

A Forrester New Technology: Projected  
Total Economic Impact™ Study  
Commissioned By Microsoft  
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# New Technology: The Projected Total Economic Impact™ Of Microsoft 365 Knowledge & Content Services

Cost Savings And Business Benefits Enabled By  
Knowledge & Content Services In Microsoft 365

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## ABOUT FORRESTER CONSULTING

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## Investment Benefits



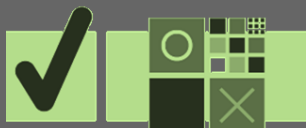
Improved discovery savings:

**\$42 million to \$127 million**



Accelerated time-to-productivity for new employees:

**\$9.8 million to \$17.1 million**



Content classification and curation savings:

**\$1.2 million to \$3.3 million**



Avoided legacy tool and services:

**\$864,482 to \$1.2 million**



Automatic form processing savings:

**\$541,435 to \$1.3 million**

## Executive Summary

In July 2019, the Forrester Wave™: ECM Content Platforms, Q3 2019, evaluated Microsoft's offerings and predicted the following, "Expect more investment in intelligent content services for better recommendations, automated categorization and data extraction, and cohesive content management and governance."<sup>1</sup> On November 4, 2019, Microsoft unveiled the newest addition to its productivity suite, codenamed Project Cortex.<sup>2</sup>

Developed as part of the Project Cortex initiative, Microsoft 365 Knowledge & Content Services (Microsoft KCS) works within Microsoft 365 to make it easy to discover and share information, digital assets, and the results of collaborations within business applications that are used every day. Microsoft KCS, including SharePoint Syntex and Microsoft Viva Topics, uses AI to organize content into shared topics to address the perpetual enterprise obstacle: identifying, consuming, and optimizing corporate knowledge in all of its forms.

In her blog post titled, "Project Cortex: Microsoft's Bold Play To Help Optimize Corporate Knowledge," Forrester Analyst, Cheryl McKinnon describes: "Corporate knowledge resides in documents, pages, data, websites, and in the heads of the people who we work with. But documents, pages, sites, and people alone are not 'knowledge.' Knowledge implies curation, experience, iteration, and shared lessons learned."<sup>3</sup>

Microsoft commissioned Forrester Consulting to conduct a New Technology: Projected Total Economic Impact™ (New Tech TEI) study and examine the projected return on investment (PROI) enterprises may realize by deploying Microsoft KCS. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Microsoft KCS on their organizations. To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed six preview customers with experience using Project Cortex in a pilot phase.

The interviewed organizations participated in the preview of Project Cortex to determine if the solution can help solve their classic knowledge management challenges: how to connect and organize knowledge and how to surface that knowledge to the right people, in the right place, and at the right time. Microsoft KCS is built to solve these challenges. It promises to empower people with knowledge and expertise in the applications workers use every day; to automatically connect and optimize knowledge; and to use AI to manage and automate content protection.

To estimate the projected total economic impact of Microsoft KCS, Forrester developed a composite organization based on the six interviewed preview customers. The composite company is a global organization with \$20 billion in annual revenue, 40,000 knowledge workers, and it has completed a full deployment of Microsoft KCS across the enterprise.

All values in the study are reported in risk-adjusted, three-year present value (PV) unless otherwise indicated.

## Key Financial Findings

**Quantified projected benefits.** The following ranged benefits reflect the low, medium, and high projected financial outcomes associated with the composite organization.



**PROI**  
**104% to 458%**



**Benefits PV**  
**\$54.7 million to**  
**\$150.1 million**



**NPV**  
**\$27.8 million to**  
**\$123.2 million**

“From our perspective, Cortex is a fantastic suggestions engine. It makes suggestions of topics and terms that are active and are resonating with people within the organization.”

*Productivity applications architect,  
consulting*



- › **Automatic form processing and metadata extraction reduces manual processing efforts and saves between \$541,435 and \$1.3 million.** With SharePoint Syntex, companies train models to recognize business data and to extract and classify both structured and unstructured data. Manual efforts were reduced by 50% when metadata processing was applied to 5% to 20% of organization documents.
  - › **Content classification and curation savings of \$1.2 million to \$3.3 million.** Microsoft KCS simplifies human moderation and involvement by suggesting taxonomies and topics and helping companies manage and regulate content with AI. When used to classify and categorize millions of documents, companies experienced a reduction in formal curation efforts, and they avoided monumental manual document management projects.
  - › **Improved productivity from automated discovery totaling \$42.4 million to \$127.2 million.** Microsoft KCS connects people with knowledge in the Microsoft applications they use every day, optimizing content discovery and reducing time previously lost to inefficient search efforts. Conservative estimates suggest that this could save employees between 1 and 3 hours each week, avoiding time previously lost to search efforts.
  - › **Accelerated time-to-productivity for new employees totaling \$9.8 million to \$17.1 million.** Viva Topics plays a valuable role in onboarding new employees, reducing their time-to-productivity, and helping embed them into the collective knowledge of the enterprise more quickly.
  - › **Avoided legacy tools and professional services savings of \$864,482 to \$1.2 million.** The features provided by Microsoft KCS can enable organizations to consolidate, decommission, and retire point solutions that make up the content management technology stack.
- Costs.** The following costs reflect the financial analysis associated with the composite organization.
- › **Technical implementation and ongoing professional services costs totaling \$1.6 million.** These include three internal resources for six months performing technical implementation and 1,000 hours of ongoing professional services each year.
  - › **Microsoft KCS licensing costs of \$12.5 million.** These include the undiscounted licensing of both SharePoint Syntex and Viva Topics, at a combined \$10 per user per month.
  - › **Training, change management, and ongoing administration of Microsoft KCS costs totaling \$12.7 million.** These include training of knowledge workers, ongoing efforts of employees contributing to the knowledge curation, and two fully dedicated knowledge managers.
- Forrester modeled a range of projected low, medium, and high impact outcomes based on evaluated risk factors. This financial analysis projects that the composite organization accrues the following three-year net present value (NPV) and PROI for each scenario by investing in Microsoft KCS:
- › Projected high impact of a \$123.2 million NPV and a 458% PROI.
  - › Projected medium impact of a \$76.7 million NPV and a 285% PROI.
  - › Projected low impact of a \$27.8 million NPV and an 104% PROI.

The New Tech TEI methodology helps companies demonstrate and justify the projected tangible value of technology initiatives to both senior management and other key business stakeholders.

## New Tech TEI Framework And Methodology

From the information provided in the interviews, Forrester has constructed a New Technology: Projected Total Economic Impact™ (New Tech TEI) framework for those organizations considering implementing Microsoft KCS.

The objective of the framework is to identify the potential cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the projected impact that Microsoft KCS may have on an organization:



### **DUE DILIGENCE**

Interviewed Microsoft stakeholders and Forrester analysts to gather data relative to Microsoft KCS.



### **EARLY-IMPLEMENTATION CUSTOMER INTERVIEWS**

Interviewed six organizations using Project Cortex in a pilot or beta stage to obtain data with respect to projected costs, benefits, and risks.



### **COMPOSITE ORGANIZATION**

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



### **PROJECTED FINANCIAL MODEL FRAMEWORK**

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



### **CASE STUDY**

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

## DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Microsoft and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Microsoft KCS.

Microsoft 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.

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

The study was completed in September 2020 and updated in January 2021.

# The Microsoft KCS Customer Journey

## BEFORE AND AFTER THE MICROSOFT KCS INVESTMENT

### Interviewed Organizations

For this study, Forrester conducted six interviews with Project Cortex customers. Interviewed customers include the following:

INDUSTRY	INTERVIEWEE	SIZE	GEOGRAPHY
Consulting	Productivity applications architect	\$1.2 billion, 16,000 employees	UK headquarters, global operations
Insurance	Digital platforms enterprise architect	\$47 billion, 53,000 employees	Switzerland headquarters, global operations
IT consulting	Innovation lead for the modern workplace	Private, 30,000 employees	USA headquarters, global operations
Healthcare	Principal architect	\$80 billion, 300,000 employees	USA headquarters and operations
IT service provider for government	Content services lead	Private, 2,000 employees	UK headquarters, EMEA operations
Manufacturing	Collaboration and modern workplace architect	\$110 billion, 140,000 employees	USA headquarters, global operations

### Key Challenges

Interviewees noted the following business challenges that they anticipate Microsoft KCS will address:

- › **Knowledge managers find it difficult to create a taxonomy that resonates.** Interviewees faced classic knowledge management challenges such as taxonomy creation in their pre-Microsoft KCS environment. The productivity applications architect shared: “If you ask 100 people in your organization to define what your organization does in a series of 10 terms, it’s a long, drawn out, painful process. And even then, people struggle to make a connection to the terms that were generated. So that was one of our real pain points. We see Cortex improving that resonance.”
- › **Terabytes of unclassified information have become impossible to manually manage.** The interviewed organizations noted that the sheer mass of data made it functionally impossible to manually categorize and classify documents. The principal architect told Forrester: “Our original pain point came from just the massive amount of time it’s taking to process documents. The number of documents is increasing, while staff numbers are staying level. So we know we need to be smarter.” The content services lead noted: “[The organization] creates something like 2 million documents on average per year, which will have to be classified correctly. Historically, they’ve got several million documents produced previously, which are not in the archive yet. And all this must be classified and then protected with information protection and retention mechanisms. To do that manually is a huge effort that they’ll never complete.”

“Knowledge mining and expertise finding is a key blind spot in the enterprise that we need to address. As an enterprise, we feel we need to connect our global employees who may not even know that they have similar expertise to each other.”

*Collaboration and modern workplace architect, manufacturing*





- › **Unclassified documents put organizations at risk.** Furthermore, organizations expressed concerns over their inability to accurately enforce retention policies and the associated risk of being noncompliant. The principal architect said: “Following our own retention and disposition rules manually is very challenging, especially with the many terabytes of files that we have. We know we’re not disposing of content when we should.”
- › **Ineffective search results sap employee productivity.** A common problem amongst all interviewees was the frustration and ineffectiveness caused by legacy search efforts. The enterprise architect told Forrester: “Every day people are failing to find information. We’ve got a diverse community that is globally spread, and we don’t know what we don’t know.”
- › **Ineffective search efforts lead to reproduction and duplicative efforts.** When knowledge workers can’t easily find the content they are searching for, the solution may be to recreate the work. This degrades productivity and creates document control issues. For the content services lead, this is a problem they see every day: “There’ll be at least 10 copies or more of a list floating around, and they’ll all be different, and nobody knows which one is correct. So, three or four people could spend 2 hours in a day trying to actually find the correct version and verifying which list is the most accurate. When I try and estimate how much time is lost, it’s hours, for multiple members of staff every day.”
- › **Content has become stale and experts are difficult to find.** The innovation lead for the modern workplace shared, “We create a lot of content and no matter how good we make search, it is still like finding a needle in a haystack.” They continued by saying: “Hopefully, Cortex can help us have that knowledge up to date. A lot of the time we see our information has gone stale. Since things happen so quickly, and not to mention this whole pandemic, we need access to fresh data and [we] need to know who the expert on this topic is, right here, right now.”
- › **New employees and project members are slow to ramp up.** There is an onboarding period where new project members and employees lag behind the productivity curve. The productivity applications architect said: “It’s really hard to bring a new project team member up to speed on a project. The second challenge that always follows is the question: ‘Who is a relevant connection?’ and ‘What content is relevant to them?’”



## Investment Objective: Improve The Knowledge Management Approach

Forrester asked interviewees why they chose to preview Project Cortex and what their objective was with the investment. The productivity applications architect of a consultancy told Forrester: “Well, for one thing, we saw a really good brand fit. Our brands’ statement is, ‘Creating opportunities through connected thinking,’ which is very much what Cortex is striving for at its heart. We also saw from our metrics, on our own existing knowledge management approach, that there is a lot more that we could still achieve and pain points we could address. Cortex offered ways that we could further improve our knowledge management approach. That was our catalyst to be early adopters; not only to share the product but also to shape our organization for the product.”

## Composite Organization

Forrester constructed a composite organization to evaluate the projected Total Economic Impact of Microsoft KCS. The composite organization was constructed using characteristics of the six interviewed Project Cortex preview customers. Forrester's composite organization has the following characteristics:

- › The composite organization is a global enterprise with \$20 billion in annual revenue and 50,000 employees; 40,000 of which are knowledge workers that will utilize Microsoft KCS in a full deployment.
- › The composite organization chooses to purchase both SharePoint Syntex and Viva Topics.

## Risk Treatment For Benefits And Costs Projections

Projection-based financial modeling introduces inherently more uncertainty than analyzing actual, realized impacts. Forrester's New Technology: Projected TEI methodology therefore incorporates a risk factor to adjust projections.

For benefit calculations, Forrester incorporates risk via a range of projected outcomes based on customer interview data. In the benefit financial models, low, middle, and high estimates are included for each input variable to create a potential benefit range. Forrester develops these ranges using expected benefits data collected from interviews as well as from Forrester research.

Costs are more consistent and easily estimated, combining interview data with Microsoft-provided license and support costs. Forrester therefore uses a simplified approach, adjusting cost upward based on risk to ensure a conservative financial analysis. This is described further in the [Analysis Of Projected Costs](#) section.



### Key assumptions:

- Global organization
- \$20 billion annual revenue
- 40,000 knowledge workers

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

Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the higher the potential costs.



# Analysis Of Projected Benefits

## QUANTIFIED PROJECTED BENEFIT DATA AS APPLIED TO THE COMPOSITE

### Total Projected Benefits

REF.	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total projected benefits (Low)	\$21,897,991	\$22,028,755	\$22,136,783	\$66,063,529	\$54,744,541
Total projected benefits (Mid)	\$41,521,427	\$41,652,191	\$41,760,219	\$124,933,837	\$103,545,122
Total projected benefits (High)	\$60,201,334	\$60,369,598	\$60,515,126	\$181,086,058	\$150,086,626

The graphs below show the projection range for each benefit category quantified. Adding these benefits together will result in the total benefits values listed in the table above.

The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total benefits to have a projected PV range of \$55 million to \$150 million.

## Automatic Form Processing Savings

Several of the interviewed organizations pointed SharePoint Syntex at invoices and receipts to test Microsoft's automatic form processing features. The collaboration and modern workplace architect shared: "We previewed the AI Builder capability, which is where you can essentially digitize incoming information, things like receipts, invoices, and purchase orders, for example. So instead of having a PDF or a bunch of PDFs sitting in a document library somewhere, you can really do some intelligent OCR-type capabilities and bring in specific fields from those documents."<sup>4</sup>

The collaboration and modern workplace architect described the typical legacy environment for form processing, "We receive invoices in a PDF format, then somebody has to open each of those documents and either perform OCR to digitize them, or in some cases they have to manually enter the information because the formats are inconsistent."

While AI can automate many of the repetitive tasks involved with processing documents, it still needs human subject matter expertise to refine and train the model. "Essentially, you sit down, spend a couple of hours going through the wizard extracting metadata, training it, retraining it, and adding content," said the innovation lead for the modern workplace. "It is a very iterative process, but it doesn't take a long time to actually build a model."

Although the legacy systems had basic functionality, the objective with Microsoft KCS is to take advantage of machine learning for more extensive understanding and to capture other useful information. The collaboration and modern workplace architect went on to say: "What we are seeing is that with the AI Builder, we just need to train four or five sample copies and Cortex is able to quickly find the fields. And it is really accurate once we've specified the fields. Any subsequent documents that are added, Cortex will process them very accurately. We were very happy with the way it works."

### Example use cases:

- Auditing receipts to ensure compliance with company policies
- Case management
- Field operations
- Information approval and distribution
- Purchase orders

"With the use of Cortex's AI Builder and the language understanding for receipts processing, the technology risk office stated that it would save them from hiring an additional two-and-a-half people in 2021."

*Principal architect, healthcare*



**Assumptions and modeling.** Based on the customer interviews, Forrester modeled the financial impact for the composite organization with the following estimates:

- › The composite organization annually creates or obtains 2 million documents.
- › Of the total documents, between 5% and 20% have metadata that SharePoint Syntex is applied to for automatic processing. In the prior environment, processing one of these documents manually took an average of 6 minutes from beginning to end.
- › As confidence grows — in the AI capabilities and use cases experienced — the composite organization increases the volume of documents ingested over three years, saving 46K, 76K, and 106K total hours between the low, medium, and high calculation estimates.
- › The composite organization assumes a 50% reduction in required effort, taking into consideration that models must be trained for each document type.
- › The hourly burdened cost for a resource performing these tasks is \$29.



Reduced efforts for manual form processing:  
**50%**

**Results.** This yields a three-year projected PV ranging from \$541.4K to \$1.3M. The summary table for the low, medium, and high projections is shown below, followed by the detailed calculations for each projection.

Automatic Form Processing Savings: Summary Table						
REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
At <sub>LOW</sub>	Automatic form processing savings (Low)	\$145,000	\$232,000	\$290,000	\$667,000	<b>\$541,435</b>
At <sub>MID</sub>	Automatic form processing savings (Mid)	\$290,000	\$377,000	\$435,000	\$1,102,000	<b>\$902,029</b>
At <sub>HIGH</sub>	Automatic form processing savings (High)	\$435,000	\$522,000	\$580,000	\$1,537,000	<b>\$1,262,622</b>

## Automatic Form Processing Savings: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
A1	Number of documents created or obtained annually	Interviews	2,000,000	2,000,000	2,000,000
A2 <sub>LOW</sub>	Percent of documents with metadata to be extracted by Microsoft KCS	Composite	5%	8%	10%
A2 <sub>MID</sub>			10%	13%	15%
A2 <sub>HIGH</sub>			15%	18%	20%
A3	Number of minutes of manually processing per document in legacy environment	Interviews	6	6	6
A4 <sub>LOW</sub>	Manual hours spent manually processing documents (rounded)	A1*A2*A3/60 mins	10,000	16,000	20,000
A4 <sub>MID</sub>			20,000	26,000	30,000
A4 <sub>HIGH</sub>			30,000	36,000	40,000
A5	Reduction in efforts using Microsoft KCS	Interviews	50%	50%	50%
A6	Hourly burdened cost of resource	\$60,000/2,080 hours (rounded)	\$29	\$29	\$29
A <sub>tLOW</sub>	<b>Automatic form processing savings</b>	<b>A4*A5*A6</b>	<b>\$145,000</b>	<b>\$232,000</b>	<b>\$290,000</b>
A <sub>tMID</sub>			<b>\$290,000</b>	<b>\$377,000</b>	<b>\$435,000</b>
A <sub>tHIGH</sub>			<b>\$435,000</b>	<b>\$522,000</b>	<b>\$580,000</b>

## Content Classification And Curation Savings

A very real concern for organizations is how to manage and use the millions of documents that are created and stored within SharePoint in a way that both reduces risk and drives business value. Otherwise, too many of these documents may wind up functionally incapacitated. Defining relevant taxonomies, categorizing documents, and making them accessible to users is a monumental task for interviewees.

**Content curation.** The productivity applications architect outlined the legacy process for how his organization curates content and defines taxonomies. He shared: "Our curation process is pretty labor-intensive. We have a board of 60 sector leaders that meets every six months to talk about the dry subject of our current taxonomy, the way the current terms are used, which one should be promoted, and which ones shouldn't. It is a really hard exercise and it takes a long time."

Microsoft KCS helps organizations by extracting, classifying, and curating the vast amounts of unstructured data into organizational topics. It also automates the extraction of metadata, which is then mapped to taxonomies. As a result, the formal efforts for curation will be replaced by AI with the crowdsourced assistance of knowledge workers closest to the content who are acting as subject matter experts. The principal architect of a healthcare organization expects Microsoft KCS to democratize knowledge management. He shared: "Knowledge management is going to be the first thing that people will really gravitate to and use the most. [Our company] does well with crowdsourcing knowledge and we have a lot of people that are willing to spend extra time to help colleagues; we can see that on our Teams' channels around Office 365 support. I think



**Reduced formal curation efforts: 60% to 90%**

we're going to see those people gravitate towards helping build more structured knowledge, especially around projects and all of our acronyms.”

When estimating the impact this will have on his organization, the productivity applications architect noted: “Fewer people will be required on the curation board, and they would need to meet less often. Since Cortex allows staff to make suggestions and support that process, the responsibility is no longer on a few people to curate the terms. We can open up to a much wider pool of domain experts. So, it actually lightens the load.”

Note: There is a soft cost associated with crowdsourcing from knowledge workers. See Forrester's discussion of related costs in the [Training, Change Management, And Ongoing Administration](#) section.

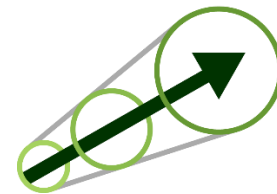
**Content classification.** Previous efforts to manually classify documents proved to be logistically impossible for the interviewed organizations. The constant influx of documents and the time required to identify relevant information made any classification project cost prohibitive. The content services lead of an IT service provider for government estimated that classifying the 7 million documents, which are created annually, would cost nearly \$10 million. That number increases to nearly \$15 million when applying protection and retention policies. The content services lead shared with Forrester: “One of the benefits of Cortex is automatic classification. If we can classify our content automatically and accurately and say, ‘This is a contract and this is an invoice.’ And if we can do that across the entire content load of Office 365, that's a very powerful thing to be able to do.”

One way to measure the impact of proper classification is to consider retention and privacy policies and the potential for fines if a compliance breach were to occur. See the [Unguaranteed Benefits](#) section for further discussion on document retention and risk.

**Assumptions and modeling.** Based on the customer interviews, Forrester modeled the financial impact for the composite organization with the following estimates:

- › In the prior environment, the composite organization had a formal curation board of 60 employees that is representative of the operational areas of the business. The curation board met once a month for 90 minutes to discuss curation efforts and review taxonomies.
- › As a result of the Microsoft KCS investment, the curation board decreases its formal curation efforts by 60%, 70%, and 90% in Years 1, 2, and 3, respectively.
- › The hourly burdened cost of a resource on the curation board is \$58.
- › The number of documents created annually ranges between 1 million and 3 million for the low, medium, and high impact use cases.
- › In the legacy environment, efforts were made to classify 35% of the documents, with specific attention being made for items with personally identifiable information and content with strict compliance requirements. To classify 100% of documents was too costly a project to attempt.

**Results.** This yields a three-year projected PV ranging from \$1.2 million to \$3.3 million. The summary table for the low, medium, and high projections is shown below, followed by the detailed calculations for each projection.



While the classification benefit that is modeled here applies only to 35% of documents, the business benefits of document classification are potentially much larger than modeled, as Microsoft KCS has the capability to classify a greater percentage of documents.

### Content Classification And Curation Savings: Summary Table

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Bt <sub>LOW</sub>	Content classification and curation savings (Low)	\$460,491	\$466,755	\$479,283	\$1,406,529	\$1,164,469
Bt <sub>MID</sub>	Content classification and curation savings (Mid)	\$883,427	\$889,691	\$902,219	\$2,675,337	\$2,216,248
Bt <sub>HIGH</sub>	Content classification and curation savings (High)	\$1,306,334	\$1,312,598	\$1,325,126	\$3,944,058	\$3,267,955

### Content Classification And Curation Savings: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
B1	Number of formal curators in legacy environment	Interviews	60	60	60
B2	Hours spent on formal curation efforts in legacy environment per curator	1x per month 90 mins	18	18	18
B3	Reduction in formal curation efforts	Interviews	60%	70%	90%
B4	Average hourly dedicated cost of resource	\$120,000/2,080 hours (rounded)	\$58	\$58	\$58
B5	Subtotal: reduction in formal curation efforts	B1*B2*B3*B4	\$37,584	\$43,848	\$56,376
B6 <sub>Low</sub>			1,000,000	1,000,000	1,000,000
B6 <sub>Mid</sub>	Number of documents created annually	Composite	2,000,000	2,000,000	2,000,000
B6 <sub>High</sub>			3,000,000	3,000,000	3,000,000
B7	Percent of documents processed in legacy environment	Composite	35%	35%	35%
B8	Minutes to manually categorize and manage each document	Interviews	2.5	2.5	2.5
B9 <sub>Low</sub>			14,583	14,583	14,583
B9 <sub>Mid</sub>	Hours of manual content management	B6*B7*B8/60 mins (rounded)	29,167	29,167	29,167
B9 <sub>High</sub>			43,750	43,750	43,750
B10	Hourly burdened cost of processing resource	\$60,000/2,080 hours (rounded)	\$29	\$29	\$29
Bt <sub>LOW</sub>			\$460,491	\$466,755	\$479,283
Bt <sub>MID</sub>	Content classification and curation savings	B5+(B9 *B10)	\$883,427	\$889,691	\$902,219
Bt <sub>HIGH</sub>			\$1,306,334	\$1,312,598	\$1,325,126

## Improved Productivity From Content And Expert Discovery

Organizations are grappling with how to connect corporate knowledge at the right time, in the right place, to the right person. When this connection fails, employees lose their time being productive to ineffective searches and duplicative efforts. Forrester analyst Cheryl McKinnon noted in a recent blog post, “Inquiries with Forrester customers, particularly in those industries that rely on intellectual property to drive revenue and innovate, reveal a significant reemergence of interest in knowledge management.”<sup>5</sup> The collaboration and modern workplace architect shares this interest, telling Forrester: “Our main interest in Cortex is for knowledge mining and expertise finding because we think that’s a key capability. The way we see the evolution of our workforce for the future is having this ability to innately share expertise and knowledge with each other without having any type of prior connection or acquaintance with each other.”

In the past, workers could lean over a cubicle wall and ask their neighbor for help, but as employees find themselves working remotely — and subsequently siloed in global organizations — there may be no neighboring colleague to collaborate with. The collaboration and modern workplace architect described how this impacts his organization, focusing on help desk resources: “Many of the questions that our help desk receives are things they can resolve by themselves. But they are generalists and unfortunately there is a lot of turnover. Those two factors combine so when they have to search for someone who can answer a more difficult question, they ask 10 different people; they send a lot of emails; or they post it on our internal Yammer network. Very often they end up waiting and not getting an answer, then they’ll just move the ticket along to the next team that could help. And even that team may not be the right person, so that person moves it to someone else. It’s a really broken process.”

Broken processes like the one described above can have significant cost ramifications. In June of 2020, a commissioned research study estimated that 11% to 14% of daily productivity is lost to search efforts or recreating existing information.<sup>6</sup> The collaboration and modern workplace architect said, “We think about the time lost to ineffective searching as an opportunity cost, because that 3 hours they spend searching for the right person or file could be 3 hours they could be spending instead on creating a new capability or building the next most efficient widget.”

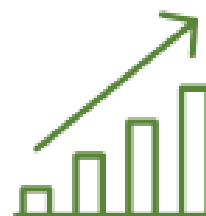
See the [Unquantified Benefits](#) section for further discussion of how Microsoft KCS helps organizations avoid duplicative efforts and the resulting impact they have on collaboration.

**Assumptions and modeling.** Based on the customer interviews, Forrester modeled the financial impact for the composite organization with the following estimates:

- › The amount of time saved avoiding ineffective search will vary by organization, use case, and baseline legacy environment experiences. The low, medium, and high estimates of time saved are 1 hour, 2 hours, and 3 hours, saved weekly, respectively. These estimates may be low for organizations that are highly dependent on knowledge-search efforts and expert identification, yet they may be high for employees that rarely require these connections.

“Cortex allows us to not be solely dependent on a search feed or typing in a query and getting results. It’s more personal and it connects the individual to the information that they’re most likely looking for rather than all the information in the organization.”

*Principal architect, healthcare*



While the benefit modeled here is large (in relative terms), the business benefits of improved search, avoided duplicative efforts, and relevant connections to subject matter experts are potentially much larger than modeled.



Avoided search time savings:  
**1 to 3 hours weekly**



- › The average burdened hourly cost of a knowledge worker is \$41.
- › To form a conservative calculation, Forrester assumes that 20% of the time saved by employees is recaptured and committing to driving new value.

**Results.** This yields a three-year projected PV ranging from \$42.4 million to \$127.2 million. The summary table for the low, medium, and high projections is shown below, followed by the detailed calculations for each projection.

#### Improved Productivity From Content And Expert Discovery: Summary Table

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Ct <sub>LOW</sub>	Improved productivity from content and expert discovery (Low)	\$17,056,000	\$17,056,000	\$17,056,000	\$51,168,000	<b>\$42,415,748</b>
Ct <sub>MID</sub>	Improved productivity from content and expert discovery (Mid)	\$34,112,000	\$34,112,000	\$34,112,000	\$102,336,000	<b>\$84,831,495</b>
Ct <sub>HIGH</sub>	Improved productivity from content and expert discovery (High)	\$51,168,000	\$51,168,000	\$51,168,000	\$153,504,000	<b>\$127,247,243</b>

#### Improved Productivity From Content And Expert Discovery: Summary Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
C1 <sub>LOW</sub>	Avoided hours lost to search and rework for 40,000 knowledge workers	1 hour per week	2,080,000	2,080,000	2,080,000
C1 <sub>MID</sub>		2 hours per week	4,160,000	4,160,000	4,160,000
C1 <sub>HIGH</sub>		3 hours per week	6,240,000	6,240,000	6,240,000
C2	Average hourly dedicated cost of resource	\$85,000/2,080 hours (rounded)	\$41	\$41	\$41
C3	Productivity recapture	Assumption	20%	20%	20%
Ct <sub>LOW</sub>	<b>Improved productivity from content and expert discovery</b>	<b>C1*C2*C3</b>	<b>\$17,056,000</b>	<b>\$17,056,000</b>	<b>\$17,056,000</b>
Ct <sub>MID</sub>			<b>\$34,112,000</b>	<b>\$34,112,000</b>	<b>\$34,112,000</b>
Ct <sub>HIGH</sub>			<b>\$51,168,000</b>	<b>\$51,168,000</b>	<b>\$51,168,000</b>

## Faster Time-To-Productivity For New Employees

The interviewed organizations expect Microsoft KCS to play a valuable role in onboarding new employees, reducing time-to-productivity, and helping them tap into the enterprise knowledge network more quickly. “Employee orientation is an area where we feel Project Cortex will be highly valued because we want to get new employees to be more productive from day one,” said the collaboration and modern workplace architect. He continued: “For new employees there are a lot of topics to learn that are really difficult to pick up. Onboarding with Cortex, they can search rather than having to ask a supervisor. They will be able to find not just the meaning of the topic but also documents associated with that topic and the people who have referenced that topic.” The productivity applications architect estimated: “Depending on the complexity of the project, it takes about three weeks for someone to be fully onboarded and engaged with the project. We see those times quite easily dropping by a third through this process.”

See the [Unquantified Benefits](#) section for further discussion on the impact of Microsoft KCS on new project orientation and employee experience and retention.

**Assumptions and modeling.** Based on the customer interviews, Forrester modeled the financial impact for the composite organization with the following estimates:

- › The composite organization has 40,000 knowledge workers and a 10% turnover rate, resulting in 4,000 new knowledge workers requiring annual onboarding.
- › In the legacy environment, onboarding a new employee took three weeks. During this period, the employee was nonproductive.
- › The reduction in time-to-production will vary by organization, and for the composite organization the low, medium, and high impact scenarios range from 20%, 30%, and 35%, respectively.
- › The average weekly cost of a knowledge worker is \$1,635.

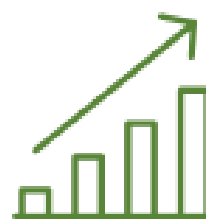
This yields a three-year projected PV ranging from \$9.8 million to \$17.1 million. The summary table for the low, medium, and high projections is shown below, followed by the detailed calculations for each projection.

**Faster Time-To-Productivity For New Employees: Summary Table**

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Dt <sub>LOW</sub>	Faster time-to-productivity for new employees (Low)	\$3,924,000	\$3,924,000	\$3,924,000	\$11,772,000	<b>\$9,758,407</b>
Dt <sub>MID</sub>	Faster time-to-productivity for new employees (Mid)	\$5,886,000	\$5,886,000	\$5,886,000	\$17,658,000	<b>\$14,637,611</b>
Dt <sub>HIGH</sub>	Faster time-to-productivity for new employees (High)	\$6,867,000	\$6,867,000	\$6,867,000	\$20,601,000	<b>\$17,077,213</b>

“Just in terms of this use case, we would expect to save in the region of something like 10 hours per week across the board. But this is only one of many business processes that Cortex can assist with.”

*Content services lead, IT service provider for government*



While the benefit modeled here measures productivity savings, the business benefits of accelerated time-to-production could be measured in terms of revenue and net income.

## Faster Time-To-Productivity For New Employees: Summary Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
D1	Number of employees oriented to new roles or projects annually	10% turnover	4,000	4,000	4,000
D2	Onboarding time in legacy environment	Interviews	3	3	3
D3 <sub>Low</sub>	Reduction in onboarding time with Microsoft KCS	Composite	20%	20%	20%
D3 <sub>Mid</sub>			30%	30%	30%
D3 <sub>High</sub>			35%	35%	35%
D4	Weekly dedicated cost of resource	\$85,000/52 weeks (rounded)	\$1,635	\$1,635	\$1,635
Dt <sub>Low</sub>	<b>Faster time-to-productivity for new employees</b>	<b>D1*D2*D3*D4</b>	<b>\$3,924,000</b>	<b>\$3,924,000</b>	<b>\$3,924,000</b>
Dt <sub>Mid</sub>			<b>\$5,886,000</b>	<b>\$5,886,000</b>	<b>\$5,886,000</b>
Dt <sub>High</sub>			<b>\$6,867,000</b>	<b>\$6,867,000</b>	<b>\$6,867,000</b>

## Avoided Legacy Tool And Professional Services Costs

The features Microsoft KCS provides have the potential to allow organizations to consolidate, decommission, and retire point solutions that make the content management technology stack. Extraction, OCR, search, and tagging tools were noted by interviewees as options for replacement by Microsoft KCS. The collaboration and modern workplace architect told Forrester: "Cortex would allow us to retire a significant portion of our legacy tools. If I were to estimate, we have anywhere from 25 to 50 different instances of OCR applications, and some of them are very complex and have been heavily customized over the years. I feel pretty confident we could replace at least half of those."

Additionally, those interviewed organizations which are relying on third parties to aid with search and analysis could in fact replace that third-party reliance with Microsoft KCS features. The principal architect of a healthcare organization shared: "Our product development team is very interested in using Cortex, and [they have] done their own calculations as to how much money they're going to save a quarter. They anticipate saving \$50,000 a quarter just so they don't have to pay a third party to pull out information."

**Assumptions and modeling.** Based on the customer interviews, Forrester modeled the financial impact for the composite organization with the following estimates:

- › The composite organization avoids third-party services, which are worth \$50,000 per quarter, by using Microsoft KCS to automate data extraction.
- › The composite organization has 30 legacy OCR, tagging, and extraction tools that cost \$25,000 per year.
- › The composite organization decommissions and retires these tools at varying rates for the high, medium, and low estimates, from 15% to 50%.



**Retired legacy tools:  
15% to 50%**

This yields a three-year projected PV ranging from \$864,482 to \$1.2 million. The summary table for the low, medium, and high projections is shown below, followed by the detailed calculations for each projection.

Avoided Legacy Tool And Professional Services Costs: Summary Table						
REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
E <sub>tLow</sub>	Avoided legacy tool and professional services costs (Low)	\$312,500	\$350,000	\$387,500	\$1,050,000	\$864,482
E <sub>tMid</sub>	Avoided legacy tool and professional services costs (Mid)	\$350,000	\$387,500	\$425,000	\$1,162,500	\$957,739
E <sub>tHigh</sub>	Avoided legacy tool and professional services costs (High)	\$425,000	\$500,000	\$575,000	\$1,500,000	\$1,231,593

Avoided Legacy Tool And Professional Services Costs: Calculation Table					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
E1	Avoided third-party research and analysis costs	Interviews: \$50K per quarter	\$200,000	\$200,000	\$200,000
E2	Number of tools in legacy environment (OCR, tagging, extraction)	Interviews	30	30	30
E3	Retired legacy tools	Interviews: \$25K per year per OCR tool	\$25,000	\$25,000	\$25,000
E4 <sub>Low</sub>	Percent of legacy tools retired and replaced by Microsoft KCS	Interviews	15%	20%	25%
E4 <sub>Mid</sub>			20%	25%	30%
E4 <sub>High</sub>			30%	40%	50%
E <sub>tLow</sub>	<b>Avoided legacy tool and professional services costs</b>	<b>E1+(E2*E3*E4)</b>	<b>\$312,500</b>	<b>\$350,000</b>	<b>\$387,500</b>
E <sub>tMid</sub>			<b>\$350,000</b>	<b>\$387,500</b>	<b>\$425,000</b>
E <sub>tHigh</sub>			<b>\$425,000</b>	<b>\$500,000</b>	<b>\$575,000</b>

## Unquantified Benefits

In addition to the benefits quantified in the previous sections, there were several benefits of Microsoft KCS that were not quantified for this study.

- › **Microsoft KCS helps enforce document retention policies and reduces risk.** While [Benefit B](#) quantifies the impact of content classification and curation savings, a related unquantified benefit is the downstream impact of properly classified documents. The principal architect of a healthcare organization shared: “Cortex is helping us understand how long we have to retain our files based off of the sensitivity of the content. With Cortex, we can identify content that might contain medical record numbers, and maybe a person’s last name. That’s something that we want to keep for only a certain period of time and beyond that we want to get rid of it. Cortex is really going to help us do that.” When sensitive documents are retained beyond compliance deadlines, it puts the organization at risk and could result in hefty fines and legal fees. The principal architect noted, “We have several initiatives going on now where we’re trying to dispose of content that is no longer in use since that is really a risk to keep around.” Estimates for the financial impact of this reduced risk vary widely and have been excluded from the financial analysis.



### Microsoft KCS Unlocks The Value Of Informal Employee Networks

For organizations that create value through intellectual property and idea sharing, informal employee networks are key for collaboration and mobilizing knowledge across the business. In the quintessential office workplace, relationships form organically through the physical proximity of colleagues, with informal interactions and socializing, such as chatting at the metaphorical watercooler. In light of the COVID-19 pandemic, employees are working remotely more than ever before, and they are finding themselves removed from the opportunities that would have previously created natural connections and networks.

Technology has made the creation of digital networks — based on mutual interests — a reality, with forums, communities, and social networks standing in as the new type of watercooler. Microsoft KCS complements these offerings by playing the role of linchpin and facilitating a warm introduction to relevant experts.

Microsoft KCS also aids in the discovery of interested parties, and it helps integrate related topics and drive efficiency. Microsoft KCS overcomes the major limitation of traditional informal networks, which is that management typically lacks visibility into the topics and connections that are formed. This ability for management to view the most popular topics, which experts have commonly accessed knowledge, and even what topics are no longer used, provides a view into the pulse of the company.

- › **Improved discovery helps avoid duplicative efforts and version control issues.** [Benefit C](#) quantifies the impact of avoiding productivity losses from ineffective search efforts. A related productivity lift that was not calculated for this study is the impact Microsoft KCS may have on reducing duplicative efforts of employees that cannot find the data they need, which therefore requires them to recreate or duplicate the work. The content services lead shared with Forrester: “For our local councils, if they don’t find the right content, they duplicate it, and then that becomes an additional issue. There are always ten copies of the truth floating around the organization. No one knows which one is the right one.” Estimates for the financial impact of avoiding duplicative efforts vary widely and have been excluded from the financial analysis.

- › **Microsoft KCS’s “serendipitous discovery” improves cross-organizational collaboration.** [Benefit C](#) quantifies the value related to better discovery in terms of productivity, but it does not capture the financial impact from expert discovery, collaboration improvements, and reduced organizational silos. The productivity applications architect noted: “Based on the taxonomy that we have existing; we’ve asked people to align themselves to form our own knowledge graph. But that’s based on their interpretation of terms and their choices. The real benefit of Cortex is regardless of the fields that people have consciously chosen, it is going to make those unconscious connections, to help with the serendipitous discovery of knowledge and experts that people did not even know existed in the organization. This automatically breaks down silos and improves collaboration.” Interviewees did not estimate the financial impact of this benefit, but they did consider it to be a powerful change for their organizations.



## Microsoft KCS In The Time Of COVID-19

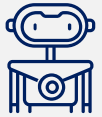
The interviews for this study were conducted in the first months of the COVID-19 pandemic, and the principal architect of a healthcare organization reflected on how a full deployment of Microsoft KCS could have helped his organization react to the situation. He shared with Forrester: “Cortex would have helped us identify procedural information much faster. When it comes to the treatment of pandemics, we already have workflows in our archives since that type of emergency management procedure has already been thought of and written down.”

In addition to surfacing the relevant information, Microsoft KCS would have helped disseminate knowledge across the organization more efficiently. The principal architect continued: “If we’d had Cortex, a knowledge manager would have been able to start curating information and then help focus that information and expose it through Outlook and Teams and everything else connected to Microsoft 365. Instead, we had a lot of redundant systems and tools that sprung up, and we had to discover the redundancies almost at that point where it was too late. So then we had regions that had facilities that were just miles away using completely different tools to measure the temperature, record the temperature, and manage that information for their employees.”

- › **Engagement with knowledge expected to reduce employee attrition.** The content services lead anticipates that contributions to content curation could be measured and rewarded, and this action could subsequently contribute to employee retention. He said: “You can reward staff that are contributing to the knowledge network. If you have stats and insights on what contributed knowledge is valuable, then you can reward people appropriately. People that are being rewarded are more likely to stay. Cortex could certainly help retain people.”
- › **Microsoft KCS can accelerate time-to-productivity for existing employees in new situations.** [Benefit D](#) quantifies the impact that Microsoft KCS can have on onboarding new employees, and a related benefit can be realized for organizations that move existing employees between departments, business functions, or projects. The productivity applications architect noted: “Cortex will even help people moving between project teams. They have to learn the new project definitions, and our industry is full of acronyms. Nothing gets built without a three-letter acronym (TLA). So, understanding what the TLAs mean will really help people. Cortex will help accelerate that understanding.” Forrester did not include this impact as a quantified benefit, as estimates for frequency of new project rotations vary widely by organization.



- › **Employee experience is improved by tailored onboarding.** [Benefit D](#) quantifies the impact of faster time-to-productivity for new employees, and there are further benefits realized downstream. The productivity applications architect elaborated, “Project Cortex will accelerate the onboarding process and allow us to have a more person-centric and more tailored individual onboarding process, without an increase in the level of effort required.” If Microsoft KCS can aid with the discovery of project-related terms and surface-related topic cards, as well as connecting employees to relevant experts, it gives organizations the opportunity to customize the onboarding process and contribute to a positive employee experience.
- › **Security and controlled access.** One concern raised by the interviewed organizations was how to avoid a situation where Microsoft KCS surfaces sensitive knowledge to an employee who should not have access to that information. Microsoft has addressed this by providing capabilities that enable IT organizations to govern users, devices, and content with security and compliance controls. The productivity applications architect told Forrester: “Ninety-nine percent of our content is stored in Microsoft 365. All the mission critical content is in the Microsoft Cloud. So, Cortex can be able to make those connections while respecting security boundaries, which I think is one of the big benefits.”



## Forrester's Perspective: Meet Your Robotic Colleague

In April of 2017, Forrester published a study, “The Future Of Jobs, 2027: Working Side By Side With Robots,” which describes how advances in technology and automation will create a workforce that routinely works with robots, ultimately cutting costs and driving customer value.

Microsoft KCS is just one of these technological advancements, and if Forrester's predictions are correct, this solution will reinvigorate legacy systems, augment human intelligence, transform work, and become a digital colleague that works side by side with employees on an ongoing basis.

This Forrester's Perspective is supported by the following research:  
“The Future Of Jobs, 2027: Working Side By Side With Robots.”<sup>7</sup>

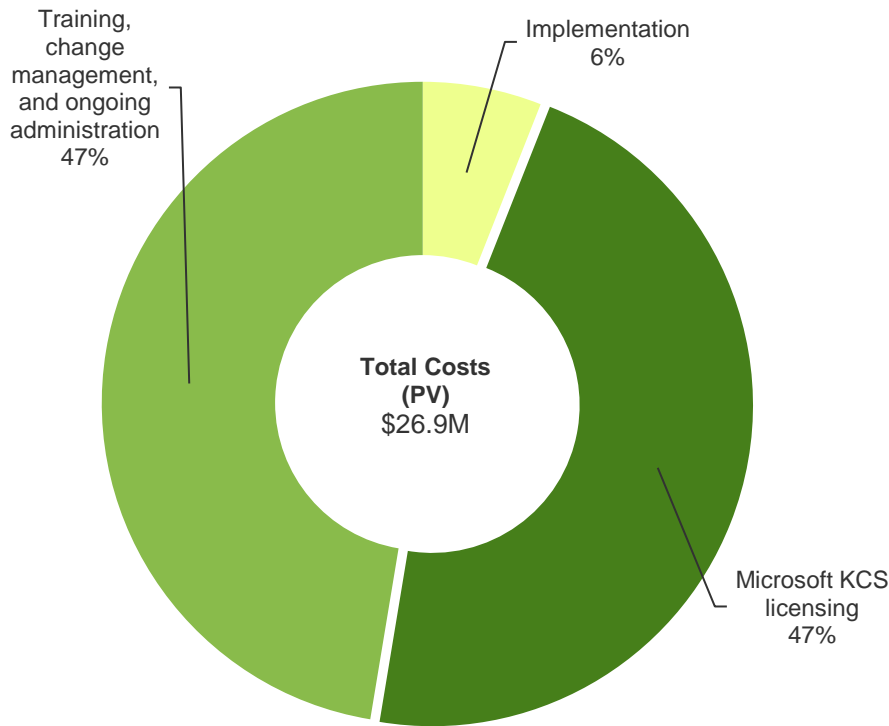
# Analysis Of Projected Costs

## QUANTIFIED PROJECTED COST DATA AS APPLIED TO THE COMPOSITE

### Total Projected Costs

REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Ftr	Implementation	\$609,500	\$402,500	\$402,500	\$402,500	\$1,817,000	\$1,610,458
Gtr	Microsoft KCS licensing	\$6,300	\$5,040,000	\$5,040,000	\$5,040,000	\$15,126,300	\$12,540,034
Htr	Training, change management, and ongoing administration	\$6,458	\$5,620,852	\$4,834,673	\$4,834,673	\$15,296,656	\$12,744,282
	Total costs (risk-adjusted)	\$622,258	\$11,063,352	\$10,277,173	\$10,277,173	\$32,239,956	\$26,894,774

### Costs By Category



The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total costs to have a PV of \$26.9 million.

## Implementation

Interviewed organizations estimated the technical implementation and professional services costs related to a full deployment of Microsoft KCS (SharePoint Syntex and Viva Topics).

**Assumptions and modeling.** Based on the customer interviews, Forrester modeled the financial impact for the composite organization with the following estimates:

- › Technical implementation requires the internal efforts of six resources over the course of three months.
- › The burdened monthly cost of a technical resource is \$10,000.
- › The composite organization engages professional services, requiring approximately 1,000 hours of consulting for initial implementation, and an additional 1,000 hours each year for ongoing consulting.
- › The hourly cost of a professional services resource is \$350.

**Risks.** Considering that the interviewed organizations have not yet completed companywide deployments of Microsoft KCS, the provided numbers are estimates, and therefore, this cost may vary greatly. Readers should consider:

- › Complexity of implementation, including customization, consumption volumes and the number of data sources outside of Microsoft 365 that will be integrated.
- › Required professional services and associated hourly cost of consultant.

To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of \$1.6 million.

Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the higher the potential costs.

### Implementation: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
F1	Number of months for technical implementation	Interviews	3			
F2	Internal resources dedicated to implementation	Interviews	6			
F3	Monthly burdened cost of resource	\$120,000/ 12 months (rounded)	\$10,000			
F4	Subtotal: internal implementation labor costs	$F1 * F2 * F3$	\$180,000			
F5	Professional services hours	Interviews	1,000	1,000	1,000	1,000
F6	Hourly cost of professional services resource	Composite	\$350	\$350	\$350	\$350
F7	Subtotal: external implementation costs	$F5 * F6$	\$350,000	\$350,000	\$350,000	\$350,000
Ft	Implementation	$F4 + F7$	\$530,000	\$350,000	\$350,000	\$350,000
	Risk adjustment	↑15%				
Ftr	Implementation (risk-adjusted)		\$609,500	\$402,500	\$402,500	\$402,500

## Microsoft KCS Licensing

The licensing costs listed below are tailored to the composite organization's specifics. They are conservatively calculated, using Microsoft list prices, and they do not include any potential discounts. The best way to determine the actual licensing cost is to speak directly with a Microsoft representative.

**Assumptions and modeling.** Based on the customer interviews, Forrester modeled the financial impact for the composite organization with the following estimates:

- › The composite organization purchases both SharePoint Syntex and Viva Topics.
- › Each product alone is licensed at \$5 per person, per month. Therefore, in the case of the composite organization, the licensing costs are \$10 per person per month.
- › The composite organization initially licenses 50 users for development and implementation. It then rolls out licenses to all 40,000 knowledge workers across the organization.

**Risks.** This cost can vary due to uncertainty related to:

- › Organizations will need to determine the number of knowledge workers that will receive Microsoft KCS capabilities.
- › Organizations may receive discounts on the list price based on contract negotiation, duration of contract, and economies of scale.
- › Organizations may choose to license only one product, in which case licensing costs would be halved.

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV of \$12.5 million.

**Microsoft KCS Licensing: Calculation Table**

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
G1	Number of E3 licenses	Composite	50	40,000	40,000	40,000
G2	Incremental cost per license	\$10 per user per month	\$120	\$120	\$120	\$120
Gt	Microsoft KCS licensing	G1*G2	\$6,000	\$4,800,000	\$4,800,000	\$4,800,000
	Risk adjustment	↑5%				
Gtr	Microsoft KCS licensing (risk-adjusted)		\$6,300	\$5,040,000	\$5,040,000	\$5,040,000

## Training, Change Management, And Ongoing Administration

Interviewed organizations noted that in addition to licensing and implementation costs, they expect to incur labor costs for efforts around training, change management, and ongoing administration of Microsoft KCS. The innovation lead for the modern workplace noted: “For a company of our size, we expect some work before we deploy it to the end users. We do not expect to just turn on Cortex features and hope that all our knowledge management issues will be solved. It will require active engagement, active planning on deploying it, conducting change management, and curating the information.”

**Assumptions and modeling.** Based on the customer interviews, Forrester modeled the financial impact for the composite organization with the following estimates:

### Training And Change Management

- › In the interest of garnering companywide support, higher rates of adoption, and the best business outcomes possible, the composite organization deploys a change management and awareness campaign for Microsoft KCS.
  - The initial change management effort of 150 hours is comprised of the labor from 25 resources over the course of six months — resources dedicate 1 hour per month.
  - In the first year of Microsoft KCS, the composite organization hosts an ongoing awareness campaign that requires 312 labor hours, this comprises of four resources who each dedicate 1.5 hours per week.
  - In subsequent years, awareness campaigns continue to update knowledge workers on new features and best practices. The composite organization incurs 50 hours of labor for ongoing awareness, which comprises of one resource spending approximately 4 hours a month.
  - The average burdened cost of a knowledge worker is \$85,000 per year, or \$41 per hour.
- › The composite organization provides a 30-minute training for all knowledge workers, demonstrating the power and benefits of Microsoft KCS. In the first year, this training is provided to 40,000 knowledge workers. Assuming a 10% turnover rate, in subsequent years training is provided to 4,000 knowledge workers.

### Ongoing Administration

- › As referenced in [Benefit B](#), the composite organization relies on crowdsourcing of topics and content, improving and expanding the suggestions from Microsoft KCS. To capture these efforts, the financial model assumes that 30% of knowledge workers will actively participate in curation, each contributing an average of 10 minutes per week to Microsoft KCS curation.
- › In addition to the crowdsourced curation efforts, the composite organization has two knowledge managers that are dedicated to overseeing Microsoft KCS and administering the program across the organization. These experts help define best practices, train AI, and explore new opportunities and use cases.

“I can imagine having a full-time employee that would be a solution consultant with a very good understanding of how Cortex can be leveraged to deliver solutions. They would act as an internal consultant for people who are interested in doing something on their own with Cortex.”

*Principal architect, healthcare*



**Two FTEs**  
spend 100% of their time  
on ongoing management  
of Microsoft KCS.

- › The burdened rate of a Microsoft KCS administrator is \$120,000 per year.

**Risks.** This cost can vary due to uncertainty related to:

- › An organization may incur greater (or lesser) efforts around change management and training, depending on company culture, technology adoption habits, and ability to dedicate time and efforts to the project. There could also be additional costs associated with either hiring change managers or outsourcing change management and training to an outside consulting firm, which would incur hard costs in addition to the soft labor costs captured in these costs.
- › Organizations may experience increasing efforts over the three-year window due to new content ingestion, which may increase content curation needs. On the other side of the scale, organizations may find that Microsoft KCS has created a semiautomatic system and would therefore incur lower ongoing efforts.
- › Readers should also consider burdened costs of employees and opportunity cost of assigning employees to these tasks.

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV of \$12.7 million.



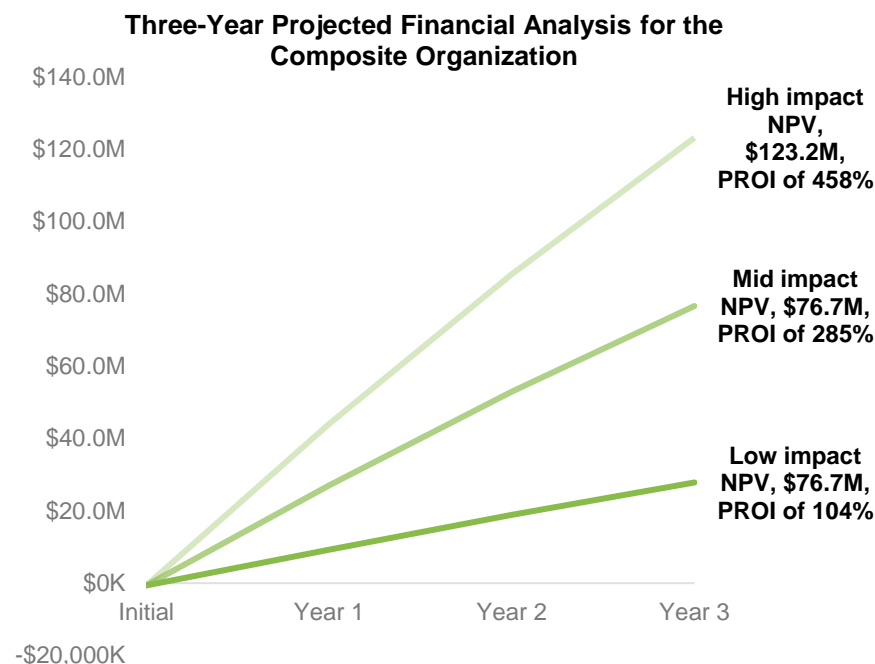
## Training, Change Management, And Ongoing Administration: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
H1	Number of hours for change management and ongoing awareness campaigns	Interviews	150	312	50	50
H2	Number of knowledge workers receiving training	Composite		40,000	4,000	4,000
H3	Hours of training per knowledge worker	Interviews		0.5	0.5	0.5
H4	Average hourly dedicated cost of resource	\$85,000/2,080 hours (rounded)	\$41	\$41	\$41	\$41
H5	Subtotal: training and change management	$(H1+(H2*H3)) * H4$	\$6,150	\$832,792	\$84,050	\$84,050
H6	Number of employees aiding with content curation	30% of employees		12,000	12,000	12,000
H7	Hours spent curating content annually	10 min* 52 weeks/ 60 mins (rounded)		8.7	8.7	8.7
H8	Number of knowledge managers	Composite		2	2	2
H9	Burdened cost of knowledge manager	Composite		\$120,000	\$120,000	\$120,000
H10	Subtotal: Ongoing management	$(H4*H6*H7)+(H8*H9)$	\$0	\$4,520,400	\$4,520,400	\$4,520,400
Ht	Training, change management, and ongoing administration	$H7+H5$	\$6,150	\$5,353,192	\$4,604,450	\$4,604,450
	Risk adjustment	↑5%				
Htr	Training, change management, and ongoing administration (rounded) (risk-adjusted)		\$6,458	\$5,620,852	\$4,834,673	\$4,834,673

# Financial Summary

## CONSOLIDATED THREE-YEAR RISK-ADJUSTED PROJECTED METRICS

### Cash Flow Chart (Risk-Adjusted)



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



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

### Cash Flow Table (Risk-Adjusted)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$622,258)	(\$11,063,352)	(\$10,277,173)	(\$10,277,173)	(\$32,239,956)	(\$26,894,774)
Total benefits (Low)	\$0	\$21,897,991	\$22,028,755	\$22,136,783	\$66,063,529	\$54,744,541
Total benefits (Mid)	\$0	\$41,521,427	\$41,652,191	\$41,760,219	\$124,933,837	\$103,545,122
Total benefits (High)	\$0	\$60,201,334	\$60,369,598	\$60,515,126	\$181,086,058	\$150,086,626
Net benefits (Low)	(\$622,258)	\$10,834,639	\$11,751,582	\$11,859,610	\$33,823,573	\$27,849,767
Net benefits (Mid)	(\$622,258)	\$30,458,075	\$31,375,018	\$31,483,046	\$92,693,881	\$76,650,348
Net benefits (High)	(\$622,258)	\$49,137,982	\$50,092,425	\$50,237,953	\$148,846,102	\$123,191,852
PROI (Low)						104%
PROI (Mid)						285%
PROI (High)						458%

# Appendix A: New Technology: Projected Total Economic Impact

New Technology: Projected Total Economic Impact (New Tech TEI) 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 New Tech TEI methodology helps companies demonstrate and justify the projected tangible value of IT initiatives to both senior management and other key business stakeholders.

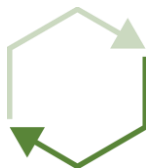
## Total Economic Impact Approach



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



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



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



**Risks** measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time.

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



### Present value (PV)

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



### Net present value (NPV)

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



### Projected return on investment (PROI)

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



### Discount rate

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%. A 10% discount rate is used for this analysis.

## Appendix B: Endnotes

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<sup>1</sup> Source: “The Forrester Wave: ECM Content Platforms, Q3 2019,” Forrester Research, Inc., July 24, 2019.

<sup>2</sup> Source: Seth Patton, “Introducing Project Cortex,” Microsoft 365 Blog, November 4, 2019, (<https://techcommunity.microsoft.com/t5/microsoft-365-blog/introducing-project-cortex/ba-p/966091>)

<sup>3</sup> Source: Cheryl McKinnon, “Project Cortex: Microsoft’s Bold Play To Help Optimize Corporate Knowledge,” Forrester Blogs (<https://go.forrester.com/blogs/project-cortex-microsofts-bold-play-to-help-optimize-corporate-knowledge/>).

<sup>4</sup> OCR: optical character recognition.

<sup>5</sup> Source: Cheryl McKinnon, “Project Cortex: Microsoft’s Bold Play To Help Optimize Corporate Knowledge,” Forrester Blogs (<https://go.forrester.com/blogs/project-cortex-microsofts-bold-play-to-help-optimize-corporate-knowledge/>).

<sup>6</sup> Source: “Microsoft Knowledge Sharing Research,” a commissioned study conducted by Spiceworks Ziff Davis on behalf of Microsoft, June 2020.

<sup>7</sup> Source: “The Future Of Jobs, 2027: Working Side By Side With Robots,” Forrester Research, Inc., April 3, 2017.