

A Forrester Total Economic
Impact™ Study

Commissioned By IBM

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The Total Economic Impact™ Of IBM Content Navigator

Delivering An Improved Web, Office
and Mobile Experience Platform For
Enterprise Content Management

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Executive Summary

In January 2015, IBM commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by implementing IBM Content Navigator. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of IBM Content Navigator on their organizations.

To better understand the benefits, costs, and risks associated with an IBM Content Navigator implementation, Forrester interviewed and conducted a survey of several customers who implemented IBM Content Navigator. IBM Content Navigator is the unified experience platform for mobile, web, and desktop across both the IBM Enterprise Content Management (ECM) portfolio and non-IBM ECM systems that are CMIS compatible. IBM calls Content Navigator an experience platform as they consider it both a modern and easy to use user experience and also a best in class platform for building ECM applications.

The main drivers for implementing IBM Content Navigator among the organizations surveyed included a desire to shift to a more cloud-focused IT environment; the need to deliver innovative products and services, in the form of documents or data, to busy users; a need to support a mobile-centric workforce; and a requirement to deliver innovative solutions with a resource-constrained IT team. Another major factor in these customers' IBM Content Navigator deployment was the need for one user interface for end users to work with content, enabled by IBM Content Navigator's ability to access content and data repositories beyond IBM's own offerings.

IBM Content Navigator improves collaboration, reduces time-to-market for new applications and features, improves the end user experience with a single UI to access enterprise information, and improves IT and end user productivity. The results for a composite organization based on survey data and customer interviews are:

- Total cost savings and benefits: \$2,425,666.
- Over 6X return on investment

IBM CONTENT NAVIGATOR IMPROVES COLLABORATION AND REDUCES COST OF DEPLOYMENT

Our survey of 30 IBM Content Navigator customers and in-depth interviews with two existing customers, along with subsequent financial analysis, found that a composite organization based on these companies experienced the risk-adjusted ROI, benefits, and costs shown in Figure 1.¹ See Appendix A for a description of the composite organization.

The composite organization analysis points to benefits of \$2,425,666 over three years with a net present value (NPV) of \$2,097,525.

With IBM Content Navigator, IT resources were able to improve their productivity by as much as 40% and organizations saw an improved end user experience with additional productivity gains. Apart from productivity and resource optimization benefits, the organizations interviewed and surveyed also saw cost avoidance in reduced fees for customization and reduction in legacy software maintenance costs.

FIGURE 1
Financial Summary Showing Three-Year Risk-Adjusted Results

ROI:
639%

NPV:
\$2,097,525

Payback:
2.8 months

Productivity:
**▲ as much as
40%**

Source: Forrester Research, Inc.

- › **Benefits.** The composite organization recognized the following benefits from its IBM Content Navigator implementation that represent those experienced by the interviewed companies:
- **IT labor savings through reduced cost of developing and deploying new applications and features as well as ease of management with a single interface for all ECM solutions.** This represents improved productivity for IT resources as a result of the ease of management and development.
 - **End user productivity savings with improved collaboration across all ECM solutions with a single platform and improved document collaboration and management.** The claims group saved 30 minutes per week, while the rest of the composite organization's IBM Content Navigator users saw a rise in productivity ranging from 10% to 25% over three years.
 - **General productivity gains.** Mobile access and improved collaboration across all ECM solutions with a single platform.
 - **Faster time-to-market for ECM solutions for mobile devices.** The time to roll out the mobile project was cut by two-thirds through using IBM Content Navigator. The project was delivered in six months instead of 1.5 years.
 - **Ease of customization, leading to cost avoidance of development fees.** By using IBM Content Navigator to build a customized UI for its ECM portfolio, the composite organization saved significant development and maintenance professional services fees.
 - **Maintenance cost savings with the improved ability to access non-IBM repositories.** Organizations no longer had to pay maintenance on legacy software used to access data repositories as these could now be tapped through IBM Content Navigator.
 - Other benefits experienced by the organizations interviewed and surveyed include: **improved end-user experience with a modern unified UI, ease of viewing information from multiple devices outside the enterprise, and ease of integration with line-of-business (LOB) applications.**
- › **Costs.** The following costs for the composite organization were considered in the financial analysis.
- **IBM ECM software maintenance fees.** IBM Content Navigator is available as a non-chargeable, bundled component of many offerings in IBM's ECM portfolio, so there is no direct license fee for its use or maintenance. Forrester conservatively considers the software license maintenance cost of the IBM ECM portfolio as part of the ROI analysis to account for access to the IBM Content Navigator platform, though readers of the study may choose to do otherwise.
 - **Additional hardware and software.** One of the organizations interviewed incurred some costs for additional hardware and related software as part of their implementation, though it should be noted that companies may also reduce their hardware and related software costs if they consolidate servers that support a variety of legacy UI's replaced by Content Navigator.
 - **Professional services fees.** This represents additional professional services fees that the composite organization undertook for its customization of the IBM Content Navigator UI when customization was required.
 - **Implementation costs — internal labor.** This represents time spent internally on deployment of IBM Content Navigator and development of a custom UI based on the IBM Content Navigator Experience platform.
 - **Training.** This represents time spent by resources on preparing training materials and holding training sessions for the Content Navigator and custom UI rollout.

Disclosures

The reader should be aware of the following:

- › The 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 return on investment 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 Content Navigator.
- › 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.
- › The customer names for the interviews were provided by IBM. IBM did not participate in customer interviews.

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 IBM Content Navigator. 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 IBM Content Navigator can have on an organization (see Figure 2). Specifically, we:

- › Interviewed IBM marketing and sales personnel, along with Forrester analysts, to gather data relative to IBM Content Navigator and the ECM market.
- › Interviewed two organizations and surveyed 30 organizations currently using IBM Content Navigator to obtain data with respect to costs, benefits, and risks.
- › Designed a composite organization based on characteristics of the interviewed and surveyed organizations (see Appendix A).
- › Constructed a financial model representative of the interviews and survey data using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews and survey as applied to the composite organization.
- › Risk-adjusted the financial model based on issues and concerns the interviewed organizations highlighted in interviews. Risk adjustment is a key part of the TEI methodology. While interviewed organizations provided cost and benefit estimates, some categories included a broad range of responses or had a number of outside forces that might have raised or lowered them. For that reason, some cost and benefit totals have been risk-adjusted and are detailed in each relevant section.

Forrester employed four fundamental elements of TEI in modeling IBM Content Navigator's service: 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 B for additional information on the TEI methodology.

FIGURE 2
TEI Approach



Source: Forrester Research, Inc.

Analysis

COMPOSITE ORGANIZATION

For this study, we surveyed 30 organizations and conducted interviews with representatives from two companies that implemented IBM Content Navigator:

- › A large agri-business and real estate conglomerate with approximately 20 different businesses including oil production, mining, real estate development, and farming operations.
- › A leading insurance provider to the nonprofit space with 700 employees and over \$550 million in annual revenue.

Based on the survey results and these interviews, 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 an organization of about 600 employees with the following additional characteristics:

- › It is a conglomerate with diversified businesses in real estate, financial investment, and insurance, with over \$500 million in revenue and 600 employees.
- › The organization has been an IBM ECM customer since 2006 and deployed Content Navigator in 2014.
- › It has a wide range of end users in different businesses, with a significant number of non-tech-savvy users.

The composite company, also known as *Organization A*, was looking for a single UI to access all ECM applications to improve the end user experience. Prior to IBM Content Navigator, employees had to log in multiple times as they switched screens to access data, and applications timed out. The composite organization also needed to launch a mobile application because its claims and legal teams working from the field had to go into the office to upload documentation, such as photos and legal papers, thus leading to longer turnaround times for work processes.

INTERVIEW HIGHLIGHTS

Situation

IT resource constraints was a top concern among the organizations surveyed, which played into their decision to implement IBM Content Navigator. Other major themes among the organizations interviewed included:

- › The need for a single UI for all ECM packages as well as the ability to easily customize this UI to fit their requirements. One interviewed organization noted that it needed a solution that could work across different applications in different industries. The organization needed an ECM UI it could easily customize with a “friendly look and feel” for its users and immediate access to LOB applications such as its Oracle ERP suite and invoice solution.
- › A big shift in focus to mobile applications and mobile access to the enterprise. One organization noted that it had a number of remote workers in its claims group and legal team managing lots of cumbersome paper. Access to content repositories while mobile would be very beneficial to those groups. This organization released a mobile application using Content

“IBM Content Navigator fit into our mobile strategy. With a ready-built iOS app and now an Android app to import and access content in and out of the enterprise, it was an easy decision.”

~ Head of enterprise content infrastructure, insurance company

Navigator. It also plans to expand mobile use in the future using Content Navigator, with a view toward creating fully designed solutions around ECM with IBM Content Navigator as the main interface from mobile and web.

Solution

These organizations implemented IBM Content Navigator to access data in their IBM ECM portfolio as well as information in non-IBM data repositories. IBM Content Navigator was also used to launch mobile ECM applications.

Results

Several benefits drove the analysis:

- › **End user productivity benefits through improved collaboration and mobile access to data repositories.** The most significant benefit realized was end user productivity. The organizations achieved savings as users were able to better collaborate with the easy-to-use ECM interface, improved workflows, and increased access to records and information through mobile and web.
- › **IT resource savings.** These savings resulted from improved management due to IBM Content Navigator and faster time-to-market for developing and deploying new applications and features.

“We could add Content Navigator without replacing our other solutions. With Content Navigator, they can access multiple content repositories from multiple devices. It’s been really seamless.”

~ Head of enterprise content infrastructure, insurance company

- › **Cost avoidance of customization fees.** There were also significant savings on third-party developer fees with the ease of customization enabled by IBM Content Navigator.

BENEFITS

The quantified benefits for the composite organization, which reflect those of the organizations interviewed and surveyed, include:

+ IT Savings Through Reduced Cost Of Development And Deployment And Ease Of Management

With the implementation of IBM Content Navigator, organizations were able to reduce their cost of developing and deploying new applications and features. They were also able to improve the productivity of their IT organization through the ease of management enabled by a single interface for all ECM solutions. Customers surveyed estimated an average 15% improvement in IT management productivity as a result of IBM Content Navigator. One customer noted that two IT resources on its enterprise content infrastructure team saved as much as 40% of their time because of the solution. Another interviewed customer estimated that with its rollout of a mobile application for its claims group and legal team, IBM Content Navigator has saved the organization the effort of 2.5 full-time equivalents (FTEs) at initial rollout and another .3 FTE on administrative costs per year.

Content Navigator was able to improve the productivity of *Organization A's* IT infrastructure team by reducing the effort needed to deploy and maintain a new mobile ECM application. The composite organization saved 2.5 FTEs in Year 1 in

“Working in a consistent user environment is a top benefit. It’s also been critical that they put collaboration inside Navigator — comments, enhanced workflow, instant messaging [integration] — that’s really empowered the user.”

~Director of records and information management, agri-business and real-estate company

development and deployment. At a fully loaded compensation of \$90,000 per year, this results in \$220,500 of IT labor savings in the first year. Each subsequent year, the composite organization saved 30% of one FTE on ongoing administration equivalent to \$27,000 annual savings per year. This benefit was risk-adjusted and reduced by 2%. Table 1 illustrates the calculation.

TABLE 1
IT Labor Savings

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	IT resources saved		2.5	0.3	0.3
A2	Fully loaded compensation per IT resource		\$90,000	\$90,000	\$90,000
At	IT labor savings	A1*A2	\$225,000	\$27,000	\$27,000
	Risk adjustment		↓ 2%		
Atr	IT labor savings (risk-adjusted)		\$220,500	\$26,460	\$26,460

Source: Forrester Research, Inc.

★ End-User Productivity Gains With Improved Document Collaboration And Document Management

Improved document collaboration and document management was one of the top benefits of IBM Content Navigator, as cited by 40% of the organizations surveyed. These organizations estimated a 20% reduction in document management cost as a result of IBM Content Navigator. Disparate teams in different locations were now able to share and manage information more easily. One organization interviewed used IBM Content Navigator for a mobile application that enabled its claims group to upload photos directly into their data repository from their mobile phones. This application also gave the legal team access to deposition content from their mobile devices. This organization estimated that its core workers in the claim management group saved 30 minutes per week and its legal team saved 5% to 10% of their time as a result.

Organization A saw weekly time savings of 30 minutes for the users of its mobile application as IBM Content Navigator enabled them to share information in a timely manner while they were out in the field. This translates to 26 hours of savings per year for a core team of 50. At a fully loaded cost of \$21.63 per hour for these resources, the composite organization realized annual savings of \$28,125 per year. This benefit was risk-adjusted and reduced by 2%. Table 2 illustrates the calculation.

TABLE 2
Mobile Project End-User Productivity Gains

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Number of mobile app end users		50	50	50
B2	Time saved per end user		26	26	26
B3	Average hourly compensation per person	\$45,000/2,080 hours	\$21.63	\$21.63	\$21.63
Bt	Mobile project — end user productivity gains	B1*B2*B3	\$28,125	\$28,125	\$28,125
	Risk adjustment		↓ 2%		
Btr	Mobile project — end user productivity gains (risk-adjusted)		\$27,563	\$27,563	\$27,563

Source: Forrester Research, Inc.

⊕ General Productivity Gains — Mobile Access And Improved Collaboration Across All ECM Solutions With A Single Platform

One interviewed organization noted that the main benefits of its IBM Content Navigator deployment have been the “easier collaboration” and “working in a consistent user environment.” Its users no longer had to change logins as they switched between different applications. This company also had a lot of workers in the field and noted that the introduction of IBM Content Navigator would have a significant impact on the ability of its personnel to work from anywhere. The head of records and information management noted, “We’re only starting to tap into [Content Navigator] benefits. Right now it’s only between 5% to 10% improvement in end user productivity, but by next year as we understand and collaborate better with workflows and mobility, it’s going to be a 70%.” Improved collaboration across all ECM solutions with a single platform is a top three benefit for survey respondents, with these organizations citing an average 21% improvement as a result of their deployment. For mobile-centric organizations in the survey, this benefit placed first.

We estimate that the composite organization saw a 10% productivity improvement for its end users in the first year of its IBM Content Navigator implementation as a result of improved collaboration and mobile access. This productivity improvement will increase in subsequent years to 25% with full adoption among the organization’s remote and field workforce.

Organization A has an additional 100 IBM Content Navigator users at an average fully loaded compensation per FTE of \$60,000 per year. Forrester assumes that only 50% of end user time saved is captured for productive work. The overall productivity gains for the composite organization are valued at \$300,000 in Year 1 and \$750,000 in years 2 and 3. This benefit was risk-adjusted by 2%. Table 3 illustrates the calculation.

TABLE 3
General End-User Productivity Gains

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Number of end users		100	100	100
C2	Fully loaded compensation per worker		\$60,000	\$60,000	\$60,000
C3	Percentage improved productivity		10%	25%	25%
C4	Productivity captured		50%	50%	50%
Ct	General end user productivity gains	$C1 * C2 * C3 * C4$	\$300,000	\$750,000	\$750,000
	Risk adjustment		↓ 2%		
Ctr	General end user productivity gains (risk-adjusted)		\$294,000	\$735,000	\$735,000

Source: Forrester Research, Inc.

+ Faster Time-To-Market — ECM Solutions For Mobile Devices

Organizations interviewed and surveyed also noted that they gained the ability to quickly develop ECM solutions for mobile devices with IBM Content Navigator. “Our mobile project was delivered in six months instead of a year and half,” observed one organization’s head of ECM infrastructure. Reduction in project delivery times as a result of IBM Content Navigator ranged from 11% to 67% among the organizations interviewed and surveyed. IBM Content Navigator can be used as a toolkit and a set of building blocks to reduce the time it takes to build custom applications. These organizations interviewed noted the ease with which they could customize the standard interfaces, especially as they moved toward mobile.

Using IBM Content Navigator to build a custom mobile ECM application for its remote workers, the composite organization delivered its project a year earlier. The average fully loaded cost of the resources on this project is \$60,000 per FTE. With two resources allocating 70% and another 10 resources allocating 20% of their time to this project, this one-year savings is valued at \$210,000. These savings are further risk-adjusted by 2% to \$205,800. Calculations are illustrated in Table 4 below.

TABLE 4
Faster Time-To-Market Savings

Ref.	Metric	Calculation	Year 1
D1	Number of resources		2
D2	Percentage time allocated to project		75%
D3	Number of resources		10
D4	Percentage time allocated to project		20%
D5	Average fully loaded compensation per resource per year		\$60,000
D6	Number of years (saved)		1
Dt	Faster time-to-market	$((D1 * D2) + (D3 * D4)) * D5 * D6$	\$210,000
	Risk adjustment		↓ 2%
Dtr	Faster time-to-market (risk-adjusted)		\$205,800

Source: Forrester Research, Inc.

⊕ Ease Of Customization Leading To Cost Avoidance Of Development Fees

Another top benefit of IBM Content Navigator for the organizations interviewed and surveyed was the ease of customization of the solution. IBM Content Navigator enabled their developers to configure applications instead of coding them, and it was noted that customizations needed less work when compared with other alternatives. Survey respondents estimated an average 11% in integration cost reduction through the ease of customization enabled by IBM Content Navigator. One organization used IBM Content Navigator for the custom UI it was building into all of its ECM applications, noting, "My users get a totally customized experience, as the solution needs to adapt to the way we work." Without the IBM Content Navigator solution, alternative bids from vendors they were considering would have cost them \$350,000 to \$500,000 in development fees for the customizations required and an additional \$100,000 a year in maintenance.

Organization A created a custom UI as its primary ECM interface. The company now only had to go to one place for contract administration, accounts receivable, inventory, manufacturing, contracts, legal documentation, insurance claims, and other records and information needed for its disparate businesses by the wide variety of skilled personnel employed by these businesses. Although they required a high level of customization for this project, the composite organization was able to avoid the expensive cost of third-party development and maintenance fees by leveraging the customization capabilities, and especially the ease of extensibility, of IBM Content Navigator. IBM Content Navigator saved the composite organization \$350,000 in Year 1 and \$100,000 in subsequent years. These development and maintenance savings were risk adjusted at 5%, as illustrated in Table 5.

TABLE 5
Cost Avoidance Of Customization Fees

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
E1	Third-party customization fees		\$350,000	\$100,000	\$100,000
Et	Cost avoidance of customization fees	E1	\$350,000	\$100,000	\$100,000
	Risk adjustment		↓ 5%		
Etr	Cost avoidance of customization fees (risk-adjusted)		\$332,500	\$95,000	\$95,000

Source: Forrester Research, Inc.

+ Improved Ability To Access Non-IBM Repositories

Organizations interviewed and surveyed could now gain access to non-IBM repositories through Content Navigator. As a result, these organizations saved the cost of maintaining legacy applications to access information from non-IBM sources. One interviewed organization saved \$25,000 in annual maintenances in licenses as it moved from a legacy program to IBM Content Navigator. As a back-up measure, the company still decided to pay \$5,000 a year to maintain a portal to its legacy programs.

By using IBM Content Navigator to access non-IBM repositories, the composite organization saved \$20,000 a year in maintenance of licenses needed for legacy applications. This cost is risk-adjusted by 2% in Table 6 below.

TABLE 6
Maintenance Cost Savings — Improved Ability To Access Non-IBM Repositories

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
F1	Annual maintenance of legacy applications		\$20,000	\$20,000	\$20,000
Ft	Cost savings from maintaining legacy applications	F1	\$20,000	\$20,000	\$20,000
	Risk adjustment		↓ 2%		
Ftr	Cost savings from maintaining legacy applications (risk-adjusted)		\$19,600	\$19,600	\$19,600

Source: Forrester Research, Inc.

Total Benefits

Table 7 shows the total of all benefits across the six areas listed above, 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 \$2.4 million.

TABLE 7
Total Benefits (Risk-Adjusted)

Benefit	Initial	Year 1	Year 2	Year 3	Total	Present Value
IT labor savings	\$0	\$220,500	\$26,460	\$26,460	\$273,420	\$242,202
Mobile project — end user productivity gains	\$0	\$27,563	\$27,563	\$27,563	\$82,688	\$68,544
General end user productivity benefit	\$0	\$294,000	\$735,000	\$735,000	\$1,764,000	\$1,426,927
Faster time-to-market for applications and features	\$0	\$205,800	\$0	\$0	\$205,800	\$187,091
Cost avoidance of customization fees	\$0	\$332,500	\$95,000	\$95,000	\$522,500	\$452,160
Cost savings from maintaining legacy applications	\$0	\$19,600	\$19,600	\$19,600	\$58,800	\$48,742
Total benefits	\$0	\$1,099,963	\$903,623	\$903,623	\$2,907,208	\$2,425,666

Source: Forrester Research, Inc.

COSTS

The cost categories listed below for the composite organizations were considered by Forrester in their financial analysis of the costs associated with the IBM Content Navigator solution:

- › IBM ECM software maintenance fees.
- › Hardware and software.
- › Professional service fees.
- › Project implementation — internal labor.
- › Training.

📌 IBM ECM Software Maintenance Fees

IBM Content Navigator is available as a non-chargeable, bundled component of many offerings in IBM's ECM portfolio, so there is no direct license fee for its use or maintenance. Forrester's conservative financial analysis takes into consideration that organizations still need to pay maintenance on IBM ECM licenses to gain access to Content Navigator. We consider IBM ECM software maintenance fees as part of the cost model in the analysis. Readers of this study may choose a different approach. Without maintenance fees, overall project ROI would be at 750%.

The annual maintenance cost for the IBM ECM suite to *Organization A* for approximately 150 users is \$15,000 per year. To account for variability, this cost was risk-adjusted up by 15%.

💰 Hardware And Software

The organizations interviewed estimated that they spent between \$5,000 and \$10,000 on hardware and software for their IBM Content Navigator deployments. The cost of hardware and server licenses to the composite organization was \$8,500. This cost was risk-adjusted up by 15%. Organizations that run IBM Content Navigator on existing hardware may choose not to include these costs in their analysis. Those organizations that decommission associated application servers and databases with their Content Navigator deployments may actually see these costs reduced.

💰 Professional Services Fees

While the composite organization did see significant third-party customization savings from its use of IBM Content Navigator, it still had to employ a third-party developer to work with IBM for additional customization. Compared with the alternative quote of \$350,000 for development without IBM Content Navigator, this third-party developer working with IBM cost *Organization A* \$86,000 in upfront costs and a maintenance agreement of \$15,000 per year. This cost was risk-adjusted up by 5%.

💰 Project Implementation — Internal Labor

One organization interviewed noted that its actual Content Navigator product implementation took a week while another organization noted that its Content Navigator implementation plus upgrade of the full IBM ECM stack took six months. *Organization A* spent a total of 832 hours per FTE for 2.5 resources on Content Navigator deployment and upgrade of its IBM ECM solutions with its custom UI and mobile application. At an average annual fully loaded compensation of \$80,000, or about \$38.46 per hour, the total implementation cost to the organization was \$80,000. As implementation costs may vary by organization, this cost was risk-adjusted up by 15%. The total risk-adjusted internal labor cost for implementation was \$92,000.

TABLE 9
Project Implementation — Internal Labor

Ref.	Metric	Calculation	Initial
G1	Number of resources		2.5
G2	Average compensation per resource	\$80,000/2,080 hours	\$38.46
G3	Number of hours		832
Gt	Implementation costs	$G1 \times G2 \times G3$	\$80,000
	Risk adjustment		↑ 15%
Gtr	Implementation costs (risk-adjusted)		\$92,000

Source: Forrester Research, Inc.

💰 Training

One organization we interviewed did spend more time on its training compared with the other organization as it has rolled out a new custom UI built on Content Navigator instead of using it out of the box. "This training was critical because everyone in our organization was going to use Content Navigator," the head of records and information management noted. *Organization A* allocated 60% of the time of three resources over three months to train its internal users. At an annual fully loaded compensation of \$60,000 per resource, the cost of training to the organization is \$54,000.

Total Costs

Table 10 shows the total of all costs as well as associated present values, discounted at 10%. Over three years, the composite organization expects costs to total a net present value of \$328,141.

TABLE 10
Total Costs (Risk-Adjusted)

Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
ECM suite software maintenance fees	\$0	(\$17,250)	(\$17,250)	(\$17,250)	(\$51,750)	(\$42,898)
Additional hardware and software	(\$9,775)	\$0	\$0	\$0	(\$9,775)	(\$9,775)
Additional professional service fees	(\$90,300)	(\$15,750)	(\$15,750)	(\$15,750)	(\$137,550)	(\$129,468)
Project implementation	(\$92,000)	\$0	\$0	\$0	(\$92,000)	(\$92,000)
Training	(\$54,000)	\$0	\$0	\$0	(\$54,000)	(\$54,000)
Total costs	(\$246,075)	(\$33,000)	(\$33,000)	(\$33,000)	(\$345,075)	(\$328,141)

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 use IBM Content Navigator 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).

By increasing the number of users of IBM Content Navigator, customers could gain additional productivity benefits from these users. One organization interviewed noted that it was planning to use IBM Content Navigator as the main portal for its vendor and contractors and estimated that an additional 5,000 external users would be using its system. The organization noted that this would bring a “great benefit” in improving collaboration with its vendors. As organizations that implemented Content Navigator also expanded their mobile applications or added features and capabilities, companies would also see additional cost and resource savings. The value of flexibility is unique to each organization, and the willingness to measure its value varies from company to company.

RISKS

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 IBM Content Navigator 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 IBM Content Navigator, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for cost and benefit estimates.

TABLE 11
Benefit And Cost Risk Adjustments

Benefits	Adjustment
Cost avoidance of customization fees	↓ 5%
All other benefit categories	↓ 2%
Costs	Adjustment
Professional services fees	↑ 5%
All other cost categories	↑ 15%

Source: Forrester Research, Inc.

Quantitatively capturing investment risk and impact risk by directly adjusting the financial estimates results provides 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 since they represent the expected values considering risk.

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

- › Customer benefits could vary depending on their pre-IBM Content Navigator environment, as well as the nature of the use case, such as mobile applications for their deployments.
- › Productivity savings are dependent on the size and structure of the organizations as well as the number of ECM users in an organization.

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

- › Some organizations may have more extensive need of third-party professional services than others.
- › Implementation costs could also vary depending on the size and complexity of the deployment required.

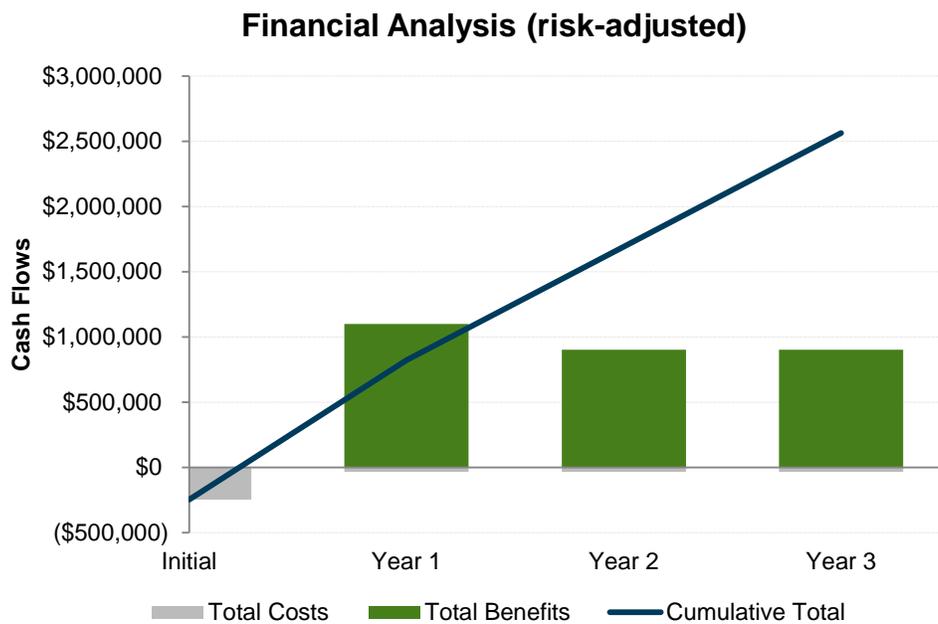
Table 9 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

Financial Summary

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 in IBM Content Navigator.

Table 10 below shows the risk-adjusted ROI, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Table 9 in the Risks section to the unadjusted results in each relevant cost and benefit section.

FIGURE 3
Cash Flow Chart (Risk-Adjusted)



Source: Forrester Research, Inc.

TABLE 10
Cash Flow (Risk-Adjusted)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Costs	(\$246,075)	(\$33,000)	(\$33,000)	(\$33,000)	(\$345,075)	(\$328,141)
Benefits	\$0	\$1,099,963	\$903,623	\$903,623	\$2,907,208	\$2,425,666
Net benefits	(\$246,075)	\$1,066,963	\$870,623	\$870,623	\$2,562,133	\$2,097,525
ROI	639%					
Payback period	2.8 months					

Source: Forrester Research, Inc.

IBM Content Navigator: Overview

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

WHAT IS IBM CONTENT NAVIGATOR?

IBM® Content Navigator is the unified experience platform for Mobile, Web and Desktop use of the IBM Enterprise Content Management (ECM) portfolio. It includes a user experience with features that make it incredibly easy to create, share, manage, and collaborate on content on all devices within all of IBM's ECM major products and key partner solutions. Because it is also an open platform, it is the most effective way for partners and clients to simplify and accelerate development of custom applications on mobile, web, and desktop paradigms.

Content Navigator enables you to:

- › Deliver content on any device in order to drive better and faster decision making and provide access to content anywhere work is done
- › Secure collaboration between individuals, teams, clients and suppliers through teamspaces and content sharing
- › Integrate content intensive solutions and applications through open and standards based APIs to promote extensibility and data integration
- › Use a variety of IBM products to provide an intuitive mobile content experience, including [IBM Content Foundation](#), [IBM Connections Enterprise Content Edition](#), [IBM FileNet® Content Manager](#), [IBM Content Manager Enterprise Edition](#), [IBM Content Manager OnDemand](#), [IBM Case Manager](#), IBM Datacap, [IBM Case Foundation](#) and [IBM Daeja® ViewONE® Professional and Virtual](#).
- › Use a variety of non-IBM products that support CMIS (Content Management Interoperability Services)

Appendix A: Composite Organization Description

For this TEI study, Forrester has created a composite organization, *Organization A*, to illustrate the quantifiable benefits and costs of implementing IBM Content Navigator. The composite company is intended to represent a US-based conglomerate with diversified business interests in real estate, finance, investment, and insurance. It has 800 employees and is based on characteristics of the interviewed customers.

The composite organization that Forrester synthesized from these results represents an organization with \$500 million in annual revenue. Additional background on the composite organization includes:

- › It has been an IBM ECM customer since 2006, although it also used a number of other applications throughout the organization.
- › It deployed IBM Content Navigator in 2014.

In its environment prior to its IBM Content Navigator deployment:

- › The organization used different ECM applications with different user logins required.
- › Legal teams and other teams working from the field had to go into the office to upload documentation, such as photos and legal papers, thus leading to longer turnaround times for work processes.
- › The organization had busy end users in diverse roles, with a significant portion of non-tech-savvy users.

Its reasons for investment in IBM Content Navigator were:

- › Have one UI for all ECM applications
- › Push to mobile applications and mobile access in the enterprise.
- › Readily available applications for iOS and Android to import and access content in and out of the enterprise
- › Compatibility of IBM Content Navigator with other non-IBM content repositories to give the organization flexibility for additional use and expansion for future planned projects with external vendors.

FRAMEWORK ASSUMPTIONS

The discount rate used in the PV and NPV calculations is 10%, and the 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.

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, flexibility, and risks.

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.

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

RISKS

Risks measure 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 risk factors are based on a probability density function known as "triangular distribution" to the values entered. At a minimum, three values are calculated to estimate the risk factor around each cost and benefit.

Appendix C: Glossary

Discount rate: The interest rate used in cash flow analysis to take into account the time value of money. Companies set their own discount rate based on their business and investment environment. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult their respective organizations to determine the most appropriate discount rate to use in their own environment.

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

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

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

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

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 the Framework Assumptions section) at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations are not calculated until 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.

TABLE [EXAMPLE]
Example Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3

Source: Forrester Research, Inc.

Appendix D: 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 16.