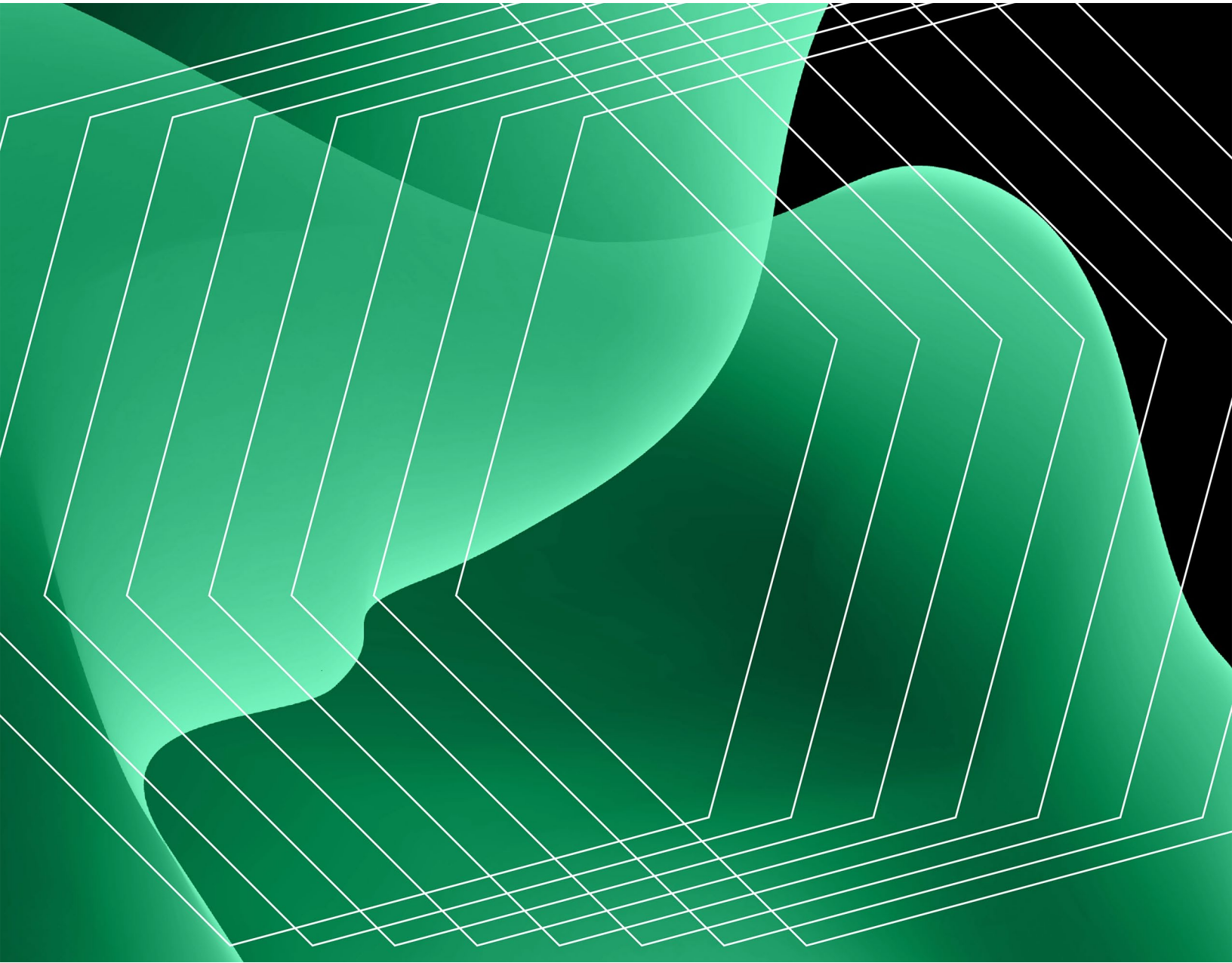
FORRESTER®

The Total Economic Impact™ Of Microsoft Fabric

Cost Savings And Business Benefits Enabled By Fabric

A Forrester Total Economic Impact™ Study
Commissioned By Microsoft, May 2024



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ABOUT FORRESTER CONSULTING

Forrester provides independent and objective research-based consulting to help leaders deliver key outcomes. Fueled by our customer-obsessed research, Forrester's seasoned consultants partner with leaders to execute their specific priorities using a unique engagement model that ensures lasting impact. For more information, visit forrester.com/consulting.

Executive Summary

Insights-driven businesses (IDBs) — organizations that consistently use their enterprise data to derive and act on insights — significantly outperform their competitors financially.[1] As more organizations see the benefits of the insights-driven approach, they have collected large amounts of data from multiple sources, much of which they have struggled to use effectively due to the difficulties inherent in integrating, sharing, and manipulating multicloud data. In order to experience the full value of their data, these organizations need to create a single source of truth, integrate the processes of turning raw data into actionable insights, and provide broad access to spark the thinking and creativity of their data professionals.

Microsoft Fabric is a comprehensive, AI-infused data analytics management system, including data lake, data engineering, data integration, analytics, and business intelligence. As an all-in-one software-as-a-service (SaaS) solution, Fabric allows organizations to manage data, users, and projects in one place, encouraging data scientists, data engineers, and business analysts to work together in the same environment.

Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Fabric.[2] The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Fabric on their organizations.

Return on investment (ROI)
379%

Net present value (NPV)
$9.79M

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four representatives, each from a different company, with experience using Fabric. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single composite organization with 10,000 employees and $5 billion in annual revenue.

Interviewees said that prior to using Fabric, their organizations leveraged multiple tools and systems to store, access, and analyze data. However, this left them facing challenges with latency, silos, and access issues, which hampered their development processes and left employees unsatisfied.

After the investment in Fabric, the interviewees were able to consolidate technologies and improve access to data. Key results from the investment include improved productivity for data engineers and business analysts, better insights leading to enhanced business results, and reduced attrition due to improved employee productivity and job satisfaction.

> "The value proposition from Fabric is that you have everything under one roof. If you've made it available in OneLake, it will be easy for team members to find, browse, and activate it."
>
> BUSINESS INTELLIGENCE ARCHITECT, MANUFACTURING

KEY FINDINGS

Quantified benefits. Three-year, risk-adjusted present value (PV) quantified benefits for the composite organization include:

- **Improved business analyst access and output by 20%.** Fabric elevates analysts' ability to produce more innovative and useful output more quickly because they can access more data (and more up-to-date information) and often manipulate it with little to no assistance from engineering. It also accelerates analysts' transition to citizen developers. The resulting increased productivity saves the company $4.8 million.
- **Enhanced business results due to better insights.** In addition to improving the analyst team's productivity, Fabric allows them to use fresher, higher-quality data

and to look at relationships they may not have been able to analyze before. They can provide faster and better answers to the business' key questions, resulting in better data-driven decisions and increased profits worth $3.6 million.

- **Increased data engineering productivity by 25%.** Fabric makes all of the organization's data, including third-party and multicloud data, available in a common format. This significantly reduces the time data engineers need to spend finding and preparing data for use by data scientists and business analysts, saving the organization $1.8 million.
- **Reduced attrition by 8%.** Skilled data professionals are hard to find, and organizations invest heavily in familiarizing them with the types of questions and data sources that are relevant to their industry. That investment can be lost when valuable team members are lured away by the promise of working with more modern technology and spending more of their time developing insights as opposed to trying to find and integrate data. This delivers $1.4 million to the composite organization's bottom line.
- **Eliminated infrastructure costs.** Once Fabric is deployed, the organization decommissions its outdated infrastructure, including SQL servers, cubes, duplicated software platforms, etc. This delivers $779,000 in savings.

Unquantified benefits. Benefits that provide value for the composite organization but are not quantified for this study include:

- **Enhanced analytics creativity and upskilling.** With access to new datasets and more freedom to combine and experiment with them, both analysts and data engineers stretch to gain new skills and produce new insights.
- **Improved alignment between the technical and business sides of the analytics team.** Because using Fabric encourages everyone using the data lake to collaborate and makes it easier to do so, the organization begins to see a closer alignment between these groups.
- **Heightened attention to correct data governance.** Rolling deployment of Fabric highlights the need for more consistent data governance in the organization, which is now being addressed to better position the organization to take advantage of further data automation opportunities.

Costs. Three-year, risk-adjusted PV costs for the composite organization include:

- **Microsoft Fabric-related fees of $1.1 million.** The composite organization pays Microsoft for storage and compute capacity for Fabric.
- **Implementation costs of $1.1 million.** Internal resources dedicate time and effort to deploying Microsoft Fabric during a proof-of-concept and a phased implementation over three years.
- **Ongoing maintenance costs of $352,000.** As Fabric is rolled out across the organization, the composite organization adds dedicated system administrators to support the solution and the program.

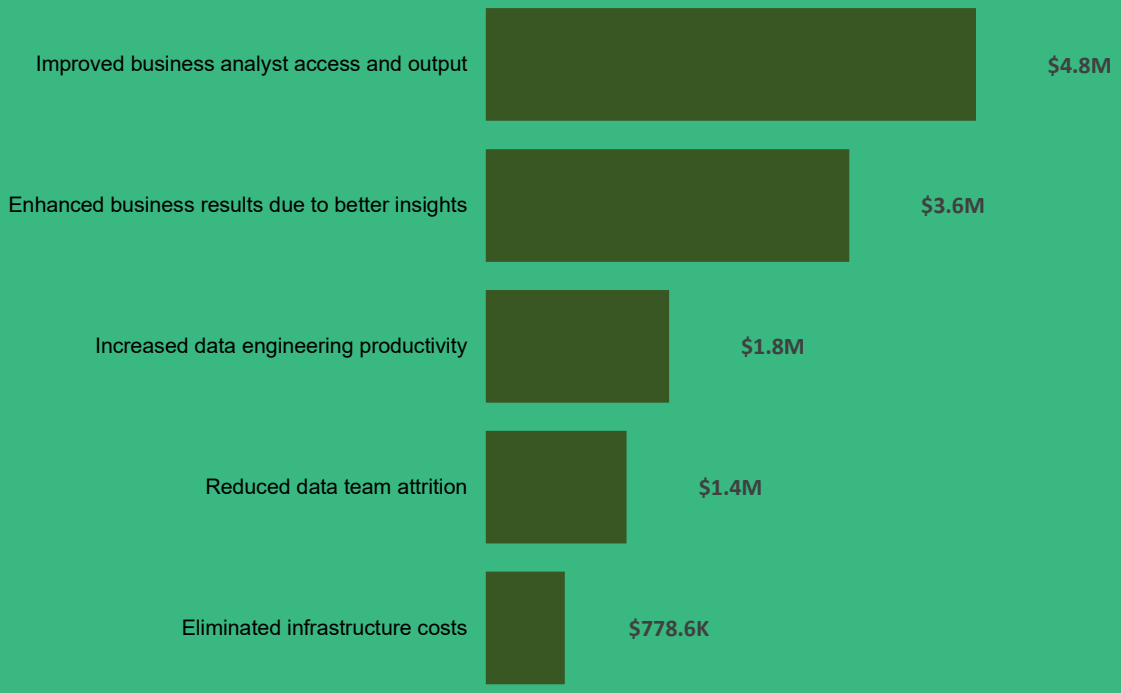
The representative interviews and financial analysis found that a composite organization experiences benefits of $12.37 million over three years versus costs of $2.58 million, adding up to a net present value (NPV) of $9.79 million and an ROI of 379%.

Reduced data engineering time related to searching, integrating, and debugging

90%

Return on investment	Benefits PV	Net present value	Payback
379%	**$12.37M**	**$9.79M**	**<6 months**

Benefits (Three-Year)



TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in Fabric.

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

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 study to determine the appropriateness of an investment in Fabric. Forrester does not endorse Microsoft nor its offerings.

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.

Due Diligence
Interviewed Microsoft stakeholders and Forrester analysts to gather data relative to Fabric.

Interviews
Interviewed four representatives at different organizations using Fabric to obtain data about costs, benefits, and risks.

Composite Organization
Designed a composite organization based on characteristics of the interviewees' organizations.

Financial Model Framework
Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewees.

Case Study
Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

The Microsoft Fabric Customer Journey

Drivers leading to the Fabric investment

Interviews			
Role	**Industry**	**Region**	**Annual revenue**
Senior advisor, data architecture and platform	Energy	Europe	$29 billion
Vice president of data and analytics	Technology	Global	$1 billion
Senior director of data strategy and finance	Manufacturing	Global	$34 billion
Business intelligence (BI) architect	Manufacturing	Global	$34 billion

KEY CHALLENGES

Prior to adopting Microsoft Fabric, interviewees' organizations tended to use a variety of systems and tools to store, access, and analyze data. These typically included other Microsoft products such as Synapse, SQL Server, Power BI, and even Excel, as well as technologies from other vendors.

Due to legacy infrastructure, disparate data sources, and piecemeal tools, interviewees noted how their organizations struggled with common challenges, including:

- **Latency in data availability.** Interviewees shared that getting data out of its different locations and into a place and format they could analyze was often time-consuming and resource-intensive, and it slowed down the entire analysis process. A VP of data and analytics for a technology organization noted: "Some of the processing times were 24 hours-plus. And because my team was so small, being able to invest the time in incremental refresh and performance improvement while trying to do extensions and add more data to add more value — those were just in total conflict. We just bought larger instances to try to make them run faster, and our costs were spiraling pretty quickly."

- **Limited data access and restricted consumption.** A business intelligence architect for a manufacturing organization summed up a common challenge across interviewees: “The biggest struggle working with data has always been to get access to data, to know how and where to find it, and then to activate it. A number of pains always exist, because if you’re not an expert — if you don’t have the right level of access or if you don’t know this person or type of certificate — there are a lot of things you’re struggling with that prevent a successful experience working with a platform or number of platforms.”
- **Data silos and overreliance on individual skills.** Data was often fragmented at interviewees’ organizations, spread across different homegrown tools and systems and individual hard drives. In addition to presenting access challenges, it created organizational risk. A senior director of data strategy and finance for a manufacturing organization explained: “Our solution was written by our IT people back in 2007. The people who built that system are no longer around. Nobody knows how to use the system or how it’s built. … The other risk was with local spreadsheets and data stored in them and things [going] wrong.”
- **Lack of motivation among data engineers and analysts.** Interviewees noted that the legacy solutions required a lot of manual effort to manage and work with. The effort to access and organize data before being able to analyze it was unsatisfying for employees who wanted to focus on more interesting, value-added work. A VP of data and analytics for a technology organization said: “It was hard to keep and retain people; we invest quite a lot of time in teaching them our data structures and processes so that they’re able to build and do what they need to do. But the technology is old and outdated, and they want to go and play with new toys. So there’s an element of motivation in the whole process.”

INVESTMENT OBJECTIVES

The interviewees’ organizations searched for a solution that could:

- Enable broader access to better data to support better insights and decisions.
- Streamline processes and lower costs.
- Support effective data governance.

> “It became very attractive to us to be able to say, ‘You mean with a click of a button, I can provision a warehouse or lakehouse?’ And the way it integrates with Power BI, with the direct lake and all these things, it felt like it was becoming more and more seamless.”
>
> SENIOR DIRECTOR OF DATA STRATEGY AND FINANCE, MANUFACTURING

COMPOSITE ORGANIZATION

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

Description of composite. The global organization has $5 billion in annual revenue and 10,000 employees. This includes 40 data engineers and 400 business analysts. Prior to deploying Fabric, the composite organization leveraged multiple tools and systems to store, access, and analyze data, including Synapse solutions as well as Power BI.

Deployment characteristics. The composite organization conducts a proof-of-concept test of Fabric over the first six months. In Year 1, the solution is rolled out to 50% of the business, increasing to 85% in Year 2 and 100% in Year 3.

Key Assumptions

$5 billion revenue

10,000 employees

40 data engineers

400 business analysts

Analysis Of Benefits

Quantified benefit data as applied to the composite

Total Benefits						
Ref.	**Benefit**	**Year 1**	**Year 2**	**Year 3**	**Total**	**Present Value**
Atr	Improved business analyst access and output	$1,264,120	$2,149,004	$2,528,240	$5,941,364	$4,824,740
Btr	Enhanced business results due to better insights	$937,500	$1,593,750	$1,875,000	$4,406,250	$3,578,137
Ctr	Increased data engineering productivity	$472,680	$803,556	$945,360	$2,221,596	$1,804,068
Dtr	Reduced data team attrition	$363,392	$617,766	$726,784	$1,707,943	$1,386,951
Etr	Eliminated infrastructure costs	$204,000	$346,800	$408,000	$958,800	$778,603
	Total benefits (risk-adjusted)	$3,241,692	$5,510,876	$6,483,384	$15,235,953	$12,372,499

IMPROVED BUSINESS ANALYST ACCESS AND OUTPUT

Evidence and data. Interviewees told Forrester that benefits for business analysts fell into two categories: faster access and more data. On the first front, the VP of data analytics at a technology company explained: “[Business analysts] can go to our ERP, see the screen that they want to get information from, put in a data request, and have that data the next day. That would have taken a month before. In addition, they can play with obfuscated data and figure out what the model should look like, which then allows us to do the governance review and move it forward into UAT [user acceptance testing] and production quite quickly.”

In terms of having more data to work with, the senior advisor, data architecture and platform at an energy company opined: “The biggest challenge we have is that people can’t find data. They might know that they want some data to do something, but first they have to find it. And then there’s a lot around legality issues, ownership, and so forth. OneLake and some of the concepts around certification of data in Fabric help with the discoverability and with the trust level you can put on certain data. So it is certainly helping on that side of things.”

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- The composite organization has 400 business analysts.
- The analysts each spend 1,352 hours per year (65% of their time) creating analytic output.
- With Fabric, they experience a 20% reduction in the time required to create analytic output.
- Fabric is rolled out to 50% of the organization — and therefore business analysts — in Year 1, 85% in Year 2, and 100% in Year 3.
- The average fully burdened pay for data engineers is $55 per hour.
- Forrester assumes that not all recovered time will be used for productive or value-added activities, so a 50% productivity recapture rate is applied.

Risks. An organization's realization of benefits related to improved business analyst access and outputs will vary depending upon a number of factors, including:

- The number of business analysts at the organization, the nature of their work, and their salaries.
- Existing systems, tools, and solutions for data management, access, and analytics.
- How and to what extent the organization rolls out Microsoft Fabric.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $4.8 million.

> "The overall key is that you've got this common data governance and data management, which allows combining different tools and technology, and then you've got standardization in the way you make data available for people to use."
>
> SENIOR ADVISOR, DATA ARCHITECTURE AND PLATFORM, ENERGY

Improved Business Analyst Access And Output					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
A1	Business analysts	Composite	400	400	400
A2	Hours spent creating analytic output	Interviews	1,352	1,352	1,352
A3	Reduction in time to create output	Interviews	20%	20%	20%
A4	Percentage benefit achieved due to rollout timing	Composite	50%	85%	100%
A5	Average fully burdened hourly wage for a business analyst	TEI standard	$55	$55	$55
A6	Productivity recapture	TEI standard	50%	50%	50%
At	Improved business analyst access and output	A1*A2*A3*A4*A5*A6	$1,487,200	$2,528,240	$2,974,400
	Risk adjustment	↓15%			
Atr	Improved business analyst access and output (risk-adjusted)		$1,264,120	$2,149,004	$2,528,240
	Three-year total: $5,941,364			**Three-year present value: $4,824,740**	

ENHANCED BUSINESS RESULTS DUE TO BETTER INSIGHTS

Evidence and data. Siloed data, access issues, and time-consuming processes hampered organizations' abilities to analyze, understand, and activate data. Interviewees shared that Fabric made it easy for engineers and analysts to find and use data, helping them develop new insights and drive value for their organizations.

- A senior advisor, data architecture and platform for an energy organization explained that OneLake and data certifications help improve data discoverability, making it easier for users to find the data they need. Fabric enabled the organization to become more data-driven by streamlining data ingestion and preparation processes, allowing users to focus on value-added activities and make faster, more informed decisions based on data insights.
- A VP of data and analytics for a software organization shared that Fabric allowed them to increase their data coverage for business analysts from 20% to 80%, enabling analysts to bring together more information and develop new insights.

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- The composite organization's annual revenue prior to adopting Fabric is $5 billion.
- Fabric provides faster, easier access to data and enables better data analysis. As a result, it supports better insights and decision-making at the composite organization, leading to increased revenue. For the composite organization, a 0.50% revenue increase can be attributed to Fabric.
- The organization enjoys an operating margin of 10% on revenue.
- Fabric is rolled out to 50% of the organization in Year 1, increasing to 85% in Year 2 and 100% in Year 3. This rollout impacts the amount of revenue increase the organization realizes in each year.

Risks. An organization's realization of benefits related to enhanced business results due to better insights will vary depending upon a number of factors, including:

- How and to what extent they roll out Fabric.

- How and to what extent they leverage data analysis to create insights, and to what extent they act upon those insights.
- Organizations' industry, market, profit margins, and various economic factors impacting their overall revenue and profitability.

Results. To account for these risks, Forrester adjusted this benefit downward by 25%, yielding a three-year, risk-adjusted total PV of $3.6 million.

> "[Fabric] gives more standardized ways of working, and [it] empowers and enables a wider range of people to start working with data. When you have that, you can then start building up communities that can collaborate. They can contribute, and they can learn from each other."
>
> SENIOR ADVISOR, DATA ARCHITECTURE AND PLATFORM, ENERGY

Enhanced Business Results Due To Better Insights					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
B1	Annual revenue before Fabric	Composite	$5,000,000,000	$5,000,000,000	$5,000,000,000
B2	Revenue improvement due to Fabric	Interviews	0.50%	0.50%	0.50%
B3	Average net margin	Composite	10%	10%	10%
B4	Percentage benefit achieved due to rollout timing	Interviews	50%	85%	100%
Bt	Enhanced business results due to better insights	B1*B2*B3*B4	$250,000	$2,125,000	$2,500,000
	Risk adjustment	↓25%			
Btr	Enhanced business results due to better insights (risk-adjusted)		$937,500	$1,593,750	$1,875,000
	Three-year total: $4,406,250			**Three-year present value: $3,578,137**	

INCREASED DATA ENGINEERING PRODUCTIVITY

Evidence and data. Data engineers spent a great deal of time prior to Fabric creating structures and pipelines and reformatting data from different platforms so it could be analyzed. Fabric improved access to the data and provided tools to accelerate engineers' work, leading to significant time savings.

- According to the VP of data and analytics for a technology organization, their company saw development time for new analytics sets reduced by more than 90% and development time reduced by 50% after deploying Fabric, and it has continued to improve over time. They said: "We can see [that] to achieve an outcome is about six times faster using Fabric than it was using [our previous solution]. It's been a huge accelerator for us."
- A senior advisor, data architecture and platform in the energy industry explained how Fabric has led to productivity improvements at their organization. For instance, engineers have used Fabric to create automations and build solutions, saving them substantial time. The senior advisor said: "You've got benefits which come from standardization and streamlining the way you do things. Some might be direct time savings. Some might come from simple things such as actually having source control on what you're producing."
- A senior director of data strategy and finance for a manufacturing organization described how previously, siloed data meant that data engineers couldn't easily access data and instead had to reach out to colleagues for information, leading to delays, incomplete datasets, and workarounds that could lead to errors. With Fabric, the engineers have access to the data they need, when they need it, saving hours a day per person.

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- The composite organization has 40 full-time data engineers who each work a total of 2,080 hours per year.
- With Fabric, they experience a 90% reduction in the time they spend searching, integrating, and debugging, resulting in an overall 25% improvement in productivity.

- Fabric is rolled out to 50% of the organization — and therefore data engineers — in Year 1, 85% in Year 2, and 100% in Year 3.
- The average fully burdened pay for data engineers is $101 per hour.
- Forrester assumes that not all recovered time will be used for productive or value-added activities, so a 50% productivity recapture rate is applied.

Risks. An organization's realization of benefits related to increased data engineering productivity will vary depending upon a number of factors, including:

- The number of data engineers at the organization, the nature of their work, and their salaries.
- Existing systems, tools, and solutions for data management, access, and analytics.
- How and to what extent the organization rolls out Microsoft Fabric.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $1.8 million.

> "There should be more consistency across the board in terms of what data people are using. We can have a more centralized truth, and everybody is tapped into that as opposed to somebody trying to do their own ad hoc analysis based on data they've squirreled away."
>
> SENIOR DIRECTOR OF DATA STRATEGY AND FINANCE, MANUFACTURING

Increased Data Engineering Productivity					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
C1	Data engineers	Composite	40	40	40
C2	Annual hours of work per engineer	Interviews	2,080	2,080	2,080
C3	Time saved on low-value tasks with Fabric	Interviews	25%	25%	25%
C4	Percentage benefit achieved due to rollout timing	Interviews	50%	85%	100%
C5	Average fully burdened hourly pay for data engineers	TEI standard	$101	$101	$101
C6	Productivity recapture	TEI standard	50%	50%	50%
Ct	Increased data engineering productivity	C1*C2*C3*C4*C5 *C6	$525,200	$892,840	$1,050,400
	Risk adjustment	↓10%			
Ctr	Increased data engineering productivity (risk-adjusted)		$472,680	$803,556	$945,360
	Three-year total: $2,221,596			**Three-year present value: $1,804,068**	

REDUCED DATA TEAM ATTRITION

Evidence and data. Interviewees shared that their organizations struggled to keep data engineers and business analysts engaged — these individuals wanted to spend more time on analysis and other value-added work rather than finding and managing data. Fabric reduced many of those challenges, freeing up resources' time to do meaningful, engaging work, ultimately reducing attrition.

- A VP of data and analytics for a technology organization shared that their engineers had been frustrated with the time-consuming processes and resulting customer dissatisfaction. With Fabric, he said: "They're a lot happier. … We have a heartbeat service that measures internal satisfaction, and we're seeing continuous improvement in that. We've also got a very clear strategy, and the sets of technology are now clean and stable. Everyone is really excited about that. Doing the Microsoft Learn stuff and getting certifications in place so they all feel like there's a career path. We're also seeing the emergence of quite interesting specialization." They noted that satisfaction scores had increased by several percentage points.

- The same VP shared that internal customers were also happier with faster turnaround times, completed projects, and visibility into data and analytics that they had never had before.
- A senior advisor, data architecture and platform for an energy organization discussed how working with Fabric had allowed them to build communities that could collaborate and learn from each other. Their users have engaged with one another to provide support and share use cases and best practices. They explained this community was “happy to contribute, happy to share, and ultimately, can be self-sustaining.”

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- The composite organization spends $8,370,000 per year on its 40 data engineers, who have a fully burdened annual salary of $209,250.
- The composite organization spends $45,900,000 per year on its 400 business analysts, who have a fully burdened annual salary of $114,750.
- The composite organization experiences a 12.4% annual turnover rate, and the cost to replace an employee is 1.5 times their annual fully burdened salary. For the composite organization, this equals more than $10 million in annual costs to replace data engineers and business analysts before deploying Fabric.
- Fabric removes some of the tedium associated with data management, allowing employees to spend more time on engaging work such as analysis. As a result, the composite organization sees an 8% improvement in its turnover rate, which falls to 11.4%.
- Fabric is rolled out to 50% of the organization in Year 1, 85% in Year 2, and 100% in Year 3, impacting the realization of the 8% improvement in turnover each year.

Risks. An organization’s realization of benefits related to reduced data team attrition will vary depending upon a number of factors, including:

- Existing systems, tools, and solutions for data management, access, and analytics, as well as employee sentiment around them.

- How and to what extent the organization rolls out Microsoft Fabric.
- The number and types of employees impacted by Fabric.
- Employee engagement and retention rates, challenges, and practices at the organization.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $1.4 million.

Reduced Attrition					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
D1	Annual spend on data engineers	Composite	$8,370,000	$8,370,000	$8,370,000
D2	Annual spend on business analysts	Composite	$45,900,000	$45,900,000	$45,900,000
D3	Annual cost to replace data team employees before Fabric	(D1+D2)*12.4%* 1.5	$10,094,220	$10,094,220	$10,094,220
D4	Increase in data team retention	Interviews	8%	8%	8%
D5	Percentage benefit achieved due to rollout timing	Interviews	50%	85%	100%
D6	Annual cost to replace data team employees after Fabric	D3-(D3*(D4*D5)	$9,690,451	$9,407,813	$9,286,682
Dt	Reduced attrition	D3-D6	$403,769	$686,407	$807,538
	Risk adjustment	↓10%			
Dtr	Reduced attrition (risk-adjusted)		$363,392	$617,766	$726,784
	Three-year total: $1,707,943			**Three-year present value: $1,386,951**	

ELIMINATED INFRASTRUCTURE COSTS

Evidence and data. Interviewees noted that one of their goals when investing in Fabric was to streamline their tech stacks and reduce costs. Because Fabric offers the ability to manage data, users, and projects in one place, it enabled interviewees' organizations to retire legacy solutions.

- A VP of data and analytics for a software organization said that they had retired multiple servers, virtual machines, and analysis services with the move to Fabric

and anticipated further reductions in infrastructure costs as their use of Fabric increased.

- A senior director of data strategy and finance for a manufacturing organization and a senior advisor, data architecture and platform for an energy organization similarly expected to see savings from retiring their former solutions as well as reallocating associated IT support to other parts of the business.
- Some interviewees did not expect to fully retire solutions but instead expected usage and maintenance to decrease as users adopted Fabric and moved away from legacy tools.

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- The composite organization spends $1.6 million each year on its legacy data analytics stack.
- It eliminates 30% of its infrastructure as a result of deploying Fabric.
- Fabric is rolled out to 50% of the organization in Year 1, 85% in Year 2, and 100% in Year 3, impacting realization of retired infrastructure costs for the composite organization in each year.

Risks. An organization's realization of benefits related to eliminated infrastructure costs will vary depending upon a number of factors, including:

- Existing systems, tools, and solutions for data management, access, and analytics and associated costs.
- How and to what extent the organization rolls out Microsoft Fabric.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of $779,000.

Eliminated Infrastructure Costs					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
E1	Spend on legacy data analytics stack	Interviews	$1,600,000	$1,600,000	$1,600,000
E2	Eliminated redundant or outdated infrastructure	Interviews	30%	30%	30%
E3	Percentage benefit achieved due to rollout timing	Interviews	50%	85%	100%
Et	Eliminated infrastructure costs	E1*E2*E3	$240,000	$408,000	$480,000
	Risk adjustment	↓15%			
Etr	Eliminated infrastructure costs (risk-adjusted)		$204,000	$346,800	$408,000
	Three-year total: $958,800			**Three-year present value: $778,603**	

UNQUANTIFIED BENEFITS

Interviewees mentioned the following additional benefits that their organizations experienced but were not able to quantify:

- **Enhanced analytics creativity and upskilling.** With access to new datasets and more freedom to combine and experiment with them, interviewees were seeing business analysts in particular thinking in new ways and delivering new insights. In addition, both analysts and data engineers stretched themselves to gain new skills. Several interviewees noted strong interest and participation in Fabric certification programs.
- **Improved alignment between the technical and business sides of the analytics team.** Because Fabric makes all the organization's data accessible to authorized users in a common format and facilitates the creation of shared workspaces (lakehouses), interviewees told Forrester that it encouraged data teams to work together on problems and analytic outputs. They believed the result was not just better analysis available in an accelerated timeframe but also a stronger sense of cohesiveness across the data team.
- **Heightened attention to correct data governance.** Interviewees explained that the deployment of Fabric had exposed weaknesses and inconsistencies — as well as unnecessary bottlenecks — in their organizations' governance structures and processes. With greater access to data, they were more likely than ever to

recognize the importance of appropriate governance, and several interviewees mentioned that the time their engineers were saving with Fabric was often being redirected to addressing governance issues. They believed that the data safeguards inherent in Fabric would help make the application of those governance initiatives seamless in the future.

FLEXIBILITY

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement Fabric and later realize additional uses, including:

- **Using Copilot to further streamline and democratize data analytics.** At the time of these interviews, very few organizations had been able to do more than experiment with using Copilot with Fabric since they were focused on getting the solution deployed quickly and successfully. Those who had used Copilot were enthusiastic about its potential to further impact both data engineers' and business analysts' productivity and to further democratize the use of data in their organizations. The senior director of data strategy and finance at a manufacturing company explained: "My team is starting to try to be more proficient with Python, and now the notebooks give us the Python experience. With Copilot integrated right there into my notebook, I think it helped make Fabric an upgrade to what we had — but without starting over."

> "We've got a [Copilot] project in the works where you can actually, within Teams, just start using almost a chatbot kind of experience to start asking questions about data. So obviously, a lot of that data would be in OneLake and would use those standardized interfaces. I expect Copilot in Fabric will allow us to get better and new insights into data."
>
> SENIOR ADVISOR, DATA ARCHITECTURE AND PLATFORM, ENERGY

- **Incorporating data that has been underutilized to improve business decision-making.** Interviewees were excited about opportunities they believe will arise as a result of incorporating new types of data that previously had relatively narrow applications. For instance, production data generated by IoT on the factory floor and which has primarily been used to address factory operations could now be combined with data such as sales or customer satisfaction to impact revenues and brand equity in addition to addressing manufacturing issues.

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

Analysis Of Costs

Quantified cost data as applied to the composite

Total Costs							
Ref.	**Cost**	**Initial**	**Year 1**	**Year 2**	**Year 3**	**Total**	**Present Value**
Ftr	Fees paid to Microsoft	$34,566	$276,524	$470,091	$553,049	$1,334,230	$1,089,970
Gtr	Implementation costs	$58,200	$560,244	$435,070	$287,246	$1,340,760	$1,142,887
Htr	Ongoing maintenance	$0	$108,674	$108,675	$217,350	$434,700	$351,908
	Total costs (risk-adjusted)	$92,766	$945,443	$1,013,836	$1,057,645	$3,109,690	$2,584,765

FEES PAID TO MICROSOFT

Evidence and data. Costs paid to Microsoft for Fabric are based upon the amount of storage and compute capacity required. Pricing may vary. Contact Microsoft for additional details, or review list pricing on Microsoft's website.

Modeling and assumptions. For the composite organization, Forrester assumes:

- The composite organization has 5 TB of data in the data lake during the initial proof-of-concept and testing period, 40 TB in Year 1, 68 TB in Year 2, and 80 TB in Year 3 as it rolls out to more of the organization and increases adoption.
- Fees are paid to Microsoft for Fabric DW storage, Fabric DW capacity, and Fabric Spark based on the amount of data in OneLake.

Risks. The fees an organization pays to Microsoft for Fabric will vary depending on a number of factors, including:

- The size of the organization's data analytics program, which will drive storage and capacity needs.
- How and to what extent the organization rolls out Microsoft Fabric.

Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $1.1 million.

Fees Paid To Microsoft						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
F1	TB of data in the data lake	Composite	5	40	68	80
F2	Fabric DW storage	Microsoft	$1,380	$11,040	$18,768	$22,080
F3	Fabric DW capacity and Spark	Microsoft	$28,677	$229,416	$390,007	$458,832
Ft	Fees paid to Microsoft	F2+F3+F4	$30,057	$240,456	$408,775	$480,912
	Risk adjustment	↑15%				
Ftr	Fees paid to Microsoft (risk-adjusted)		$34,566	$276,524	$470,091	$553,049
	Three-year total: $1,334,230			**Three-year present value: $1,089,970**		

IMPLEMENTATION COSTS

Evidence and data. In addition to the cost of the software itself, interviewees recounted a number of different internal costs associated with testing and deploying Fabric in their organizations. These included time spent by data architects and IT professionals on the initial proof of concept and the time spent working with the data and business teams to prepare the data, deploy the solution, and train the users. Since the organizations generally deployed Fabric on a rolling basis across different departments and teams, these costs began to be incurred upfront and then continued throughout the three-year period of the analysis.

- A VP of data and analytics for a technology organization noted that training for Fabric was relatively straightforward. Their data engineers participated in Microsoft certification programs, and their data architect has worked with them on additional training. Business analysts also participated in Microsoft training.
- A BI architect for a manufacturing organization said training and enablement was an important part of their implementation, including webinars, Q&A sessions, and other internal training in addition to the training content provided by Microsoft.

Training included content on data warehouses, data engineering, and data science.

Modeling and assumptions. For the composite organization, Forrester assumes:

- Three data architects spend a total of 500 hours before launch and 250 hours in Year 1 on testing and proof of concept for Fabric.
- An additional 2,340 hours in Year 1 and 1,170 hours each in Years 2 and 3 are dedicated to Fabric's continued rollout across the organization.
- The average fully burdened salary for an implementation team member is $97 per hour.
- Data engineers participate primarily in bimonthly training webinars and classes as part of the Fabric rollout. Fifty percent of engineers are trained in Year 1, 35% in Year 2, and the final 15% in Year 3. Their fully burdened average salary is $101 per hour.
- Business analysts participate in 5 hours of in-house training. Additionally, 10% of the organization's analysts spend approximately 37 hours to become certified on Fabric. Fifty percent of analysts are trained in Year 1, 35% in Year 2, and the final 15% in Year 3. Their fully burdened average salary is $55 per hour.

Risks. An organization's costs related to implementation of Fabric will vary depending upon a number of factors, including:

- How and to what extent the organization rolls out Microsoft Fabric.
- The time and effort it takes the organization to prepare its people and processes for a new solution.
- The salaries of the affected professionals.

Results. To account for these risks, Forrester adjusted this cost upward by 20%, yielding a three-year, risk-adjusted total PV of $1.1 million.

Implementation Costs						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
G1	Hours dedicated to Fabric testing and proof of concept	Interviews	500	250	0	0
G2	Hours dedicated to Fabric implementation post-proof of concept	Interviews		2,340	1,170	
G3	Average fully burdened hourly wage of implementation team members	TEI standard	$97	$97	$97	$97
G4	Data engineer training hours	Interviews		240	168	72
G5	Fully burdened hourly wage of data engineers	TEI standard		$101	$101	$101
G6	Business analyst training hours	Interviews		3,480	4,220	4,220
G7	Fully burdened hourly wage of business analysts	TEI standard		$55	$55	$55
Gt	Implementation costs	G2*G3*G4*G6	$48,500	$466,870	$362,558	$239,372
	Risk adjustment	↑20%				
Gtr	Implementation costs (risk-adjusted)		$58,200	$560,244	$435,070	$287,246
	Three-year total: $1,340,760			**Three-year present value: $1,142,887**		

ONGOING MAINTENANCE

Evidence and data. Interviewees found that Fabric required no more support than previous systems had, but depending on the stage of their rollout process, they might temporarily require additional headcount to support the multiple systems deployed. System administrators focused on operations, governance, expanded functionality, and support for business users.

- A senior advisor, data architecture and platform for an energy organization explained that they had three people with an operational focus, including new features and functionality of Fabric, and three to four people focused on a wider data platform strategy. Those teams also acted as a bridge for users to share best practices and support the continued adoption of Fabric at the organization. Fabric didn't require additional support beyond what they had needed for their previous solutions.

- A BI architect for a manufacturing organization said they have one to two individuals who manage, monitor, and oversee the Fabric platform and support the business when users run into issues with their use cases.

Modeling and assumptions. For the composite organization, Forrester assumes:

- The organization needs 0.5 FTEs dedicated to managing Fabric in Year 1, increasing to 1.0 in Year 2 and 2.0 in Year 3. The number of system administrators increases as Fabric is rolled out to more of the business and as management efforts shift from the implementation to ongoing management.
- The fully burdened annual salary for a system administrator is $94,500.

Risks. An organization's costs related to ongoing maintenance of Fabric will vary depending upon a number of factors, including:

- How and to what extent the organization rolls out Microsoft Fabric.
- The salary of the organization's systems administrators.

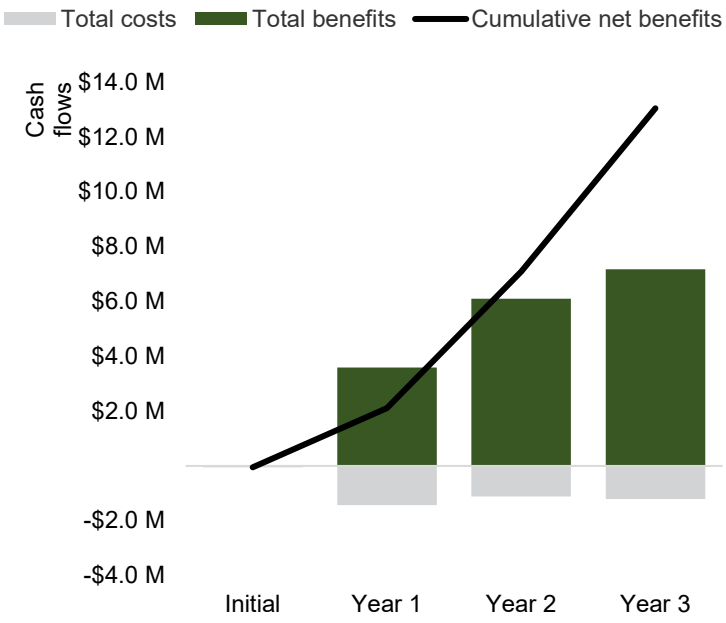
Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of $352,000.

Ongoing Maintenance						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
H1	System administrators for Fabric	Composite	0.0	1.0	1.0	2.0
H2	Fully burdened annual salary of system administrator	TEI standard	$94,500	$94,500	$94,500	$94,500
Ht	Ongoing maintenance	H1*H2	$0	$94,500	$94,500	$189,000
	Risk adjustment	↑15%				
Htr	Ongoing maintenance (risk-adjusted)		$0	$108,675	$108,675	$217,350
	Three-year total: $434,700			**Three-year present value: $351,908**		

Financial Summary

Consolidated Three-Year Risk-Adjusted Metrics

Cash Flow Chart (Risk-Adjusted)



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

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

Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	($92,766)	($945,443)	($1,013,836)	($1,057,645)	($3,109,690)	($2,584,765)
Total benefits	$0	$3,241,692	$5,510,876	$6,483,384	$15,235,953	$12,372,499
Net benefits	($92,766)	$2,296,249	$4,497,040	$5,425,739	$12,126,263	$9,787,734
ROI						379%
Payback						<6 months

APPENDIX A: TOTAL ECONOMIC IMPACT

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

Total Economic Impact Approach

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

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

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

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

PRESENT VALUE (PV)

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

NET PRESENT VALUE (NPV)

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

RETURN ON INVESTMENT (ROI)

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

DISCOUNT RATE

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

PAYBACK PERIOD

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

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.

APPENDIX B: SUPPLEMENTAL MATERIAL

Related Forrester Research

Data Fabric 2.0 For Connected Intelligence, Forrester Research, Inc., February 17, 2023.

Rationalize Multiple Enterprise BI Platforms with BI Fabric, Forrester Research, Inc., April 10, 2023.

New Technology: The Projected Total Economic Impact™ Of Microsoft Fabric, a commissioned study conducted by Forrester Consulting on behalf of Microsoft, September 2023.

APPENDIX C: ENDNOTES

[1] Source: The State Of The Insights-Driven Business, 2022, Forrester Research, Inc., August 24, 2022.

[2] 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.

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