided productivity losses from reduced IAM outages	Avoided help desk support costs	Streamlined maintenance and administration

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TEI Framework And Methodology

From the information provided in the interview, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing IBM Identity and Access Management Services.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that IBM Identity and Access Management Services can have on an organization:

DUE DILIGENCE
Interviewed IBM stakeholders and Forrester analysts to gather data relative to Identity and Access Management Services.

CUSTOMER INTERVIEW
Interviewed one organization using IBM IAM Services to obtain data with respect to costs, benefits, and risks.

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

CASE STUDY
Employed four fundamental elements of TEI in modeling the impact of IBM Identity and Access Management Services: benefits, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

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

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The Identity And Access Management Services Customer Journey

BEFORE AND AFTER THE IDENTITY AND ACCESS MANAGEMENT SERVICES INVESTMENT

Interviewed Organization

For this study, Forrester interviewed a customer that leveraged and continues to leverage IBM's Identity and Access Management Services for migration of its on-premise IAM workloads to a cloud-based IAM solution, as well as the ongoing managed services for IAM monitoring, maintenance, and optimization. The organization has the following characteristics:

› An enterprise health insurance company operating in with between $1B and $10B in annual revenue.

› Prior to engaging IBM, the company operated and managed its IAM stack of applications on-premises with five IAM administrators and an internal help desk for support.

› Migrated a total of 22 IAM applications to the public cloud over three years, with five applications migrated in Year 1, seven applications in Year 2, and 10 applications in Year 3.

Key Challenges

Prior to engaging IBM, the organization managed its own on-premises identity and access management environment. As part of a broader strategic IT vision, the organization recognized and sought to solve two major challenges with its existing on-premises IAM environment:

› Internal management of IAM platform and applications incurred significant costs.

   • Five maintenance staff members spent a majority of their time just trying to keep the aging platform running, accruing layers of technical debt over time.

   • Help desk staff were inundated with frequent support requests, including thousands of onboarding/offboarding, rights modification, and password reset cases annually.

   • IAM applications experienced frequent downtime with incidents lasting several hours, sapping productivity from internal teams that depended on IAM to access critical applications.

› Cloud migration appeared prohibitively complex and expensive.

   • Deploying, detangling, and modernizing even a single application for the cloud threatened to tie up IT staff for months. Expanding this to a significant number of highly customized systems demanded more focus and specialized expertise.

> "A major goal was to enhance services and get rid of technical debt. To make it easier, faster, and better for our end users, and automate, automate, automate wherever we possibly can."
>
> *Sr. program manager, healthcare*

> "The previous platform was very archaic; a lot of manual processes and a lot of technical debt. We paid quite a bit in extended software support to keep those systems running, and in some cases, nobody supported them anymore."
>
> *Sr. program manager, healthcare*

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Solution Requirements

The interviewed organization searched for a service provider that could:

› Align the organization's stakeholders — including IT, executives, and line of business managers — across all important considerations for an IAM migration project, including timeline, budget, and expected outcomes for the business and IT.

› Manage the end-to-end IAM migration process, from assessing and creating a road map for migration, to executing the migration, and finally managing the migrated IAM workloads in the public cloud.

› Work across all IAM applications, regardless of use case or solution provider, with the ability to be brand agnostic.

After an extensive RFP and business case process evaluating multiple vendors, the interviewed organization chose to migrate its IAM applications to an IDaaS model with IBM.

› The engagement began with an assessment period where IBM assessed the company's IAM workloads and developed a strategy and road map for deployment to the public cloud. The full deployment was phased over three years.

- **Phase 1:** applications that could be migrated to SSO without any complications.

- **Phase 2:** back-end work with slight customization and some functionality impact.

- **Phase 3:** highly customized applications requiring modernization.

Key Results

The interview revealed that key results from the Identity and Access Management Services investment include:

› **Accelerated digital transformation.** By creating a strategy and road map around the optimal architecture and deployment model for the organization's IAM applications, and the needs of business users, IBM IAM Services ultimately helped facilitate the organization's digital transformation journey. IBM IAM services helped identify end user requirements in advance of any migration activity and subsequently worked with the organization's internal IAM team to plan, develop, and deploy the required solutions, whether in the cloud or on-premises. As a result, the organization could more quickly experience the benefits of the cloud while simultaneously reducing migration-related costs.

› **Improved automation and streamlined processes.** By refactoring and rearchitecting existing IAM workloads for a cloud environment, the organization could enable multiple business use cases, such as SSO or automated change requests. These features reduced the volume of help desk requests while providing end users with a more seamless authentication experience.

"From a support model, IDaaS is significantly less difficult to maintain. We originally had five people supporting several applications, now, we have one person managing it. So, our maintenance costs are obviously tremendously lower. And I'm sure, we'll probably realize more savings as we automate more."

Sr. program manager, healthcare

"With IBM, we onboarded seven applications in a year where previously we might have been able to complete one."

Sr. program manager, healthcare

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› **Increased reliability.** With IBM IAM Services, IAM infrastructure and software maintenance could be outsourced to a team of experts at IBM rather than handled solely by internal resources. Not only did this ensure that IAM applications would be updated, patched, and deployed properly, limiting the risk of system outages, it also allowed IAM administrators to redeploy their hours to non-operational, strategic activities such as creating and enforcing policies.

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Analysis Of Benefits

QUANTIFIED BENEFIT DATA

Total Benefits

| REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Atr	Reduced IAM application onboarding costs	$539,220	$754,908	$1,078,440	$2,372,568	$1,924,339
Btr	Avoided productivity losses from reduced IAM outages	$307,800	$738,720	$1,354,320	$2,400,840	$1,907,851
Ctr	Avoided help desk support costs	$212,895	$510,948	$936,738	$1,660,581	$1,319,597
Dtr	Cost savings from streamlined IAM maintenance and administration	$90,537	$126,751	$181,073	$398,362	$323,103
	Total benefits (risk-adjusted)	$1,150,452	$2,131,327	$3,550,571	$6,832,351	$5,474,890

Reduced IAM Application Onboarding Costs

Migrating a workload can be an intimidating process to handle without professional support, particularly for IAM workloads which are key to an organization's security posture and often require careful planning and execution before moving to the cloud. Furthermore, organizations that attempt an IAM migration on their own often end up running into roadblocks such as a lack of budget, the wrong skillsets, or misalignment between IT and business lines. These challenges will often make IAM migration projects significantly more time-consuming and expensive than initially expected, even resulting at times in the project being scrapped altogether. When these projects are delayed or scrapped, organizations must also forgo the benefits of the cloud, such as increased agility and automation, that would have been experienced earlier in the case of a successful migration.

With IBM's IAM services, aided by design thinking, stakeholder needs are aligned before any migration activity ever occurs, ultimately increasing the success rate of projects and ensuring that benefits extend beyond IT to the lines of business. By engaging IBM, the interviewed organization reduced the labor cost associated with application onboarding by approximately 86%. The subsequent impact from a cost savings perspective is based on the following assumptions:

› The number of internal user identities remains constant at 4,400 from Year 1 through to Year 3, as the turnover rate is equal to the onboarding rate at 15% of total internal users.[2]

› The average labor cost to onboard one IAM application with internal resources only, per user is $30.[3]

› The organization realizes the cost savings benefits of reduced IAM application onboarding costs in proportion to the number of applications migrated to an IDaaS model on any given year.

The reduction in IAM application onboarding costs that other organizations experience will vary based on the following:

> The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the interviewed organization expects risk-adjusted total benefits to be a PV of more than $5.4 million.

$1.9 million

three-year benefit PV

35%
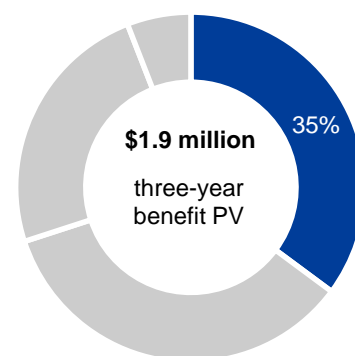
Reduced IAM application onboarding costs: **35%** of total benefits

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› **Existing IAM environment.** The complexity of an IAM application will determine the value of IBM IAM Services. Organizations are more likely to experience greater cost savings if their existing, on-premises applications require complex refactoring or rearchitecting to function optimally in the cloud. IBM's expert resources can help organizations navigate this complexity and ensure applications are deployed correctly while also helping to communicate the benefit of cloud based IAM to business end users.

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

To account for this risk, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV of $1,924,339.

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
Reduced IAM Application Onboarding Costs: Calculation Table					
A1	Number of internal users/identities		4,400	4,400	4,400
A2	Number of IAM applications onboarded to IDaaS		5	7	10
A3	Average labor cost to onboard one IAM application with internal resources only, per user		$30	$30	$30
A4	Percentage reduction in time required to onboard new application		86%	86%	86%
At	Reduced IAM application onboarding costs	A1*A2*A3*A4	$567,600	$794,640	$1,135,200
	Risk adjustment	↓5%			
Atr	Reduced IAM application onboarding costs (risk-adjusted)		$539,220	$754,908	$1,078,440

Avoided Productivity Losses From Reduced IAM Outages

With an on-premises IAM program running internally, organizations run the risk of their administrators improperly patching, updating, or configuring software, ultimately increasing the risk of system outages and downtime, leaving end users unable to perform core functions of their jobs. In the past, the interviewed organization estimated that these downtime events occurred approximately three times per year and lasted an average of 6 hours. By leaving the maintenance and management of IAM applications to certified experts in IBM, the organization could nearly eliminate the risk of these outages. As the organization described: "We certainly have less downtime now than we did before. In fact, I don't recall experiencing any downtime since we've moved to this model."

For the interviewed organization, Forrester assumes that:

› The number of internal user identities remains constant at 4,400 from Year 1 through Year 3 as the turnover rate is equal to the onboarding rate at 15% of total internal users.[4]

› For every hour of downtime avoided, an end user would be able to effectively recapture 50% of the time for value-added activities.

› The organization realizes the cost savings benefits of IBM IAM managed services in proportion to the number of applications migrated to an IDaaS model on any given year.

$1.9 million
three-year benefit PV

35%
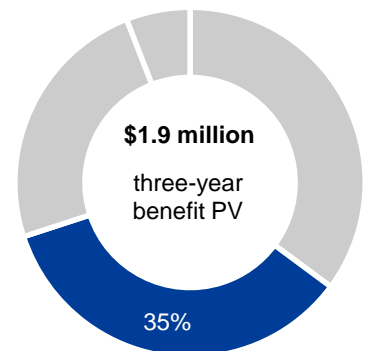
Reduced IAM outages:
35% of total benefits

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Avoided productivity losses from reduced IAM outages will vary with:

› **Existing IAM environment.** Organizations with simpler IAM programs leveraging fewer applications or point solutions may experience more modest benefits from leveraging IBM for IAM managed services. Furthermore, solutions for which the organization is already using software support may experience fewer downtime events overall, thus tempering the potential reduction in downtime achievable with IBM IAM managed services.

To account for this risk, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $1,907,851.

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
	Avoided Productivity Losses From Reduced IAM Outages: Calculation Table				
B1	Number of end users impacted by major downtime incidents	A1	4,400	4,400	4,400
B2	IAM outages experienced per year		3	3	3
B3	Hours of productivity lost per IAM outage		6	6	6
B4	Hours of productivity lost due to IAM outages annually	B2*B3	18	18	18
B5	Percentage reduction in productivity hours lost due to IAM outages with IBM Managed Identity Services		95%	95%	95%
B6	Percentage of total IAM applications managed with IBM Managed Identity Services		22.73%	54.55%	100.00%
B7	Avoided loss of productivity hours due to IAM outages with IBM Managed Identity Services (rounded)	B4*B5*B6	3.886	9.327	17.10
B8	Fully burdened end user compensation per hour		$40	$40	$40
B9	Productivity capture		50%	50%	50%
Bt	Avoided productivity losses from reduced IAM outages	B1*B7*B8*B9	$342,000	$820,800	$1,504,800
	Risk adjustment	↓10%			
Btr	Avoided productivity losses from reduced IAM outages (risk-adjusted)		$307,800	$738,720	$1,354,320

Avoided Help Desk Support Costs

The support desk is a significant cost center for many IAM programs due to frequent employee and contractor turnover, reassignments within the organization, and authentication-related support requests such as the need for password resets. By moving to a cloud-based IAM program, organizations are able to automate many of the steps involved in managing and assigning access rights. For example, once an access request is made, a cloud-based IAM program can immediately check against security policies to ensure that the right level of access is being given to the requestor. Furthermore, moving to single sign-on (SSO) can reduce the complexity of remembering individual passwords for distinct applications, and ultimately reduce the volume of IAM support requests.

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› In particular, the interviewed organization noted that achieving SSO was a key driver of adopting IBM IAM Services to move IAM workloads to the public cloud. The organization said, "Our biggest complaint has always been that there are 9,000 passwords to remember, which is why one of our main goals has always been to move to SSO."

For the purposes of this study, Forrester made the following assumptions:

› The number of internal user identities remains constant at 4,400 from Year 1 through to Year 3 as the turnover rate is equal to the onboarding rate at 15% of total internal users.[5]

› Each user makes an average of seven rights modification requests and five password reset requests per year.[6]

› As a percentage of the organization's total internal users, 45% are either onboarded, offboarded, or transferred per year.[7]

› The blended average cost per IAM help desk case is $30.[8]

The benefit of avoided help desk support requests that other organizations experience as a result of adopting a cloud-based IAM program can vary based on the following:

› **IAM automation.** Organizations that do not put any additional development into their IAM applications to support automation for use cases such as privileged access management may see smaller reductions in help desk support cases.

› **Employee turnover and reassignment rate.** Organizations with a smaller percentage of employees turning over and being reassigned each year may not see the same savings in their help desk support costs due to experiencing fewer total change requests.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV of $1,319,597.

24%

$1.3 million

three-year benefit PV
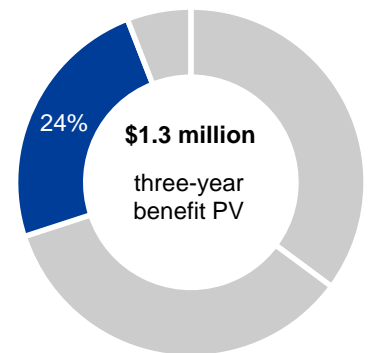
Avoided help desk support costs: **24%** of total benefits

"Our biggest complaint has always been that there are 9,000 passwords to remember, which is why one of our main goals has always been to move to SSO."

Sr. program manager, healthcare

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	Avoided Help Desk Support Costs: Calculation Table				
REF.	**METRIC**	**CALC.**	**YEAR 1**	**YEAR 2**	**YEAR 3**
C1	Number of internal users/identities	A1	4,400	4,400	4,400
C2	Percentage of users onboarded, offboarded, or transferred per year		45%	45%	45%
C3	Number of onboarding, offboarding, and transfer cases processed by IAM help desk, annually	C1*C2	1,980	1,980	1,980
C4	Rights modification requests made yearly, per user/identity		7	7	7
C5	Number of rights modification cases processed by IAM help desk, annually	C1*C4	30,800	30,800	30,800
C6	Password reset requests made yearly, per user/identity		5	5	5
C7	Number of password reset cases processed by IAM help desk, annually	C1*C6	22,000	22,000	22,000
C8	Total help desk cases processed annually while managing IAM manually on-premises	C3+C5+C7	54,780	54,780	54,780
C9	Percentage reduction in help desk requests by using IBM Managed Identity Services		60%	60%	60%
C10	Percentage of total IAM applications managed with IBM Managed Identity Services		22.73%	54.55%	100.00%
C11	Help desk cases avoided annually using IDaaS with IBM Managed Identity Services	C8*C9*C10	7,470	17,928	32,868
C12	Blended average cost per IAM help desk case		$30	$30	$30
Ct	Avoided help desk support costs	C11*C12	$224,100	$537,840	$986,040
	Risk adjustment	↓5%			
Ctr	Avoided help desk support costs (risk-adjusted)		$212,895	$510,948	$936,738

Streamlined IAM Maintenance And Administration

IAM workloads can be complex to manage and require the right skillset to do so effectively. Organizations often struggle to find and train the talent needed to manage an IAM program, which can result in inefficient, labor-intensive processes and even potential security risks downstream. Further complicating the situation, many organizations will rely on multiple point solutions for various IAM use cases, and the interdependencies across these solutions is often poorly understood. IBM IAM services solves for these challenges by taking over the day-to-day operations of managing an IAM program, while allowing the organization's IAM specialists to refocus on core business needs such as end user adoption or improving on existing access policies. The interviewed organization required the following resources to maintain and administer an IAM program before and after the investment in IBM.

› Before the investment, the organization approximated IAM maintenance and administration to require five FTEs at an average of 60% of working hours.

› After the investment, the organization approximated IAM maintenance and administration to require just one FTE at 20% of working hours.

6%

$323,103

three-year benefit PV
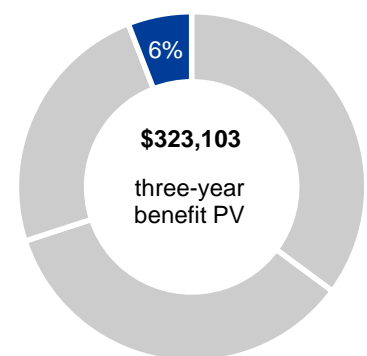
Streamlined IAM maintenance and administration:
6% of total benefits

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For the purposes of this study, Forrester assumes:

› A fully burdened hourly compensation rate of an IAM maintenance and administration professional is $70.[9]

› The organization realizes the cost savings benefits of IBM IAM managed services in proportion to the number of applications migrated to an IDaaS model on any given year.

The benefits that other organizations may experience with IBM IAM managed services may vary based on the following factor:

› **Complexity of IAM program.** Simpler IAM programs reliant on a single solution or solution suite with less varied internal identities and degrees of privilege and fewer access points, would experience a smaller magnitude of benefits from operating on an IDaaS model through IBM.

To account for this risk, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV of $$323,103.

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
Streamlined IAM Maintenance And Administration: Calculation Table					
D1	FTE hours needed to maintain IAM environment without IBM Managed Identity Services	5 FTEs spending 60% of time	6,240	6,240	6,240
D2	Total number of IAM applications		22	22	22
D3	FTE hours needed to maintain IAM environment without IBM Managed Identity Services, per application	D1/D2	283.64	283.64	283.64
D4	Percentage reduction in hours needed to maintain IAM environment with IBM Managed Identity Services		96%	96%	96%
D5	Hours saved by managing IAM with IBM Managed Identity Services, per application	D3*D4	272.29	272.29	272.29
D6	Number of IAM applications onboarded to IDaaS	A2	5	7	10
D7	Fully loaded hourly compensation of IAM maintenance and administration FTE		$70	$70	$70
Dt	Cost savings from streamlined IAM maintenance and administration	D5*D6*D7	$95,302	$133,423	$190,604
	Risk adjustment	↓5%			
Dtr	Cost savings from streamlined IAM maintenance and administration (risk-adjusted)		$90,537	$126,751	$181,073

Unquantified Benefits

The interviewed organization experienced the following benefits from IBM's IAM services which could not be quantified but were nonetheless a significant part of the value proposition of engaging IBM.

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› **Heightened security posture.** Having IAM workloads managed by certified experts at IBM ensures that applications are being patched, updated, and maintained correctly, i.e., any changes are made in accordance with group policies. This is particularly important for the access management piece, since incorrectly provisioning or removing access to employees and contractors can result in increased risk of a security breach. While unable to quantify the reduced risk of such breaches, the interviewed organization did maintain that there had been no issues with security since moving to an IDaaS model.

› **Knowledge transfer.** A common pain point across organizations that self-manage their IAM solutions is a lack of the necessary skills required to maintain, optimize, and support IAM workloads. IT resources may have experience with maintenance, for instance, but they may not know how to run a service with real-time support. By leveraging a managed service model, the interviewed organization could work directly with IBM engineers and architects possessing all three of these skillsets, thereby absorbing knowledge critical to increasing the productivity of its IT administrators.

› **End user time savings.** By achieving SSO across the enterprise, end users could access applications with fewer passwords, and as a result, collectively reduce time spent recovering and resetting these passwords or reaching out to the help desk for support.

› **Improved planning and budgeting.** When managing IAM cloud migrations with only internal resources, costs can often balloon rapidly as unforeseen circumstances and complexities add to the time, tools, and resources required to ensure success. With IBM's IAM Strategy and Assessment Services, this unpredictability is minimized because the IBM team is able to create an IAM road map, timeline, and budget requirements before ever moving or modernizing a workload. Not only does this increase the likelihood of projects becoming approved, it also helps organizations more accurately predict expenses while creating the potential for future workload migrations.

Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to leverage IBM's Identity and Access Management Services and later realize additional uses and business opportunities, such as the following:

› **Continuous operational improvement.** With each progressing year under a managed service model, IBM's managed service team can launch continuous cycles to incrementally improve IAM operations. For example, organizations with IAM workloads based in the public cloud may experience optimizations in individual application performance over time. Furthermore, as the managed service team continues to monitor the organization's IAM workloads, it can identify and create solutions to common incidences, ultimately reducing the need for end user support.

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

> "A number of new applications benefit our security posture. They ensure that people have easier access to the applications rather than remembering different passwords and having them exposed because they're on your phone or desk."
>
> *Sr. program manager, healthcare*

> Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so.

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Analysis Of Costs

QUANTIFIED COST DATA

	Total Costs						
REF.	**COST**	**INITIAL**	**YEAR 1**	**YEAR 2**	**YEAR 3**	**TOTAL**	**PRESENT VALUE**
Etr	IBM professional and managed service fees	$578,182	$786,364	$1,113,636	$681,818	$3,160,000	$2,725,679
	Total costs (risk-adjusted)	$578,182	$786,364	$1,113,636	$681,818	$3,160,000	$2,725,679

IBM Professional And Managed Service Fees

The interviewed organization engaged IBM for end-to-end IAM services, starting from professional services work to assess, strategize, and create a road map for migration, delivery, and execution of the migration itself. And finally managed services were pursued by the organization for the ongoing support, maintenance, and optimization of IAM workloads. As one group of applications were moved to an IDaaS model, IBM would concurrently prepare the next group of applications for migration in the subsequent year. Consequently, the organization realized both the costs and benefits of IBM IAM Services in piecemeal fashion, scaling up each year as the number of migrated applications increased. IBM professional and managed service fees for IAM can be broken down into the three following components:

> **Migration strategy and technical assessment fees of $260K.** These fees include the labor cost of IBM cloud architects and engineers who were needed to assess the organization's current IAM portfolio of applications and create a three-year road map for the migration and modernization of all 22 IAM applications into the public cloud.

> **Migration execution fees of $1.4M across all applications over three years.** These fees include labor costs for "lifting and shifting" a subset of applications to the cloud and refactoring more complex applications for optimal performance in the cloud.

> **Managed service fees of $1.5M.** Over three years this fee was assessed for the continued maintenance and optimization of the organization's IAM workloads once moved to an IDaaS model.

For the purposes of this study, Forrester assumes:

> The percentage of total professional and managed services costs incurred in any given year is proportional to the number of applications migrated to the cloud in that year.

The aforementioned costs represent actual costs the interviewed organization incurred and thus Forrester made no risk adjustment. The three-year, risk-adjusted total cost PV is $2,725,679.

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the interviewed organization expects risk-adjusted total costs to be a PV of more than $2.7 million.

Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the wider the potential range of outcomes for cost estimates.
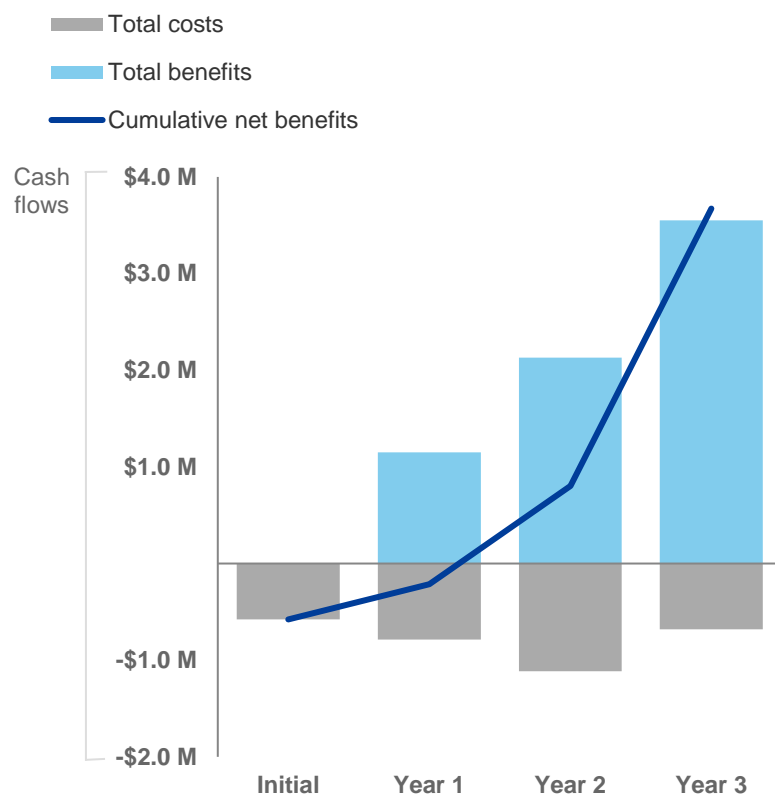
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IBM Professional And Managed Service Fees: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
E1	Professional services: migration strategy and technical assessment		$260,000			
E2	Professional services: migration execution	$1.4M total fees across all applications	$318,182	$445,455	$636,364	
E3	Managed identity services	$1.5M over three years		$340,909	$477,273	$681,818
Et	IBM professional and managed service fees	E1+E2+E3	$578,182	$786,364	$1,113,636	$681,818
	Risk adjustment	0%				
Etr	IBM professional and managed service fees (risk-adjusted)		$578,182	$786,364	$1,113,636	$681,818

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Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)

- ▬ Total costs
- ▬ Total benefits
- ▬ Cumulative net benefits

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

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

Cash Flow Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	($578,182)	($786,364)	($1,113,636)	($681,818)	($3,160,000)	($2,725,679)
Total benefits	$0	$1,150,452	$2,131,327	$3,550,571	$6,832,351	$5,474,890
Net benefits	($578,182)	$364,088	$1,017,691	$2,868,753	$3,672,351	$2,749,211
ROI						101%
Payback period						15 months

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IBM Identity And Access Management Services: Overview

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

Led by Enterprise Design Thinking, IBM IAM advisory consultants and security specialists help architect solutions for virtually every aspect of your enterprise IAM. Services include user provisioning, access management, enterprise single sign-on, multi-factor authentication, user activity compliance, privileged access management, identity governance, and managed security services.

IBM partners with clients to provide end-to-end IAM solutions based on extensive consulting and program management capabilities, innovative solutions, technology expertise, and cost-effective global operations. By combining these four disciplines, IBM aims to be a leading global IAM provider.

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Appendix A: Total Economic Impact

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

Total Economic Impact Approach

Benefits represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

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

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

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

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.

Present value (PV)

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

Net present value (NPV)

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

Return on investment (ROI)

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

Discount rate

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

Payback period

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

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Appendix B: Endnotes

[1] Source: "Forrester Analytics: IAM Software Forecast, 2018 To 2023 (Global)," Forrester Research, Inc., May 10, 2019.

[2] Source: "Making The Business Case For Identity And Access Management," Forrester Research, Inc., August 2, 2018.

[3] Ibid.

[4] Ibid.

[5] Ibid.

[6] Ibid.

[7] Ibid.

[8] Ibid.

[9] Ibid.

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