FORRESTER®

NEW TECH

# New Technology: The Projected Total Economic Impact™ Of Microsoft Fabric

## Cost Savings And Business Benefits Enabled By Microsoft Fabric

**SEPTEMBER 2023**

A FORRESTER NEW TECHNOLOGY PROJECTED TOTAL ECONOMIC IMPACT™ STUDY COMMISSIONED BY MICROSOFT

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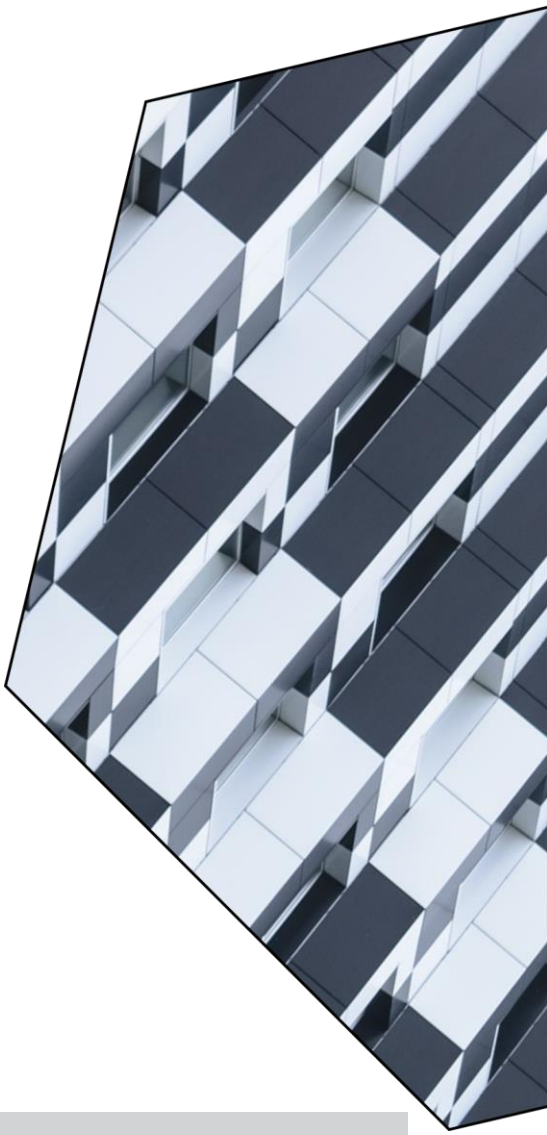

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## Executive Summary

Insights-driven businesses (IDBs) — organizations that consistently use their enterprise data to derive and act on insights — significantly outperform their competitors financially.[1] However, to advance toward IDB maturity, organizations must truly democratize access to data and the tools they need to turn data into insights. This means creating a single source of truth, integrating the processes of turning raw data into actionable insights, and providing broad access to spark the thinking and creativity of the organization's data professionals.

Microsoft Fabric is a fully integrated data estate management system that allows an organization to manage its data, users, and projects in one place, which eliminates the need to stitch together solutions from multiple vendors. The software-as-a-service (SaaS) nature of the product allows both professional developers and business analysts to work in the same environment without sacrificing the usability they need. Instead, users enjoy an end-to-end, highly integrated, single solution that is easy to understand, onboard, and scale.

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 Microsoft Fabric.[2] The purpose of this study is to provide readers with a framework to evaluate its potential financial impact on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four representatives who have experience using Microsoft Fabric in private preview. Forrester aggregated the interviewees' responses and combined the results into a single composite organization.

Interviewees noted that prior to using Microsoft Fabric, their organizations had put significant effort into creating an integrated system for onboarding, housing, manipulating, and reporting on large data sets. However, they were not completely successful, which left various teams and personas with the need to frequently copy data, move it from one platform to another, and create workarounds for collaboration.

**KEY STATISTICS**

Projected return on investment (ROI)
**254% - 420%**

Projected net present value (NPV)
**$3.9M - $6.4M**

These limitations led to frustration among data professionals who spent too much time on administrative tasks rather than using their skills to turn data into insights and inform business decisions. It also limited the output of those data professionals creating bottlenecks for development and business teams, and it increased the potential for mistakes to be made in the copying and translating of the data.

After previewing Microsoft Fabric, interviewees reported that its end-to-end integration and intuitive user interface resolved many issues they had with their analytics stack. Key expected results include increasing access to data for more analytics professionals, improving productivity for those professionals, and providing better data quality and more secure data warehousing.

## KEY FINDINGS

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

- **Increase in data engineer and data scientist productivity by up to 50%.** Microsoft Fabric gives the composite organization integrated and streamlined access to all of its available data, and it improves manipulation and collaboration capabilities. This enables its data teams to work more efficiently.
- **Increase in business analyst productivity by up to 15%.** Because Microsoft Fabric allows for faster response from data professionals, more streamlined processes, and more user-friendly technology, the composite organization's analysts are able to provide better insights to its business teams more quickly.
- **Enhanced business results between $500,000 and $1.2 million due to better insights.** Having more useful and timelier insights and recommendations allows the composite organization to act more quickly in the market and avoid costly mistakes.
- **Reduced costs of security, governance, and compliance totaling $660,000 to $1.0 million.** Fabric OneLake ensures that the composite's security and governance policies are applied automatically and that its data is scanned to avoid potential security issues.
- **Eliminated spend on current solutions saving approximately $1.1 million.** Once the composite organization deploys Fabric, it sunsets its other analytics solutions and avoids most or all of the fees and administrative costs associated with them.

**"Maybe we are already able to do all these things without Fabric, but with much, much, much, much more complexity. And system complexity presents risk."**

— Solution technician, financial services

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

- **Enhancing job satisfaction among all data professionals.** Freeing up time to focus on providing insights rather than moving data around gives employees the chance to use and develop their skills.
- **Expanding capabilities and creativity across the data analytics team.** Interviewees said Microsoft Fabric's SaaS-based UI is user-friendly and that it will encourage data professionals at all levels to explore and expand their proficiency.
- **Improving alignment between the technical and business sides of data analytics.** Microsoft Fabric is designed to meet the needs of all data analytics professionals and to allow them to collaborate with less friction between teams.

**Costs.** TEI studies use the experiences of interviewees to project costs for a composite organization. Since the interviewees in this case used the product in private preview, and well in advance of pricing being announced, these projections are Forrester's best estimate. The three-year, risk-adjusted PV costs for the composite organization include:

- **Microsoft fees of $585,000.** The composite organization incurs fees for storage and compute capacity.
- **Planning and deployment costs of $1.2 million in internal time.** While the composite organization does not need to pay fony outside professional fees, it does incur internal time costs.
- **Ongoing operation and maintenance totaling $321,000 over the three years.** The composite organization incurs a cost of a systems administrator to manage Microsoft Fabric.

Forrester modeled a range of projected low-, medium-, and high-impact outcomes based on evaluated risk. This financial analysis projects that the composite organization accrues the following three-year net present value (NPV) for each scenario by enabling Microsoft Fabric:

- Projected high impact of a $6.4 million NPV and projected ROI of 420%.
- Projected medium impact of a $5.1 million NPV and projected ROI of 332%.

Projected low impact of a 3.9 million NPV and projected ROI of 254%

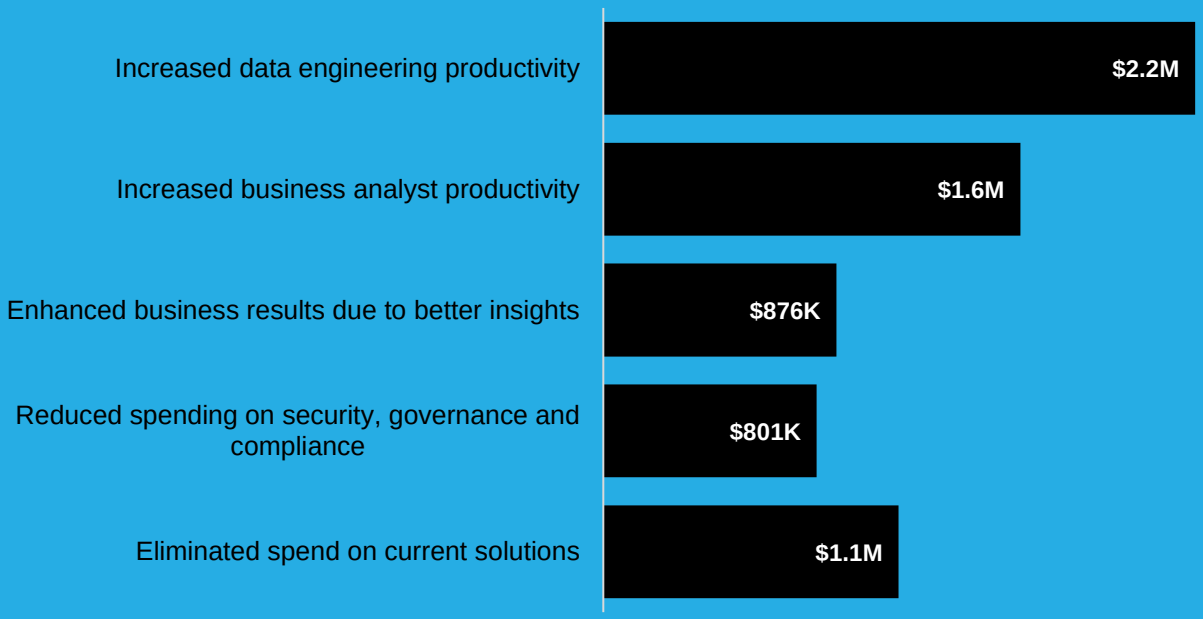
PROI
**254% - 420%**

PROJECTED BENEFITS PV
**$5.4M - $7.9M**

PROJECTED NPV
**$3.9M - $6.4M**

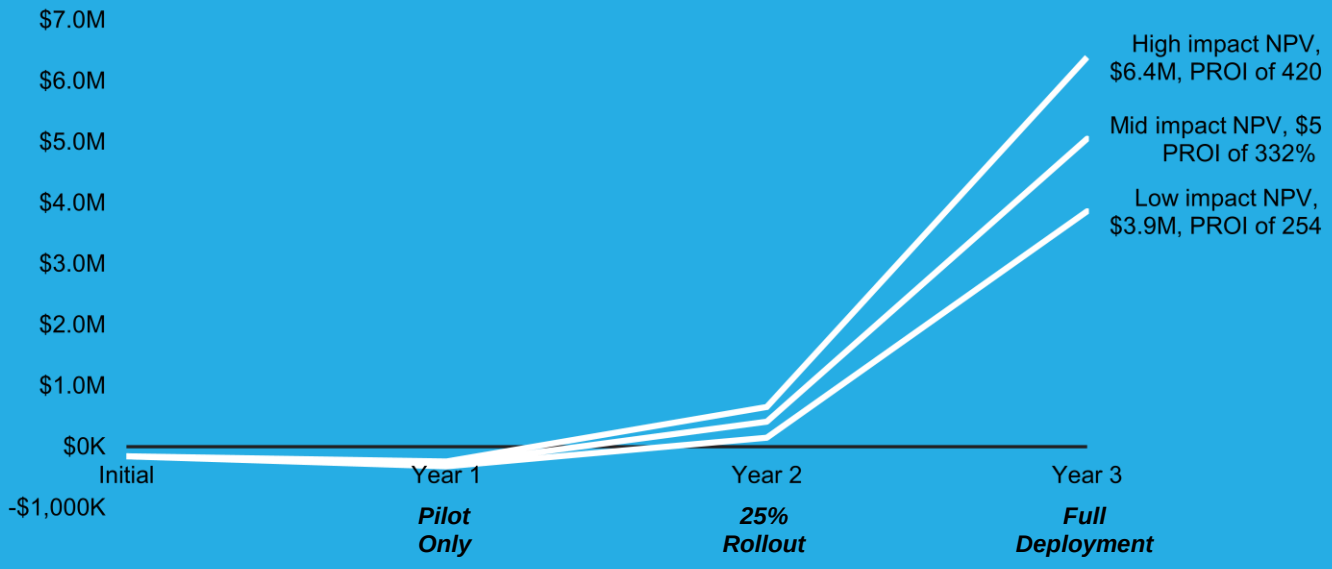
TOTAL COSTS
**$1.8M**

## Three-Year Projected Benefits




*Figures in chart are projections for the mid-case scenario*

### Three-Year Projected Financial Analysis For The Composite Organization



## NEW TECH TEI FRAMEWORK AND METHODOLOGY

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

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 Fabric can have on an organization.



### DUE DILIGENCE

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

### EARLY-IMPLEMENTATION INTERVIEWS

Interviewed four representatives at organizations using Fabric 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 interviewees' organizations.

### PROJECTED FINANCIAL MODEL FRAMEWORK

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

### CASE STUDY

Employed four fundamental elements of New Tech TEI in modeling the investment's potential 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 Microsoft Fabric investment

| Interviews | | | |
|---|---|---|---|
| **Role** | **Industry** | **Region** | **Annual Revenue** |
| Solution technician | Financial services | EMEA | $65 billion |
| Co-founder | Data analytics software | North America | $7 million |
| Controller | Pharmaceuticals | EMEA | $45 billion |
| Head of Power BI center of excellence | Manufacturing | Global | $65 billion |

**KEY CHALLENGES**

Before previewing Microsoft Fabric, the interviewees' enterprises used extensive analytics stacks to onboard, store, manipulate and report on their big data assets. These usually included several Microsoft products, such as Azure Data Factory, Synapse Data Warehouse, and Power BI, and often included data analytics software provided by other vendors. Attempts to provide access to the data and integrate its processing often involved complex interfaces and operations requiring hundreds of hours of engineering work to build and maintain.

The interviewees noted how their organizations struggled with common challenges, including:

- **Difficulty collaborating on projects.** Different team members worked with separate tools that required separate logins and often specialized query language or coding. This led to project delays, miscommunication, and finger-pointing. It also limited the ability for team members to question, comment on, or build on each other's work.
- **Suboptimal use of employees' skills.** Interviewees noted that professionals on both the data engineering and the business analytics sides of the business were frustrated with the amount of time and energy they spent on activities that did not directly advance the process of providing decision-makers with the insights they needed. A controller in the pharmaceuticals manufacturing space explained: "It's just a headache if you have to do it in a fragmented chain of different software because you have to make changes in many layers and tiers. At that point, we're just doing maintenance and not working with the numbers."
- **Delays in access to insights.** Some interviewees said the scale of their organization's data sets made it difficult to work in real time due to the time it took to harvest and refresh data. Because business analysts had to make requests of data scientists and engineers, there could be

> **"We have a data lake, but getting data out is very tough. There are very rigid predefined queries which don't allow for the needs of our different businesses."**
>
> *Controller, pharmaceuticals*

long delays in getting what they needed — and even longer delays if they needed further adjustments.

The controller in pharmaceutical manufacturing explained, "We wanted to go into a more modern, robust environment where we can more easily bring in the data in the shape we need it – and also combine it with a lot of external sources – for planning, reporting and analytics.

- **Excessive solution and vendor management requirements**. The presence of multiple tools and platforms in their analytics processes burdened interviewees' organizations with the cost of maintaining and managing all of them. For example, the co-founder of a data analytics software provider remarked: "Even though it's all in the same tenant, we have to stand up a Kusto database and various storage mechanisms. We have to have our harvester. We need to put Data Factory over here. They all have their own management interfaces and security models [and] all of that maintenance."

**INVESTMENT OBJECTIVES**

The interviewed executives and their management teams had a high-level objective of harnessing the power of their data to accelerate their progress as insights-driven businesses. In order to achieve that objective, they realized they needed to stay aware and informed of the latest technology that could help their organizations do that. This is the primary reason each agreed to participate in a private preview for Microsoft Fabric.

The organizations expected the product to help them resolve the issues and challenges discussed above, as well as to expand the power of analytics organization wide. While they each provided feedback for Microsoft to improve the product from their various perspectives, they were all confident that Microsoft Fabric could deliver on those objectives once it is ready for general availability (GA) release.

**"Microsoft Fabric is making the vision of de-siloing different data layers possible."**

— Solution technician, financial services

## 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 composite organization is a global firm with headquarters in the US. With annual revenues of $5 billion, it employs 10,000 people including 750 data professionals. It stores and analyzes petabytes of data, including sensitive personally identifiable information (PII). It uses that data to improve its product offerings, to more successfully target B2B and B2C customers, to create applications to improve customer experience, and to project and report on its own financial performance.

The company uses several different solutions for warehousing, modeling, analyzing, and business reporting that are used by the following professionals:

- 50 data warehousing engineers.
- 150 data scientists.
- 550 business analysts.

The organization's solutions interface with each other, but they are not truly integrated.

**Deployment characteristics.** After investigating Microsoft Fabric during the preview period, the composite organization runs an in-depth pilot, then deploys the product across approximately 25% of the organization. Finally, in the third year, it rolls out Fabric across the entire organization.

**Key Assumptions**

- **$5 billion in revenues**
- **10,000 employees**
- **550 data professionals**
- **Operates in multiple regions**

# Analysis Of Benefits

Quantified benefit data as applied to the composite

| Total Projected Benefits | | | | | |
|---|---|---|---|---|---|
| **Projected Benefit** | **Year 1** | **Year 2** | **Year 3** | **Total** | **Present Value** |
| Total projected benefits - Low | $140,470 | $1,214,755 | $5,663,965 | $7,019,190 | $5,387,051 |
| Total projected benefits - Mid | $174,487 | $1,496,244 | $6,897,004 | $8,567,734 | $6,577,010 |
| Total projected benefits - High | $228,415 | $1,730,858 | $8,354,513 | $10,313,786 | $7,914,980 |

**INCREASED DATA ENGINEERING PRODUCTIVITY**

**Evidence and data.** Interviewees were best able to comment on their experience with this benefit of Microsoft Fabric. It was most likely to have been the focus of their experimentation, and it was often closest to their own expected interaction with the product. After detailing the challenges they and their organizations faced with their current stacks (e.g., complex yet tedious manipulations, difficulties in collaboration, and potential for errors and security issues), they enumerated several ways in which they expected Fabric to improve productivity for data professionals.

The pharmaceutical manufacturing company controller stated, "For the team, it means a lot because we can gain quite a bit of resource flexibility and work on common data sets to save a lot of time and effort."

He went on to describe the value of having all the data analytics professionals in his organization working with the same data that's transformed and stored in the same ways: "Too often in this disconnected environment, the people we are working with have a different number [and] a different version of truth, and then we first have to talk about what is the right version of the truth before we can talk business."

A solution technician at a financial services firm related: "Based on the data packet file, and all those shortcuts available with the One Lake center, it was amazing how easy it was to provide a business team with all these different technologies, like data integration, pipelining, a warehouse, a lake house, [and] data transformation. It was a click or maybe a couple of clicks to add these people to the allowed security group and then create a workspace for them. In 3 minutes, they were able to start. This would have taken three or four weeks before."

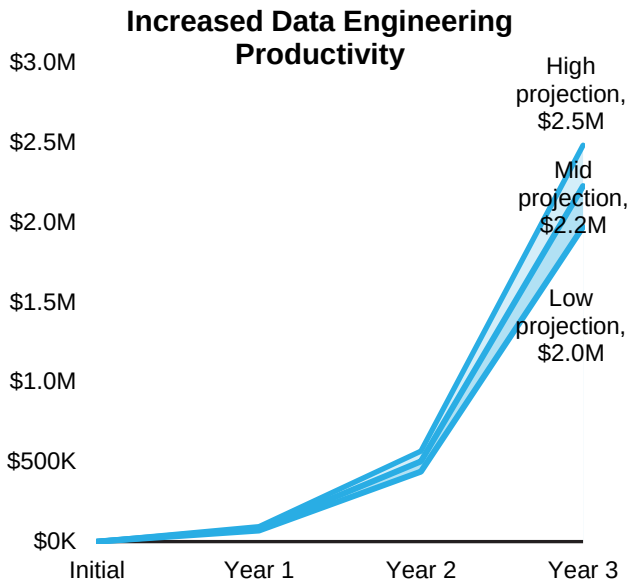
**"We have customers with massive data sets that take a long time to refresh. With Direct Lake mode, we should be able to cut out that piece of the puzzle."**

*Co-founder, data analytics software*

**Modeling and assumptions.** In order to model the value of this benefit for the composite organization, Forrester assumes:

- The organization employs 150 data scientists.

- Each data scientist spends 625 hours a year (approximately 30% of their time) integrating, copying, and debugging data as a result of the variety of different platforms they need to use in the course of their manipulation of the data.
- In Year 1, Fabric helps the composite's data scientists and engineers save 30% to 40% of this time. During the next two years, these savings increase to 40% to 50% as they become more familiar and facile with the product.
- The firm's data engineers earn an average of $97 per hour on a fully burdened basis.
- The company recaptures 50% of the time savings for productive activity.
- The organization starts with a pilot affecting 5% of its data scientists, then expands to include 25% in Year 2 and 100% by Year 3.




**Results.** This yields a three-year projected PV ranging from $2.0 million (low) to $2.5 million (high).

**Increased Data Engineering Productivity**

| Ref. | Metric | Source | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| A1 | Data engineers | Composite | 150 | 150 | 150 |
| A2 | Time spent on integration and debugging per engineer (hours) | Interviews | 700 | 700 | 700 |
| $A3_{Low}$ | Reduction in integration and debugging time with Fabric | Interviews | 30% | 35% | 40% |
| $A3_{Mid}$ | | | 35% | 40% | 45% |
| $A3_{High}$ | | | 40% | 45% | 50% |
| A4 | Average fully loaded hourly wage of a data engineer | TEI standard | $97 | $97 | $97 |
| A5 | Productivity recapture | TEI standard | 50% | 50% | 50% |
| A6 | Percent of benefit achieved due to rollout timeline | TEI standard | 5% | 25% | 100% |
| **$At_{Low}$** | **Increased data engineering productivity** | **A1*A2*A3*A4*A5*A6** | **$76,388** | **$445,594** | **$2,037,000** |
| **$At_{Mid}$** | | | **$89,119** | **$509,250** | **$2,291,625** |
| **$At_{High}$** | | | **$101,850** | **$572,906** | **$2,546,250** |
| | **Three-year projected total: $2.6M to $3.2M** | | **Three-year projected present value: $2.0M to $2.5M** | | |

### INCREASED BUSINESS ANALYST PRODUCTIVITY

**Evidence and data.** Interviewees expected Microsoft Fabric to have a powerful influence on the productivity and output of business analysts, especially given its use of the Power BI interface. They anticipated that analysts would find and manipulate the data they need more quickly within Power BI, reduce their wait time for requests made of data scientists and engineers, and even expand their own capabilities with Fabric's more user-friendly access to other powerful data analytics tools.

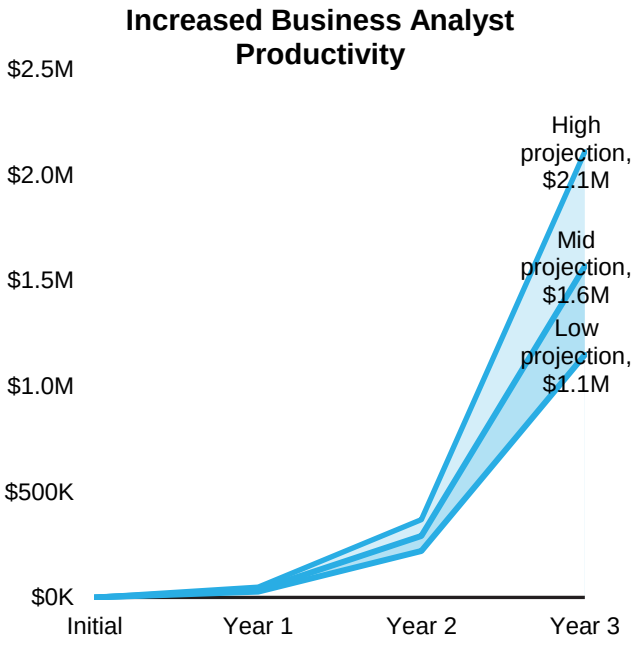
The head of the Power BI center of excellence at a manufacturing company said: "When you have business analysts creating their own content, there is a brilliant upside to that, which is agility. You don't have to rely as much on IT teams, and you don't have to rely on having a large budget to deliver certain solutions."

The solution technician in financial services said: "If there is an analyst who wants to become more of a data scientist and take their analytics to the next level, with Fabric, there is a path because this is a more user-friendly technology. Of course, data engineers can still create Python script, SQL [structured query language] scripts and the like, but there are technologies inside the stack that are much, much different from writing R code. That will help more people do more things more easily."

**Modeling and assumptions.** In order to model the value of this benefit for the composite organization, Forrester assumes:

- The organization employs 400 business analysts who work within specific business units and teams. They provide reporting and insights to management teams in different departments, functions, and geographies.
- These analysts spend 1,400 hours per year producing analytic output.
- Fabric allows the analysts to produce analyses 4% to 8% more quickly in the first year. As they grow more familiar with its capabilities, they produce their work 7% to 15% faster by Year 3.
- Analysts earn a fully burdened hourly wage of $55.
- The company recaptures 50% of the time savings for productive activity.
- The organization starts with a pilot of Fabric affecting 5% of its data scientists, then expands to include 25% in Year 2 and 100% by Year 3.

**Results.** This yields a three-year projected PV ranging from $1.2 million (low) to $2.1 million (high).



| Increased Business Analyst Productivity | | | | | |
|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Source** | **Year 1** | **Year 2** | **Year 3** |
| B1 | Business analysts | Composite | 400 | 400 | 400 |
| B2 | Time spent creating analytic output (hours) | Interviews | 1,400 | 1,400 | 1,400 |
| $B3_{Low}$ | | | 4% | 6% | 8% |
| $B3_{Mid}$ | Reduction in time to create output | Interviews | 5% | 8% | 11% |
| $B3_{High}$ | | | 7% | 10% | 15% |
| B4 | Average fully loaded hourly wage of a business analyst | TEI standard | $55 | $55 | $55 |
| B5 | Productivity recapture | TEI standard | 50% | 50% | 50% |
| $B5_{High}$ | Percent of benefit achieved due to rollout timeline | Assumption | 5% | 25% | 100% |
| **$Bt_{Low}$** | | | **$30,894** | **$231,707** | **$1,235,769** |
| **$Bt_{Mid}$** | **Increased business analyst productivity** | **B1*B2*B3*B4*B5*B6** | **$38,618** | **$308,942** | **$1,699,183** |
| **$Bt_{High}$** | | | **$54,065** | **$386,178** | **$2,317,067** |
| **Three-year projected total: $1.5M to $2.8M** | | | **Three-year projected present value: $1.2M to $2.1M** | | |

### ENHANCED BUSINESS RESULTS DUE TO BETTER INSIGHTS

**Evidence and data.** Interviewees enumerated several ways in which they expect Microsoft Fabric would make their organizations into more insights-driven businesses and enable better business decisions. The solution technician in financial services explained that Microsoft Fabric facilitated working with vast amounts of data in real time, much more than their company's current stack allows. In the insurance business, this could make it easier to predict previously unpredictable situations. That, in turn, would let the organizations optimize some of their contracts and premiums, which could have a strong impact on business growth and profitability.

Interviewees said they also believe Microsoft Fabric would significantly reduce errors on a day-to-day basis because it would eliminate much of the need to replicate and move data through data lakes, data warehouses, and BI systems. Interviewees confirmed that excessive copying and handoffs introduce the risk that errors would be made in translation, and that different team members may use outdated copies. They also pointed out that these activities introduce higher latency and additional security risk.

Interviewees also predicted another driver of better insights: closer alignment between technical data professionals and business analytics teams. They said that because Fabric provides user-friendly experiences for both kinds of users without sacrificing the specific power either side needs, they expect both would work together more closely and fruitfully with Microsoft Fabric.

Finally, and perhaps most importantly, interviewees unanimously agreed that reducing time and energy spent on low-value tasks would unleash the creativity of all the participants in the data analytics function. In addition, they said working with a more user-friendly

interface would empower and upskill data professionals and business analysts to deliver more useful, more actionable, and better-grounded insights to decision-makers.

The solution technician at a financial services firm explained: “[Fabric] is not just rebranding and putting existing products [into] a larger box. It’s making the products fit perfectly together and also reinventing certain products from a very foundational perspective. For this reason, certain things can be done more easily, and that means they can be done by more colleagues.”

The controller at a pharmaceutical manufacturer told Forrester: “Our business analysts want time to actually work with the numbers rather than just consolidate them. They can use that freed-up time to provide better recommendations.”

The co-founder of a data analytics software provider said: **“**It will become more of a discussion about ‘What’s the right tool for the job?’ versus ‘What can I do with the tool I know?’. When you have a hammer, everything looks like a nail. Well, now we’ve got a whole toolbox.”

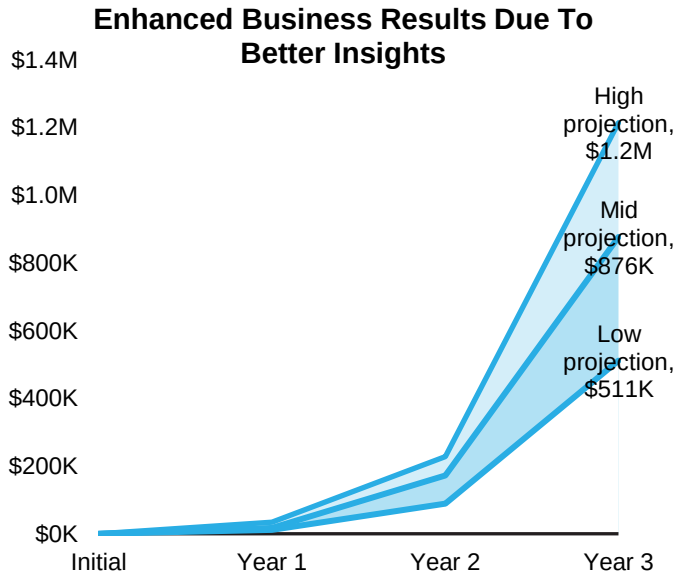
**“[Microsoft Fabric] can provide a competitive advantage. I mean, if we can move faster in the market, that’s an advantage because we can do things our competitors can’t.”**

*Co-founder, data analytics software*

**Modeling and assumptions.** In order to model the value of this benefit for the composite organization, Forrester assumes:

- Before using Fabric, the composite organization’s annual revenues are $5 billion.
- Fabric helps the organization grow its revenues by 0.1% to 0.3% in the first year as a result of having greater access to data, better data quality, and an expanded ability to perform more sophisticated and timely analysis.
- The revenue growth is not solely the result of the introduction of Fabric, but also due to the skill and ingenuity of the data team and the agility of the business teams responding to better insights. As such, Forrester only estimates the growth for the organization that is directly attributable to Fabric. Forrester assumes 15% of the value of the benefit is attributable to Fabric.
- This improvement in revenue growth accelerates to 0.15% to 0.38% in Year 2 and to 0.23% to 0.53% Year 3.
- The company’s average operating margin is 5%.
- Benefits scale up over the three years as the composite increases its rollout of Fabric from 5% of the organization to 100%.

**Results.** This yields a three-year present value of $500,000 (low) and $1.2 million (high).



| Enhanced Business Results Due to Better Insights | | | | | |
|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Source** | **Year 1** | **Year 2** | **Year 3** |
| C1 | Annual revenue before Fabric | Composite | $5,000,000,000 | $5,000,000,000 | $5,000,000,000 |
| $C2_{Low}$ | | | 0.10% | 0.15% | 0.23% |
| $C2_{Mid}$ | Increased revenue attributable to Fabric | Interviews | 0.15% | 0.30% | 0.38% |
| $C2_{High}$ | | | 0.30% | 0.38% | 0.53% |
| C3 | Average net profit | Industry Average | 5% | 5% | 5% |
| C4 | Percent benefit achieved due to rollout timing | Assumption | 5% | 25% | 100% |
| **$Ct_{Low}$** | | | **$12,188** | **$93,750** | **$562,500** |
| **$Ct_{Mid}$** | **Enhanced business results due to better insights** | **C1*C2*C3*C4** | **$18,750** | **$187,500** | **$937,500** |
| **$Ct_{High}$** | | | **$37,500** | **$234,375** | **$1,312,500** |
| | **Three-year projected total: $7K to $1.6M** | | | **Three-year projected present value: $5K to $1.2M** | |

## REDUCED SPENDING ON SECURITY, GOVERNANCE, AND COMPLIANCE

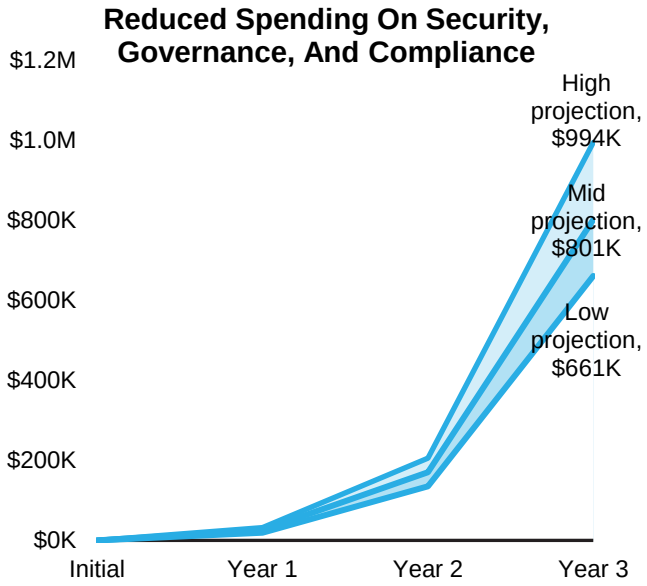
**Evidence and data.** Interviewees told Forrester they expect that an integrated, single-source solution such as Microsoft Fabric would greatly improve efficiency in monitoring and maintaining their organizations' data assets. In addition, they said they believe that not relying on data users to set up the correct security parameters repeatedly and in multiple places would more effectively secure those assets.

The head of the Power BI center of excellence at a manufacturing company stated: "To the best of my knowledge, there are at least two different teams creating content in the data lake. In that space, I'm more worried about the right governance, the right use of data assets, [and] avoiding any obligations."

The co-founder of a data analytics software provider explained: "With Microsoft Fabric, there is one place to look. That single entry point would better facilitate monitoring of the analytics stack. It's also true for governance. Governing the availability and resource usage should be easier with one place to go, and that could represent significant time savings."

**Modeling and assumptions.** In order to model the value of this benefit for the composite organization, Forrester assumes:

- The organization spends $700 per employee each year on security, governance, and compliance activities.
- After deploying Fabric, this spending drops between 6% and 10% in the first year to between 10% and 15% in the third year.



- The impact of this benefit scales up as the composite organization increases its rollout of Fabric from 5% of the organization to 100%.

**Results.** This yields a three-year present value of $700,000 (low) to $1.0 million (high).

**Reduced Spending On Security, Governance, And Compliance**

| Ref. | Metric | Source | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| D1 | Annual spend on security, governance, and compliance activities | Composite | $7,000,000 | $7,000,000 | $7,000,000 |
| $D2_{Low}$ | | | 6% | 8% | 10% |
| $D2_{Mid}$ | Reduction in spending attributable to Fabric | Interviews | 8% | 10% | 12% |
| $D2_{High}$ | | | 10% | 12% | 15% |
| D3 | Percent of benefit achieved due to rollout timeline | Assumption | 5% | 25% | 100% |
| **$Dt_{Low}$** | | | **$21,000** | **$140,000** | **$700,000** |
| **$Dt_{Mid}$** | **Reduced spending on security, governance, and compliance** | **B1*B2*B3** | **$28,000** | **$175,000** | **$840,000** |
| **$Dt_{High}$** | | | **$35,000** | **$210,000** | **$1,050,000** |
| | **Three-year projected total: $900K to $1.3M** | | **Three-year projected present value: $700K to $1.0M** | | |

### ELIMINATED SPEND ON CURRENT SOLUTIONS

**Evidence and data.** None of the interviewees said their organization experienced this benefit yet since they piloted Fabric in private preview and had not deployed it across their organizations. However, each said they realized that if and when their company switched to Fabric, it would pay fees to Microsoft based on its usage of the solution rather than the fees they currently pay for many legacy solutions.

In addition, interviewees said they expect their organizations would see a significant reduction in capacity requirements as a result of economies of scale. They also said they expect Fabric would make planning easier and more accurate because they wouldn't need to provision, administer, and provide backup separately for all the different solutions Fabric would replace.

**Modeling and assumptions.** To model this benefit, Forrester assumes:

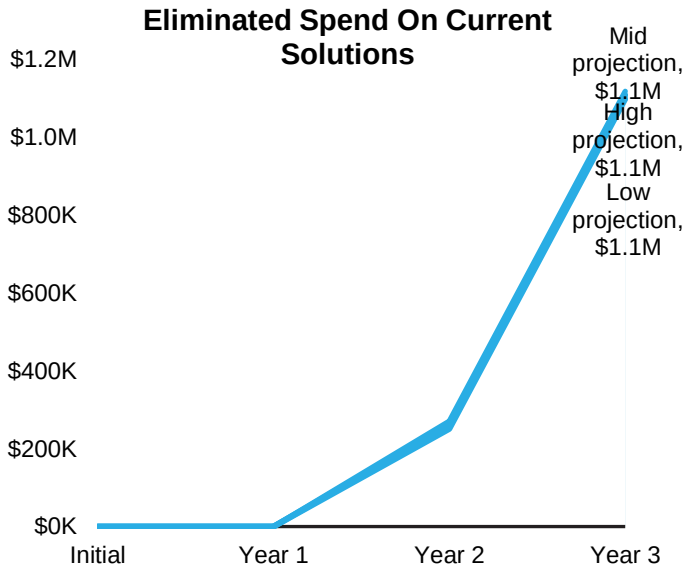
- The composite organization has 80 TB of data stored for analytics, it uses Synapse Analytics, and it pays separate fees for Spark, Data Warehouse computing capacity, Data Warehouse storage capacity, and Power BI compute capacity.
- The composite organization also uses and pays for products such as Real Time Analytics, Data Science, and Data Engineering, but their costs make up a relatively small proportion of the total. At this point in the product lifecycle, it is impossible to estimate what the organization would pay for its use of these functions within Fabric. Therefore, Forrester conservatively estimates the organization would pay the same amount for this capacity with Fabric as it did before the deployment.

- The organization retains all its legacy solutions during the pilot in Year 1, but it eliminates that spending in Year 3. In Year 2, it eliminates 90% to 100% of the spending attributable to the 25% of the organization to which Fabric is rolled out.

**Risks.** The risk that an organization will experience a different value for this benefit depends on:

- The amount of data the organization keeps in storage for its data analytics function.
- The number and type of queries the organization runs, which impacts the required compute capacity.
- The number of FTEs who administered the analytics stack prior to deploying Fabric.

**Results.** This yields a three-year present value of $1.1 million.




**Eliminated Spend On Current Solutions**

| Ref. | Metric | Source | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| E1 | Spark fees | Composite | $0 | $429 | $1,716 |
| E2 | Data Warehouse compute capacity | Composite | $0 | $216,000 | $864,000 |
| E3 | Data Warehouse storage fees | Composite | $0 | $5,520 | $22,080 |
| E4 | Power BI compute capacity | Composite | $0 | $15,000 | $60,000 |
| $E5_{Low}$ | Savings on current solution fees | Interviews | 0% | 90% | 100% |
| $E5_{Mid}$ | | | 0% | 95% | 100% |
| $E5_{High}$ | | | 0% | 100% | 100% |
| E6 | System administrator FTEs | Interviews | 0 | 1.0 | 2.0 |
| E7 | Fully burdened annual salary of a system administrator | TEI standard | $90,450 | $90,450 | $90,450 |
| **$Et_{Low}$** | **Eliminated spend on current solutions** | **((E1+E2+E3+E4)*E5) +(E6*E7)** | **$0** | **$303,704** | **$1,128,696** |
| **$Et_{Mid}$** | | | **$0** | **$315,552** | **$1,128,696** |
| **$Et_{High}$** | | | **$0** | **$327,399** | **$1,128,696** |
| **Three-year projected total: $1.4M to $1.5M** | | | **Three-year projected present value: $1.1M** | | |

## UNQUANTIFIED BENEFITS

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

- **Enhancing job satisfaction among data scientists and analysts.** Because data professionals are freed up from the low-value tasks, frustrations, and waiting times they experience while working across multiple platforms, they're able to spend more time solving real problems for their businesses. As they see their daily work make more of an impact, they feel a greater sense of job satisfaction and are also more likely to be acknowledged by others for their contributions.

  The co-founder of a data analytics software firm opined: "Now the process doesn't involve so much drudgery. We're going to be better able to focus on that higher-level capability. It's less about throwing around bits and bytes and a little more about understanding business processes."

- **Expanding capabilities and creativity across the data analytics team.** Interviewees said they expect that Microsoft Fabric's SaaS-based, user-friendly UI will encourage data professionals at all levels to explore and expand their capabilities, which would lead to new ways of viewing and using their organization's data to address business issues of all kinds. As the co-founder of a data analytics software provider predicted: "Things like a pipeline become so much more approachable under the Fabric UI. It will become a discussion that's much more about what's the right tool for the job versus what I [can] do with the tool I know. When you have a hammer, everything looks like a nail. Well, now we've got a whole toolbox."

- **Improving alignment between the technical and business sides of data analytics.** Microsoft Fabric is designed to provide more user-friendly access to all types of data professionals while still providing them with the power of the more specialized tools they used in the past. Interviewees said that as all these professionals work more closely together on projects and in workspaces, they expect they will come to understand and appreciate each other's roles and skills and reduce friction between teams.

> **"What I believe is going to happen is there will be cases in which the business is going to be very creative and will combine those technologies and come up with ways to use the data we never thought about."**
>
> *Head of Power BI center of excellence, manufacturing*

## FLEXIBILITY

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

- **Accelerated progress toward becoming a true IDB.** Interviewees repeatedly pointed to ways in which they envisioned Microsoft Fabric could expand access to and make better use of data analytics to new areas or new applications in their organizations. For instance, the head of the Power BI center of excellence at a manufacturing company related: "The processes that we are working on aren't fully industrialized; however, Microsoft Fabric can help us industrialize those processes and bring them to a broader community of users. For instance, none of our

[private preview] teams were from the manufacturing area, so it's difficult to predict, but in general, having better information about product quality or downstream demand can help us make sure that we are making the right products in the right amount and providing them at the right [times] and [places]."

- **Increased opportunity to monetize data.** The solution technician in financial services made a long-term prediction and said: Microsoft Fabric's ability to share large amounts of data provides the possibility to take a larger step in data monetization. But this is also something that we have to investigate in the future."

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 | Microsoft Fabric fees | $0 | 33,063 | $132,251 | $529,003 | $694,317 | $536,803 |
| Gtr | Planning and deployment | $155,355 | $238,875 | $410,902 | $84,213 | $889,344 | $775,372 |
| Htr | Ongoing operation and maintenance | $0 | $52,009 | $104,018 | $104,018 | $260,044 | $211,395 |
| | Total costs (risk-adjusted) | $155,355 | $323,733 | $647,170 | $717,447 | $1,843,705 | $1,523,537 |

### MICROSOFT FABRIC FEES

**Evidence and data.** It is important to keep in mind that, at the time of writing, Microsoft Fabric was just released for public preview, so private-preview interviewees were unable to provide experience-based cost information. As a result, the usage requirements (and resulting pricing) projected for the composite organization in this study are very much estimates.

In general, interviewees said they expect that integrating functions and products their organizations currently operate as separate solutions would provide significant savings in terms of computing efficiency and storage requirements as compared to the costs before using Fabric.

**Modeling and assumptions.** To model this cost, Forrester assumes:

- The composite organization stores 80 TB of data in Fabric Data Warehouse once it is fully deployed in Year 3.
- The pilot deployment in Year 1 involves approximately 5% of the enterprise, and the initial rollout in Year 2 involves a department or business unit that represents 25% of the enterprise size.
- The composite's fees to support storage in Fabric Data Warehouse scale up from $1,380 in Year 1 to $22,080 in Year 3.
- The composite's fees to support compute capacity in Fabric Data Warehouse scale up from $28,620 for the initial pilot to $457,920 per year in full deployment.
- The composite's fees for Spark within Fabric scale up from $57 in pilot to $912 in full deployment.
- As noted for Benefit E, this projection is based on the composite organization's usage of Fabric Data Warehouse and Spark. As a result, its total spending for Fabric may be higher than projected here, but the additional cost will almost certainly be lower than its current spending for the same functions in Synapse.

**Risks.** The risk that an organization may experience different costs than what's modeled for the composite may vary based on:

- The size of the organization's data analytics program, which will drive storage and capacity needs.
- The speed of the organization's rollout.

**Results.** To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $537,000.

| Microsoft Fabric Fees | | | | | | |
|---|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Source** | **Initial** | **Year 1** | **Year 2** | **Year 3** |
| F1 | TB of data in the data lake | Assumption | 0 | 5 | 20 | 80 |
| F2 | Fabric DW storage | Microsoft | $0 | $1,380 | $5,520 | $22,080 |
| F3 | Fabric DW capacity | Microsoft | $0 | $28,620 | $114,480 | $457,920 |
| F4 | Fabric Spark cost | Microsoft | $0 | $57 | $228 | $912 |
| Ft | Microsoft Fabric fees | F2+F3+F4 | $0 | $30,057 | $120,228 | $480,912 |
| | Risk adjustment | ↑10% | | | | |
| Ftr | Microsoft Fabric fees (risk-adjusted) | | $0 | $33,063 | $132,251 | $529,003 |
| | **Three-year total: $694,317** | | | **Three-year present value: $536,803** | | |

### PLANNING AND DEPLOYMENT

**Evidence and data.** Due to the limited nature of the private preview, interviewees were unable to specify their organizations' actual deployment costs. They were, however, quite clear about their firms' anticipated approaches to planning for and deploying a transition to Fabric. For instance, the co-founder of a data analytics software firm said: "We will have to do a controlled test of our whole process. Once that's proven out, we would run a few test customers in parallel. I'm not worried about being able to scale, but we'll have to monitor it in parallel at first. It will cost us more for probably six months, [and] then I would expect significant savings."

**Modeling and assumptions.** To model this cost, Forrester assumes:

- The composite organization spends three months planning and testing for the pilot of Microsoft Fabric, then introduces it to 5% of the company/analytics team.
- In Year 2, it rolls out Fabric to an additional 20% of the company, and in Year 3, the rollout is complete with 100% of the composite's 550 data professionals using Microsoft Fabric.
- Four senior-level employees from multiple functions spend 70% of their time for three months optimizing processes and onboarding them [and] then conducting the pilot of Fabric.
- Six people spend 70% of their time over three months during Year 1 preparing for the Year 2 expansion to an additional 20% of the company.
- In Year 2, 10 people spend 70% of their time for three months preparing for the final rollout to the full organization.
- In Year 1, eight technical data professionals spend approximately 4 hours learning how working in Fabric differs from working in the previous tools.

- In Year 1, 20 business analysts spend 2 hours training on Fabric's Power BI interface. These users spend less time in training than data professionals because their initial experiences with Fabric will be nearly identical to their previous experiences with Power BI.
- In Year 2, 30 technical professionals and 80 business professionals receive the same training as the users in Year 1. The remaining members of the data team receive training in Year 3.
- Data scientists, engineers, and senior-level employees who work on Fabric's planning and testing earn a fully burdened hourly wage of $97.
- Business analysts earn a fully burdened hourly wage of $55.

**Risks.** The risk that an organization may experience different costs than what's modeled for the composite may vary based on:

- The time it takes the organization to prepare its people and processes for a new approach.
- The speed of the organization's rollout.
- The salaries of the affected professionals.

**Results.** To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of $775,000.

**Planning And Deployment**

| Ref. | Metric | Source | Initial | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|---|
| G1 | Projected time spent planning and testing before deployment (hours) | Interviews | 1,456 | 0 | 0 | 0 |
| G2 | Projected time for initial deployment (hours) | Interviews | 0 | 2,184 | 0 | 0 |
| G3 | Projected time for additional rollouts (hours) | Interviews | 0 | 0 | 3,640 | 0 |
| G4 | Time for IT/data engineering training (hours) | Interviews | 0 | 32 | 120 | 448 |
| G5 | Time for business analyst training (hours) | Interviews | 0 | 40 | 160 | 600 |
| G6 | Fully burdened hourly wage of an IT/data engineer | TEI standard | $97 | $97 | $97 | $97 |
| G7 | Fully burdened hourly wage of a business analyst | TEI standard | $55 | $55 | $55 | $55 |
| Gt | Planning and deployment | ((H1+H4)*H6)+(H5*H7) | $141,232 | $217,159 | $373,547 | $76,557 |
| | Risk adjustment | 10% | | | | |
| Gtr | Planning and deployment (risk-adjusted) | | $155,355 | $238,875 | $410,902 | $84,213 |
| | **Three-year total: $889,344** | | | **Three-year present value: $775,372** | | |

### ONGOING OPERATION AND MAINTENANCE

**Evidence and data**. Interviewees said they expect their organizations would likely spend less than they currently do for operation and maintenance of their current data analytics stacks on an ongoing basis. The co-founder of a data analytics software firm told Forrester: "I don't anticipate any significant operational costs. Compared to the way we do it today, I see a significant reduction."

**Modeling and assumptions.** To model this cost, Forrester assumes:

- The composite organization uses the FTE of 0.5 system administrators during the pilot phase, then it uses a dedicated, full-time administrator for the remaining two years.
- The fully burdened annual salary of a system administrator is $90,450.

**Risks.** The risk that an organization may experience different costs than what's modeled for the composite may vary based on:

- The salary of the organization's systems administrator.
- The time of system administrator work required to maintain Fabric throughout the expansion phases.

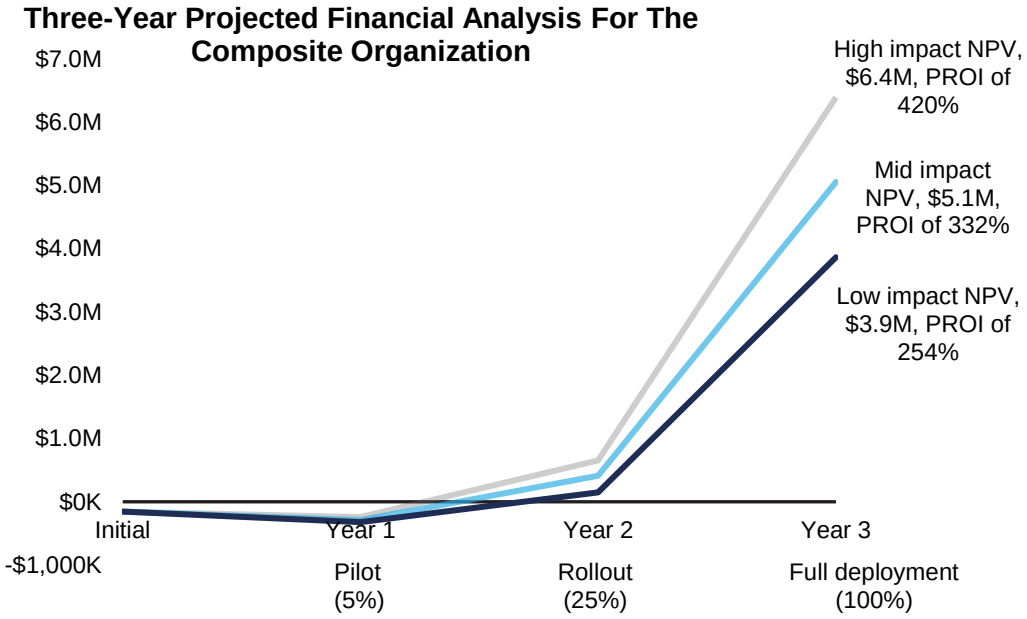
**Results.** To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of $211,000.

**Ongoing Operation And Maintenance**

| Ref. | Metric | Source | Initial | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|---|
| H1 | System administrators for Fabric | Composite | 0 | 0.5 | 1.0 | 1.0 |
| H2 | Fully burdened annual salary of a systems administrator | TEI standard | $0 | $90,450 | $90,450 | $90,450 |
| Ht | Ongoing operation and maintenance | H1*H2 | $0 | $45,225 | $90,450 | $90,450 |
| | Risk adjustment | 15% | | | | |
| Htr | Ongoing operation and maintenance (risk-adjusted) | | $0 | $52,009 | $104,018 | $104,018 |
| | **Three-year total: $260,044** | | | **Three-year present value: $211,395** | | |

# Financial Summary

**CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS**




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

**These risk-adjusted PROI and projected NPV 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 | ($155,355) | ($323,946) | ($647,170) | ($717,233) | ($1,843,705) | ($1,523,570) |
| Total benefits (low) | $0 | $140,470 | $1,214,755 | $5,663,965 | $7,019,190 | $5,387,051 |
| Total benefits (mid) | $0 | $174,487 | $1,496,244 | $6,897,004 | $8,567,734 | $6,577,010 |
| Total benefits (high) | $0 | $228,415 | $1,730,858 | $8,354,513 | $10,313,786 | $7,914,980 |
| PROI (low) | | | | | | 254% |
| PROI (mid) | | | | | | 332% |
| PROI (high) | | | | | | 420% |

# 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 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 senior management and 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 of the product. The projected cost category within New Tech TEI captures incremental ongoing costs over the existing environment that are associated with the solution.

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

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

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

### PRESENT VALUE (PV)

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

### PROJECTED NET PRESENT VALUE (PNPV)

The projected 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. 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%.

## Appendix B: Supplemental Material

*Related Forrester Research*

"Executive Guide 2022: Insights Technologies," Forrester Research, September 26, 2022

"Rationalize Multiple Enterprise BI Platforms With BI Fabric," Forrester Research, April 10, 2023

"Gauge Your Insights-Driven Business Maturity," Forrester Research, June 6, 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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