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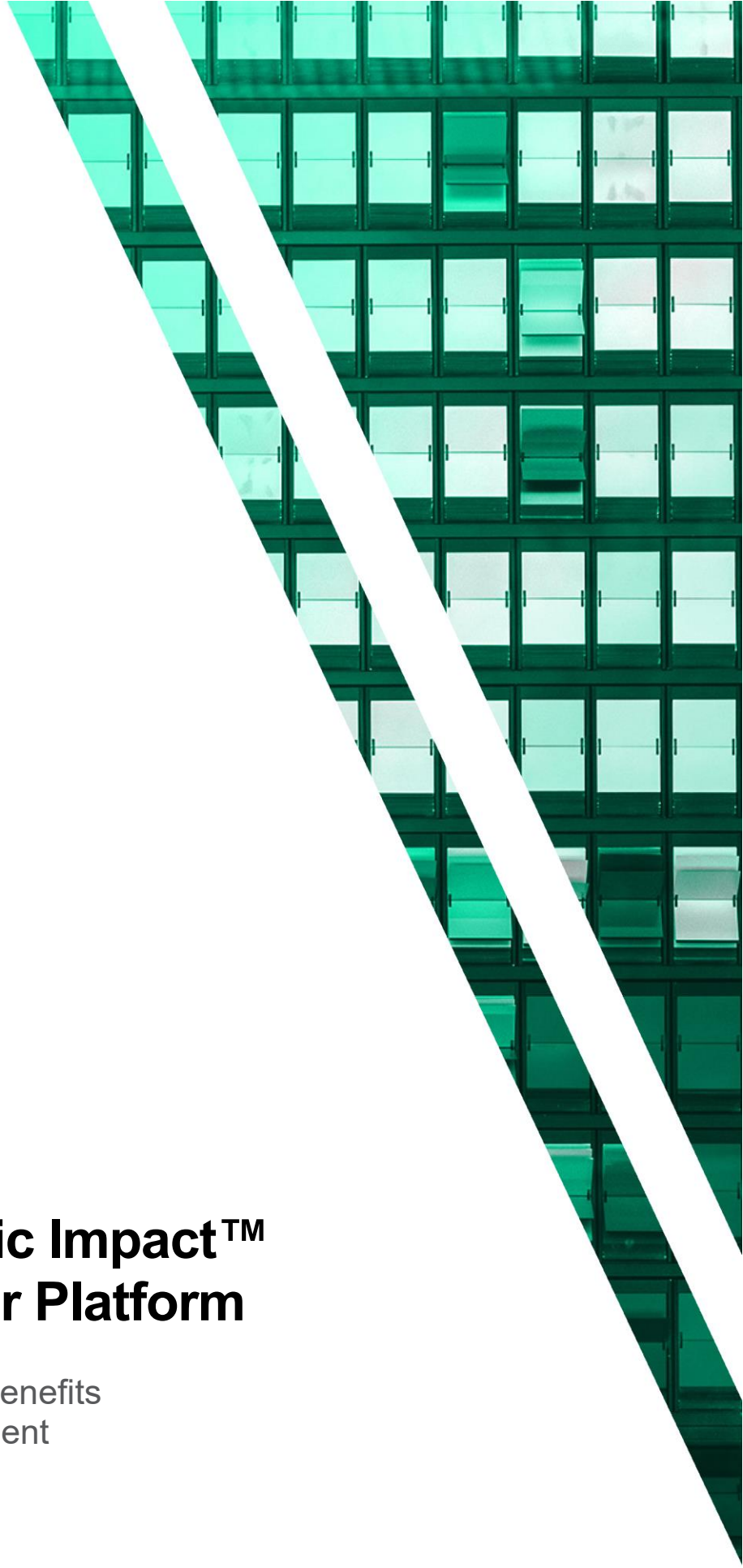

The Total Economic Impact™ Of Microsoft Power Platform

Cost Savings And Business Benefits Enabled By Citizen Development

FEBRUARY 2021

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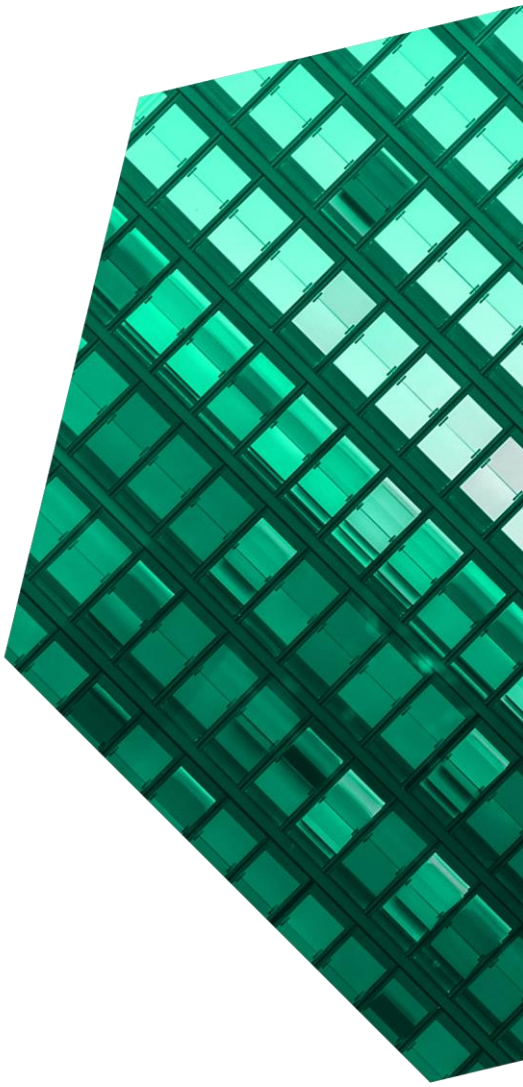


Executive Summary

Microsoft Power Platform brings low-code/no-code development, workflow, and business intelligence tools to business users. These capabilities enable corporate end users to create solutions for themselves as well as to make them available for others to utilize. The efforts can streamline operations, reduce development costs and reliance on corporate IT, and improve business outcomes.

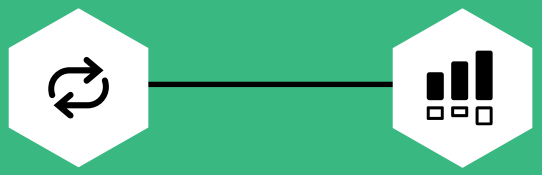
Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Power Platform. Power Platform consist of Power Apps, Power Automate, Power BI, and Power Virtual Agents. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Power Platform on their organizations. Giving these tools to business users makes them more self-sufficient, and it puts many development efforts in the hands of the people who best understand the challenges and opportunities of a business.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed 10 decision-makers from seven organizations with experience using Power Platform. For the purposes of this study, Forrester aggregated the experiences of the interviewees and combined the results into a single composite organization.

The interviewees said that prior to using Power Platform, their organizations typically did not have tools and methods for business users to create their own applications and workflows. Additionally, data analysis was highly centralized and required expensive and specialized tools. This limited the organizations' abilities to transform and rapidly respond to changing business dynamics.

After investing in Power Platform, the organizations were able to democratize development and business intelligence. In turn, this freed up corporate IT and data analytics teams to focus on initiatives that required their skill sets more. The overall result was a more agile organization, faster and less expensive development efforts, and improved business outcomes such as increased revenues.

KEY STATISTICS



Return on investment (ROI)
502%

Net present value (NPV)
$25.92M

Application development cost reduction:

48%

A companion study explores and quantifies the benefits associated with corporate IT use of Power Platform.[1] The companion study delivers an additional 94% ROI and an $11.43 million NPV to the same composite organization.

KEY FINDINGS

Quantified benefits. Risk-adjusted present value (PV) quantified benefits include:

- **Citizen developer projects completed using low-code/no-code tools cost less.** Power Platform is used to complete projects of different sizes and complexity. Small projects are something used only by the creator and they are not included in the financial analysis. Medium-sized projects cost $75,000 before Power Platform and costs reduce by 50% post-implementation. Large projects previously cost $250,000, and that is reduced by 70% post-implementation due to using fewer internal and external professional developers. A total of $4.2 million in risk-adjusted traditional development effort (this benefit) is replaced by $2.2 million in Power Platform risk-adjusted costs (shown in the Costs section of this study). The risk-adjusted net savings is $2.0 million, or 48%.
- **The organizations replaced third-party business applications and business intelligence tools with Power Platform.** Some of the needs filled with business-user-developed solutions would otherwise have been met by buying vendor solutions. Power BI also replaces other business intelligence tool licenses. Taken together, the three-year risk-adjusted savings are about $829,000.
- **Solutions built with Power Platform made users of all types more efficient.** For the composite organization, each medium-sized project benefits 50 users, and each large project benefits 300 users. This efficiency gain increases over the life of the study as more and better solutions are rolled out, increasing from 3% in Year 1 to 5% in Year 3. This is achieved through streamlining and automating processes using Power Automate and Power Virtual Agents (PVAs), creating applications that speed up work (especially in the hands of first-line workers), and generating insights faster using Power BI. After applying a 50% productivity capture, the total risk-adjusted time savings over three years is worth $10.2 million.
- **Power Platform delivered improved business outcomes across many dimensions.** Some of the interviewees described benefits including increased revenues, faster time-to-market, and reduced operating costs. By Year 3 of the study, Power Platform initiatives result in a 1% increase in revenues, and operating margins increased from 12.0% to 12.5%. This delivers $15.8 million in additional risk-adjusted operating revenues over three years.

Unquantified benefits. Benefits that are not quantified for this study include:

- **Employees can make better decisions more quickly.** Many of the applications and workflows built with Power Platform help gather and disseminate more information faster. Additionally, giving nearly everyone access to Power BI empowers them to generate insights that benefit the business. This underpins many of the quantified benefits.
- **Power Platform helps maximize the value achieved with other Microsoft solutions.** Interviewees said that Power Platform can be used to extend other solutions such as Microsoft 365 and Dynamics 365. Organizations that use Microsoft Teams as their main collaboration solution especially benefit from integrating in all parts of Power Platform.
- **Power Platform improves IT security.** Power Platform is integrated into the Microsoft security stack as well as with Microsoft 365. This makes it easier to include the necessary security into all development initiatives. Microsoft has out-of-the-box compliance for many regulations that makes compliance easier and lowers the time required to report on the system.

Costs. Risk-adjusted PV costs include:

- **Power Platform development efforts cost $2.2 million.** The average cost per project developed using Power Platform can vary widely based on its functionality and how experienced users are with the four solution areas. With Power Platform, medium-sized projects cost $37,500 on average and large projects cost $90,000. This is roughly half the cost of the non-Power Platform costs shown in the Benefits section. Subtracting the two results in a risk-adjusted savings of $2.0 million over three years.
- **Internal corporate IT and analytics teams' effort cost $2.9 million.** The composite organization's IT team spends three months making Power Platform available to the entire organization. There is also ongoing effort to train and support business users and to manage code that has been transferred to the IT department. This increases from two to four FTEs over the life of the study as user adoption increases. Additionally, a centralized data team provides support to business users who are creating with Power BI. This increases from three to five FTEs over the life of the study.
- **Incremental licenses not included in existing Microsoft 365 or Dynamics 365 licenses cost $96,228 over three years.** Most of the capabilities within Power Platform can be included in Microsoft 365 and Dynamics 365, depending on the version being used. Solutions not included in the composite organization's Microsoft 365 E5 and F3 licenses include unattended robotic process automation (RPA), and Power Virtual Agents (PVAs).

The interviews and financial analysis found that a composite organization experiences benefits of $31.08 million over three years versus costs of $5.16 million, adding up to a net present value (NPV) of $25.92 million and an ROI of 502%.

Increase in operating revenues:

1.5%

"One distinct change in citizen developer behavior in 2020 is the maturity of the solutions they are creating. In the past, they might build a Power App or a Power BI solution. Now they are bringing together pieces from across the entire platform."

— Digital transformation and innovation manager, field services

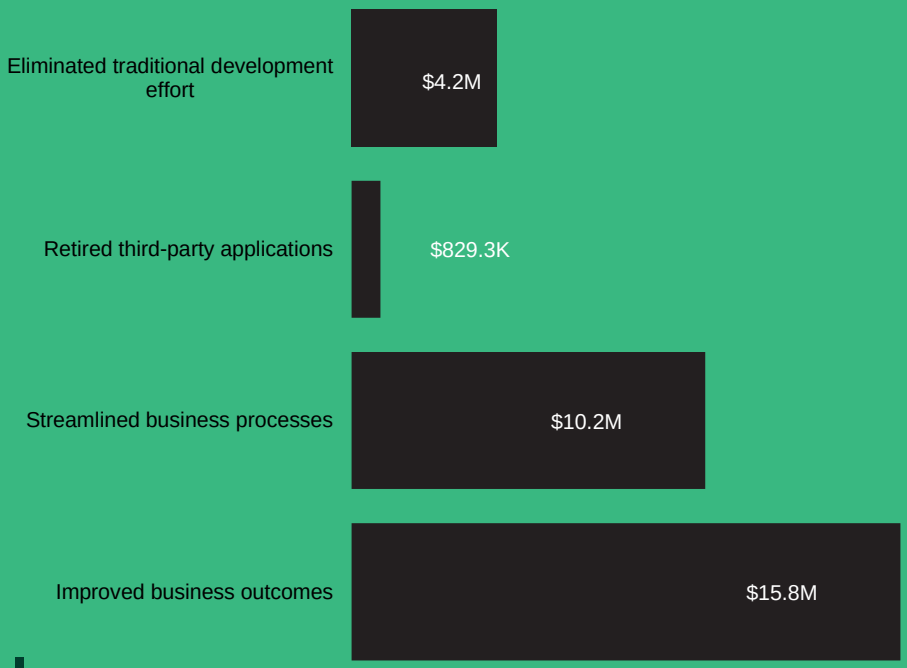
ROI
502%

BENEFITS PV
$31.08M

NPV
$25.92M

PAYBACK
11 months

Benefits (Three-Year)



Reduction in applicable development cost: 48%

Increase in operating income: 1.5%

TEI FRAMEWORK AND METHODOLOGY

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

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 Power Platform can have on an organization.

DUE DILIGENCE

Interviewed Microsoft stakeholders and Forrester analysts to gather data relative to Power Platform.

CUSTOMER INTERVIEWS

Interviewed 10 decision-makers at seven organizations using Power Platform 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 investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

The Microsoft Power Platform Customer Journey

Drivers leading to the Power Platform investment

Interviewed Organizations

Industry	Region	Interviewee(s)	Employees
Beverage distributor	North America	Enterprise business system manager Director of digital technology	1,600
Healthcare	Asia Pacific	Head of business applications	1,400
Beverage distributor	North America	Director of commercial capabilities Analyst Data and information manager	10,000
Petrochemical	North America	Manager, enterprise architecture and integration	1,300
Field services	Global	Digital transformation and innovation manager	100,000
Electoral contractor	North America	General manager	45
Telecommunications	North America	Power Platform developer and principal analyst	35,000

KEY CHALLENGES

Companies face many challenges around modernizing IT to transform the business, supporting more users and growth, and managing increasing costs. The interviewees' organizations struggled with common challenges, including:

- **IT had to support more users, especially first-line and mobile workers.** Moving to Microsoft 365 can significantly increase the number of users who consume IT services. Additionally, companies are putting more effort into making mobile workers more effective and efficient. This all means that the organizations had ever-increasing backlogs of requested IT projects.

> **"Adopting Power Platform is part of a digital transformation initiative. We want to automate manual processes and retire old systems that are no longer supportable."**
>
> *Manager, petrochemical*

- **Companies want to get more value out of previous investments in Microsoft 365 and Dynamics 365.** The interviewees said their organizations were already using Microsoft 365 and often Dynamics 365 prior to adopting Power Platform. They benefitted from expanding other Microsoft solutions and optimizing them by extending their capabilities and more fully integrating them into business processes using Power Platform. This was especially true when the organizations used Microsoft Teams as the central collaboration platform.

> **"There are now a lot of projects getting done which would not have gotten picked up by IT in the past. There are a lot of benefits from these low-hanging-fruit projects."**
>
> *Analyst, beverage distributor*

- **The lack of data analytics impeded business transformation.** There was a strong desire to transform the business through increased use of data analytics. Prior solutions could not provide all users with the timely information they needed to be successful in their jobs. Business transformation also required a culture change to become a data-driven organization.

> **"We have at least 1,000 apps that people have built. We are saving millions of dollars per year in external consultants."**
>
> *Power platform developer, telecommunications*

Key assumptions

- **10,000 employees**
- **$3 billion revenue**
- **45 medium and large Power Platform projects**

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 interviewees' companies, and it is used to present the aggregate financial analysis in the next section.

The composite organization is a global manufacturing and distribution company. It has 10,000 employees and $3 billion in revenues. For the sake of simplicity, this is held constant for the duration of this study. Prior to formally making Power Platform available to business users, decision-makers deployed Microsoft 365 across the organization, and users collaborated using Teams. The majority of knowledge workers have E5 licenses, and first-line workers are on F3 licenses. These licenses provide most of the features in Power Platform, including the use of Power Apps and Power Automate to extend the capabilities of Microsoft 365 as well as access to Power BI.

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	Eliminated traditional development effort	$675,000	$1,890,000	$2,700,000	$5,265,000	$4,204,170
Btr	Retired third-party applications	$135,000	$405,000	$495,000	$1,035,000	$829,339
Ctr	Streamlined business processes	$648,000	$3,456,000	$9,000,000	$13,104,000	$10,207,122
Dtr	Improved business outcomes	$0	$5,532,000	$15,000,000	$20,532,000	$15,841,623
	Total benefits (risk-adjusted)	$1,458,000	$11,283,000	$27,195,000	$39,936,000	$31,082,254

ELIMINATED TRADITIONAL DEVELOPMENT EFFORT

Power Platform reduced costs and effort for projects, regardless of which platform components the interviewees' organizations used. The level of savings varied greatly based on the scope of the effort. Low-code/no-code development minimized the amount of effort required from corporate IT and specialized analytics teams, and it also reduced or eliminated the need for external professional services. Additionally, there are many off-the-shelf connectors and widgets business users can leverage to create apps, flows, virtual agents, and analytics reports.

Evidence and data. Interviewees shared examples of how moving more development effort to the business community saves effort and money.

- "We are very focused on branding, so everything has to have a particular look and feel. With Power Apps, you can make everything look pixel-perfect. It allows people who aren't developers to build tools and integrate data much faster and without the need for a full developer or consultant."
- "Power Platform allows my development team to focus on the back-end. Others can focus on front-end design and business needs."
- "We had a citizen developer build a chatbot using PVA that handles HR inquiries. The number of hours spent on employee verification requests has gone from 300,000 to practically zero. It only took a couple of weeks to build, which was much faster than if it had been built the traditional way."
- "The biggest benefit is that nondevelopers in both IT and business can build their own software."

Modeling and assumptions. For the financial analysis, Forrester made the following assumptions based on the above examples:

- Project size is defined based on the number of users of a solution. Three percent of the composite organization's employees (300 users) use and are impacted by large projects and 0.5% (50 users) use and are impacted by small projects. If these projects would be completed by a mix of corporate IT and professional services using traditional development tools and methodologies, a large project would cost an average of $300,000 and a medium project would cost $75,000.

- These costs are replaced by those included in the Costs section of this study (Etr). Subtracting the two results in a net savings of $2.0 million or a 48% reduction in development costs.

Risks. Some factors that could result in this benefit being lower than interviewees reported include:

- The mix and volume of projects that can be completed by business users.
- Prior development costs — especially the need for professional services.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $4.2 million.

"We built an app for $75,000. It took one person around six months. Without Power Platform, it would have been many times the cost."

Power platform developer, telecommunications

Eliminated Traditional Development Effort

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Number of large projects		1	4	6
A2	Number of medium projects		6	12	16
A3	Average non-Power Platform project cost (large)		$300,000	$300,000	$300,000
A4	Average non-Power Platform project cost (medium)		$75,000	$75,000	$75,000
At	Eliminated traditional development effort	A1*A3+A2*A4	$750,000	$2,100,000	$3,000,000
	Risk adjustment	↓10%			
Atr	Eliminated traditional development effort (risk-adjusted)		$675,000	$1,890,000	$2,700,000
	Three-year total: $5,265,000			**Three-year present value: $4,204,170**	

RETIRED THIRD-PARTY APPLICATIONS

Many solutions that the composite organization builds using Power Platform can replace third-party solutions that have license and maintenance costs. Additionally, it can replace other low-code/no-code and business intelligence solutions with Power Platform.

Evidence and data. Interviewees shared examples of third-party costs they could replace by using business user projects:

- "We were able to get rid of a vendor that did business intelligence for us. It was [charging] us $50,000 per year, and [charging] more if we wanted to make any enhancements. Now people are working in Power BI."
- The composite organization replaces an expense reporting solution that cost $25,000 per year.
- The organization replaces a timesheet solution that cost $30 per user per month.

- "We canceled our [previous BI solution] maintenance contract and used those savings to pay for Power BI. We are in the process of completely getting rid of other solutions."
- "We eliminated another data visualization tool with a very high seat cost."

Modeling and assumptions. For the financial analysis, Forrester made the following assumptions based on the above examples:

- For the composite organization, reduced business application cost savings increase over the life of the study as it retires more third-party applications. These include savings from licenses and maintenance.
- Business intelligence tool savings are realized beginning in Year 2 after prior contracts can be retired. Traditionally, very few of the composite organization's employees used business intelligence tools because of the high per-seat cost. With Power BI, many more people can create reports, and everyone can consume this information. The $250,000 annual cost savings is indicative of a company with 10,000 employees, and the calculation is done on a per-employee basis so the reader can apply it to their organization.

Risks. Some factors that could result in this benefit being lower than interviewees reported include:

- The amount of money the organization spends on third-party applications and services that can be replaced by Power Platform solutions.
- Prior business analytics solutions in place and the number of licenses in use.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $829,339.

"Power Platform helps us limit the need to use big SaaS [software-as-a-service] solutions to deal with small problems."

Manager, petrochemical

Retired Third-Party Applications

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Business applications	Year 1: C1*$15; Year 2: C1*$20; Year 3: C1*$30	$150,000	$200,000	$300,000
B2	Business intelligence tools	C1*$25		$250,000	$250,000
Bt	Retired third-party applications	B1+B2	$150,000	$450,000	$550,000
	Risk adjustment	↓10%			
Btr	Retired third-party applications (risk-adjusted)		$135,000	$405,000	$495,000
	Three-year total: $1,035,000			**Three-year present value: $829,339**	

STREAMLINED BUSINESS PROCESSES

Many of the projects business users undertook streamlined and automated business processes. RPA was especially useful in this area by automating legacy application processes. Additionally, virtual agents greatly reduced the time associated with human interactions such as sending emails back and forth looking for information. This led to time savings, which are quantified here, and it underpins many of the business outcome benefits discussed later in this study.

Evidence and data. Interviewees shared examples of business users' Power Platform projects that save time for them and their colleagues:

- "An RPA solution a user built is targeted at vice presidents (VPs). Instead of having to track down information, everything is in a dashboard. A couple of hundred VPs are saving 4 or 5 hours per week."
- An organization saved 25% of time by commissioning activities at a new facility.
- Production planners achieved a 75% reduction in time spent creating schedules.
- An organization reduced labor hours spent on customer projects by 10% by creating better project estimates, providing associates inventory pick lists, and tracking their time.
- "The biggest benefit is users creating their own reports. It cuts the wait time from a couple of months down to a simple, ad hoc creation."
- A go-to-market team size was reduced from 20 to 10 people because of a business-developed RPA project.

Modeling and assumptions. For the financial analysis, Forrester made the following assumptions based on the above examples:

- For the composite organization, the number of employees benefiting increases over time as more projects are completed with Power Platform.
- The efficiency gain increases over time as solutions become more sophisticated in terms of process efficiency maximization and automation. A big contributor to this is bringing together the four Power Platform component areas to create more impactful solutions.
- A 50% productivity capture is applied since not all time saved translates into additional work being completed.

Risks. Some factors that could result in this benefit being lower than interviewees reported include:

- Fewer business user projects that benefit their colleagues being undertaken.
- Focusing on solutions that do not streamline and automate business processes.
- Lower salary and benefit labor costs.

To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV of $10.2 million.

> **"We built a virtual agent for onboarding hires. It is saving 300 people a lot of time when looking for information. The operations community was ecstatic when we rolled it out to them."**
>
> *Manager, petrochemical*

Streamlined Business Processes					
Ref.	**Metric**	**Calculation**	**Year 1**	**Year 2**	**Year 3**
C1	Total number of employees		10,000	10,000	10,000
C2	Number of affected workers (development projects)	A1[sum through current year]*300 users+A2[sum through current year]*50 users	600	2,400	5,000
C3	Efficiency gain		3.0%	4.0%	5.0%
C4	Average fully burdened cost		$90,000	$90,000	$90,000
C5	Total efficiency gains	C2*C3*C4	$1,620,000	$8,640,000	$22,500,000
C6	Productivity capture		50%	50%	50%
Ct	Streamlined business processes	C5*C6	$810,000	$4,320,000	$11,250,000
	Risk adjustment	↓20%			
Ctr	Streamlined business processes (risk-adjusted)		$648,000	$3,456,000	$9,000,000
	Three-year total: $13,104,000			**Three-year present value: $10,207,122**	

IMPROVED BUSINESS OUTCOMES

Democratizing development and analytics made the interviewees' organizations more agile and enabled people who best understand the business to directly contribute to the solutions being built. Power Platform means businesses and users can analyze, act, automate, and assist in new and innovative ways. This can deliver many business benefits including increased revenues, faster time-to-market, better customer and employee satisfaction, and lower costs.

Evidence and data. Interviewees shared examples of solutions they created with Power Platform and the corresponding business benefits:

- An asset tracking tool that saved $20,000 in lost tools as well as time savings.
- A mini-customer relationship management (CRM) tool to ensure proper project management oversight and cost overrun avoidance.
- A password system access reset tool used by the field force. It reduces resolution time from 30 minutes down to 2, which frees them up to do more selling.
- "We built an application to track how in-store sales associates are spending their time, and we plug that information into Power BI. The general manager says it will increase revenues by $10 million per year when rolled out to all 600 users."
- An RPA solution to quickly integrate two marketing systems as part of an acquisition.

> **"We created a solution using Power Platform to improve the ordering process for our field sales force. That has resulted in $1 million in incremental revenue from faster speed-to-market."**
>
> *Director of commercial capabilities, beverage distributor*

Modeling and assumptions. For the financial analysis, Forrester made the following assumptions based on the above examples:

- For the composite organization, revenues increase beginning in Year 2 because applications, workflows, and analytics created with Power Platform reduce time-to-market, make sales teams more effective, and improve decision-making.
- Operating margins also improve beginning in Year 2 because of streamlined business operations and better analytics contributing to areas such as lower inventory costs.

Risks. Some factors that could result in this benefit being lower than interviewees reported include:

- The types of projects being undertaken by business users.
- Baseline revenues and operating margins.
- Industry-specific differences.

To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV of $15.8 million.

Three-year operating income improvement

1.5%

Improved Business Outcomes

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Baseline revenues	C1*$300,000	$3,000,000,000	$3,000,000,000	$3,000,000,000
D2	Increased revenue percentage		0.00%	0.25%	1.00%
D3	Increased revenues	D1*D2	$0	$7,500,000	$30,000,000
D4	Operating margin		12.0%	12.2%	12.5%
Dt	Improved business outcomes	D3*D4+D1*($D4_{CY}$-$D4_{Y1}$)	$0	$6,915,000	$18,750,000
	Risk adjustment	↓20%			
Dtr	Improved business outcomes (risk-adjusted)		$0	$5,532,000	$15,000,000
	Three-year total: $20,532,000			**Three-year present value: $15,841,623**	

UNQUANTIFIED BENEFITS

There are other benefits that customers experienced but were not included in the financial analysis. This can be because they underpin the quantified benefits or they are too difficult to quantify with any precision.

- **Better And Faster Decision-Making.** Many of the interviewees' Power Platform business user projects were focused on activities such as gathering information from the field so managers could make better decisions, expand and embed the use of data in applications and workflows, and create reports and dashboards with Power BI

to make data-driven decisions. All of this helped create company cultures that fully embrace the value of data, which delivers many benefits. Power BI democratizes data management and analytics since many more users can have access compared to traditional analytics solutions. This data-centric approach underpins the streamlined business processes and improved business outcomes benefits, so it is not quantified to avoid double counting.

- "Our culture is more data-driven now. VPs have their reports on iPads instead of on paper. Power BI is used for everything, and information is more up-to-date."
- "The analytics benefit is tremendous. We've saved tons of time and really brought the data together in a single place with Power BI."

"Power BI has a lot of out-of-the-box capabilities. It doesn't require a lot of effort to make something look great. We get maximum results with minimum effort."

Analyst, beverage distributor

- **Higher Value From Other Microsoft Solutions.** Companies are typically already using Microsoft Office or Microsoft 365 when they adopt Power Platform. Some are also using Dynamics 365. Power Platform is included to different degrees in these other licenses, and it can be used to extend the core capabilities within them. This is especially true for companies using Microsoft Teams as their workplace collaboration solution. Recently, the ability to derive more value out of these other Microsoft Solutions has been further expanded with Project Oakdale, an embedded version of Microsoft Common Data Service (CDS) that Power Platform users can natively use within Teams.
  - 'We built a mobile phone app for in-store workers using Dynamics 365 on the back-end and Power BI dashboards to track performance. It only took three weeks to build and it has helped increase sales."
  - "The value of embedding PVA into Teams is huge in terms of helping employees quickly find the information and resources they need."

"We build PowerApps into our Teams channels. We also feed in Power BI reports. Centralizing everything in Teams creates a lot of value."

Power platform developer and principal analyst, telecommunications

- **Stronger Security And Compliance.** Power Platform is built on and integrates with Microsoft's security stack. This means that solutions being built by citizen developers can have proper security by default. Corporate IT can ensure that anything being published is using capabilities such as Active Directory to control access to data and resources. Additionally, when people can create their own solutions with Power Platform, they are less likely to put in place shadow IT that can bring security risks with it.
  - "Data security is a lot tighter. Access permissions are carried forward into Power BI to control information access. In the past, a lot of data was extracted from the system and shared in unknown ways."
  - "Compliance is better because we have one source of truth."

"There is not a lot of shadow IT anymore. When you tell citizen developers to go forth and develop, it becomes mainstream. They stick to the tools we have provided them."

Manager, petrochemical

FLEXIBILITY

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

- Using additional solutions components within Power Platform not already in use by the broader organization.
- Integrating Dynamics 365 or Microsoft 365 if not already done.
- Accelerating the adoption of Power Platform by business users.

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A). None of these future benefits are included in the financial analysis.

"An ongoing benefit is our increased ability to innovate. Microsoft constantly provides new capabilities, such as mixed reality, AI, and bots, which we can take advantage of. This allows us to innovate at the speed at which Microsoft and its army of developers innovate."

Enterprise business systems manager, beverage distributor

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	Power Platform development costs	$0	$536,250	$891,000	$1,254,000	$2,681,250	$2,166,012
Ftr	Internal effort	$82,500	$825,000	$1,155,000	$1,485,000	$3,547,500	$2,902,748
Gtr	Premium add-on licenses	$0	$0	$27,090	$98,280	$125,370	$96,228
	Total costs (risk-adjusted)	$82,500	$1,361,250	$2,073,090	$2,837,280	$6,354,120	$5,164,988

POWER PLATFORM DEVELOPMENT COSTS

These costs replace the eliminated traditional development effort benefit category in the Benefits section. Development costs are lower than before because business users are doing most of the creation in place of ProDev and analytics teams. Additionally, there is much less need for costly professional services.

Interviewees provided examples of how their organizations have reduced development costs, and these were previously discussed in the Benefits section.

Modeling and assumptions. For the financial analysis, Forrester made the following assumptions based on the above examples:

- Large Power Platform projects cost an average of 30% of what they would have using traditional full-stack development tools, ProDev, DevOps, corporate analytics team, and professional services. In Year 1, the cost is higher because of greater need for ProDev and consultant resources as citizen developers become more proficient in Power Platform.
- For medium projects, the savings are less because these types of projects don't require as many corporate IT and outside consulting resources. As with large projects, the savings are lower in Year 1 because users are still becoming proficient with the platform.
- These costs are approximately half of the development costs they replace as depicted in the Benefits section.

Risks. Some factors that could result in this cost being higher than interviewees reported include:

- The types of projects users are undertaking requiring more professional IT resources.
- A different mix of large and medium projects.
- Corporate IT not making all Power Platform components available to all users.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $2.2 million.

Power Platform Development Costs						
Ref.	**Metric**	**Calculation**	**Initial**	**Year 1**	**Year 2**	**Year 3**
E1	Number of large projects			1	4	6
E2	Number of medium projects			6	12	16
E3	Average Power Platform project cost (large)	Year 1: A3*50%; Years 2 and 3: A3*30%		$150,000	$90,000	$90,000
E4	Average Power Platform project cost (medium)	Year 1: A4*75%; Years 2 and 3: A4*50%		$56,250	$37,500	$37,500
Et	Power Platform development costs	E1*E3+E2*E4	$0	$487,500	$810,000	$1,140,000
	Risk adjustment	↑10%				
Etr	Power Platform development costs (risk-adjusted)		$0	$536,250	$891,000	$1,254,000
	Three-year total: $2,681,250			**Three-year present value: $2,166,012**		

INTERNAL EFFORT

Companies often put in place corporate IT and analytics support mechanisms for the army of citizen developers and their projects. This includes providing training, helping with some activities that still require full-stack development analytics support, and taking over code management for projects that have become strategic to the organization. Corporate IT also provides governance to ensure that proper security is being put in place and monitors development efforts and solution performance. Some organizations are creating "fusion teams" that pair citizen and professional developers to create solutions that are even more valuable and faster.

Modeling and assumptions. For the financial analysis, Forrester made the following assumptions based on the above examples:

- In the composite organization's initial period, two corporate IT FTEs spend three months setting up Power Platform to be used by business users and creating some training materials.
- Ongoing corporate IT resources required for the previously described activities increases over the life of the study as Power Platform usage becomes wider and more advanced.
- Similar to IT, the central data team also increases its support of citizen developers. The team helps with more advanced data integration, making various data analytics solutions within Azure available to business users and creating data visualization templates and best practices.

"We have a hybrid approach. We started by training up IT on Power Platform. We then expanded it to key business users who expressed interest. We now run a bimodal team between IT and citizen developers to cocreate apps and flows. Recently, citizen developers have started to use PVA in Teams."

Manager, petrochemical

- An average fully burdened cost of $150,000, including benefits and taxes, is used for all resources.

Risks. Some factors that could result in this cost being higher than interviewees reported include:

- Greater business user adoption of more complex projects requiring greater IT and analytics teams' involvement.
- A stronger governance model that requires more IT oversight.
- Higher labor costs.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of $2.9 million.

Internal Effort

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
F1	Corporate IT management (FTEs)	Composite	0.50	2.00	3.00	4.00
F2	Centralized data team (FTEs)	Composite	0.00	3.00	4.00	5.00
F3	Average fully burdened cost	Composite	$150,000	$150,000	$150,000	$150,000
Ft	Internal effort	(F1+F2)*F3	$75,000	$750,000	$1,050,000	$1,350,000
	Risk adjustment	↑10%				
Ftr	Internal effort (risk-adjusted)		$82,500	$825,000	$1,155,000	$1,485,000
	Three-year total: $3,547,500			**Three-year present value: $2,902,748**		

PREMIUM ADD-ON LICENSES

Most of the functions business users need come with their Microsoft 365 E5 and F3 licenses. These include Power Apps and Automate to extend Microsoft 365 capabilities as well as Power BI. Some solutions that business users may create can have additional license fees for components such as unattended RPAs and PVAs. Corporate IT often undertakes projects that require premium connectors or workflows integrating into systems such as an ERP.

Modeling and assumptions. For the financial analysis, Forrester made the following assumptions based on the above examples:

- Beginning in Year 2, citizen developers for the composite organization start to make use of RPA and PVA capabilities.
- Anything requiring premium connectors for Power Apps or Power Automate is considered a ProDev project.
- Power BI licenses are included in the price of the Microsoft 365 E5 and F3 licenses.

Risks. Some factors that could result in this cost being higher than interviewees reported include:

- Not having other Microsoft solution licenses that include the various Power Platform components.
- Enabling citizen developers to use premium connectors.
- Having more projects using RPA and PVA licenses.

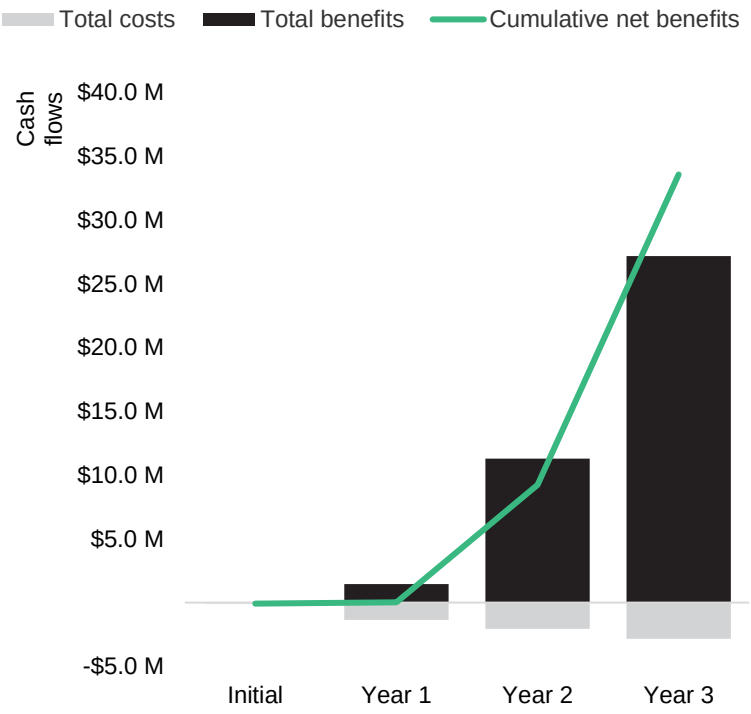
To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV of $96,228.

Premium Add-On Licenses						
Ref.	**Metric**	**Calculation**	**Initial**	**Year 1**	**Year 2**	**Year 3**
G1	Number of unattended RPA bots	Composite			1	2
G2	Unattended RPA add-on licenses	$150*G1*12 months		$0	$1,800	$3,600
G3	Number of Power Virtual Agent sessions (monthly)	Composite		0	48,000	180,000
G4	Power Virtual Agent add-on licenses	G3/2,000*$1,000		$0	$24,000	$90,000
Gt	Premium add-on licenses		$0	$0	$25,800	$93,600
	Risk adjustment	↑5%				
Gtr	Premium add-on licenses (risk-adjusted)		$0	$0	$27,090	$98,280
	Three-year total: $125,370			**Three-year present value: $96,228**		

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



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

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

Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	($82,500)	($1,361,250)	($2,073,090)	($2,837,280)	($6,354,120)	($5,164,988)
Total benefits	$0	$1,458,000	$11,283,000	$27,195,000	$39,936,000	$31,082,254
Net benefits	($82,500)	$96,750	$9,209,910	$24,357,720	$33,581,880	$25,917,266
ROI						502%
Payback period (months)						11.0

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.

Appendix B: Endnotes

[1] Source: “The Total Economic Impact™ Of Microsoft Power Platform And Azure For Corporate IT – Cost Savings And Increased Efficiencies Enabled By Power Platform And Azure,” a commissioned study conducted by Forrester Consulting on behalf of Microsoft, February 2021.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