

A Forrester Total Economic Impact™ Study Prepared For Alfresco

The Total Economic Impact Of Alfresco Enterprise Content Management Solution

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FORRESTER

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Executive Summary

Organizations continue to invest in enterprise content management (ECM) due to the continuing explosion of unstructured information such as documents, scanned images, rich media, web content, corporate records, emails, and other content. Enterprises specifically cite need for production efficiencies, more findable content, decreased time-to-market (for publicly facing content), risk mitigation, and compliance as reasons for ongoing ECM projects. In addition, some organizations are now developing true enterprise content strategies after previously relying on a collection of point solutions. Investment in ECM therefore remains a priority for many organizations whether it is a new installation or an extension to an existing solution.

In August 2011, Alfresco commissioned Forrester Consulting to examine the total economic impact and potential return on investment (ROI) enterprises may realize by deploying Alfresco's Enterprise Content Management (ECM) solution. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Alfresco's ECM solution on their organizations.

Alfresco's ECM solution is a leading open source alternative for ECM that enables organizations to capture, search, and collaborate on documents with full library services and life-cycle management, on a unified, robust repository. The Alfresco content platform uses flexible, open-standards architecture to provide document management, web content management, records management, and collaboration software to enterprises worldwide. For a more detailed overview about Alfresco's ECM platform, please refer to page 21.

Alfresco Allows Companies To Deploy Flexible And Cost-Efficient ECM Solutions

Our interviews with four existing customers and subsequent financial analysis found that a composite organization based on the companies we interviewed experienced the risk-adjusted ROI, costs, and benefits shown in Table 1. See Appendix A for a description of the composite organization.

Table 1

Composite Organization Three-Year Risk-Adjusted ROI¹

ROI	Payback period	Total benefits (PV)	Total costs (PV)	Net present value (NPV)
53%	10 months after go-live	\$1,316,786	(\$862,022)	\$454,764

Source: Forrester Research, Inc.

- **Benefits.** The composite organization (see Appendix A) we used for this analysis is a combination of the multiple interviews we conducted to delve deeper into the operational impact of Alfresco's ECM solution. This organization is a large financial services company based in the US and employing 10,000 people worldwide. The company decided to use the Alfresco ECM solution in order to create a new knowledge-sharing and

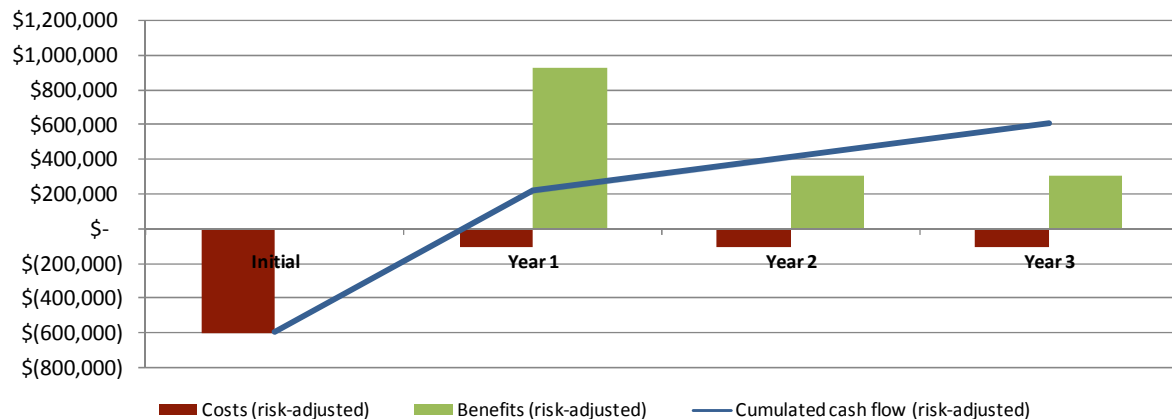
collaboration platform that can also be integrated with the company's CRM system. The new platform now contains 1 million documents and can be accessed by all employees. The composite company realized the following benefits, which are representative of those experienced by the interviewed companies:

- **Avoided software license costs.** By using the open source ECM platform from Alfresco, the composite organization avoids upfront license and annual maintenance costs for an alternative commercial ECM solution. These cost savings have an estimated three-year, risk-adjusted PV of approximately \$792,000 for our composite organization.
- **IT maintenance cost savings.** By consolidating several departmental content management solutions into the Alfresco platform and getting rid of a large number of local shared drives, the composite organization realizes maintenance cost savings. These cost savings have an estimated three-year, risk-adjusted PV in the region of \$244,000 in our case.
- **Use of less expensive developer resources.** Due to the ability to use general Java developers instead of more expensive and scarce specialized ECM resources, the composite organization realizes cost savings that have a three-year, risk-adjusted PV of approximately \$195,000.
- **IT cost avoidance due to use of open source stack.** Being able to easily integrate the Alfresco solution with other open source components saves the composite organization license and maintenance costs. These cost savings have an estimated three-year, risk-adjusted PV of approximately \$41,000 for our composite organization.
- **Integration and development efficiencies.** Due to the access to the source code, the use of a common programmer language, and the support of the open source community, the developers of the composite organization saved time for the custom integration of the Alfresco solution with the company's CRM system. These cost savings have a three-year, risk-adjusted PV of approximately \$45,000.
- **Costs.** To achieve the above benefits, the composite organization invested approximately \$862,000 over a three-year period. Costs included:
 - **Alfresco subscription fee.** The composite organization chose to subscribe to Alfresco's Enterprise edition with 24x7 services. These costs have a three-year risk-adjusted PV of approximately \$251,000.
 - **Integration costs.** The internal and external labor costs for the platform design, planning, integration including the ingestion of existing documents, and project management have an estimated three-year risk-adjusted PV of approximately \$315,000.
 - **Hardware costs.** The composite organization had to invest in 15 Linux servers. The hardware costs have a three-year risk-adjusted PV of approximately \$76,000.
 - **Training costs.** Training costs include a three-day developer training course as well as end user training. For the end user training, we assumed that 80% of the 10,000 employees actually follow a 30-minute webinar introducing the new knowledge-sharing platform and collaboration capabilities. The training costs have a three-year risk-adjusted PV of approximately \$220,000.

Figure 1 summarizes the yearly and cumulated cash flow, and Figure 2 shows the breakdown of the benefit and cost categories for the composite organization.

Figure 1

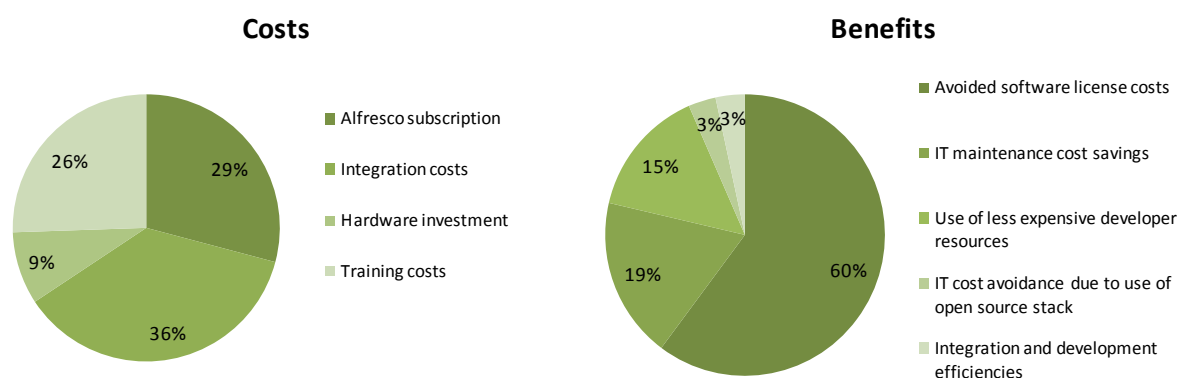
Summary Financial Results (Risk-Adjusted)



Source: Forrester Research, Inc.

Figure 2

Breakdown Of Total Costs And Benefits (Three-Year PV, Risk-Adjusted)



Source: Forrester Research, Inc.

Factors Affecting Benefits And Costs

Table 1 illustrates the risk-adjusted financial results that were achieved by the composite organization. The risk-adjusted values take into account any potential uncertainty or variance that exists in estimating the costs and benefits,

which produces more conservative estimates. The following factors may affect the financial results that an organization may experience:

- **Technology supported by the company.** Companies that already have extensive experience with Java technology and have the right technical skill set in place within their IT department are likely to gain more benefits from an investment in Alfresco than a company for which Java is a completely new field.
- **Prior experience with open source products.** Companies with prior experience with open source products and projects are already used to the new way of working and are likely to realize the benefits faster and to extract more value out of the open source community.
- **Prior experience with ECM products.** Companies that have previously deployed enterprisewide content management products are better positioned to address the associated governance and political challenges than those that have only previously implemented point solutions.
- **Scope and functional requirements.** The scope of the ECM deployment and the set of functional requirements will have an impact on the benefits that can be realized with the Alfresco solution. Some functionalities, for example, might be readily available within a commercial ECM solution, while they might need to be developed from scratch on top of the Alfresco platform, which would entail additional costs.
- **Control of customizations.** Organizations that limit the amount of customizations to ECM are more likely to realize greater financial benefits than those that customize extensively; the latter tend to experience greater costs associated with maintenance and upgrade paths.

Disclosures

The reader should be aware of the following:

- The study is commissioned by Alfresco and delivered by the Forrester Consulting group.
- Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers should use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Alfresco's ECM solution.
- Alfresco 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.
- The customer names for the interviews were provided by Alfresco.

TEI Framework And Methodology

Introduction

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing Alfresco's ECM solution. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision.

Approach And Methodology

Forrester took a multistep approach to evaluate the impact that Alfresco's ECM solution can have on an organization (see Figure 3). Specifically, we:

- Interviewed Alfresco marketing and sales personnel and Forrester analysts to gather data relative to Alfresco's ECM solution and the ECM marketplace in general.
- Interviewed four organizations currently using Alfresco's ECM solution to obtain data with respect to costs, benefits, and risks.
- Designed a composite organization based on characteristics of the interviewed organizations (see Appendix A).
- Constructed a financial model representative of the interviews using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews as applied to the composite organization.

Figure 3

TEI Approach



Source: Forrester Research, Inc.

Forrester employed four fundamental elements of TEI in modeling Alfresco's ECM solution:

1. Costs.
2. Benefits to the entire organization.
3. Flexibility.
4. Risk.

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

Analysis

Interview Highlights

A total of four interviews were conducted for this study, involving representatives from the following Alfresco customers:

1. A large financial service organization operating globally with headquarters in Western Europe.
2. A large provider and custodian of quality information serving customers in more than 100 countries and employing more than 15,000 people worldwide.
3. A large US health insurer with more than 8,000 employees and providing health benefits to more than 6 million individuals.
4. A global pharmaceutical and chemical company with around 40,000 employees in more than 60 countries.

These interviews uncovered a number of facts and insights that apply to the composite organization (see Appendix A) and may also apply to other companies that consider deploying Alfresco, including:

- All of the interviewed organizations already had experience with ECM solutions from other vendors. Most of the time, more than one solution was installed across the company and used by different business units.
- In the majority of cases, the Alfresco platform was deployed as part of a new initiative within the company, such as the creation of a knowledge-sharing platform, the introduction of a new collaborative workspace, or the establishment of a central repository for the company's websites. One of the interviewed organizations was actually replacing its entire legacy ECM solution with the Alfresco platform.
- The common business objectives for deploying Alfresco were to:
 - Achieve a well-integrated and flexible document management environment.
 - Give access to document management capabilities to a large number of users.
 - Contain the software licenses and maintenance costs.
- All of the interviewed organizations have used the Alfresco platform in production for more than 10 months, one for more than four years.
- The different interviewees reported overall implementation projects ranging from two to six months.
- The number of end users with access to the Alfresco platform ranged from 300 to 35,000 people, and between 100,000 and 3.5 million documents were managed by the Alfresco platform.
- All of the interviewed organizations appreciated the commercial open source model by Alfresco. They considered that it allows them to introduce a new ECM platform in a cost-effective but secure and managed way.

“One of the key things we liked about Alfresco is its open source nature. It’s not because it’s free. As an enterprise, we do like the support from a company like Alfresco behind the scenes who can come in and solve production-level issues if needed. And we are willing to pay for their services to do that.” (Senior architect and IT manager at a provider of quality information)

“The usual interpretation of open source is that, yes, it is cheap but that it is going to cost the earth to try to actually command and leverage it. And to be honest, we have spent just as much if not more on the commercial ECM solutions to make them work for our organization. So, I do not see massive differentiation between them — except the cost.” (Senior IT manager at a financial service company)

“Basically, the license model makes an entry very appealing. We can satisfy business requirements with a functional offering, especially around usability. And we get it for a very reasonable price. It is also very interesting if you have a large number of readers or occasional users.” (Senior architect at a global pharmaceutical and chemical company)

“Alfresco is right up with the commercial players. Almost in any kind of RFI/RFP now, I will look at a professional open source company alongside the commercial vendors.” (Senior IT manager at a financial service company)

- One of the interviewees pointed out a high degree of innovation as one of the benefits of an open source approach.

“The rate of change at Alfresco as compared to other vendors is phenomenal. It was one of the reasons why we were so keen of looking into it further. They are very innovative. The pace of change, the amount of features that came in, was incredible. It has got some real competitive edge elements to it.” (Senior IT manager at a financial service company)

- Others see increased productivity and control as direct benefits of an open source software solution.

“The main reason why we adopt open source software is that our developers are becoming more agile. They now have access to the source code — so they can build plug-ins, they can do many things to make the product better, even contribute back to the community. They have more visibility of what is going on. It is not a black box.” (Senior architect and IT manager at a provider of quality information)

“Alfresco enables our projects to be built more simply, with less efforts, and they are more maintainable over time.” (Director of software and infrastructure solutions at a large health insurance company)

- Generally, the interviewees seemed less concerned about hardware infrastructure than about operational aspects of their ECM platforms.

“If you would consider the exact same scope, I think that Alfresco probably has the minimum infrastructure footprint. It can be very well integrated into our company’s standard Linux servers and standard databases. But for us, it is not so much about avoided hardware costs but more about the operations. For Alfresco, we already had the right skill set in-house.” (Senior architect at a global pharmaceutical and chemical company)

“Our Alfresco implementation has definitely a lighter infrastructure footprint than our legacy ECM environment. However, we are not too concerned about hardware as far as the costs are concerned. We are really concerned about the maintenance aspects of it.” (Senior architect and IT manager at a provider of quality information)

- Three out of four interviewees were participating in Alfresco's open source community — at least to a certain degree. One of them even considers contributing developments back to the community.

"We developed a plug-in, and we are in discussions with Alfresco to contribute it back to the community because it is something useful that other companies might be able to leverage. We'd like to share it not only because of the open source spirit but we think that other contributors might pick it up and make it even better." (Senior architect and IT manager at a provider of quality information)

- The interviewees reported that they had encountered common integration challenges and that the efforts for rollouts were often underestimated. A way to mitigate these implementation risks was to hire or contract with highly experienced consultants and Java developers.

"We found that the efforts for much of the projects around the platform were often underestimated. In organizations like this, people do not really appreciate that it is not actually only about installing a piece of software but putting the whole offering around it. And this actually costs money. Even if your product is cheap, you need to talk about things like engagement management, capacity planning, and continual upgrades." (Senior IT manager at a financial service company)

"Our developers had to go through a learning curve. To do the implementation correctly and to set up best practices that we can use to move forward with other projects, at that time, we had to bring in a really high-end consultant." (Senior architect and IT manager at a provider of quality information)

Composite Organization

Based on the interviews with the four existing customers provided by Alfresco, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization that Forrester synthesized from these results represents a large financial services company based in the US. The company employs 10,000 people in 15 countries. Like many other large organizations, the company creates a huge volume of unstructured content. Some of this content was in different point content management solutions implemented at the departmental level, with varying levels of governance surrounding the management of this content. But some of the time, this content was saved on local shared drives, preventing the company from properly using these valuable assets.

The company wanted to foster a knowledge-sharing culture that facilitates information flow companywide in a compliant manner. The corporate IT department was therefore asked to create a new knowledge-sharing and collaboration platform. While other ECM solutions were already in use for specific business needs, the corporate IT department was looking for a flexible, cost-effective repository that could also work with other existing enterprise tools such as the company's CRM. The company looked at different options, including extending one of the existing ECM platforms. In the end, the company chose Alfresco because of the open architecture of Alfresco's ECM platform, the lower upfront costs, and the availability of experienced in-house Java developers.

See Appendix A for more details on the composite organization.

Framework Assumptions

Table 2 provides the model assumptions, including an average fully loaded salary rate that Forrester used in this analysis.

Table 2

Model Assumptions

Ref.	Metric	Calculation	Value
A1	Hours worked per day		8
A2	Average number of working days per year		240
A3	Average fully loaded annual salary rate		\$100,000
A4	Average fully loaded daily salary rate (rounded)	$A3/A2$	\$417
A5	Average fully loaded hourly salary rate (rounded)	$A3/(A1*A2)$	\$52

Source: Forrester Research, Inc.

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

Costs

This section describes and lists the incremental costs that have been reported by the interviewed organizations and which incurred to the composite organization for deploying and using Alfresco's ECM solution over a three-year period.

Alfresco Subscription Fee

As an open source ECM solution provider, Alfresco does not charge upfront enterprise license fees, but companies that prefer to have a supported solution may subscribe to Alfresco's services.

For the sake of this analysis, the composite organization chose an enterprise subscription with 24x7 services. For an annual fee of \$100,000, the company gets access to:

- The Alfresco Enterprise edition.
- Alfresco Technical Support services.
- Maintenance releases, patches, and hot fixes.
- Quality assurance (QA) process.
- Platform support.

Readers should define the level of support and services their organizations require in order to determine the subscription fee that would be applicable to them.

Integration Costs

The interviewed organizations reported project durations from two to six months and generally recommended to sporadically complement the internal IT staff with experienced consultants who have integrated Alfresco within other organizations.

In our analysis, the equivalent of four full-time employees (FTEs) is working for six months on the integration and deployment of the solution. They are being assisted by two external experts during the first four months. As indicated in Table 3 below, the composite organization spends \$300,000 in integration costs.

Table 3

Integration Costs (Non-Risk-Adjusted)

Ref.	Metric	Value/ calculation	Initial	Year 1	Year 2	Year 3	Total
B1	Number of internal developers	4					
B2	Project duration (in months)	6					
B3	Average fully loaded annual salary rate	\$100,000					
B4	Number of external consultants	2					
B5	Number of months contracted with external consultants	4					
B6	Average fully loaded annual salary rate (external consultant)	\$150,000					
B7	Integration costs	$(B1*B2*B3/12)+(B4*B5*B6/12)$	\$300,000	\$0	\$0	\$0	\$300,000

Source: Forrester Research, Inc.

Hardware Costs

The composite organization decided to use a clustered environment including six production servers, one test server, two quality assurance servers, and six servers in the disaster recovery data center. In this analysis, we assume that the composite organization has to invest in 15 new Linux servers with an average cost of \$4,000 per server and an annual hardware maintenance fee of 10%. As indicated in Table 4, the composite organization invests \$78,000 in hardware over the three years.

Table 4

Hardware Costs (Non-Risk-Adjusted)

Ref.	Metric	Value/ calculation	Initial	Year 1	Year 2	Year 3	Total
C1	Number of Linux servers	15					
C2	Average cost per Linux server	\$4,000					
C3	Annual HW maintenance costs	10%					
C4	Hardware investment	Initial: C1*C2 Years 1-3: C1*C2*C3	\$60,000	\$6,000	\$6,000	\$6,000	\$78,000

Source: Forrester Research, Inc.

Training Costs

Developer and end user training are two important factors for a successful project. In this analysis, we assume that four developers attend a five-day training class at \$2,500 per developer and that 80% of the 10,000 end users actually follow a 30-minute webinar introducing the new ECM capability. The resulting training costs are indicated in Table 5 below.

Table 5

Training Costs (Non-Risk-Adjusted)

Ref.	Metric	Value/ calculation	Initial	Year 1	Year 2	Year 3	Total
D1	Initial developer training (four staff)	4 FTEs*\$2,500	\$10,000				
D2	Number of end users	10,000					
D3	Percentage of users trained	80%					
D4	Duration of training for information workers (in hours)	0.5					
D5	Average fully loaded hourly salary rate (rounded)	\$52 (see A5)					
D6	End user training	D2*D3*D4*D5	\$208,000				
D7	Training costs	D1+D6	\$218,000	\$0	\$0	\$0	\$218,000

Source: Forrester Research, Inc.

Total Costs

Table 6 summarizes the incremental costs incurred by the composite organization for deploying and using Alfresco's ECM solution over a three-year period. In total, the composite organization spent \$896,000 over three years.

Table 6

Total Costs (Non-Risk-Adjusted)

Ref.	Costs	Initial	Year 1	Year 2	Year 3	Total
E1	Alfresco subscription	\$0	\$100,000	\$100,000	\$100,000	\$300,000
E2	Integration costs	\$300,000	\$0	\$0	\$0	\$300,000
E3	Hardware investment	\$60,000	\$6,000	\$6,000	\$6,000	\$78,000
E4	Training costs	\$218,000	\$0	\$0	\$0	\$218,000
E5	Total costs	(\$578,000)	(\$106,000)	(\$106,000)	(\$106,000)	(\$896,000)

Source: Forrester Research, Inc.

Benefits

The Alfresco customers who were interviewed for this study described a range of benefits that they have accrued from their deployment of the Alfresco ECM platform. The most significant benefits described to Forrester were around avoided software licenses, maintenance cost savings, the ability to use less expensive developer resources, avoided IT costs due to the use of the open source stack, and integration and development efficiencies.

Each of these categories of benefit is discussed below.

Avoided Software License Costs

The interviewed organizations reported that avoided software licenses and maintenance costs for an alternative commercial ECM solution represented one of the major financial benefits of the Alfresco solution. Commercial proprietary products typically have annual maintenance costs ranging from 18% to 22% of the original license price. Estimations from the interviewees ranged from \$800,000 to more than \$2 million in savings.

Given the scope of the deployment as described for the composite organization, Forrester conservatively assumes an upfront cost avoidance of \$800,000 and a maintenance cost avoidance of 18% for Years 2 and 3.

Readers should determine what the cost for an alternative commercial ECM solution would be in their particular case.

Table 7

Avoided Software License Costs (Non-Risk-Adjusted)

Ref.	Metric	Value/calc.	Year 1	Year 2	Year 3	Total
F1	Avoided upfront license fee including first-year maintenance	\$800,000				
F2	Assumed software maintenance costs as percentage of upfront license fee	18%				
F3	Avoided software license costs	Year 1: F1 Years 2-3: F1*F2	\$800,000	\$144,000	\$144,000	\$1,088,000

Source: Forrester Research, Inc.

IT Maintenance Cost Savings

In our scenario, the composite organization gets rid of several point content management solutions at departmental level and part of their local shared drives that were previously used to store and share content. These point solutions are typically used for general document storage and management and collaboration, and they result in a duplication of effort when it comes to administration, maintenance, governance, and upgrades. The move to the new Alfresco platform results in ongoing maintenance cost savings. In this analysis, we conservatively assume that the equivalent of one FTE can be reassigned to other tasks. The resulting cost savings is indicated in Table 8 below.

Table 8

IT Maintenance Cost Savings (Non-Risk-Adjusted)

Ref.	Metric	Value/calc.	Year 1	Year 2	Year 3	Total
G1	Number of FTEs freed up	1				
G2	Average fully loaded annual salary rate	\$100,000				
G3	IT maintenance cost savings	H1*H2	\$100,000	\$100,000	\$100,000	\$300,000

Source: Forrester Research, Inc.

Use Of Less Expensive Developer Resources

The interviewed organizations reported that it was easier and more cost-efficient for them to find and hire skilled Java developers than developers with special knowledge about a commercial ECM solution. Due to the openness of the Alfresco platform, already hired developers with experience in Java may have a shorter learning curve compared with learning a commercial, proprietary solution. For the sake of this analysis, we assume that the composite organization

hires two more Java developers at an average fully loaded annual salary of \$100,000 instead of two specialized ECM developers at a 40% higher rate. The resulting cost savings is indicated in Table 9 below.

Table 9

Use Of Less Expensive Developer Resources (Non-Risk-Adjusted)

Ref.	Metric	Value/calc.	Year 1	Year 2	Year 3	Total
H1	FTEs hired	2				
H2	Average fully loaded annual salary rate	\$100,000				
H3	Assumed fully loaded annual salary rate for a specialized ECM developer	\$140,000				
H4	Salary difference	\$40,000 (J3-J2)				
H5	Use of less expensive developer resources	J1*J4	\$80,000	\$80,000	\$80,000	\$240,000

Source: Forrester Research, Inc.

IT Cost Avoidance Due To Use Of Open Source Stack

The Alfresco platform supports the full open source stack. Some of the interviewed organizations actually took advantage of it and decided to use an open source database instead of a commercial database. So does our composite organization. The assumed database license and maintenance cost savings are shown in Table 10 below.

Readers should explore if there are other opportunities for their companies to take advantage of the open source stack and realize further savings.

Table 10

IT Cost Avoidance Due To Use Of Open Source Stack (Non-Risk-Adjusted)

Ref.	Metric	Value/calc.	Year 1	Year 2	Year 3	Total
I1	Avoided commercial database license cost		\$30,000	\$0	\$0	
I2	Avoided annual database maintenance costs		\$6,000	\$6,000	\$6,000	
I3	IT cost avoidance due to use of open source stack	G1+G2	\$36,000	\$6,000	\$6,000	\$48,000

Source: Forrester Research, Inc.

Integration And Development Efficiencies

In our scenario, the new Alfresco platform is integrated with the composite organization's CRM system. The interviewed companies that had experience with the integration between Alfresco and different enterprise tools reported productivity gains for their IT staff mainly due to the access to the source code, the use of a common programmer language, and the support of the open source community. One of the interviewed organizations estimated an average cost savings of about \$150,000 per integration project. In our analysis, we conservatively assume a one-time cost savings of \$50,000, which in our case would, for example, correspond to a reduction of the project duration of 30 days with a team of four developers.

Table 11

Integration And Development Efficiencies (Non-Risk-Adjusted)

Ref.	Metric	Value/calc.	Year 1	Year 2	Year 3	Total
J1	Assumed integration, development costs avoided		\$50,000	\$0	\$0	
J2	Integration and development efficiencies	11	\$50,000	\$0	\$0	\$50,000

Source: Forrester Research, Inc.

Total Benefits

Table 12 shows the total benefits for the composite organization that were quantifiable for this study.

Table 12

Total Benefits (Non-Risk-Adjusted)

Ref.	Metric	Year 1	Year 2	Year 3	Total
K1	Avoided software license costs	\$800,000	\$144,000	\$144,000	\$1,088,000
K2	IT maintenance cost savings	\$100,000	\$100,000	\$100,000	\$300,000
K3	Use of less expensive developer resources	\$80,000	\$80,000	\$80,000	\$240,000
K4	IT cost avoidance due to use of open source stack	\$36,000	\$6,000	\$6,000	\$48,000
K5	Integration and development efficiencies	\$50,000	\$0	\$0	\$50,000
K6	Total benefits	\$1,066,000	\$330,000	\$330,000	\$1,726,000

Source: Forrester Research, Inc.

Flexibility

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

For the purposes of this financial analysis, we have not quantified any flexibility benefits. However, during our interviews with the Alfresco customers, the interviewees mentioned potential expansion of their use of the Alfresco ECM platform, such as:

- **Replacement of other commercial enterprise document management solutions.** Many large organizations are running multiple ECM solutions in parallel for multiple reasons, including historical factors, mergers and acquisitions, or very specific functional requirements. As the companies gain confidence in the capabilities of the Alfresco platform, they might investigate if it would be appropriate and beneficial to their organization to retire some of the commercial ECM solutions and extend the scope of the Alfresco platform.
- **Integration with other enterprise tools.** In our example, the composite organization integrates the Alfresco platform with its CRM system. This organization uses Alfresco’s product to provide content services (such as document check-in and checkout) from within its CRM application. Organizations can use the solution to content-enable other enterprise tools and thus save further costs and realize more productivity gains.
- **Powering a company intranet.** Alfresco can be used beyond document and records management. In addition, it can be used as a collaboration and web publishing platform that could serve as the foundation for a corporate Internet.

The value of flexibility is unique to each organization, and the willingness to measure its value varies from company to company (see Appendix B for additional information regarding the flexibility calculation).

Risk

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

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

The following implementation risks that affect costs are identified as part of this analysis:

- The amount of the actual Alfresco subscription fee depends on several configuration options and might be slightly higher than originally estimated.
- The amount of labor, including the use of external consultants needed for the integration of the ECM solution, depends on the complexity of the existing environment and may be higher than originally estimated.
- The amount and type of new hardware that has to be purchased depends on the company's requirements and may be higher than originally estimated.
- The amount of training needed over the three-year period may depend on the amount of people to be trained and the employee turnover rate, and the costs may thus be higher than originally estimated.

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

- The amount of software license costs avoided with regard to an alternative commercial ECM solution depends on the exact scope and the chosen vendor and might be lower than originally estimated.
- The amount of IT maintenance cost savings might be lower depending on the complexity of the retired point solutions.
- The savings due to the use of skilled Java developers instead of developers with a high knowledge of the alternative commercial ECM solution depends on the availability of such resources and their actual difference in salary and might be lower than originally estimated.
- The amount of IT cost savings due to the use of the open source stack depends on how far the alternative solution might leverage open source components as well and might therefore be lower.
- The amount of realized integration and development efficiencies depends on the availability of skilled developers and how far they can leverage the open source code and community and might be lower than originally estimated.

Table 13 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates. The TEI model uses a triangular distribution method to calculate risk-adjusted values. To construct the distribution, it is necessary to first estimate the low, most likely, and high values that could occur within the current environment. The risk-adjusted value is the mean of the distribution of those points. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

Table 13

Cost And Benefit Risk Adjustments

Costs	Low	Most likely	High	Mean
Alfresco subscription	98%	100%	105%	101%
Integration costs	100%	100%	115%	105%
Hardware investment	98%	100%	105%	101%
Training costs	98%	100%	105%	101%
Benefits	Low	Most likely	High	Mean
Avoided software license costs	50%	100%	100%	83%
IT maintenance cost savings	90%	100%	105%	98%
Use of less expensive developer resources	90%	100%	105%	98%
IT cost avoidance due to use of open source stack	90%	100%	105%	98%
Integration and development efficiencies	90%	100%	105%	98%

Source: Forrester Research, Inc.

Financial Summary

The financial results calculated in the Costs and Benefits sections can be used to determine the ROI, NPV, and payback period for the organization's investment in Alfresco's ECM solution. These are shown in Table 14 below.

Table 14

Cash Flow — Non-Risk-Adjusted

Cash flow — original estimates						
	Initial	Year 1	Year 2	Year 3	Total	PV
Costs	(\$578,000)	(\$106,000)	(\$106,000)	(\$106,000)	(\$896,000)	(\$841,606)
Benefits	\$0	\$1,066,000	\$330,000	\$330,000	\$1,726,000	\$1,489,752
Total	(\$578,000)	\$960,000	\$224,000	\$224,000	\$830,000	\$648,146
ROI	77%					
Payback period	8 months after go-live					

Source: Forrester Research, Inc.

Table 15 below shows the risk-adjusted ROI, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Table 13 in the Risk section to the cost and benefits numbers in Tables 6 and 12.

Table 15

Cash Flow — Risk-Adjusted

Cash flow — risk-adjusted estimates						
	Initial	Year 1	Year 2	Year 3	Total	PV
Costs	(\$595,780)	(\$107,060)	(\$107,060)	(\$107,060)	(\$916,960)	(\$862,022)
Benefits	\$0	\$924,680	\$301,800	\$301,800	\$1,528,280	\$1,316,786
Total	(\$595,780)	\$817,620	\$194,740	\$194,740	\$611,320	\$454,764
ROI	53%					
Payback period	10 months after go-live					

Source: Forrester Research, Inc.

Alfresco's Enterprise Content Management Solution: Overview

According to Alfresco, Alfresco is a leading open source alternative for ECM that enables organizations to capture, search, and collaborate on documents with full library services and life-cycle management, on a unified, robust repository. The Alfresco content platform uses flexible, open-standards architecture to provide document management, web content management, records management, and collaboration software to 2,200 enterprise customers in 56 countries. Integrations exist for SAP, IBM Lotus, Microsoft Office, SharePoint, and Google Docs. Alfresco is built using the latest open source infrastructure components — including Spring, Activiti BPM, Apache Solr, Lucene, and MyFaces — and is based on aspect-oriented programming.

As an open source ECM solution provider, Alfresco does not charge upfront enterprise license fees. Instead, Alfresco charges an annual subscription. This scalable model allows companies of any size to deploy the solution. The subscription provides customers with access to Alfresco Team, Alfresco Standard, or Alfresco Enterprise, and a number of key subscription-only services.

These Enterprise Subscription services include:

- Access to the Alfresco Team, Alfresco Standard, or Alfresco Enterprise editions.
- Alfresco Technical Support services. There are two levels available:
 - 8x5 — With telephone access and a 4-business-hour response time for all severities, 8x5 support is most appropriate for non-mission-critical applications.
 - 24x7 — Ideal for high-availability systems, this level of support offers the fastest response time. Any severity 1 issue will be responded to within 2 hours, 24x7. Any severity 2 or 3 issues will be responded to within 2 business hours by a local Alfresco Support Center.
- Additional service offerings include:
 - Premier and Premier Advantage support: Among other advantages, the Premier support includes a designated Alfresco Technical Account Manager (TAM), proactive services, release upgrade assistance, quarterly support reviews, and annual health checks.
- Maintenance releases, patches, and hot fixes.
- An extended QA process.
- Extensive platform support.

This approach allows Alfresco to offer an economic solution to any company looking for a fully supported, fully tested, full-featured ECM solution.

Appendix A: Composite Organization Description

In this TEI study, Forrester has created a composite organization to illustrate the quantifiable costs and benefits of deploying Alfresco's ECM platform. Forrester's conclusions were derived in large part from information received in a series of in-depth interviews with executives and personnel at four organizations currently using Alfresco's ECM solution. As each of the interviewed organizations was promised anonymity, Forrester constructed a composite company, a TEI framework, and an associated ROI analysis based on our findings from these Alfresco customers.

This study illustrates the financial impact of deploying Alfresco's ECM platform by aggregating the findings from the customer interviews and portraying a composite organization that is achieving value from Alfresco's solution.

The composite organization in this study represents a large financial service company based in the US. The company employs 10,000 people in 15 countries. Like many other large organizations, the company creates a huge volume of unstructured content that includes collaterals, guidelines, collaborative documents, email messages, scanned images, and more. Some of this content was in different point content management solutions implemented at the departmental level, with varying levels of governance (i.e., metadata, workflows, retention policies, etc.) surrounding the management of this content. But some of the time, this content was saved on local shared drives, preventing the company from properly using these valuable assets.

The company wanted to foster a knowledge-sharing culture that facilitates information flow companywide in a compliant manner. The corporate IT department was therefore asked to create a new knowledge-sharing and collaboration platform. While other ECM solutions were already in use for specific business needs, the corporate IT department was looking for a flexible, cost-effective repository that could also work with other existing enterprise tools and systems. The company looked at different options, including extending one of the existing ECM platforms. In the end, the company chose Alfresco because of the open architecture of Alfresco's ECM platform, the lower upfront costs, and the availability of experienced in-house Java developers.

The main business objectives for the investment in the Alfresco ECM platform were to:

- Create a companywide knowledge-sharing and collaboration platform.
- Provide general document management (for lower-level business content — as opposed to regulatory content) capabilities to all of the company's 10,000 employees.
- Achieve a well-integrated environment at affordable costs.
- Improve the ability to find content via search.

Today, the company essentially uses the document management module of the Alfresco ECM platform that serves as back end to the knowledge-sharing platform and the company's CRM system. It contains about 1 million documents in total.

The technical platform consists of a clustered environment including six production servers, one test server, two quality assurance servers, and six servers in the disaster recovery data center. All servers are Linux-based.

Appendix B: Total Economic Impact™ Overview

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

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

Benefits

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

Costs

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

Risk

Risk measures the uncertainty of benefit and cost estimates contained within the investment. Uncertainty is measured in two ways: 1) the likelihood that the cost and benefit estimates will meet the original projections, and 2) the likelihood that the estimates will be measured and tracked over time. TEI 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.

Flexibility

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

having the ability to capture that benefit has a present value that can be estimated. The flexibility component of TEI captures that value.

Appendix C: 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, companies often set a discount rate based on their business and investment environment. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult their respective 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 at 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. 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 Framework Assumptions section) 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 flows in each year.

Table [Example]

Example Table

Ref.	Category	Calculation	Initial cost	Year 1	Year 2	Year 3	Total

Source: Forrester Research, Inc.

Appendix D: Related Forrester Research

“The Forrester Wave™: Enterprise Content Management Suites, Q4 2009,” Forrester Research, Inc., November 12, 2009

Appendix E: Endnotes

¹ Forrester risk-adjusts the summary financial metrics to take into account the potential uncertainty of the cost and benefit estimates. For more information on Risk, please see page 17.