

A Forrester Total Economic Impact™
Study Commissioned By IBM
January 2019

The Total Economic Impact™ Of IBM Domino

Cost Savings And Business Benefits
Enabled By IBM Domino Application
Development Platform

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Executive Summary

IBM Domino provides a rapid application development platform to help organizations build solutions with embedded workflows that can automate their business quickly and effectively. IBM commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential ROI that enterprises may realize by deploying Domino. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of the Domino platform on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four customers with 16 to 23 years of experience using Domino for application development. The platform offers email and collaboration tools as well as a low-code application development environment where business and IT developers can quickly build customized, robust, and lightweight applications to streamline workflows and increase an organization's operational efficiency.

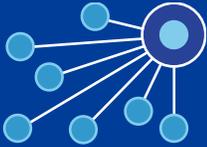
While all interviewed organizations had been customers of IBM Domino for about two decades, these organizations evaluated their contract with IBM every few years, weighing potential alternative application development platforms and off-the-shelf software solutions by other vendors. This enabled Forrester to understand the drivers for continual use of the IBM Domino platform. Whenever they evaluated the alternatives, the interviewed organizations always renewed their contracts with IBM Domino, citing cost, reliability, customization, and speed of application development as their main reasons.

Key Findings

Quantified benefits. The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the companies interviewed:

- › **Saved \$2.8 million in license costs of specialized software by providing a platform for building the needed functionality in-house.** IBM Domino provided the tools to build solutions with embedded workflows to automate business operations and eliminate the need of purchasing off-the-shelf solutions, such as HR, CRM, or enterprise resource planning (ERP) systems.
- › **Saved \$1.3 million in resource costs from implementing automation and workflow improvements.** IBM Domino helped to implement workflow improvements, enhance collaboration, and introduce automation in order to shorten time-to-market and eliminate redundant labor efforts throughout the organization.
- › **Saved \$822,225 in infrastructure costs by remaining on the Domino platform.** Switching away from the lightweight Domino platform would drive an increase in infrastructure costs and IT resources needed to support it.
- › **Saved \$805,740 as a result of employing business developers.** Domino empowered and trained employees with unique business knowledge to build applications in the Domino low-code environment at a lower annual cost to the organization than professional developers would require.

Benefits And Costs



Avoided cost of alternative software:

\$2.8 million



Efficiency from workflow automation:

\$1.3 million



Infrastructure cost savings:

\$822K



ROI
302%



Benefits PV
\$5.6 million



NPV
\$4.2 million

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

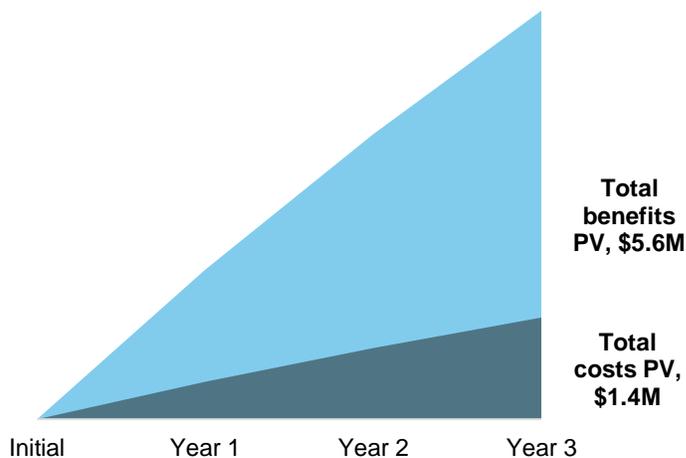
- › **IBM Domino provides the tools to quickly develop robust applications.** One interviewed organization estimated that with the available pre-built components supplied by IBM Domino, their Domino developers could build applications 50% to 500% percent times faster than on comparable platforms, depending on the application.
- › **Domino-built applications guarantee performance and reliability at no additional cost for upgrades.** Applications and databases built in Domino run for decades without interruption as they are backward compatible and do not need any major updates.
- › **Applications developed on Domino provide full customization to support organizations' unique needs and preferences.**

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

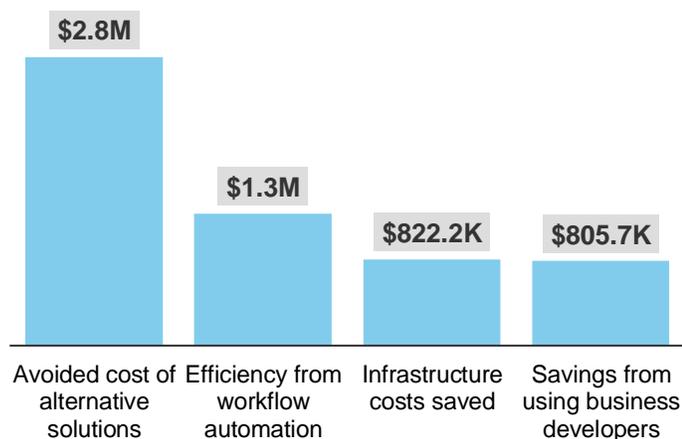
- › **IBM Domino license and professional services costs.** Fees to IBM Domino included the cost of the software, servers, and support services, for a three-year total PV of \$123,597. There wasn't a need to risk-adjust this cost, as IBM provided realistic quotes.
- › **IBM Domino ongoing management and development costs.** As a long-term Domino customer with the platform already implemented, the interviewed organization incurred ongoing costs of development and Domino-related infrastructure management, which amounted to a risk-adjusted three-year PV of \$1.3 million.

Forrester's interviews with four existing customers and subsequent financial analysis found that an organization based on these interviewed organizations experienced benefits of \$5.6 million over three years versus costs of \$1.4 million, adding up to a net present value (NPV) of \$4.2 million and an ROI of 302%.

Financial Summary



Benefits (Three-Year)



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

TEI Framework And Methodology

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

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 Domino can have on an organization:



DUE DILIGENCE

Interviewed IBM stakeholders and Forrester analysts to gather data relative to Domino.



CUSTOMER INTERVIEWS

Interviewed four organizations using Domino to obtain data with respect to costs, benefits, and risks.



COMPOSITE ORGANIZATION

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



FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organizations.



CASE STUDY

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

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by IBM 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 IBM Domino.

IBM 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.

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

The Domino Customer Journey

BEFORE AND AFTER THE DOMINO INVESTMENT

Interviewed Organizations

For this study, Forrester conducted four interviews with IBM Domino customers. Interviewed customers include the following:

INDUSTRY	REGION	INTERVIEWEE	USE OF IBM DOMINO
Civil engineering	Headquartered in Europe	Head of IT	30 Domino apps, 700 internal, 4,300 external users, 20 years using Domino
Communications	Headquartered in Europe	Sales information manager	20 Domino apps, 900 users, 16 years using Domino
IT services	Headquartered in Europe	Head of IT infrastructure and operations	600 Domino apps, 4,000 users, 23 years using Domino
Insurance	Headquartered in North America	Two network system analysts	900 Domino databases, 800 internal, thousands of external users, 22 years using Domino

Solution Requirements

Interviewees evaluated IBM Domino against alternatives every couple of years prior to renewal with IBM, considering other vendors' software tools and development platforms as a potential replacement for Domino. The interviewed organizations always chose to renew, citing:

- › Reliable performance of the Domino servers and apps.
- › Fast application development timelines.
- › Little to no upgrades required to existing Domino apps.
- › Lighter infrastructure as compared to what would be required for hosting apps.
- › Lower license costs as compared to alternative solutions.

“On other platforms, you need to develop all the features yourself. With Domino, you receive a very stable framework with lots of pre-built functionalities. Domino allows you to develop applications faster and with less manual effort.”

Head of IT infrastructure and operations, IT services provider



Key Results

The interviews revealed that key results from the Domino investment include:

- › **Avoided costs of off-the-shelf software products with necessary capabilities developed in-house.** With fully customized applications developed to support organizations' needs, companies avoided purchasing software that would have required significant investment.
- › **Reductions in resource costs from avoiding manual processes.** With automation and improved workflows enabled by IBM Domino, organizations increased employee productivity and avoided hiring additional resources.

“The total cost of ownership (TCO) is very low: When management doesn't need to worry about costs, it provides us the freedom to iterate on and develop new applications.”

Sales information manager, communications



- › **Low cost of application development.** Domino's easy to use lightweight framework with pre-built modules enabled business developers to build applications faster than in alternative environments, saving organization from additional investment developer resources.
- › **Confidence in knowing what the Domino IBM platform has and continues to provide.** While it cannot be quantified, organizations have relied on Domino for years to develop and run their business applications. As one interviewee told Forrester, "The platform has been reliable for 20 years with code that has never been rewritten. The applications just run on and on after each IBM software update without a need to rewrite the code or migrate the data."

Composite Organization

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

- › **Description of composite:** The composite organization is a long-term IBM Domino customer with 700 employees and \$250 million in revenue. Originally, the organization started using Domino for IBM Notes email and now heavily relies upon its application development capabilities for mission critical applications. Prior to renewals with IBM, the organization regularly evaluates alternatives to IBM Domino and considers using other software solutions and development platforms.
- › **Deployment characteristics:** The applications developed in Domino serve multiple business functions across HR, sales, marketing, etc., and are used by every employee. The organization currently has 40 Domino apps.

"The durability of the solutions supported the business' mid-term and long-term stability as we did not need a new tool every three or four years. Even though Domino had six major updates, users didn't realize the change because their applications continued to work without disruption."

Head of IT, civil engineering



Key assumptions:

- › 40 Domino apps
- › 5 servers hosting Domino apps
- › 2 FTEs manage the infrastructure
- › 4 Domino developers

Analysis Of Benefits

QUANTIFIED BENEFIT DATA AS APPLIED TO THE COMPOSITE

Total Benefits

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Atr	Avoided cost of alternative software	\$1,106,700	\$1,106,700	\$1,106,700	\$3,320,100	\$2,752,199
Btr	Efficiency from workflow automation	\$505,677	\$505,677	\$505,677	\$1,517,031	\$1,257,544
Ctr	Infrastructure costs saved	\$330,629	\$330,629	\$330,629	\$991,886	\$822,225
Dtr	Savings from using business developers	\$324,000	\$324,000	\$324,000	\$972,000	\$805,740
	Total benefits (risk-adjusted)	\$2,267,006	\$2,267,006	\$2,267,006	\$6,801,018	\$5,637,708

Avoided Cost Of Alternative Software

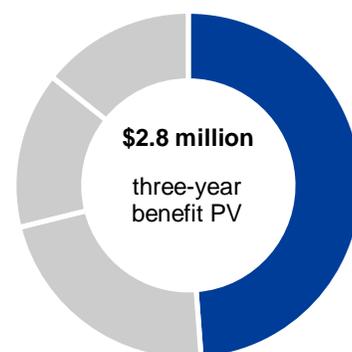
For all interviewed organizations, IBM Domino serves as a platform to develop useful and fully customizable applications to run their respective businesses without purchasing licenses to additional specialized software:

- › As the head of IT at a civil engineering company told Forrester: “Domino serves multiple business purposes for us. We don’t have an ERP system besides that. We don’t have a CRM system besides that. We don’t have an HR system besides that. It’s all Domino applications.”
- › Several interviewees with multiple years of experience evaluating specialized software for app development, CRM, or ERP found their costs to be anywhere from 2.5 to 15 times higher than the cost of the Domino platform. One interviewee reported, “I think we saved millions of euros over the last couple of years because we remained with Domino.”
- › A network systems analyst at an insurance company explained, “Domino is a good solution if you’re focused on improving workflows and want the ability to rapidly build applications.”

For the composite organization Forrester assumes:

- › The organization currently uses IBM Domino for its main applications, including CRM and ERP. The organization is considering replacing these two Domino apps with specialized on-premises solutions.
- › The composite organization’s research shows that the CRM solution license will cost \$75 per user per month and the ERP tool will cost \$80 per user per month.
- › Beyond the license fees, the composite organization did not evaluate the cost of transition from existing Domino applications and change management. Readers are encouraged to consider the internal cost of migration and change management in ROI analysis.

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 composite organization expects risk-adjusted total benefits to be a PV of more than \$5.6 million.



Avoided cost of alternative software: **49%** of total benefits

The total cost of alternative software will vary based on:

- › Particular Domino apps, and the functionality that the organization is looking to replace with alternative software.
- › License fees per new software and the number of users.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year risk-adjusted total PV of \$2.8 million.

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.

Avoided Cost Of Alternative Software: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
A1	Number of users	Composite organization	700	700	700
A2	CRM software license	\$75 per user per month*A1*12	630,000	630,000	630,000
A3	ERP software license	\$80 per user per month*A1*12	672,000	672,000	672,000
At	Cost of alternative software	A2+A3	\$1,302,000	\$1,302,000	\$1,302,000
	Risk adjustment	↓15%			
Atr	Cost of alternative software (risk-adjusted)		\$1,106,700	\$1,106,700	\$1,106,700

Efficiency From Workflow Automation

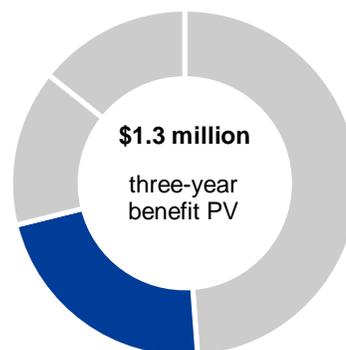
A primary use case of IBM Domino for all the interviewed organizations was to implement workflow improvements, enhance collaboration, and introduce automation to shorten time-to-market and eliminate redundant labor:

- › A communications provider freed up to 30% of the sales team’s time by eliminating the need for emails and phone calls to share client or project information. The organization built the right app to store and make historical, contact, and relationship information available to sales reps as needed.
- › An insurance provider built the workflow to automatically upload and store images from claims into a database, saving hours of manual entry. In fact, the organization originally planned to hire two to three FTEs to scan the images manually but managed to avoid additional hires. The network system analyst explained, “Every department touches Domino one way or another through workflows, applications, email, or our mobile devices; it’s intertwined into our whole company.”
- › The head of IT for an engineering company said: “Everybody in the company uses at least one Domino application at some point in the day. It really doesn’t matter if you’re a secretary, a project manager, an intern, or a project team member. You use several Domino applications throughout the day.”

For the composite organization, Forrester assumes that:

- › On average, each employee saves 10 minutes per day due to the workflows and efficiencies built with the Domino applications.
- › Forrester recognizes 50% of the time saved as productive time.
- › An average FTE’s annual burdened salary is \$73,000.

The efficiency gains from workflow automation will vary with:



Efficiency from workflow automation: **22%** of total benefits



Efficiencies and automations enabled by IBM Domino on average save each employee 10 minutes per day.

- › An organization’s commitment to building and using applications and workflows for saving time and manual labor.
- › Employees’ fully loaded compensation.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of \$ \$1.3 million.

Efficiency From Workflow Automation: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
B1	Time saved per employee (hours)	10 min*260 days/ 60	43	43	43
B2	Number of FTEs	A1	700	700	700
B3	FTE burdened salary		\$73,000	\$73,000	\$73,000
B4	Productivity capture		50%	50%	50%
Bt	Efficiency from workflow automation	$B1*B2*(B3/2,080 \text{ days})*B4$	\$532,292	\$532,292	\$532,292
	Risk adjustment	↓5%			
Btr	Efficiency from workflow automation (risk-adjusted)		\$505,677	\$505,677	\$505,677

Infrastructure Cost Savings From Remaining On Domino

The interviewed organizations described one of the key benefits as cost savings from relatively light infrastructure requirements with IBM Domino, as compared to the infrastructure required to host alternative on-premises solutions.

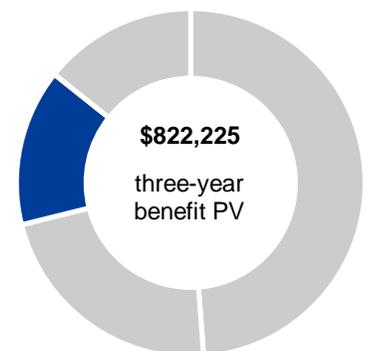
- › An IT services provider told Forrester that they would need to run more servers to accomplish the same tasks. The head of IT infrastructure and operations reported, “I would need to put in a huge effort in orchestration and engage the DevOps, but with the Domino platform, you’re just focusing on this one application.”
- › Interviewees at an insurance company told Forrester, “From talking to other vendors, it seems that if you drop one Domino server you need to bring up about five, if not more, servers to support the same task.”

For the composite organization Forrester assumes that:

- › The organization currently runs Domino applications on five servers.
- › In an alternative scenario of transitioning from Domino to other on-premise solutions, the organization would require five new servers to replace single Domino servers. The industry average for server and network costs/maintenance was taken from the July 2017 Forrester report, “Justify Your Hybrid Cloud Future With A Solid Business Case.”¹
- › The organization would need to assign two FTEs to manage additional infrastructure.

Infrastructure cost savings would vary based on:

- › IT staff dedicated to infrastructure management.
- › The costs of servers, software, maintenance, and facilities.



Infrastructure cost savings from remaining on Domino: **15% of total benefits**



The organization would need five servers to replace one Domino server.

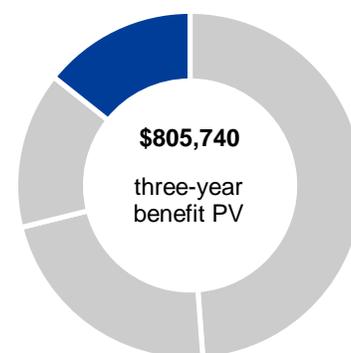
To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year risk-adjusted total PV of \$822,225.

Infrastructure Cost Savings From Remaining On Domino: Calculation Table					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
C1	Number of Domino servers		5	5	5
C2	Servers required to replace one Domino server		5	5	5
C3	Server required for alternative solutions	$C1 \times C2$	25	25	25
C4	Server hardware cost	Source: industry average	\$1,666	\$1,666	\$1,666
C5	Server/network hardware maintenance	Source: industry average	\$1,500	\$1,500	\$1,500
C6	Server operating system and applications	Source: industry average	\$833	\$833	\$833
C7	Network cost	Source: industry average	\$250	\$250	\$250
C8	Server software maintenance	Source: industry average	\$750	\$750	\$750
C9	Infrastructure costs saved	$C3 \times (C4 + C5 + C6 + C7 + C8)$	\$124,975	\$124,975	\$124,975
C10	Infrastructure analysts required to manage incremental infrastructure		3	3	3
C11	Infrastructure analysts burdened salary		\$88,000	\$88,000	\$88,000
C12	Reduction in infrastructure management costs	$C10 \times C11$	\$264,000	\$264,000	\$264,000
Ct	Infrastructure cost savings from remaining on Domino	$C9 + C12$	\$388,975	\$388,975	\$388,975
	Risk adjustment	↓15%			
Ctr	Infrastructure cost savings from remaining on Domino (risk-adjusted)		\$330,629	\$330,629	\$330,629

Savings From Employing Business Developers

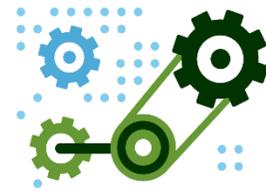
All interviewed organizations described using business developers to build and maintain applications in Domino as a key benefit. While none of the FTEs acting as developers on the Domino platform arrived from a traditional developer or computer-science background, they were successful in building applications in the Domino low-code environment and contributed business knowledge that a typical developer would lack. From a cost perspective, business employees without a computer science degree commanded lower annual compensation.

- › At a civil engineering company, one Domino developer came from the finance field and another came from the construction and engineering field, bringing the specialized industry knowledge into their dev work.
- › Similarly, at a communications company the Domino work was initiated by the staff within the sales department as a means of optimizing their workflows, and then it spread to other teams and departments.



**Savings from employing business developers:
14% of total benefits**

- › As the head of IT infrastructure and operations at an IT services provider told Forrester, “If someone from accounting, after a short training, switches to become a Domino developer, they bring the business perspective into the process and cost our organization 25% to 40% less.”



The low-code Domino platform empowers business developers.

For the composite organization, Forrester assumes that:

- › The organization avoids employing four developers with a computer science background to maintain the existing 40 Domino apps and build new ones.
- › An average developer burdened salary is \$90,000 per annum.

The reduction in software development expenses will vary with:

- › The application development effort in Domino and the number of business developers needed to support it.
- › The fully loaded compensation of business developers.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of \$805,740.

Savings From Employing Business Developers: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
D1	Number of professional developers avoided		4	4	4
D2	Typical developer burdened salary		\$90,000	\$90,000	\$90,000
Dt	Savings from using business developers	D1*D2	\$360,000	\$360,000	\$360,000
	Risk adjustment	↓10%			
Dtr	Savings from using business developers (risk-adjusted)		\$324,000	\$324,000	\$324,000

Unquantified Benefits

- › **IBM Domino provides the tools to develop robust applications quickly.** One interviewed organization estimated that with available pre-built components their Domino developers could build applications 50% to 500% percent times faster than on comparable platforms. The head of IT at a civil engineering company reported, “When you compare what you can achieve within a few days of developing on Domino to how long it would take on an alternative platform, you should recognize that this is an extremely fast way of creating robust applications that work for years without costing you extra.”
- › **Domino-built applications guarantee performance and reliability at no additional costs of upgrades.** All interviewed organizations conveyed that apps and databases built in Domino decades ago were still running without any major updates. The head of IT at a civil engineering company said: “The platform has been reliable for 20 years with code that has never been rewritten. The applications just run on and on after each IBM software update without a need to rewrite the code or migrate the data.”

“Domino allows you to build workflow applications faster, with less effort, and less spending.”

Head of IT infrastructure and operations, IT services provider



- › **Applications developed on Domino provide full customization to support organizations' unique needs and preferences.** As one interviewed organization told Forrester, "With the customization level at 100%, every idea, field, name, label, transaction, and button — everything — was defined internally to provide absolutely custom tools and workflows to respond to our business' and customers' requests."

Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to implement Domino and later realize additional uses and business opportunities, including:

- › **Fostering business-developer culture.** Given the scarcity of specialized and competent developers, organizations can continue to grow and train their business employees, with their unique business knowledge, into developer roles — an opportunity enabled by the low-code nature of the Domino platform.
- › **Expanding the use of IBM Domino applications.** Organizations could continue to build new applications, deliver workflow improvements internally (and with customers and partners), and integrate with collaboration tools such as Slack or MS Office for new opportunities.

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

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

Analysis Of Costs

QUANTIFIED COST DATA AS APPLIED TO THE COMPOSITE

Total Costs

REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Etr	Fees to IBM Domino	\$0	\$49,700	\$49,700	\$49,700	\$149,100	\$123,597
Ftr	Domino management and development	\$0	\$514,800	\$514,800	\$514,800	\$1,544,400	\$1,280,231
	Total costs (risk-adjusted)	\$0	\$564,500	\$564,500	\$564,500	\$1,693,500	\$1,403,828

Fees To IBM Domino

The composite organization incurred software license fees for IBM Domino. These are the annual recurring fees that are based on the Domino configuration, which in addition to app development could include email or social capabilities. As a part of the annual fee, the organizations receive access to ongoing support and an extensive user community for additional knowledge sharing and best practices.

The composite organization primarily uses Domino for application development and collaboration, and it chose to secure unlimited server space. An annual fee to IBM amounted to \$49,700.

IBM provided realistic quotes, so Forrester did not risk-adjust this cost. Over three years, the total PV cost was \$123,597.

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 composite organization expects risk-adjusted total costs to be a PV of \$1.4 million.

Fees To IBM Domino: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
E1	Domino license cost per user	Provided by client		\$71	\$71	\$71
Et	Fees to IBM Domino	E1*A1	\$0	\$49,700	\$49,700	\$49,700
	Risk adjustment	0%				
Etr	Fees to IBM Domino (risk-adjusted)		\$0	\$49,700	\$49,700	\$49,700

Domino Management And Development

All organizations reported that IBM Domino required little maintenance. Their ongoing use exhibited the following patterns:

- › Interviewees had three to five dedicated Domino developers working on the Domino platform full-time.
- › Additionally, several FTEs were assigned to manage the infrastructure that hosted Domino applications.
- › At the time of the interviews, organizations experienced no implementation burdens since the platform had been in place for roughly 20 years.

For the composite organization, Forrester assumes:



Four business developers work in the Domino platform full-time.

- › Two dedicated infrastructure analysts from IT to manage Domino servers.
- › Four full-time Domino developers work on the Domino to build new and support existing Domino apps and workflows.

The costs will vary based on:

- › The number of dev initiatives led by the organizations and the number of developers and IT staff required to support these efforts.
- › Fully loaded salaries of Domino developers and infrastructure analysts (or IT).

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.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year risk-adjusted total PV of \$1.3 million.

Domino Management And Development: Calculation Table

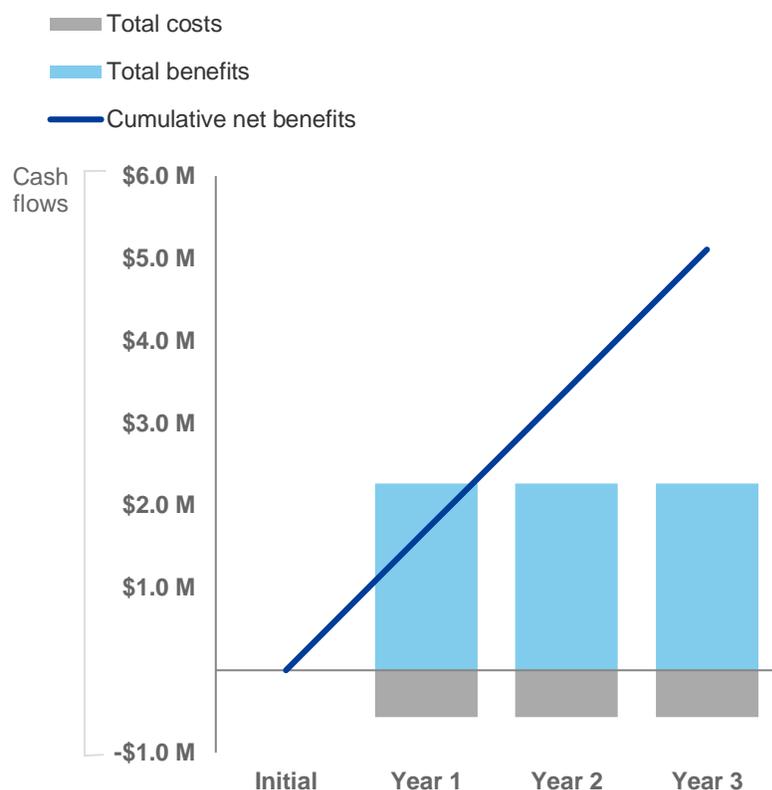
REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
F1	Infrastructure analysts managing Domino servers			2	2	2
F2	Infrastructure analysts burdened salary			\$88,000	\$88,000	\$88,000
F3	Number of Domino business developers			4	4	4
F4	Domino business developer burdened salary			\$73,000	\$73,000	\$73,000
Ft	Domino management and development	$(F1 \cdot F2) + (F3 \cdot F4)$		\$468,000	\$468,000	\$468,000
	Risk adjustment	↑10%				
Ftr	Domino management and development (risk-adjusted)		\$0	\$514,800	\$514,800	\$514,800

Forrester found that the internal cost of the ongoing training necessary to successfully use IBM Domino is negligible. For the composite organization, the four Domino developers attended a three-day long developer training camp to refresh their skills and interact with peers who are solving similar issues. For organizations where IBM Domino is newly implemented, requiring developers to build a new skillset, Forrester recommends the internal cost of training as an additional expense in the ROI analysis.

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



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



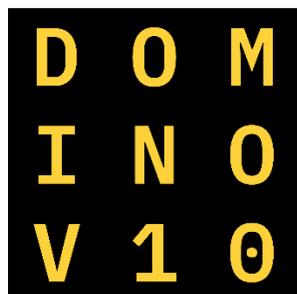
These risk-adjusted ROI, and NPV values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

Cash Flow Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	\$0	(\$564,500)	(\$564,500)	(\$564,500)	(\$1,693,500)	(\$1,403,828)
Total benefits	\$0	\$2,267,006	\$2,267,006	\$2,267,006	\$6,801,018	\$5,637,708
Net benefits	\$0	\$1,702,506	\$1,702,506	\$1,702,506	\$5,107,518	\$4,233,880
ROI						302%

IBM Domino: Overview

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



IBM Domino is a critical application platform that has been essential to business and IT developers alike for decades — to help build solutions with embedded workflows that can automate their business quickly and effectively. Domino powers businesses around the world — from banks to insurance and communications companies — for use in offices, ships, helicopters, and even oil rigs.

Domino V10, the biggest release in years, is the first installment in a reinvigorated Domino platform road map which represents the input of thousands of clients, IBM Champions and Business Partners globally, for both application deployment and enterprise mail. Domino V10 is faster, more modern, and delivers lower TCO.

IBM Domino Advantages:

1. **FAST:** Rapid application development — we were there at the beginning of “low-code app dev” space to enable tech savvy business users and IT to get work done faster.
2. **MODERN:** Domino has enabled businesses to build all kinds of robust solutions. And now, by adding JavaScript and node.js, any JavaScript developer in your organization can enhance, integrate, and build new applications that include data and processes from Domino.
3. **PROVEN:** Enterprise-grade platform — secure and scalable for building workflows and collaboration-centric business processes using the world’s first NoSQL document database.
4. **LOW TCO:** Lowest total cost of ownership — proven low administrative overhead and easy integration with enterprise ecosystems such as Microsoft. Domino is 15x more cost-effective than the alternatives.
5. **OPEN AND INTEGRATES EASILY:** Integrate your Domino app into anything that supports node.js/JavaScript — such as Slack or MSFT Teams. Configure single sign-on using SAML IPDs including Microsoft’s ADFS. You can also call any REST API that you want from your Domino application — bring in a google map, pull in a Watson API, use customer data from Salesforce, ask for an Approval in a Slack channel, or grab support ticket information from ServiceNow.
6. **MOBILE:** Classic Domino applications can now go mobile, without any code changes. In less than an hour. IBM Domino Mobile Apps lets developers turn their desktop applications into mobile solutions. On iPads, users can keep working offline and sync-up automatically when communication is available, or more reliable.
7. **EASIER ADMIN:** Domino V10 now supports CentOS, which lowers your costs immediately compared to Windows. CentOS can be used to create Docker Domino containers as easily as Red Hat Linux (or Windows), so you can deploy your Domino solution on-premises, hybrid, and public — wherever it makes sense for your business. We’ve instrumented V10 so you can understand every aspect of the performance of Domino applications and mail in real time. Using tools such as NewRelic, you can fully understand the trends and identify opportunities to upgrade to new hardware, identify which application to optimize, or spot any bottlenecks.
8. **BETTER EMAIL/CALENDARING:** Now, with V10, there is a better user experience and enhancements of essential email features. Expanded calendar usability, touch-screen support for tablets, and interoperability with O365 applications.

Appendix A: Total Economic Impact

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

Total Economic Impact Approach



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



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



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



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

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



Present value (PV)

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



Net present value (NPV)

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



Return on investment (ROI)

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



Discount rate

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



Payback period

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

Appendix B: Endnotes

¹ Source: “Justify Your Hybrid Cloud Future With A Solid Business Case,” Forrester Research, Inc., July 6, 2017.