A Forrester Total Economic Impact™
Study Commissioned By IBM
October 2019

The Total Economic Impact™ Of IBM Planning Analytics

Cost Savings And Business Benefits Enabled By IBM Planning Analytics

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Project Director:
David Park

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Benefits And Costs

Reduced time to complete annual budgeting cycle:
63%

Faster planning system processing:
80%

Reduced time to complete forecasts
70%

Executive Summary

IBM Planning Analytics, powered by IBM TM1, is a comprehensive planning and analytics solution designed to integrate and streamline an organization's planning workflows and processes, thereby allowing for more efficient and productive planning cycles. IBM commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential ROI enterprises may realize by deploying IBM Planning Analytics. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of IBM Planning Analytics on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed several customers with years of experience using IBM Planning Analytics. Prior to leveraging IBM Planning Analytics, these organizations executed their various planning workflows using manual, spreadsheet-based tools and processes that were siloed, error-prone, and slow to compute. Initially, these tools and processes sufficed; however, as organizations continued to scale and expand their operations, managing across various planning cycles became an increasingly time-consuming and expensive endeavor.

Composite Organization

Based on the aforementioned interviews, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization is representative of the four companies that Forrester interviewed and is used to present the aggregate financial analysis for this study. The composite organization that Forrester synthesized from the customer interviews has the following characteristics:

- Retail enterprise operating in the Americas with annual revenues of $800M and 5,000 employees.
- By Year 3, the organization has 175 users of IBM Planning Analytics, including 87 read-only users, 70 read/write users, and 18 power users (including administrators/modelers).
- The organization operates 30 retail branch locations in Year 1 and grows to 35 retail branch locations by Year 3. Each branch acts as a separate revenue and cost center, thus necessitating individual input toward annual budgeting and monthly forecasting and reporting.

Key assumptions

- Retail enterprise with 35 retail branch locations (Y3)
- $800M annual revenue
- 100% cloud-based deployment of IBM Planning Analytics
- 175 IBM Planning Analytics Users (Y3)
- Leverages Planning Analytics for core FP&A and supply chain planning use cases

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ROI
133%

Benefits PV
$3,047,611

NPV
$1,737,874

Payback
14 months

- Deploys IBM Planning Analytics Cloud, leveraging both IBM Planning Analytics for Microsoft Excel and IBM Planning Analytics Workspace.
- Prior to adopting IBM Planning Analytics, the organization relied on spreadsheet-based planning solutions for individual planning workflows, including core FP&A (financial planning and analysis) planning and supply chain planning. As the organization continued to grow, repeating planning processes across the branch footprint became a time-consuming and expensive endeavor, prompting the organization to eventually engage IBM.

Key Findings

Quantified benefits. The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the companies interviewed:

- **63% reduction in labor time needed to complete the annual budgeting cycle.** Centralizing planning processes on an enterprise level allowed organizations to break siloes across disparate departments and lines of businesses, all contributing separately to the broader annual budget. In doing so, IBM Planning Analytics promoted collaboration and communication, created a single and real-time source of the truth, and streamlined burdensome administrative steps such as data collection and consolidation. Over three years, the subsequent cost savings resulted in a present value of nearly $1.2M.
- **80% faster processing of planning data.** Leveraging the powerful IBM TM1 calculation engine, organizations reduced the average time to run a planning system refresh from 45 minutes with their legacy planning systems to under 10 minutes with IBM TM1. With hundreds of reports being refreshed during month-end reporting cycles, organizations quickly experienced material time savings from faster system processing speeds. Over three years, these efficiencies accumulated a present value of just over $1M.
- **70% fewer labor hours required to complete forecasting cycles.** By leveraging templates and pre-existing modules to seed historical data prior to calculating forecasting metrics for future periods, planning professionals spent less time on manual data collection and input and more time reviewing and analyzing forecast results. Over three years, the labor cost savings amounted to a present value of $195K.
- **Cost savings from retiring and replacing legacy planning solutions.** IBM Planning Analytics replaced organizations' legacy planning solutions with a simple IT data feed, thereby creating a centralized repository applicable across multiple planning use cases while simultaneously reducing hardware, software, support, and professional services fees associated with any legacy systems. Over three years, the cost savings totaled a present value of $689K.

Unquantified benefits. The interviewed organizations experienced the following benefits, which are not quantified for this study:

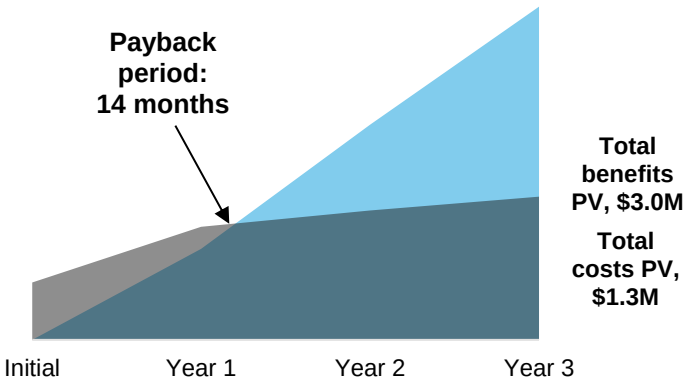
- **Reduced risk of errors.**
- **Improved data hygiene and consistency.**
- **Increased collaboration.**

Costs. The interviewed organizations experienced the following risk-adjusted PV costs:

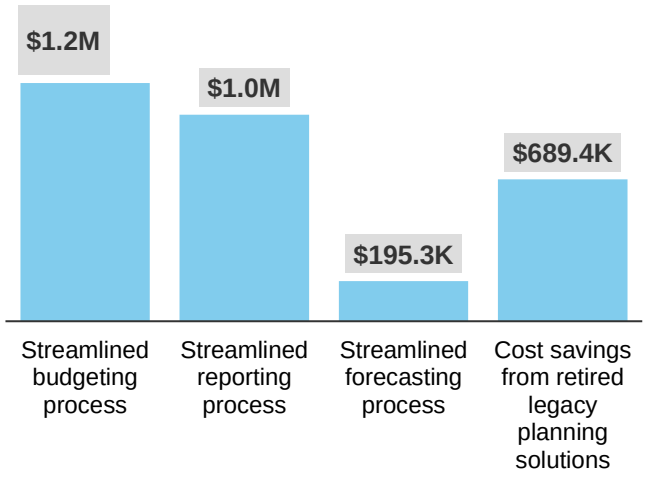
- **Licensing, support, and implementation services.** Organizations engaged IBM Business Partners to assist in the initial implementation, customization, and configuration of IBM Planning Analytics for their unique planning use cases. Furthermore, organizations paid software licensing fees to IBM or an IBM Business Partner based on the number and types of users. Over three years, these costs totaled a PV of almost $841K.
- **Internal deployment costs.** Dedicated internal teams consisting of both technical and project management resources coordinated with IBM and its Business Partners during each implementation of IBM Planning Analytics. Over three years, the associated labor costs reached a PV of $337K.
- **Planning Analytics user training.** End users spent hours to weeks training to use IBM Planning Analytics, depending on the user's role. Over three years, training costs amounted to a PV of $132K.

Forrester's interviews with four existing customers and subsequent financial analysis found that an organization based on these interviewed organizations experienced benefits of $3,047,611 over three years versus costs of $1,309,737, adding up to a net present value (NPV) of $1,737,874 and an ROI of 133%.

Financial Summary



Benefits (Three-Year)



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TEI Framework And Methodology

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing IBM Planning Analytics.

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 IBM Planning Analytics can have on an organization:

The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

DUE DILIGENCE
Interviewed IBM stakeholders and Forrester analysts to gather data relative to IBM Planning Analytics.

CUSTOMER INTERVIEWS
Interviewed four organizations using IBM Planning Analytics to obtain data with respect to costs, benefits, and risks.

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

CASE STUDY
Employed four fundamental elements of TEI in modeling the impact of IBM Planning Analytics with regard to: benefits, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

The IBM Planning Analytics Customer Journey

BEFORE AND AFTER THE IBM PLANNING ANALYTICS INVESTMENT

Interviewed Organizations

For this study, Forrester conducted four interviews with IBM Planning Analytics customers. Interviewed customers include the following:

INDUSTRY	SIZE	PLANNING ANALYTICS DEPLOYMENT	INTERVIEWEE
Retail	Revenue: >$10B # of FTEs: 100K to 200K	IBM Planning Analytics Local (on-premises)	Director of FP&A
Financial services	Revenue: $500M to $1B # of FTEs: 1K to 5K	IBM Planning Analytics Cloud	Business intelligence and systems accountant
Hospitality	Revenue: $100M to $500M # of FTEs: 1K to 5K	IBM Planning Analytics Local (on-premises)	Director of enterprise systems
Utilities	Revenue: $100M to $500M # of FTEs: 1K to 5K	IBM Planning Analytics Cloud	Group controller

Key Challenges

Interviewed organizations all performed three primary types of recurring planning activity: budgeting, forecasting, and reporting. All organizations performed these planning activities on a monthly or annual basis during regular planning cycles, such as for financial planning. Prior to adopting IBM Planning Analytics, keeping track of and executing on these activities manually using spreadsheets created the following challenges:

- **Siloed planning workflows.** Organizations, particularly large enterprises, can often adopt several different planning solutions catered to specific departments, functions, or planning cycles. Ultimately, however, the outputs of individual planning activities must roll up into a single organizational hierarchy. This can be a challenge when two different solutions display the same data in different ways or are configured to organize the data in a singular lens, such as a general ledger lens or a product lens. In larger organizations with more complex planning cycles, the reconciliation of data from two or more different planning systems often required a manual effort from dedicated resources. One organization recalled, "We had upwards of twelve people in FP&A whose sole job was simply to reconcile planning numbers."
- **Expensive and inflexible spreadsheet-based legacy planning systems.** Having siloed planning workflows also meant that organizations needed to pay for additional licensing, hardware, and support for each planning system. Furthermore, these planning solutions required additional integration work to be able to effectively communicate with each other, and any changes would require even more integration and customization work, ultimately resulting in a hefty pile of professional services fees paid to a system integrator or other third-party provider. As one organization put it, "The main reason we had this mandate to change our planning system is because our existing solution was highly inflexible and every request to change something cost us a million bucks."

"The main reason we had this mandate to change our planning system is because our existing spreadsheet-based solution was highly inflexible and every request to change something cost us a million bucks."

Director of FP&A

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- **Time- and labor-intensive planning activities.** With their legacy spreadsheet-based planning solutions, organizations needed to manually populate, refresh, and pull data during planning cycles such as month-end reporting or forecasting. A data refresh, for example, could take up to an hour to execute depending on the complexity and amount of data being pulled, leaving less time for review and analysis. Forecasting, too, required manual seeding of data from prior periods before any projections could even be made. These manual processes would be repeated for each planning cycle and workflow, wasting valuable hours that could be spent on other, value-added activities.

> "Our monthly closing process took too much time because our legacy platform simply couldn't calculate fast enough."
>
> *Group controller*

Key Results

The interviews revealed that key results from the IBM Planning Analytics investment include:

- **A unified planning process.** The larger and more complex an organization becomes, the more likely it is to create siloes across different departments, functions, and cost centers, ultimately resulting in a multitude of different planning and reporting systems, processes, and reporting views. By having a central planning system, organizations can ensure that disparate planning workflows all roll up to the same hierarchy, thus eliminating the issue of numbers not reconciling. At the same time, employees from different parts of the organization are able to more efficiently collaborate by pulling data from a single source of truth, therefore reducing the risk of errors and expediting planning cycles.

> "The big benefit for us is really the ability to have a one-stop shop or centralized system that multiple users can access and collaborate together with to effectively produce a forecast or budget and see changes and end results quickly."
>
> *Business intelligence and systems accountant*

- **A simplified planning environment.** Instead of having several planning point solutions leveraging disparate spreadsheets, organizations could rely on IBM Planning Analytics to cover multiple planning use cases. This reduced the need for constant integration, customization, and break/fix support from third parties and ensured that changes deployed to one planning workflow seamlessly applied to the entire planning ecosystem.
- **Scalability.** Organizations found that IBM Planning Analytics could easily adjust to a rapidly growing business without requiring additional planning resources or spreading existing resources thin. With a centrally managed planning environment, organizations could add and remove cost centers, branches, and offices by using pre-existing templates or modules, thereby significantly reducing the time needed to create these additional resources from the ground up and integrate them across the organization's various planning workflows. As one organization put it, "Scalability and growth are huge with Planning Analytics because it's very easy for me to onboard a new property now. I don't really do a whole lot anymore. The templates are ready, the departments are ready, the accounts are ready, the reports are ready, and all I need to do is create a new company on the system."

> "Scalability and growth are huge with Planning Analytics because it's very easy for me to onboard a new property now. I don't really do a whole lot anymore. The templates are ready, the departments are ready, the accounts are ready, the reports are ready, and all I need to do is create a new company on the system."
>
> *Director of enterprise systems*

- **Planning automation.** Interviewed organizations spent the majority of their hours during planning cycles manually collecting, compiling, and validating data rather than analyzing and extracting insights from the data to create business value. IBM Planning Analytics helped these organizations automate the data collection process, making it repeatable and scalable, and enabling further value-added analyses such as what-if or scenario-based segmentation.
- **Streamlined analysis.** Leveraging Planning Analytics' TM1 calculation engine, organizations performed any number of what if and scenario-

based calculations to show the impact of an incremental change in a business driver to the organization's bottom line. Some organizations used these results to create additional reports and dashboards for executive or board consumption, ultimately contributing to executive decision making and business level strategy.

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	Streamlined budgeting process	$368,874	$507,202	$537,941	$1,414,017	$1,158,678
Btr	Streamlined reporting process	$279,936	$461,894	$489,888	$1,231,718	$1,004,278
Ctr	Streamlined forecasting process	$54,432	$89,802	$95,256	$239,490	$195,267
Dtr	Cost savings from retired legacy planning solutions	$212,500	$314,500	$314,500	$841,500	$689,388
	Total benefits (risk-adjusted)	$915,742	$1,373,398	$1,437,585	$3,726,725	$3,047,611

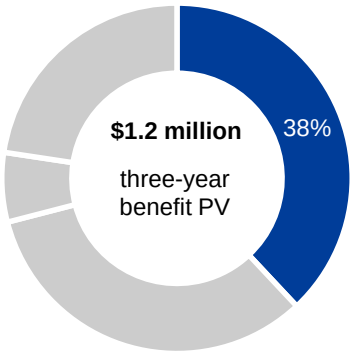
The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total benefits to be a PV of more than $3 million.

Streamlined Budgeting Process

A common pain point across organizations is the time it takes to complete an annual budgeting cycle. For some organizations, this process can take up to six months from front to end, including the time to create budget templates, input historical and forecasted data, compile and merge datasets, and review and finalize the consolidated plan. Producing the annual budget involves input from various functions, branches, and lines of businesses, each often working with different templates and even planning systems or software. The end result is a disjointed budgeting process that is iterative rather than cumulative, requiring significant hours of rework and review. As one organization recalled, “In some cases, people were having to enter the same data in four different ways because of the dynamics between the general ledger and the category view of the world. Then on top of that, you'd have people coming in and manually reconciling all of that data over the next several weeks.”

IBM Planning Analytics tackles these challenges by acting as a central planning system that can be integrated across different endpoints and planning workflows within the organization. End users can therefore create their inputs with the confidence that they are working with the latest historical and forecast data and under a singular view that is aligned and used across the organization, from executive leadership down to the individual business managers. By accessing a single source of truth, organizations increase communication and collaboration during the budgeting process, reduce the frequency and likelihood of errors, and lessen the need for multiple, iterative review cycles. The subsequent time savings for Forrester’s composite organization is based on the following assumptions:

- The organization uses a bottom-up approach for the annual budgeting process, with each retail branch location individually contributing to the master plan.
- The number of retail branches grows organically from 30 in Year 1, to 33 in Year 2, and finally 35 in Year 3.



Streamlined budgeting: **38%** of total benefits

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- In Year 1, IBM Planning Analytics is deployed for core financial planning, a process involving four FTEs per branch across the organization's footprint for annual budgeting.
- In Year 2, IBM Planning Analytics is deployed for operational, product-level planning, involving an additional two FTEs per branch across the organization's footprint for annual budgeting.
- The fully burdened hourly rate per planning FTE is $60.

Additionally, the following factors may impact the degree of benefits that other organizations experience through IBM Planning Analytics:

- Industry and organization-specific characteristics will impact the complexity of the annual budgeting process. For example, smaller organizations will often have less siloed planning workflows and processes compared to large enterprises.
- The budgeting approach can impact the amount of overhead needed to complete the annual budgeting cycle. A top-down approach, for instance, will rely on fewer inputs than a bottom-up approach.
- The organization's legacy planning environment will impact the efficiency of the annual budgeting process prior to adopting IBM Planning Analytics, and ultimately, the magnitude of improvement achieved with IBM Planning Analytics.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $1,158,678.

> "We now have a seamless solution that rolls up and pulls together multiple elements, including risks and opportunities. It is now easy for us to move the data around to provide the type of multifaceted perspectives that leadership is looking for during the budget cycle and beyond."
>
> *Director of FP&A*

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

Streamlined Budgeting Process: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
A1	Number of branches		30	33	35
A2	Number of hours spent on annual budgeting cycle, per planning FTE		90	90	90
A3	Number of planning FTEs involved in annual budgeting cycle, per branch		4	5	5
A4	Time needed to execute annual budgeting cycle with legacy planning environment, in hours	A1*A2*A3	10,800	14,850	15,750
A5	Percentage reduction in time needed to execute annual budgeting cycle with IBM Planning Analytics		63.25%	63.25%	63.25%
A6	Time saved by executing annual budgeting cycle with IBM Planning Analytics, in hours	A4*A5	6,831.0	9,392.6	9,961.9
A7	Fully burdened hourly rate of planning FTE		$60	$60	$60
At	Streamlined budgeting process	A6*A7	$409,860	$563,558	$597,713
	Risk adjustment	↓10%			
Atr	Streamlined budgeting process (risk-adjusted)		$368,874	$507,202	$537,941

Streamlined Reporting Process

When it comes to month-end reporting, interviewed organizations faced similar challenges to those experienced during annual budgeting cycles, including inefficiencies related to organizational siloes, lack of collaboration, and multiple sources of the truth. Additionally, due to the

number of reports run and accounts closed during month-end reporting, the processing times of legacy planning systems presented another significant pain point. During month-end reporting, organizations would reconcile and close hundreds of books, triggering multiple system refreshes along the way. Interviewed organizations noted that their legacy planning systems struggled with the volume of data being processed during this period, resulting in slow refreshes taking upwards of 1 hour each. As one organization put it, "Before, we had an automated refresh process running, but it wasn't enough during month-end reporting because people post their entries and want to see the impact immediately."

With IBM Planning Analytics, organizations found that the IBM TM1 engine could refresh, calculate, and pull data in a fraction of the time compared to their legacy planning platforms. Furthermore, this speed remained consistent across both on-premises and cloud-based deployments. One organization stated: "TM1 updates the whole portfolio when it refreshes so that nobody needs to kick off a refresh on their own. If they post a new entry, they know that their data will be available in the system within the next 15 minutes, max."

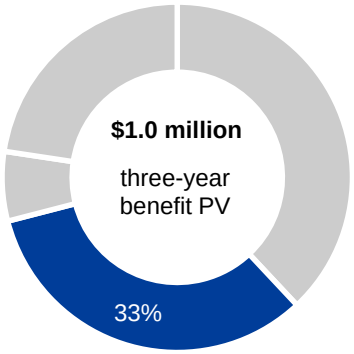
On average, interviewed organizations slashed the time needed to refresh a single report from 45 minutes to 9 minutes. The subsequent impact on Forrester's composite organization is based on the following assumptions:

- The number of retail branches grows organically from 30 in Year 1, to 33 in Year 2, and finally 35 in Year 3.
- In Year 1, IBM Planning Analytics is deployed for core financial planning, a process involving two FTEs per branch across the organization's footprint for month-end reporting.
- In Year 2, IBM Planning Analytics is deployed for operational, product-level planning, involving an additional one FTE per branch across the organization's footprint for month-end reporting.
- Organizations post entries for month-end reporting during a three-day period, during which an average of four reports are refreshed per day.
- The fully burdened hourly rate per planning FTE is $60.

The time savings achieved through streamlined reporting with IBM Planning Analytics will vary based on the following factors:

- The organization's legacy planning environment will impact the efficiency of the month-end reporting process prior to adopting IBM Planning Analytics, and ultimately, the magnitude of improvement achieved with IBM Planning Analytics.
- The cadence of reporting workflows will determine the number of reports refreshed in a given year. Some organizations will emphasize reporting on a quarterly basis, while others will report monthly.

To account for this risk, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $1.01 million.



Streamlined reporting: **33%** of total benefits

"Planning Analytics updates the whole portfolio when it refreshes so that nobody needs to kick off a refresh on their own. If they post a new entry, they know that their data will be available in the system within the next 15 minutes, max."

Director of enterprise systems, hospitality

"Planning Analytics reduces waiting times and allows us to have several extra days to analyze our results, trends, and business performance."

Group controller, utilities

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Streamlined Reporting Process: Calculation Table					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
B1	Number of branches		30	33	35
B2	Number of times a report is refreshed during month-end reporting, per planning FTE	4 refreshes per day * 3 days of month-end reporting * 12 months	144	144	144
B3	Number of planning FTEs involved in month-end reporting, per branch		2	3	3
B4	Total number of reports refreshed during month-end reporting cycle	B1*B2*B3	8,640	14,256	15,120
B5	Time needed to refresh a single report with legacy planning environment, in hours		0.75	0.75	0.75
B6	Time needed to refresh a single report with IBM Planning Analytics, in hours		0.15	0.15	0.15
B7	Fully burdened hourly rate of planning FTE		$60	$60	$60
Bt	Streamlined reporting process	B4*(B5-B6)*B7	$311,040	$513,216	$544,320
	Risk adjustment	↓10%			
Btr	Streamlined reporting process (risk-adjusted)		$279,936	$461,894	$489,888

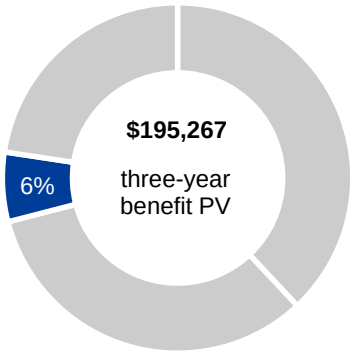
Streamlined Forecasting Process

Similar to reporting workflows, forecasting workflows also took place multiple times per year allowing for frequent adjustments in response to major P&L (profit and loss) driving events or changing market conditions. In the forecasting process, before projecting future outcomes, historical data must first be seeded into the planning system. With legacy spreadsheet-based planning systems, this process typically involved manual input and reorganization of data, which required hours of upfront work to prepare a forecasting template.

Organizations noted that IBM Planning Analytics made this seeding process a near-instantaneous exercise. Instead of manually creating and updating forecasting templates for individual cost and revenue centers, organizations could leverage IBM Planning Analytics to automatically populate and prepare preexisting forecasting templates with the most up-to-date historical data, shaving off 70% of the total hours needed to produce monthly forecasts. As one organization put it, “With Planning Analytics, I am able to get the system ready for all our properties quite fast, as opposed to having to worry and prepare templates for each property, which would take a very long time.”

The subsequent cost savings for the composite organization is based on the following assumptions:

- The number of retail branches grows organically from 30 in Year 1, to 33 in Year 2, and finally 35 in Year 3.
- In Year 1, IBM Planning Analytics is deployed for core financial planning, a process involving two FTEs per branch across the organization’s footprint for month-end forecasting.



Streamlined forecasting: **6%** of total benefits

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- In Year 2, IBM Planning Analytics is deployed for operational, product-level planning, involving an additional one FTE per branch across the organization's footprint for month-end forecasting.
- The fully burdened hourly rate per planning FTE is $60.

The time savings achieved through streamlined forecasting with IBM Planning Analytics will vary based on the following factors:

- The organization's legacy planning environment will impact the efficiency of the month-end forecasting process prior to adopting IBM Planning Analytics, and ultimately, the magnitude of improvement achieved with IBM Planning Analytics.
- The cadence of reporting workflows will determine the number of reports run in a given year. Some organizations will emphasize running forecasts on a quarterly basis, while others will forecast monthly.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $195,268.

> "With Planning Analytics, I am able to get the system ready for all our properties quite fast, as opposed to having to worry and prepare templates for each property, which would take a very long time."
>
> *Director of enterprise systems*

Streamlined Forecasting Process: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
C1	Number of branches		30	33	35
C2	Number of hours spent on monthly forecasting, per planning FTE	Average of 2 hours per month	24	24	24
C3	Number of planning FTEs involved in monthly forecasting, per branch		2	3	3
C4	Time needed to execute monthly forecasting with legacy planning environment, in hours	C1*C2*C3	1,440	2,376	2,520
C5	Percentage reduction in time needed to execute monthly forecasts by seeding data with IBM Planning Analytics		70%	70%	70%
C6	Time saved by performing monthly forecasting with IBM Planning Analytics, in hours	C4*C5	1,008	1,663	1,764
C7	Fully burdened hourly rate of planning FTE		$60	$60	$60
Ct	Streamlined forecasting process	C6*C7	$60,480	$99,780	$105,840
	Risk adjustment	↓10%			
Ctr	Streamlined forecasting process (risk-adjusted)		$54,432	$89,802	$95,256

Cost Savings From Retired Legacy Planning Solutions

Interviewed organizations shared that their legacy planning solutions were inherently siloed as they were designed to fit a singular use case or planning workflow, and as a result, these organizations would adopt multiple planning point solutions across the organizational footprint. As a consequence, organizations needed to manually reconcile numbers across solutions, resulting in the inefficiencies discussed earlier in this study, as well as engage professional services to facilitate change management or integration support. Over time, the licensing, hardware, professional services, and support for these legacy solutions became overwhelming, with the total cost of ownership would often run well into

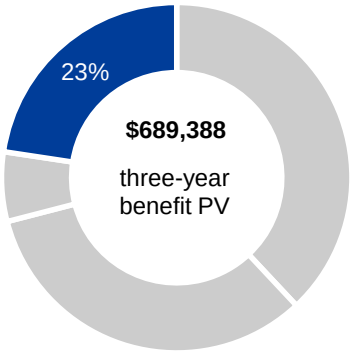
the millions.

Because IBM Planning Analytics is equally compatible across cloud and on-premises deployments, and designed to be use-case agnostic, organizations could gradually expand IBM Planning Analytics throughout the organization while replacing legacy planning solutions. In doing so, one organization experienced cost savings that ran well into the tens of millions. This organization claimed, "Over several years, Planning Analytics has allowed us to replace more than $26 million in old legacy applications."

To calculate the cost savings of retiring legacy planning solutions for the composite organization, Forrester assumes the following:

- In Year 1, IBM Planning Analytics replaces the organization's core FP&A planning solution, costing the organization an average of $250K in licensing, hardware, professional services, and support per year.
- In Year 2, IBM Planning Analytics replaces the organization's supply chain and operational planning solution, costing the organization an average of $150K in licensing, hardware, professional services, and support per year. In its place, the organization uses a single IT data feed integrated with IBM Planning Analytics costing the organization $30K per year.

The cost savings that other organizations may realize by replacing legacy planning solutions with IBM Planning Analytics will vary based on the total cost of ownership of the organization's legacy planning solutions and the number and type of IBM Planning Analytics deployments that replace them. While the composite organization uses highly conservative estimates for the total cost of ownership of legacy planning solutions, based on the ranges offered by interviewed customers, Forrester recognizes that cost ranges can vary widely by organization. Therefore, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of $689,388.



Retired legacy solutions: **23%** of total benefits

"Planning Analytics allowed us to conjoin planning and reporting so that you don't need a separate reporting solution for each. Our users are now hitting the planning instances and immediately getting back the latest and greatest content for reporting."

Director of FP&A

Cost Savings From Retired Legacy Planning Solutions: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
D1	Licensing, hardware, professional services, and support for legacy planning solutions		$250,000	$400,000	$400,000
D2	Cost of incremental data feed to Planning Analytics			$30,000	$30,000
Dt	Cost savings from retired legacy planning solutions	D1-D2	$250,000	$370,000	$370,000
	Risk adjustment	↓15%			
Dtr	Cost savings from retired legacy planning solutions (risk-adjusted)		$212,500	$314,500	$314,500

Unquantified Benefits

Interviewed organizations maintained that they had benefited from IBM Planning Analytics in ways that could not necessarily be quantified but were significant, nonetheless. These organizations noted the following benefits:

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- **Reduced risk of errors.** Using IBM Planning Analytics, organizations could automate manual, spreadsheet-based processes, minimizing the possibility of human error. Additionally, by centralizing planning processes instead of having separate components managed and updated by individual contributors and teams and later consolidated, projections and budgets could be based on a single source of truth, therefore increasing the accuracy and reliability of the data.
- **Improved data hygiene and consistency.** Gathering input data for a planning process is a time-consuming activity that often involves multiple departments and stakeholders. Without the presence of a dedicated project manager periodically gathering and consolidating these inputs, individual departments would seldom update planning spreadsheets and documents until it was required for a specific planning process, such as budgeting or forecasting. With IBM Planning Analytics, however, departments felt empowered to update central planning documents more frequently because of the platform's ease of use and ability to update in real time – meaning that users accessing and analyzing these documents could more consistently access up-to-date data.
- **Increased collaboration.** In their legacy planning environments, organizations found it difficult to effectively share data across teams and lines of businesses. Spreadsheets would be formatted differently, important data points would be missing, the wrong people might access the documents, and maintaining version control was a challenge. By leveraging IBM Planning Analytics as the sole platform housing and powering a department's planning processes, organizations found it easier to break siloes and work across different teams and contributors involved in an integrated planning process.

"Accuracy is a huge plus for us. We now just rely on the processes and the formulas and trust that everything comes together."

Business intelligence and systems accountant

Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to implement IBM Planning Analytics and later realize additional uses and business opportunities, including:

- **Strategic analysis.** While interviewed organizations primarily leveraged IBM Planning Analytics for various planning use cases, they recognized that the ability to easily manipulate and pull data across cubes and hierarchies could be extended beyond planning to include other value-added analyses with the potential to drive strategic business decisions. By continuing to deploy IBM Planning Analytics across the enterprise, organizations believe that the platform can eventually be adopted as an analytics tool rather than just a planning tool by groups such as product or corporate strategy.
- **Hybrid configuration.** Because IBM Planning Analytics functions identically across cloud and on-premises deployments, organizations can deploy IBM Planning Analytics for multiple planning environments without risking lack of interoperability from one environment to the next. Additionally, this allows organizations to take advantage of the benefits of hybrid computing while maintaining their preferred deployment model.

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

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so.

"The number of financial metrics was expanded greatly when we moved into the TM1-based solution. We were able to analyze a much richer set of both inventory and product metrics that matched our workflows."

Director of FP&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
Etr	Licensing, support, and implementation services	$315,000	$316,596	$145,984	$156,038	$933,618	$840,696
Ftr	Internal deployment costs	$209,790	$139,860	$0	$0	$349,650	$336,935
Gtr	IBM Planning Analytics user training	$0	$102,375	$37,060	$11,193	$150,628	$132,106
	Total costs (risk-adjusted)	$524,790	$558,831	$183,043	$167,231	$1,433,896	$1,309,737

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total costs to be a PV of more than $1.3 million.

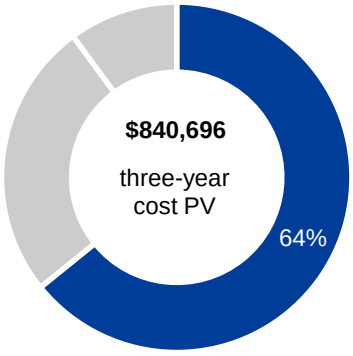
Licensing, Support, And Implementation Services

In order to successfully launch IBM Planning Analytics, organizations first needed to engage IBM Professional Services or an IBM Business Partner to assist in creating and configuring modules, templates, and cubes, performing data integrations, and conducting user experience testing. For core FP&A implementations, interviewed organizations deploying IBM Planning Analytics on the cloud found that implementation times ranged from six to 12 months while those deploying on-premises experienced implementation times ranging from 12 to 18 months.

Additionally, interviewed organizations paid IBM software licensing and support fees based on their active IBM Planning Analytics user base, broken down by the number of users with read-only capabilities, those with read and write capabilities, and power users with modeling capabilities. For the composite organization, licensing and support fees for IBM Planning Analytics are based on the following assumptions:

- The organization opts for a cloud-only deployment of IBM Planning Analytics, with implementation cycle times lasting an average of six months across planning use cases.
- Partner service fees for the initial implementation of IBM Planning Analytics for core FP&A planning total $300K.
- During Year 1 after going live with IBM Planning Analytics, the organization executes its second deployment of Planning Analytics for supply chain and operational planning, running an additional $200K in partner service fees.
- The number of read-only users grows from 60 in Year 1, to 83 in Year 2, to 87 in Year 3.
- The number of read/write users grows from 48 in Year 1, to 66 in Year 2, to 70 in Year 3.
- The number of power users grows from 12 in Year 1, to 16 in Year 2, to 18 in Year 3.

Licensing, support, and implementation service fees that other organizations incur will vary based on the following factors:



Licensing, support, and implementation services: **64%** of total costs

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- The number and composition of users will determine licensing and support fees quoted in the annual contract. Furthermore, discretionary relationship or volume-based discounts directly through IBM or IBM partners can further alter these fees.
- Partner implementation fees will vary widely based on the number and types of IBM Planning Analytics deployments, the complexity of the organization's existing planning environment, and the specific partner delivering the services.

Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the wider the potential range of outcomes for cost estimates.

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV of $840,696.

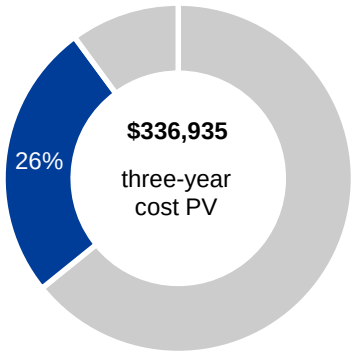
Licensing, Support, And Implementation Services: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
E1	Partner implementation services		$300,000	$200,000		
E2	Planning Analytics licensing and ongoing support			$101,520	$139,032	$148,608
Et	Licensing, support and implementation services	E1+E2	$300,000	$301,520	$139,032	$148,608
	Risk adjustment	↑5%				
Etr	Licensing, support and implementation services (risk-adjusted)		$315,000	$316,596	$145,984	$156,038

Internal Deployment Costs

Successfully deploying IBM Planning Analytics required a full-time effort not only from IBM Professional Services or IBM Business Partners, but also from the organizations themselves. In fact, organizations dedicated a number of resources, both technical and administrative, to ensuring a seamless project. Deployment teams typically consisted of a project manager from the business who worked with IBM or an IBM Business Partner to identify and deliver on business requirements, along with several IT resources, including engineers, developers, and architects, who provided guidance throughout the technical components of the implementation. As mentioned earlier, the implementation process took anywhere from six months to 18 months to complete, on average, depending on the desired deployment model, characteristics of the implementation partner, and the organization's legacy environment. During this time, internal deployment teams also contributed an average of two to three months of full-time labor toward the implementation. To calculate the subsequent internal deployment costs for the composite organization, Forrester assumes:

- The internal deployment team consists of one project manager at a daily rate of $368, three software developers at a daily rate of $409, and one software architect at a daily rate of $625.
- Initial deployment of IBM Planning Analytics for core FP&A planning requires 90 days, or three months of full-time labor across the deployment team.
- The organization's second deployment of IBM Planning Analytics for supply chain and operational planning requires 60 days, or two months of full-time labor across the deployment team.



Internal deployment: **26%** of total costs

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Internal deployment costs will vary for other organizations depending on the size, makeup, and compensation rate of the deployment team, and the number and types of IBM Planning Analytics deployments across the organization's footprint. To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV of $336,935.

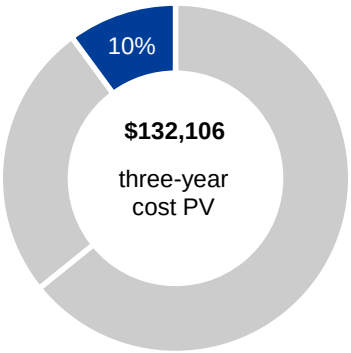
Internal Deployment Costs: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
F1	Number of full-time days required to deploy IBM Planning Analytics		90	60		
F2	Number of software architects on internal IBM Planning Analytics deployment team		1	1		
F3	Fully burdened software architect daily rate		$625	$625		
F4	Number of software developers on internal IBM Planning Analytics deployment team		3	3		
F5	Fully burdened software developer daily rate		$409	$409		
F6	Number of project management FTEs on internal IBM Planning Analytics deployment team		1	1		
F7	Fully burdened project manager daily rate		$368	$368		
Ft	Internal deployment costs	F1*((F2*F3)+(F4*F5)+(F6*F7))	$199,800	$133,200	$0	$0
	Risk adjustment	↑5%				
Ftr	Internal deployment costs (risk-adjusted)		$209,790	$139,860	$0	$0

IBM Planning Analytics User Training

For the interviewed organizations, user training consisted of two primary steps. First, administrators and modelers (i.e., power users) would be trained directly by IBM or an IBM Business Partner, enabling these users to customize and configure the platform, create and modify modules and cubes, and provide basic product support. Next, these power users would become the trainers for the other end users within the organization. Training times differed by user type, with power users naturally taking the longest to ramp up, and read-only users, often working through a familiar spreadsheet-based interface, fully ramping within several hours. As one organization put it: "For developers, there's certainly a learning process to get a grip on how to make Planning Analytics perform the way it should. From an end user perspective, the interfaces that Planning Analytics allows you to build for end user interaction are easy, sophisticated, and very similar to spreadsheets. In fact, you can take a spreadsheet model that you've built and essentially promote it onto the web and it'll feel exactly the same. Everybody and their grandmother can work on it at the same time."

In order to calculate the cost of user training for the composite organization, Forrester made the following assumptions:



User training:
10% of total costs

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- Read-only users fully ramp with 2 hours of training. Interviewed organizations attributed this short ramp time to a simple and intuitive user experience and interface and the ability to work through familiar spreadsheet-based tools.
- Read/write users fully ramp with 40 hours, or one full business week of training.
- Power users fully ramp with 80 hours, or two full business weeks of training.
- The fully burdened, blended hourly user rate across power users, read/write users, and read-only users is $32.5.

User training costs will naturally vary for other organizations based on the number and type of users as well as individual user proficiency. To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV of $132,106.

> "We had dedicated people who were trained by IBM, and then in turn, went out and trained the businesses."
>
> *Business intelligence and systems accountant*

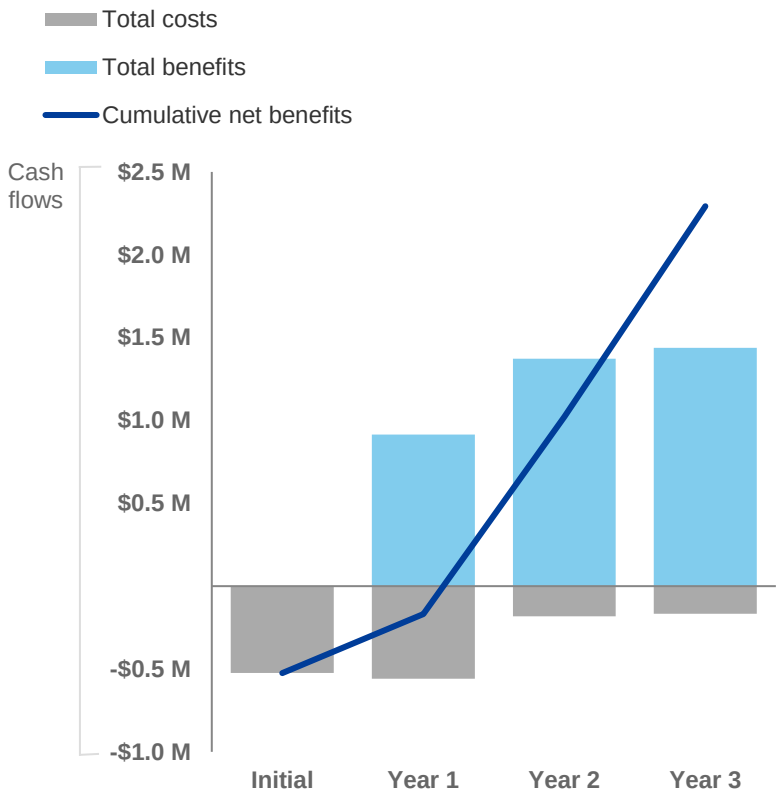
Planning Analytics User Training: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
G1	Number of incremental IBM Planning Analytics read-only users			60	23	4
G2	Hours of read-only user training required for IBM Planning Analytics			2	2	2
G3	Number of incremental IBM Planning Analytics read/write users			48	18	4
G4	Hours of read/write user training required for IBM Planning Analytics			40	40	40
G5	Number of incremental IBM Planning Analytics power users			12	4	2
G6	Hours of power user training required for IBM Planning Analytics			80	80	80
G7	Fully burdened, blended hourly user rate			$32.50	$32.50	$32.50
Gt	IBM Planning Analytics user training	((G1*G2)+(G3*G4) +(G5*G6))*G7	$0	$97,500	$35,295	$10,660
	Risk adjustment	↑5%				
Gtr	IBM Planning Analytics user training (risk-adjusted)		$0	$102,375	$37,060	$11,193

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 Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	($524,790)	($558,831)	($183,043)	($167,231)	($1,433,896)	($1,309,737)
Total benefits	$0	$915,742	$1,373,398	$1,437,585	$3,726,725	$3,047,611
Net benefits	($524,790)	$356,911	$1,190,355	$1,270,354	$2,292,830	$1,737,874
ROI						133%
Payback period						14.0 months

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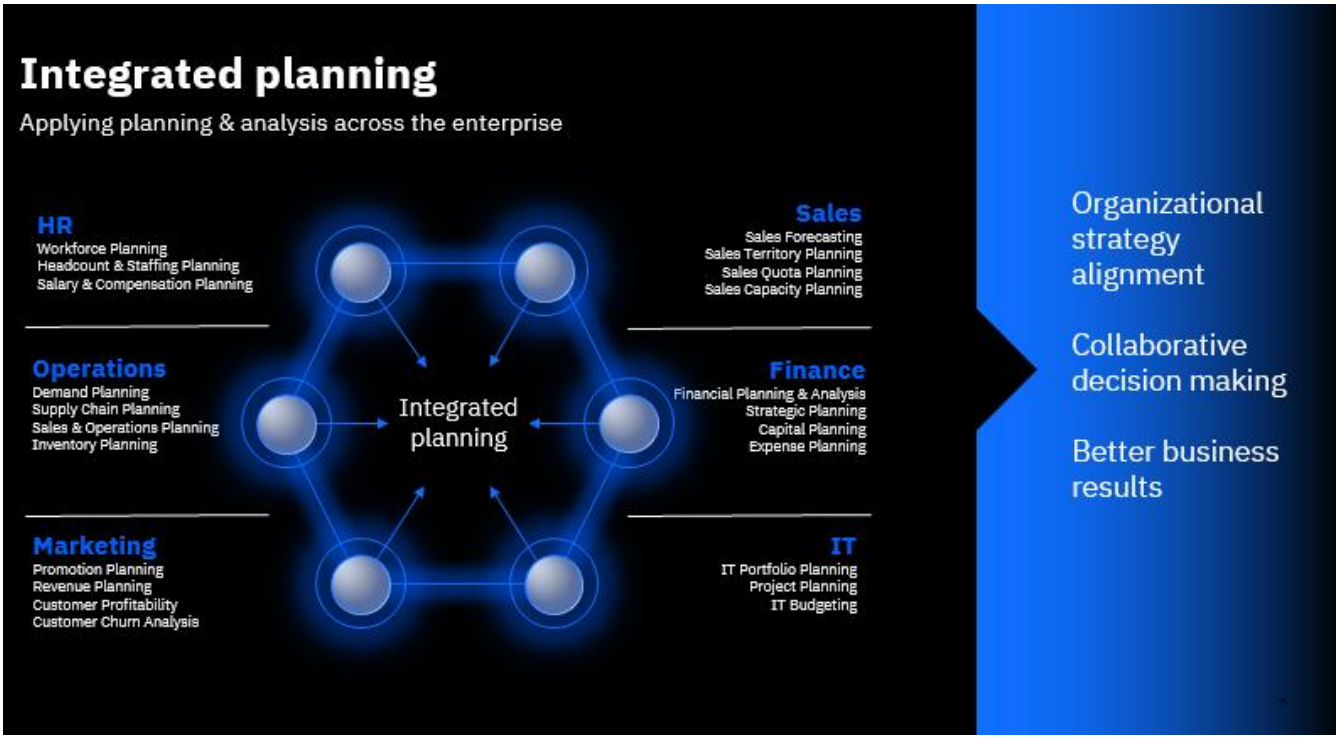
IBM Planning Analytics: Overview

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

IBM Planning Analytics, powered by IBM TM1, is an integrated planning solution designed to promote collaboration across the organization and help keep pace with the speed of modern business. Built on a powerful calculation engine, this enterprise performance management tool provides a truly modern planning solution with high quality visualizations and unprecedented scalability, allowing customers to leverage even the most complex business models to drive faster, more accurate planning and forecasting. IBM's user-friendly interface and robust capabilities help users at any expertise level become analytics heroes.

With seamless Microsoft Excel integration, you can infuse spreadsheets with more analytical power and control, while retaining the same familiar interface. Simplify complex data by unifying data sources into one repository and empowering users to build sophisticated, multidimensional models that drive more reliable forecasts and plans. Adapt with agility to today's quickly changing business conditions using one single source of truth across the entire organization — from finance, operations, workforce and sales planning to marketing and IT.

A centralized, integrated planning solution enables coordination between different parts of the business and helps produce more streamlined, accurate, connected plans. Integrated planning helps ensure that plans, budgets, and forecasts are created with a holistic approach.



Click here to learn more about integrated planning with IBM Planning Analytics.

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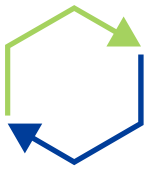
Appendix A: Total Economic Impact

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."

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

Present value (PV)

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

Net present value (NPV)

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

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.