

A Forrester Total Economic Impact™
Study Commissioned By Microsoft
July 2020

The Total Economic Impact Of Migrating From Microsoft Dynamics AX To Microsoft Dynamics 365 In The Cloud

Cost Savings And Other Business Benefits By
Migrating To The Cloud-Native Dynamics 365
Platform From On-Premises Dynamics AX

How to use this report



Forrester's Total Economic Impact methodology is designed to allow organizations of various sizes and technology deployments estimate the areas they may realize benefits based on the experiences the interviewed organizations. Forrester identifies the factors which may affect the magnitude of these benefits among different organizations so you can estimate the impact of each on your organization.

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3.4%

TCO savings by migrating to a cloud-based Dynamics 365 solution from an on-premises Dynamics AX deployment



109%
ROI



6 months
Payback period

“Dynamics 365 is and will continue to be a cornerstone piece as we look to expand our business.”

Head of group business applications, eCommerce

Executive Summary

Microsoft Dynamics 365 Finance and Dynamics 365 Supply Chain Management are business applications which form an enterprise resource planning (ERP) solution delivered as a service in the cloud. Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study to examine the potential return on investment (ROI) enterprises may realize by migrating from existing, on-premises deployments of Microsoft Dynamics AX to comparable Microsoft Dynamics 365 apps hosted by Microsoft in the cloud. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four customers who recently migrated from their legacy, on-premises Dynamics AX solution to Dynamics 365 in the cloud. Migration to a cloud ERP solution was a priority for those interviewed due to increasing costs to maintain and upgrade on-premises deployments. The interviewed companies looked to the cloud to reduce infrastructure and personnel costs associated with their Dynamics AX deployments while delivering the scalability and real-time data collection required to improve operations and power new opportunities.

Key Findings

Interviewed customers either matched or marginally reduced their ERP's total cost of ownership (TCO) by migrating from AX 2009 and/or AX 2012 to Dynamics 365 in the cloud. As cloud migration helps organizations to do the following, Forrester's model found a typical TCO reduction of 3.4%:

- › **Consolidate on-premises licensing and support costs.** By moving to the cloud, the interviewed organizations save an average of just over 8% of the overall licensing and support costs for their ERP users, including Dynamics AX licensing fees and support costs, and non-Microsoft fees for previously unavailable Dynamics 365 capabilities. Organizations with global operations and multiple on-premises Dynamics AX deployments reported consolidation savings upwards of 20%.
- › **Avoid on-premises infrastructure costs.** Infrastructure refreshes, including server hardware, networking hardware, and software costs, are no longer necessary after the Dynamics 365 migration, saving an average of \$25,500 per server across the deployment. Ongoing costs such as maintenance (hardware and personnel costs), cooling, and power are also avoided at \$13,950 per server per year as organizations continue to decommission infrastructure.
- › **Reduce the burden on IT systems administrators.** As organizations' on-premises deployments are migrated to the cloud, IT systems administrators previously tasked with maintaining and upgrading the on-premises deployments realize productivity savings of up to 50% and are reallocated to other high impact tasks.

Forrester's Total Economic Impact methodology looks beyond TCO-only analysis, as many of the most important business benefits of migration to a cloud-native ERP solution are often not considered when assessing true cost impact. These benefits include:

- › **Operational efficiency gains.** Interviewees described the impact of improved visibility and real-time data collections on their finance operations, retail operations, and manufacturing operations, and supply

Modeled financial impact for a composite organization



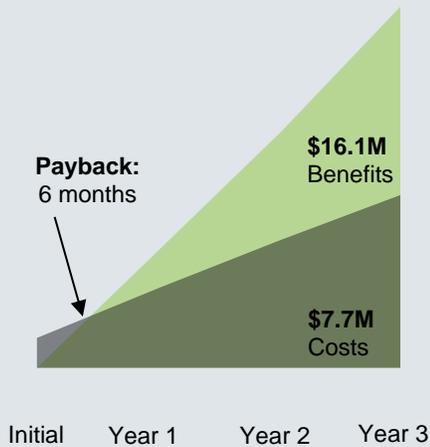
Benefits PV
\$16.1 million



Costs PV
\$7.7 million



NPV
\$8.4 million



chain. On aggregate, organizations improve their margins by just over 1%, improving profitability.

- › **Profit from scaling to meet increase in eCommerce demand.** In general, eCommerce (as a percentage of total revenue) has been increasing for the interviewed companies each year. However, disruptions, such as the COVID-19 global pandemic, serve to highlight the efficiency of a cloud-native ERP solution amid a substantial spike in eCommerce demand and an associated impact on operations. Interviewees described their ability to provision for and meet this increase in demand that would not have been possible on their on-premises Microsoft solution. For one interviewee, this resulted in an estimated \$400M+ gain in revenue that may otherwise have been missed.
- › **Employee productivity improvements.** Functionality improvements such as streamlined receipt entry at the location level and improvements in visibility across the organization bolster employee productivity between 3% and 9% across a variety of roles.

Cost Considerations

The interviewed organizations quantified three categories of cost, which were used to calculate the financial metrics for this report, including:

- › Subscription fee per user per month for Dynamics 365.
- › Internal migration and ongoing personnel hour costs.
- › Migration and ongoing support fees from a Microsoft Dynamics 365 partner. Note that enterprises meeting a minimum license requirement may be eligible for Microsoft's FastTrack program, which assists the organization in their migration efforts by providing professional services and tools at no additional cost.

Additional TEI Considerations

The interviewed organizations described benefits which Forrester did not quantify for the analysis, including:

- › Improvement to user experience due to an improvement in device access and reduction of tedious tasks.
- › Integration with and shared experience across other Microsoft solutions.
- › Better customer experiences from improved service delivery times.

Interviewees also expressed optimism for benefits they hope to take advantage of in the future, resulting from their recent migration to Dynamics 365, including:

- › Faster business value and improved user experiences resulting from functionality and performance enhancements via automatic application update delivery.
- › Extended value from solutions such as Power BI, AI, and/or machine learning (ML) from real-time data collection in the cloud.
- › Integration with other applications on the Dynamics 365 platform.

To evaluate the Total Economic Impact of such a migration, Forrester constructed a TEI framework, a composite organization, and an associated ROI analysis based on the four interviewed customers. This composite organization reduces the TCO of its ERP solution by slightly more than 3.4% over three years, with IT cost savings of nearly \$8.0M against cost considerations of \$7.7M over the same period. The migration enabled an additional \$8.1M in benefits to the business over three years for a 109% ROI and a net present value (NPV) of these benefits of \$8.4M.

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

TEI Framework And Methodology

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering migration to Microsoft Dynamics 365 from their on-premises Microsoft Dynamics AX solution.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the migration decision. Forrester took a multistep approach to evaluate the impact that migration to Microsoft Dynamics 365 can have on an organization:



DUE DILIGENCE

Interviewed Microsoft stakeholders and Forrester analysts to gather data relative to Dynamics 365 Finance and Dynamics 365 Supply Chain Management.



CUSTOMER INTERVIEWS

Interviewed four organizations that migrated to Dynamics 365 Finance and Dynamics 365 Supply Chain Management 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 migration to Microsoft Dynamics 365's impact, benefits, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

DISCLOSURES

Readers should be aware of the following:

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

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of a migration to Microsoft Dynamics 365 Finance and Dynamics 365 Supply Chain Management.

Microsoft reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

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

The Dynamics 365 Customer Journey

BEFORE AND AFTER MIGRATING TO DYNAMICS 365 IN THE CLOUD

Interviewed Organizations

For this study, Forrester conducted four interviews with organizations who recently migrated from Dynamics AX to Microsoft Dynamics 365 in the cloud. Interviewed customers include the following:

INDUSTRY	REGION	REVENUE	INTERVIEWEE(S)	DYNAMICS 365 USERS
Oil and gas	Europe	\$7B	Head of finance and supply chain solutions	140 daily users
Healthcare	United States	\$80B	Director of technology and enterprise applications	500 users
eCommerce	Europe	\$100M	<ul style="list-style-type: none">Head of group business applicationsHead of IT group	160 users
Specialty retail and manufacturing	United States	\$5B	Senior director of technology	500 users

Decision Drivers

Interviewees decided to migrate from their on-premises Dynamics AX solutions to Dynamics 365 for several key reasons:

- › **Gain better control of unconsolidated, redundant ERP solutions.** The interviewees noted that their organizations' previously complex network of competing and oftentimes redundant solutions disrupted the management of supply chains and introduced a myriad of technical and productivity issues. In conjunction with their Dynamics AX on-premises deployments, additional solutions were needed to bring required core business functionality to the interviewees' organizations. Due to a lack of automation capabilities of its disparate solution, the senior director of technology at the specialty retailer and manufacturer noted that onboarding stock keeping units (SKUs) for new products or parts on its previous ERP deployment could take up to 50 back-office FTEs to achieve.
- › **Simplify infrastructure management.** The organizations struggled with the inherent limitations of physical infrastructure. The director of technology and enterprise applications for the healthcare company noted, "On-premises, we were scrambling to add resources and maintain infrastructure to support everything." On-premises supply chain solutions naturally incurred significant additional infrastructure and resource costs when organizations provision for periods of peak usage. Additional maintenance fees and personnel hours are required to ensure the infrastructure continued to run smoothly.
- › **Improve scalability and flexibility to meet business challenges.** Organizations looked to improve their ERP solution's flexibility in the face of shifts in demand, as on-premises ERP solutions were not nimble enough to adapt to these shifts. This shortcoming often led to delays in the availability of goods and services, the inability to process order increases, and other difficulties throughout the supply chain.

"[Our on-premises solution was based on] very old systems, which would have had a high cost to keep alive going forward."

Head of finance and supply chain solutions, oil and gas



"On-premises, we were scrambling to add resources and maintain infrastructure to support everything."

Director of technology and enterprise applications, healthcare



Key Results

The interviews revealed that key results from the Dynamics 365 migration include:

- › **Increases in productivity for finance and other back-office personnel.** The simplification of processes within finance operations, such as receipt entry, boosts the productivity of staff across the board. The oil and gas company was able to take, in its words, “[...] several of our users who were doing menial work on our on-premises solution and reallocate them on tasks and in-house features we used to outsource, gaining nearly 20% productivity in some back-office functions such as receipt entry.”
- › **Operational efficiency gains (or improvements) throughout the supply chain.** Dynamics 365 provides automation capabilities that help drive efficiency improvements across the entire supply chain. This allows organizations to reallocate FTE resources from time-consuming tasks that are now automated. The healthcare interviewee elaborated on this: “[We had a] manual process that would require around 20 FTEs around-the-clock managing the warehouse for shipments. Now, an advance ship notice comes automatically, and Dynamics 365 sends out an invoice which is reconciled, and our vendors are paid automatically. Now, we have only two or three people doing the work of 20.”
- › **TCO savings from consolidating ERP capabilities in the cloud.** The interviewed organizations stated that Dynamics 365 provides the needed functionality within a single solution that covered the demands of supporting the entire supply chain providing the visibility and reliability they needed. Interviewees commented on how smoothly the Dynamics 365 solution ran compared to their legacy on-premises solutions, with one organization saving up to 30% per year in infrastructure costs and another reallocating 20% of supporting IT staff to other, more value-added projects.
- › **Flexibility to scale for business demands or unforeseen events.** The ability to scale resources, inherent to the cloud, allows organizations more adaptability to predicted — and unpredicted — demands of the business. One interviewee cited the flexibility provided by Dynamics 365 as a key enabler in allowing its organization to scale for an unexpected increase in eCommerce demand as a direct result of the COVID-19 pandemic. They cited this scalability as a significant reason that they’re still in business today, noting, “Had we not made that move to Dynamics 365, I don’t think we would have survived this last month and a half.”

“[We took] several of our users who were doing menial work on our on-premises solution and reallocate them on tasks and in-house features we used to outsource.”

Head of finance and supply chain solutions, oil and gas



“Now, we have only two or three people doing the work of 20.”

Director of technology and enterprise applications, healthcare



Composite Organization

Based on the interviews, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected by a migration to the cloud. The composite organization is representative of the four companies that Forrester interviewed and is used to present the aggregate financial analysis in the next section.

Description of composite organization. From the customer interviews, Forrester synthesized the composite organization with the following characteristics to help illustrate the financial impact of migrating to the cloud:

- › A vertically integrated global specialty retailer and manufacturing organization with annual revenue of \$3B and 10,000 total employees.
- › One hundred and fifty retail locations in addition to centralized manufacturing and back-office functions.
- › There are 450 Dynamics 365 users with an average of two users at each of its 150 retail locations. And 50 back-office, finance, and operation users are centrally located at the organization's global headquarters. User total is growing 5% annually.
- › Migration from a combination of Microsoft Dynamics AX 2009 and Dynamics AX 2012 deployments across global operations and retail locations to a consolidated Dynamics 365 deployment in the cloud.
- › Previous on-premises Dynamics AX deployments contained moderate number of customizations, which were migrated to or replicated in Dynamics 365.
- › The Microsoft FastTrack for Dynamics 365 service was leveraged to facilitate the migration to the cloud.
- › The previous, on-premises version of Dynamics AX had been deployed across the organization for five years. The composite organization is assumed to have been migrated to Dynamics 365 for one full year.



Composite organization characteristics:

- \$3 billion revenue
- 10,000 employees
- 450 Dynamics 365 users
- 150 retail locations
- One-year, post-migration from Dynamics AX 2009 and 2012 deployments

Analysis Of Benefits

QUANTIFIED BENEFIT DATA AS APPLIED TO THE COMPOSITE

Forrester modeled the financial impact of migrating from an on-premises deployment of Dynamics AX 2009 or 2012 to Dynamics 365 Finance and Dynamics 365 Operations in the cloud for the composite organization based on the key findings from the customer interviews. This section discusses the quantified IT TCO benefits and business impact benefits of such a migration, with the section that covers costs to follow. The following tables and accompanying text detail the cash flow by benefit category over a three-year period. The calculations incorporate risk adjustments, and the table shows the present value (PV) of each benefit at a 10% annual discount rate. More information for each benefit is available in the corresponding section using the category's name or the reference letter (column labeled "Ref.").

Quantified TCO savings. The composite organization achieves the following three-year, risk-adjusted PV cost savings:

- › **Avoids over \$2.9M in on-premises licensing and support fees.** Over three years, the subscription fees for Dynamics 365 in the cloud results in savings of over 8%, as compared to the cost of its Microsoft Dynamics AX assurance fees, support costs, and other ERP-related license fees.
- › **Saves over \$1.3M in on-premises infrastructure costs.** Initial savings include hardware and software costs for infrastructure refreshes. Annual savings in the form of software licensing, maintenance, power, and cooling costs accrue each year as infrastructure is phased out.
- › **Reallocates over \$3.7M in IT systems administrator labor.** As on-premises infrastructure is phased out and the organization's ERP deployment is managed in the cloud, IT systems administrators are reallocated to other value-adding activities through the organization.

Total Cost Of Ownership Savings

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Atr	Consolidated on-premises licensing and support fees	\$1,117,800	\$1,174,932	\$1,232,064	\$3,524,796	\$2,912,868
Btr	Avoided on-premises infrastructure costs	\$887,625	\$313,875	\$313,875	\$1,515,375	\$1,302,152
Ctr	IT systems administrator savings	\$1,404,000	\$1,512,000	\$1,620,000	\$4,536,000	\$3,743,080
	<i>Subtotal: Reduced TCO</i>	<i>\$3,409,425</i>	<i>\$3,000,807</i>	<i>\$3,165,939</i>	<i>\$9,576,171</i>	<i>\$7,958,100</i>

Quantified business benefits. The composite organization achieves the following three-year, risk-adjusted PV business benefits:

- › **Achieves nearly \$4.8M in operational efficiency gains.** Improving the efficiency and agility of finance and supply chain operations within the composite organization decreases the cost of goods sold by 0.5% per year and improves profitability.
- › **Profit from ability to meet increases in demand of \$1.2M.** The composite organization leverages the flexibility of Dynamics 365 to scale to capitalize on nearly \$2M in eCommerce revenue that would have been unlikely to materialize with its on-premises Dynamics AX solution.
- › **Employee productivity improvements of over \$2.0M.** The reduction or elimination of time-consuming tasks, combined with improved access of ERP capabilities for employees, yields up to an 9% productivity improvement for employees by Year 3, post-migration.

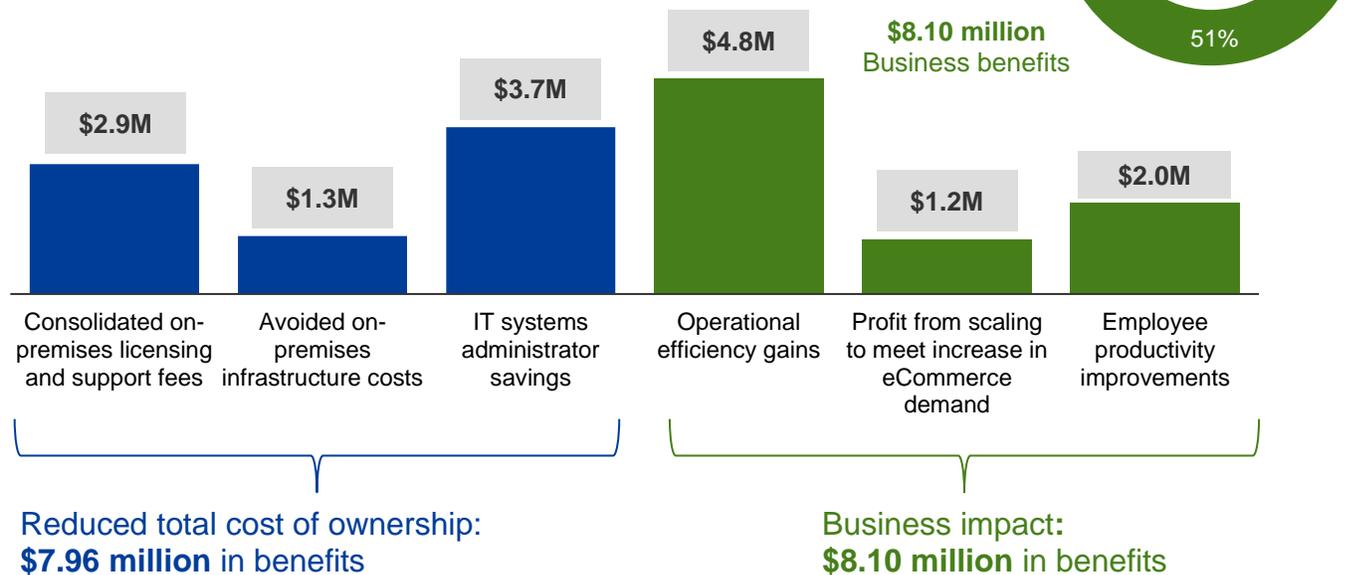
Business Benefits

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Dtr	Operational efficiency gains	\$1,200,000	\$1,977,600	\$2,800,776	\$5,978,376	\$4,829,554
Etr	Profit from scaling to meet increase in eCommerce demand	\$480,000	\$494,400	\$509,232	\$1,483,632	\$1,227,552
Ftr	Employee productivity improvements	\$610,623	\$837,369	\$1,064,115	\$2,512,107	\$2,046,638
<i>Subtotal: Business benefits</i>		<i>\$2,290,623</i>	<i>\$3,309,369</i>	<i>\$4,374,123</i>	<i>\$9,974,115</i>	<i>\$8,103,774</i>

TCO savings and business benefits combine for a three-year PV total benefit of \$16,061,884 for the composite organization.

Benefits

Three-year, risk-adjusted present values



REDUCED TOTAL COST OF OWNERSHIP

Consolidated On-Premises Licensing And Support Fees

After the migration of Dynamics 365 in the cloud, the interviewed organizations avoided the costs pertaining to their per-user client access licenses for their Dynamics AX deployment(s). Organizations paying software assurance or support fees noted savings due to the fact that support is included with their Dynamics 365 subscriptions. The interviewed organizations with global operations realized greater savings through the consolidation of their user licenses across multiple geographies as now centralized functions yield savings via downgraded license type or avoided users altogether. Some organizations paying user license fees for additional ERP functionality not available on their Dynamics AX deployments reported higher levels of consolidation savings after the migration, with one interviewee citing a near 20% license fee consolidation savings

The tables above show 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 nearly \$16.1 million.

Forrester assumes the following for the financial model:

- › An avoided software assurance fee of \$42 per user per month (20% of the Dynamics 365 list price).
- › License consolidation savings of \$123 per user per month across 300-600 users by downgrading license types or avoiding Dynamics AX licenses altogether by centralizing redundant regional users.
- › Additional savings of \$65 per user per month on average, as additional non-Microsoft ERP licensing is avoided through the functionality gains on Dynamics 365.
- › An 8% savings vs the list price for Dynamics 365 based on the above consolidation savings.
- › A consolidated user range of 300-600 users growing 5% annually. 450-496 average users were factored into the calculations.

This benefit will vary from organization to organization based on:

- › The size and complexity of an organization's on-premises Dynamics AX ERP deployment as it pertains to licensing costs.
- › The scope of global operations as it pertains to total consolidation savings.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of \$2,912,868.



8% Average licensing cost reduction from global ERP consolidation

Consolidated On-Premises Licensing And Support Fees: Calculation Table

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3
A1	Microsoft Dynamics AX yearly software assurance per user	\$42 per user per month average	\$504	\$504	\$504
A2	Consolidated support fees, non-Microsoft ERP licenses	\$65 per user per month average	\$780	\$780	\$780
A3	Savings from consolidated users and license types	\$123 per user per month average	\$1,476	\$1,476	\$1,476
A4	Average Dynamics AX user range	300-600 users, growing 5% annually	450	473	496
At	Consolidated on-premises licensing and support fees	(A1+A2+A3) * A4	\$1,242,000	\$1,305,480	\$1,368,960
	Risk adjustment	↓10%			
Atr	Consolidated on-premises licensing and support fees (risk-adjusted)		\$1,117,800	\$1,174,932	\$1,232,064
	Three-year, risk-adjusted cumulative total for the composite organization: \$3,524,796	Three-year, risk-adjusted PV for the composite organization: \$2,912,868			

Avoided On-Premises Infrastructure Costs

Migration to the cloud inherently yields significant infrastructure cost savings over an on-premises deployment as capex expenses shift to opex. Nearly every interviewee cited an organizational mandate to migrate to cloud solutions for TCO reduction. The interviewed companies realized capex savings from avoided infrastructure refreshes and overprovisioning, as well as from avoiding associated annual expenses such as hardware maintenance, associated software licensing, energy, and cooling.

- › The oil and gas interviewee spoke to the ongoing expense required for the on-premises Dynamics AX deployments, “We were running very old systems and the cost of keeping them running would have been increasingly high going forward.” The specialty retailer echoed: “Our infrastructure costs were increasing as performance was getting worse. Migrating to Dynamics 365 was an easy decision. We were able to sever our contract with the third party who hosted most of our infrastructure.”
- › After migration to Dynamics 365, the eCommerce organization began a yearly rolling retirement of infrastructure, avoiding just over \$100,000 in capital expenditure for refreshes.
- › The healthcare organization estimates a nearly 30% infrastructure cost reduction since migration to the cloud.

Forrester assumes the following for the financial model.¹ It uses a combination of customer interview data and Forrester market data:

- › An initial avoided infrastructure refresh cycle of 25 servers across global operations, yielding \$14,875 in hardware (server and networking) savings and \$10,625 in software costs.
- › Post-migration, the composite organization decommissions an additional 25 servers per year, avoiding \$13,950 annually per server in maintenance, software, power, and cooling costs.
- › These costs were modeled conservatively for the composite organization using a combination of customer interview data and Forrester market data. Other organizations may see higher cost savings based on factors such as purchasing power, scope of deployment, and others.

This benefit will vary from organization to organization based on:

- › The size and complexity of an organization’s on-premises Dynamics AX ERP deployment as it pertains to infrastructure refresh costs and ongoing expenses.
- › The skill and capacity of an organization’s IT personnel supporting the Dynamics AX deployment.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of \$1,302,152.



Organizations realized initial and ongoing TCO savings by avoiding infrastructure refreshes and the associated annual costs.

Avoided On-Premises Infrastructure Costs: Calculation Table

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3
B1	Cost per new server and related hardware	Forrester assumption	\$14,875		
B2	Software costs for new on-premises infrastructure	Forrester assumption	\$10,625		
B3	Avoided server refresh purchases	Composite	25		
B4	Avoided infrastructure refreshes	$(B1+B2)*B3$	\$637,500		
B5	Decommissioned infrastructure (servers)	Composite	25	25	25
B6	Ongoing costs per server from decommissioned infrastructure	Forrester assumption	\$13,950	\$13,950	\$13,950
B7	Avoided ongoing maintenance costs	$B5*B6$	\$348,750	\$348,750	\$348,750
Bt	Avoided on-premises infrastructure costs	$B4+B7$	\$986,250	\$348,750	\$348,750
	Risk adjustment	↓10%			
Btr	Avoided on-premises infrastructure costs (risk-adjusted)		\$887,625	\$313,875	\$313,875
	Three-year, risk-adjusted cumulative total for the composite organization: \$1,515,375	Three-year, risk-adjusted PV for the composite organization: \$1,302,152			

IT System Administrator Savings

IT staff previously assigned to manage and maintain on-premises Dynamics AX deployments realized significant efficiency savings of between 20% and 50% on average once their organization completed its migration to Dynamics 365. Factors influencing these savings include:

- › Reduced and/or eliminated on-premises infrastructure maintenance.
- › Facilitated ERP update deployment via automatic updates on Dynamics 365.
- › Improved processes through better data capture, more access, and improved visibility.

Interviewees shared the following examples:

- › The specialty retailer and manufacturer noted, “We hosted some of our infrastructure internally, which also reduced the support from our IT personnel.”
- › The interviewed eCommerce organization estimated that assigned IT personnel freed up 20% of their total working time by reducing their burden to update the organization’s Dynamic AX deployment. Since the migration of just over one year ago, the organization has already gone through five updates on Dynamics 365. Simplified processes for other IT personnel yield an additional 10% estimated productivity enhancement.

Forrester assumes the following for the financial model:

- › Thirteen (13) IT systems administrators increasing by one each subsequent year at a \$120,000 yearly rate are reallocated from hardware refreshes, maintenance, and ERP software upgrades to other value-adding tasks. This saves the organization additional IT headcount in the future.

This benefit will vary from organization to organization based on:

- › The size and complexity of an organization’s on-premises Dynamics AX ERP deployment as it pertains to infrastructure costs, licensing costs, and supporting IT personnel.
- › The skill and capacity of an organization’s IT personnel supporting the Dynamics AX deployment.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of \$3,743,080.



15 Reallocated IT hires from avoided infrastructure maintenance and upgrade deployment by Year 3

IT Systems Administrator Savings: Calculation Table

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3
C1	Reallocated IT system administrators	Customer interviews	13	14	15
C2	Annual rate for IT systems administrator		\$120,000	\$120,000	\$120,000
Ct	IT systems administrator savings	C1*C2	\$1,560,000	\$1,680,000	\$1,800,000
	Risk adjustment	↓10%			
Ctr	IT systems administrator savings (risk-adjusted)		\$1,404,000	\$1,512,000	\$1,620,000
	Three-year, risk-adjusted cumulative total for the composite organization: \$4,536,000		Three-year, risk-adjusted PV for the composite organization: \$3,743,080		

BUSINESS IMPACT BENEFITS

Operational Efficiency Gains

Prior to the migration to Dynamics 365, the interviewed organizations on Dynamics AX faced operations challenges pertaining to an on-premises ERP deployment, including:

- › Multiple Dynamics AX and ERP deployments across global operations, leading to inefficiencies in procurement, warehousing, shipping, and communication. This caused manufacturing delays, service delays, and redundant and/or additional work.
- › Limited visibility within finance operations and the supply chain as data collection, submittal, and user access is inherently limited in an on-premises environment.
- › Limited access to ERP capabilities for staff on multiple devices.

By migrating and standardizing on Dynamics 365 in the cloud, each of the interviewed organizations shared impactful before and after stories which highlight improvements to their operations made possible only by migrating to the cloud:

- › The oil and gas organization noted that across the regions they operate, multiple ERP deployments meant that processes within finance and its supply chain, such as billing and purchasing, were inconsistent from region to region. By standardizing on Dynamics 365 in the cloud, back-office finance and operation functions that were at one time managed regionally are now managed centrally, improving efficiency and consistency for these functions by an estimated 66% across all back-office staff. The interviewee added, “Dynamics 365 has enabled better communication and visibility across the different regions and improves the way we work together.”

“Dynamics 365 has enabled better communication and visibility across the different regions and improves the way we work together.”

Head of finance and supply chain solutions, oil and gas



- › The eCommerce company reported that its on-premises Dynamics AX order processing and production would interfere with each other causing delays in either customer orders or production. After switching to Dynamics 365, asynchronous order transfer occurs, improving customer order receipt by nearly 4 hours without disrupting production.
- › The healthcare organization described inefficiencies pre-Dynamics 365 that pertain to the massive amount of procurement, shipping, warehousing, billing, payments, and reverse logistics (for proper device disposal) that were required to operate its network of healthcare providers. The lack of visibility into real-time data led to suboptimal procurement timing and inventory management. This ultimately caused delays in service. By migrating to the cloud and Dynamics 365, real-time data allows the organization to get the right devices and medical equipment to providers at the locations they need them. This not only improves the speed at which its healthcare network can plan routes for providers by over 50% but it also increases the quality of care.
- › Previously, the specialty retailing and manufacturing organization required the effort of 50 FTEs to add new SKUs into their inventory. But now, they can onboard up to 6,000 SKUs for new products or vendors per month on Dynamics 365 in the cloud using a fraction of these FTE resources, greatly improving the accuracy in its supply chain.

For the composite organization, Forrester makes the following modeling assumptions:

- › A baseline revenue of \$3.0B is attributed to Year 1. This number increases 3% each subsequent year of the model to represent organic growth.
- › A baseline gross margin of 10%.
- › A yearly increase in gross margin of 0.05% per year calculated based on a reduced cost of goods sold (COGS) and improvements to selling, general, and administrative expenses (SG&A) due to improved efficiency and visibility in finance and supply chain operations. This is a conservative assumption made by Forrester based on the experiences of the interviewed organizations.

This level of benefit will vary from organization to organization, based on several factors. And no two organizations will achieve the same level of benefit. These factors include:

- › The baseline level of functionality of an organization's on-premises ERP capabilities prior to migration.
- › The scope of an organization's operations, as those with more complex supply chains or global operations inherently have more areas to achieve benefits.
- › The skill and capacity of an organization's finance and supply chain personnel.

To account for these variances, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV of \$4,829,554.



Dynamics 365 allows global organizations to consolidate multiple on-premises ERP solutions in the cloud.

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.

Operational Efficiency Gains: Calculation Table

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3
D1	Total baseline revenue	3% organic growth	3,000,000,000	3,090,000,000	3,182,700,000
D2	Baseline gross margin	Composite	10%	10%	10%
D3	Improvement to gross margin	Customer interviews	0.50%	0.80%	1.10%
D4	Improved gross margin	$D2*(1+D3)$	10.05%	10.08%	10.11%
D5	Total baseline gross profit	$D1*D2$	300,000,000	309,000,000	318,270,000
D6	Increased gross profit	$D1*D4$	301,500,000	311,472,000	321,770,970
Dt	Operational efficiency gains	$D6-D5$	\$1,500,000	\$2,472,000	\$3,500,970
	Risk adjustment	↓20%			
Dtr	Operational efficiency gains (risk-adjusted)		\$1,200,000	\$1,977,600	\$2,800,776
Three-year, risk-adjusted cumulative total for the composite organization: \$5,978,376			Three-year, risk-adjusted PV for the composite organization: \$4,829,554		

Profit From Scaling To Meet Increase In eCommerce Demand

One of the limitations of an on-premises ERP deployment is the lack of flexibility to meet short-term demands of the business. While FTE resources, licenses, and associated infrastructure can be overprovisioned to support periods of high demand on an on-premises solution, capacity often goes unutilized for long stretches of time, greatly increasing the TCO associated with this excess capacity.

By moving to a cloud-based ERP solution with Dynamics 365, organizations can give themselves short-term flexibility to scale up or down according to current levels of demand.

- › One interviewee cited the COVID-19 pandemic as a perfect proof of concept for a cloud-based ERP solution. The specialty retailing and manufacturing interviewee noted that the pandemic forced the closing of all its retail locations, which in turn drove its eCommerce demand up by over 700% month over month.
 - Having migrated to Dynamics 365 almost two years before the time of the interview, the organization was able to scale up resources to meet this monumental increase in eCommerce demand.
 - The interviewee told Forrester that if they were still on-premises, they only would have been able to meet 200% of this increased volume of transactions at its scope of deployment. And there was absolutely no way they would have been able to provision for this demand increase amid the pandemic.
 - An estimated 500% of that increased eCommerce demand, or over \$400 million, would have been lost if the organization were still on its on-premises solution, jeopardizing its business.
 - The interviewee summarized: “With COVID, our eCommerce volume suddenly rose to over seven times our normal levels. We hadn’t prepared ourselves for that eCommerce growth yet, but that was a big advantage of being on the cloud — we could scale up to meet it. Had we not made that move to Dynamics 365, I don’t think we would have survived this last month and a half. The turnaround was enormous.”

For the composite organization, Forrester assumes that:

- › eCommerce revenue represents 10% of the organization’s total revenue in Year 1. This percentage of total revenue is increasing organically by 5% of total revenue each subsequent year of the analysis.
- › An eCommerce demand spike event causes baseline eCommerce demand to quadruple. These are events which cause sharp increases in eCommerce volume not limited to pandemics, wars, retail disruption, viral demand increase, etc.
- › The likelihood of such an event occurring each year is estimated at 1%, or once every 100 years. In the face of an increasingly uncertain future regarding pandemics, public health, and globalization, Forrester considers this to be a conservative assumption.
- › The net margin on eCommerce revenue is 5%.

This benefit will vary from one organization to the next based on:

“With COVID . . . had we not made that move to Dynamics 365, I don’t think we would have survived this last month and a half. The turnaround was enormous.”

*Senior director of technology,
specialty retail and manufacturing*



- › The industry and nature of an organization's business. Those which are more transactional or see higher percentages of revenue through eCommerce may see higher benefit.
- › The industry of an organization as it affects net margin.
- › The skill and capacity of personnel managing the Dynamics 365 solution.

To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV of \$1,227,552.

Profit From Scaling To Meet Increase In eCommerce Demand: Calculation Table

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3
E1	Baseline yearly eCommerce revenue	10% of total revenue	\$300,000,000	\$309,000,000	\$318,270,000
E2	Increase in eCommerce demand due to external factors	Customer interview	400%	400%	400%
E3	Demand-adjusted eCommerce revenue	$E1*(1+E2)$	\$1,500,000,000	\$1,545,000,000	\$1,591,350,000
E4	Net revenue increase from new eCommerce demand	$E3-E1$	1,200,000,000	1,236,000,000	1,273,080,000
E5	Net margin	Composite	5%	5%	5%
E6	Total unadjusted profit increase	$E4*E5$	\$60,000,000	\$61,800,000	\$63,654,000
E7	Likelihood of external eCommerce demand increase	Forrester assumption	1%	1%	1%
Et	Increased profit from scaling to meet increase in eCommerce demand	$E6*E7$	\$600,000	\$618,000	\$636,540
	Risk adjustment	↓20%			
Etr	Increased profit from scaling to meet increase in eCommerce demand (risk-adjusted)		\$480,000	\$494,400	\$509,232

Three-year, risk-adjusted cumulative total for the composite organization: **\$1,483,632**

Three-year, risk-adjusted PV for the composite organization: **\$1,227,552**

Employee Productivity Improvements

On their legacy, on-premises Microsoft Dynamics AX solutions, the interviewed organizations described challenges which affected the productivity of employees at every level. Menial, time-consuming, and redundant tasks were commonplace throughout the organization's personnel ranks, resulting from disconnected, static data, and poor visibility on the legacy ERP solution.

- › The oil and gas interviewee cited employee difficulties staying connected to the legacy ERP solution as a significant productivity drain. They elaborated: "Our employees needed to use remote desktops to access the system. Previously, it was a common issue that our users complained they couldn't access the solution because they didn't have, or couldn't have, their VPN enabled." The same



Improved ERP access to multiple devices improves personnel productivity.

interviewee estimates a 15% improvement in employee productivity after a migration to Dynamics 365 through improved access.

- › Limited access and processes variance across the entire organization hampered productivity of finance users, developers, and IT staff at the interviewed eCommerce organization. It was noted that developers in separate geographies leveraged different processes in their roles than their peers in other regions, contributing to culture silos and inefficiency.
- › The healthcare organization noted that up to 25 warehouse staff employees were responsible for warehouse and inventory management tasks that could not be automated given their legacy, on-premises ERP deployment. These tasks include procurement, shipping and receiving, invoicing and accounts payable, among others.
- › Since updating its on-premises Microsoft Dynamics AX solution required significant IT hours, the specialty retailer and manufacturer noted that the functionality of its ERP systems in some geographies lagged behind that in others, due to the limited IT personnel capacity. This greatly affected the productivity of employees in these regions, as compared with employees leveraging frequently updated systems.

Since migrating to Dynamics 365, every interviewee cited productivity improvements across its workforce, stemming from increased visibility, increased access, and improved functionality.

- › Access to the organization's ERP solution increased significantly at the oil and gas company once it had migrated to Dynamics 365. Finance staff realized an estimated 15% productivity increase and used this time to manage tasks which were previously outsourced due to personnel capacity restraints.
- › An average 10% productivity increase among employees ranging from finance users to software development staff was estimated by the eCommerce organization.
- › The healthcare organization estimated that the warehouse and inventory management tasks that once took up to 25 employees now only took two or three given the level of automation and visibility provided by the cloud-based Dynamics 365 solution. The interviewee added: "Probably our biggest benefit that we're seeing from the cloud is time saved. If we were still doing these warehouse tasks manually on the previous on-premises solution, it would be about three to four times the cost."
- › The specialty retailer and manufacturer estimated that in geographies with emerging markets, where its on-premises ERP systems were behind on updates, employee productivity rose as high as 45% to 50% after migrating and consolidating on Dynamics 365.

For the composite organization, Forrester makes the following modeling assumptions:

- › Retail floor and warehouse employees represent 300 of the total Dynamics 365 users.
- › The hourly rate for the floor and warehouse level employee is \$22.
- › A 3% to 5% escalating productivity increase is conservatively estimated for floor- and warehouse-level employees based on the interviews.
- › Finance and back-office employees represent 150 of the total Dynamics 365 users.

"Probably our biggest benefit that we're seeing from the cloud is time saved. If we were still doing these warehouse tasks manually on the previous on-premises solution, it would be about three to four times the [labor] cost."

Director of technology and enterprise applications, healthcare



3% to 9% productivity increases for back-office operations staff

- › The hourly rate for a finance or back-office level employee is \$35.
- › A 5% to 9% escalating productivity increase is conservatively estimated for finance- and back-office-level employees based on the interviews.
- › A 75% productivity rate is captured, as Forrester cannot assume all productivity reclaimed from Dynamics 365 will be applied to additional value-adding work.

This benefit will vary from organization to organization based on:

- › The baseline effectiveness of the legacy on-premises ERP solution as it affects an employee's ability to do its job.
- › The nature of an organization's business as it pertains to the type of work and tasks required of employees.
- › The skill and capacity of an organization's employees who leverage ERP functions.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of \$2,046,638.

Employee Productivity Improvements: Calculation Table

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3
F1	Total floor and warehouse users	Composite	300	300	300
F2	Floor user average productivity increase	Customer interviews	3%	4%	5%
F3	Floor user hourly rate	Forrester assumption	\$22	\$22	\$22
F4	Floor user productivity savings	$F1 * F2 * F3 * 2,080$	\$411,840	\$549,120	\$686,400
F5	Total finance users	Composite	150	150	150
F6	Averaged finance user productivity increase	Customer interviews	5%	7%	9%
F7	Finance user hourly rate	Forrester assumption	\$35	\$35	\$35
F8	Finance productivity savings	$F5 * F6 * F7 * 2,080$	\$546,000	\$764,400	\$982,800
F9	Employee productivity recapture	Forrester assumption	75%	75%	75%
Ft	Employee productivity improvements	$(F4 + F8) * F9$	\$718,380	\$985,140	\$1,251,900
	Risk adjustment	↓15%			
Ftr	Employee productivity improvements (risk-adjusted)		\$610,623	\$837,369	\$1,064,115
	Three-year, risk-adjusted cumulative total for the composite organization: \$2,512,107	Three-year, risk-adjusted PV for the composite organization: \$2,046,638			

Unquantified Benefits

The interviewed organizations also identified benefits which were not quantified in this analysis:

- › **Improved user experience.** Migrating to Dynamics 365 in the cloud not only improves user productivity but it also improves employees' day-to-day experience through the facilitation of tedious tasks such as receipt entry and improved access to ERP capabilities from multiple devices. Interviewees also noted that integration with Office 365 applications such as Outlook, Teams, and SharePoint promoted an improved experience.
- › **Improved reliability.** By shifting business critical applications such as ERP solutions off on-premises infrastructure and into the cloud, the composite organization inherently becomes more reliable as hardware-related failures and planned downtime are no longer of concern. The eCommerce interviewee told Forrester, "Our peak season last year was the best it has ever been with Dynamics 365 in the cloud, not only [was it] due to the improvements in performance but also the improvement in reliability."
- › **Improved customer experience.** Every interviewee noted to Forrester that its organization is in a better position to deliver a superior experience to its customers resulting from improvements in performance, reliability, and service agility enabled by Dynamics 365 in the cloud.
 - The healthcare interviewee described the impact of a more efficient supply chain on its patient experience, noting that fewer incidents of device- and equipment-related delays from inefficiencies in the supply chain allows providers to deliver timelier patient care.
 - The specialty retail and manufacturing organization noted that Dynamics 365 is a much faster and more reliable performing ERP solution than its Dynamics AX based on-premises solutions. They noted to Forrester that this increase in performance allows for better customer service: "[When our service reps would need to] restart their computer from a slow application or a crash, the customers were hanging on phone and the call volume increased. It was a very bad customer experience when that happened, and it was happening more frequently."

"Our peak season last year was the best it has ever been with Dynamics 365 in the cloud not only due to the improvements in performance, but also the improvement in reliability."

Head of IT group, eCommerce



One of the advantages of a cloud solution is **improved reliability.**

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 migrate to Dynamics and later realize additional uses and business opportunities, including:

- › **Expansion on the Dynamics 365 platform.** Interviewees noted that expansion to additional Customer Engagement applications on the Dynamics 365 platform such as Sales, Field Service, and Customer Service are under consideration or are in the plans for implementation.
- › **Valuable integration with additional Microsoft applications.**
 - The healthcare interviewee noted during the interview that they've integrated the real-time data collection from its

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.

Dynamics 365 implementation with Microsoft's Power BI to add analytics capabilities to its operations. These analytics are used to continuously improve efficiency throughout its network of patients, providers, and devices.

- Most of the interviewed organizations solely have several Microsoft solutions embedded throughout their supply chain. These organizations commented on the simplified integration with other Microsoft products, the shared UI across apps, and modernized user experience that Dynamics 365 provides.
- › **More frequent updates.** The interviewed organizations reaped benefits of more frequent updates not limited to improved functionality, increased performance, and improved security by increasing the frequency of their Microsoft Dynamics updates.

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

Analysis Of Costs

QUANTIFIED COST DATA AS APPLIED TO THE COMPOSITE

Forrester modeled the financial impact of migrating from an on-premises deployment of Microsoft Dynamics AX 2009 and AX 2012 to Dynamics 365 in the cloud for the composite organization based on the key findings from the customer interviews. This section discusses the quantified costs of such a migration. The following tables and accompanying text detail the cash flow by cost category over a three-year period. The calculations incorporate risk adjustment, and the table shows the PV of each cost at a 10% annual discount rate. More information for each cost is available in the corresponding section using the category's name or the reference letter (column labeled "Ref.").

Costs. The composite organization incurs the following risk-adjusted costs for its migration from Dynamics AX to Dynamics 365 Finance and Supply Chain Management:

- › Subscription costs of approximately \$1.2M per year for Dynamics 365 users based on 450 users.
- › Initial migration costs of just under \$1.0M over a six-month implementation period measured in internal labor hours. Microsoft FastTrack is included at no additional cost. After initial migration, personnel hours are factored into the analysis as ongoing maintenance costs.
- › Costs for professional services starting at over \$300,000 at initial migration and \$660,000 per year over three years, or approximately \$50,000 per month.

Total Costs

REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Gtr	Subscription fees paid to Microsoft	\$0	\$1,190,700	\$1,251,558	\$1,312,416	\$3,754,674	\$3,102,838
Htr	Migration and ongoing management	\$990,000	\$594,000	\$660,000	\$726,000	\$2,970,000	\$2,620,909
Itr	Third-party support fees	\$330,000	\$660,000	\$660,000	\$660,000	\$2,310,000	\$1,971,322
	Total costs (risk-adjusted)	\$1,320,000	\$2,444,700	\$2,571,558	\$2,698,416	\$9,034,674	\$7,695,069

Subscription Fees Paid To Microsoft

Interviewees paid Microsoft a subscription fee for their usage of Dynamics 365. The license fee is paid on a per-month, per-user, or per-device basis. Pricing assumptions calculated for the composite organization are assumptions that Forrester has made based on the Dynamics 365 Finance and Supply Chain Management list price. These assumptions have been reviewed by Microsoft. For pricing or configuration options specific to your organization, please contact Microsoft.

The composite organization:

- › Pays \$210 per user, per month for Dynamics 365.
- › Has a combination of enterprise and retail licenses across 450 total users, growing at 5% annually.
- › Averages two retail licenses per retail location, or 300 licenses across 150 locations.
- › Contracts for 50 enterprise licenses for centrally located finance and operations staff.

This cost will vary among organizations based on:

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 just under \$7.7 million.

- › The total number of users or devices an organization contracts with Microsoft for.
- › The specific breakdown of license types within the total number of users or devices.

To account for these variances, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV of \$3,102,838.

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.

Subscription Fees Paid To Microsoft: Calculation Table

REF.	METRIC	CALCULATION	INITIAL	YEAR 1	YEAR 2	YEAR 3
G1	Total users	Growing 5% per year		450	473	496
G2	Yearly cost per user	\$210 per month		\$2,520	\$2,520	\$2,520
Gt	Subscription fees paid to Microsoft	G1*G2		\$1,134,000	\$1,191,960	\$1,249,920
	Risk adjustment	↑5%				
Gtr	Subscription fees paid to Microsoft (risk-adjusted)		\$0	\$1,190,700	\$1,251,558	\$1,312,416
Three-year, risk-adjusted cumulative total for the composite organization: \$3,754,674			Three-year, risk-adjusted PV for the composite organization: \$3,102,838			

Migration And Ongoing Management

The interviewed organizations collectively described a migration experience that, when compared to similarly sized foundational business technology implementations, was less resource-intensive and shorter in duration, averaging three months to one year across all interviewees.

- › The eCommerce organization noted that since its on-premises Dynamics AX deployment had a high amount of custom code, even normal updates for its on-premises ERP proved challenging. Despite this, they noted that the migration to Dynamics 365 was straightforward.
- › The oil and gas company staged a phased migration for Dynamics 365 as part of a global consolidation project to one ERP. The first phase was running within six months. They added: “We have gone through a large harmonization project and now all of our global marketing operations are running in D365. Given this success, we are planning to expand to our refineries this year.”

Some interviewees leveraged Microsoft’s FastTrack program, which assisted with the migration effort by providing services and tools for support.

Once deployed, interviewees noted that most of the personnel time spent managing the solution was for continued customization or deployment across additional regions.

For the composite organization, Forrester makes the following modeling assumptions:

- › A six-month initial migration period based on customer interviews.
- › Thirty (30) IT FTEs at a \$120,000 yearly rate involved with the migration for 50% of their working hours during the migration period.
- › Once deployed, nine FTEs, increasing by one each year as the user base expands, spend 50% of its working hours on maintenance, continued expansion, and customization.

This cost will vary from organization to organization based on:

“We have gone through a large harmonization project and now all of our global marketing operations are running in D365. Given this success, we are planning to expand to our refineries this year.”

Head of finance and supply chain solutions, oil and gas



Interviewee migration durations last **just over three months to 18 months.**

- › The scope, complexity, and customizations of an organization's on-premises Dynamics AX deployment(s), as it affects the migration duration and required personnel involvement.
- › The skill and capacity of an organization's IT staff or personnel involved with migration.
- › Participation in Microsoft's FastTrack program.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of \$2,620,909.

Migration And Ongoing Management: Calculation Table

REF.	METRIC	CALCULATION	INITIAL	YEAR 1	YEAR 2	YEAR 3
H1	Migration: required IT personnel	Customer interviews	30			
H2	Migration duration	Customer interviews	50% of year (6 months)			
H3	Migration: IT personnel time on task	Customer interviews	50%			
H4	Average yearly rate for IT personnel	Forrester assumption	\$120,000	\$120,000	\$120,000	\$120,000
H5	Migration: total personnel cost	$H1*H2*H3*H4$	\$900,000			
H6	Ongoing management: required IT personnel	Customer interviews		9	10	11
H7	Ongoing management: IT personnel time on task	Customer interviews		50%	50%	50%
H8	Ongoing management: total personnel cost	$H4*H6*H7$		\$540,000	\$600,000	\$660,000
Ht	Migration and ongoing management	$H5+H8$	\$900,000	\$540,000	\$600,000	\$660,000
	Risk adjustment	↑10%				
Htr	Migration and ongoing management (risk-adjusted)		\$990,000	\$594,000	\$660,000	\$726,000
Three-year, risk-adjusted cumulative total for the composite organization: \$2,970,000			Three-year, risk-adjusted PV for the composite organization: \$2,620,909			

Third-Party Support Fees

For support with both the initial migration efforts and the ongoing expansion or customizations, some interviewees pay for ongoing partner support from one of Microsoft's partners across their expansive global partner network.

For the composite organization, Forrester makes the following assumptions:

- › A \$300,000 initial expenditure for support with the initial Dynamics 365 migration. The composite organization also leverages Microsoft's FastTrack program for migration support.
- › A \$50,000 monthly fee for ongoing support with maintenance, ongoing expansion, and customizations.

This cost will vary among organizations based on:

- › The scope, complexity, integrations, and required customizations for an organization's Microsoft Dynamics deployment.
- › Participation in Microsoft's FastTrack program, as this may reduce initial migration partner fees.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of \$1,971,322.

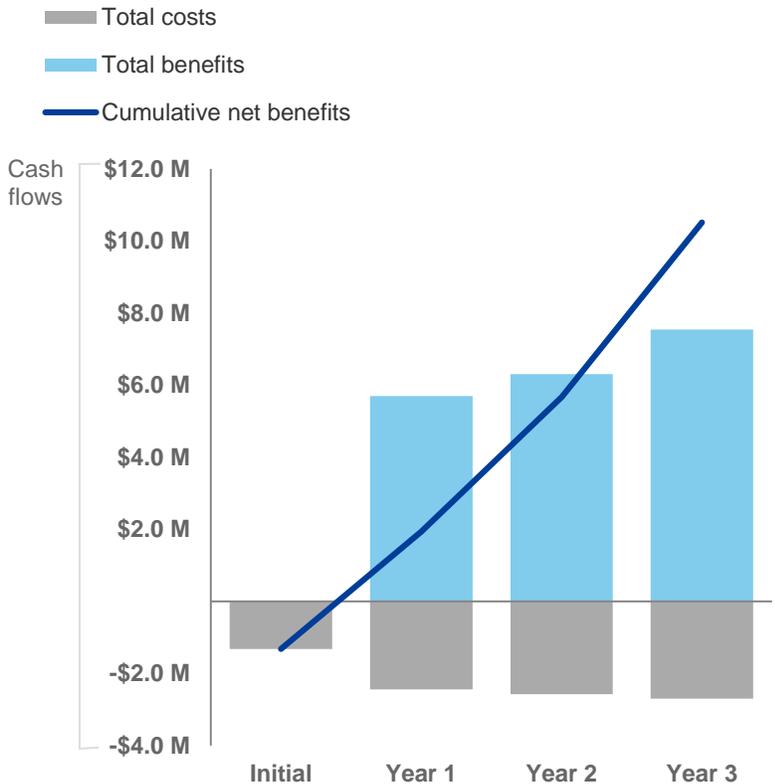
Third-Party Support Fees: Calculation Table

REF.	METRIC	CALCULATION	INITIAL	YEAR 1	YEAR 2	YEAR 3
I1	Ongoing support fee paid to partner(s)	\$50,000*12 months		\$600,000	\$600,000	\$600,000
I2	Implementation support fee paid to partner(s)	\$50,000*6 months	\$300,000			
I _t	Third-party support fees	I1+I2	\$300,000	\$600,000	\$600,000	\$600,000
	Risk adjustment	↑10%				
I _{tr}	Third-party support fees (risk-adjusted)		\$330,000	\$660,000	\$660,000	\$660,000
	Three-year, risk-adjusted cumulative total for the composite organization: \$2,310,000					
		Three-year, risk-adjusted PV for the composite organization: \$1,971,322				

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)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	(\$1,320,000)	(\$2,444,700)	(\$2,571,558)	(\$2,698,416)	(\$9,034,674)	(\$7,695,069)
Total benefits	\$0	\$5,700,048	\$6,310,176	\$7,540,062	\$19,550,286	\$16,061,844
Net benefits	(\$1,320,000)	\$3,255,348	\$3,738,618	\$4,841,646	\$10,515,612	\$8,366,775
TCO reduction						3.4%
ROI						109%
Payback period						6 months

Microsoft Dynamics 365 Finance and Dynamics 365 Supply Chain Management: Overview

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

Microsoft Dynamics 365 Finance and Microsoft Dynamics 365 Supply Chain Management

Microsoft Dynamics 365 Finance and Microsoft Dynamics 365 Supply Chain Management unifies business management across finance, manufacturing, retail, supply chain, warehouse, inventory, and transportation management with built-in predictive analytics and intelligence to help enterprises run a modern global business. It provides organizations with a service that can support their unique requirements and rapidly adjust to changing business environments without the hassle of managing infrastructure.

Elevate your financial performance. Close books faster, deliver robust reporting, increase profitability with predictive intelligence, and ensure global compliance.

- › **Share a 360-degree view of your business.** Bring organizational visibility by unifying your financials and business operations to provide real-time and predictive insights for data-driven decisions to capitalize on opportunities for growth.
- › **Improve financial performance.** Gain global visibility into the financial health of your business with role-based workspaces that provide core KPIs, charts, and financial performance to help drive accountability, efficiency, and growth.
- › **Increase profitability.** Drive margin revenue growth with a centralized, global financial management solution that delivers robust financial intelligence and embedded analytics in real time.
- › **Expand your business in new markets.** Whether you want to optimize across subsidiaries, acquire companies, or expand organically, you can go live in weeks across many countries and languages.

Run smarter with connected operations. Bring speed, agility, and efficiency to your manufacturing to optimize production planning, scheduling, operations, and cost management.

- › **Achieve operational excellence.** Accelerate the speed and accuracy of your business operations with streamlined processes that effectively coordinate people, assets, and resources to reduce costs, improve service levels, and drive growth.
- › **Drive strategic innovation.** Connect your global operations and reorient growth discussions from static views focused on historic data to dynamic views of future trends, opportunities, and strategic options.
- › **Select best-fit manufacturing processes.** Optimize manufacturing processes based on current demand and market trends by creating a mix of discrete, lean, and process in a single, unified solution to support your processes across the supply chain.
- › **Improve operational procedures.** Optimize manufacturing parameters for each product family, including make to stock, make to order, pull to order, configure to order, and engineer to order.

Discover how Microsoft is helping customers accelerate the speed of doing business by empowering people to make smarter decisions, transform business processes faster, and drive rapid business growth.

Automate and streamline your supply chain. Modernize your supply chain to maximize customer satisfaction and profitability with unified, advanced warehouse and inventory management to improve material sourcing, fulfillment, and logistics.

- › **Modernize business logistics.** Optimize fulfillment and reduce costs by synchronizing logistics across sites, warehouses, and transportation modes.
- › **Get ahead with predictive insights.** Gain visibility and control across all sites and warehouses for proactive responses to issues. Leverage existing customer data to effectively identify customer lifetime value, profitability, and buying trends.
- › **Streamline procurement.** Reduce procurement costs and gain greater control by automating procure-to-pay processes.
- › **Unify processes from sales to fulfillment.** Seamlessly connect sales and purchasing with logistics, production, and warehouse management for a 360-degree view of your supply chain.

Deliver unmatched workforce productivity. Provide a single source of global business intelligence that drives productivity from assets and resources, aligns employees toward strategic goals, and enables real-time responses to the changing demands of customers, partners, and employees.

- › **Provide a single source of intelligence.** Leverage deep data and process integration across Dynamics 365, Microsoft 365, LinkedIn, and third-party applications for a centralized source of intelligent information that saves your employees time and enables them to collaborate across your organization and supply chain to make better and faster decisions for optimum business outcomes.
- › **Empower and engage employees.** Create an agile, mobile, always connected work environment that bridges the skills gap and brings people, data, and processes together to improve business productivity and results. Enable fast user actions and decisions with over 50 role-based workspaces that provide embedded Power BI interactive data visualizations, giving them a high-level view of key business metrics and the ability to drill down into the transactions and KPIs to monitor the pulse of your business and accelerate performance.

Innovate with a modern and adaptable platform. Drive innovation with an intelligent application that is easy to tailor, scale, extend, and connect to other applications and services you already have to make full use of existing investments.

- › **Enable flexible deployment.** Drive continuous business growth with rapid, hybrid deployment options that adjust to changing requirements, comply with regulations, and maximize existing investments. Use a combination of cloud, hybrid, and on-premises deployments to meet your global business requirements of today and have the flexibility and ease to change as your business needs evolve over time.
- › **Adapt quickly.** Accelerate time-to-market and adapt the application to your needs with no-code visual editors and tools that make it easy to build and deploy web and mobile apps. Manage your growing and global business by rapidly deploying new subsidiaries in record time with the ability to copy an existing legal entity's setup to a new company, allowing the onboarding of a new location to be quick and consistent with the company's best practices.
- › **Extend and connect.** Automate processes across Dynamics 365 applications and third-party systems for a unified experience.

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: “On-Premises Infrastructure Costs Analysis Tool,” Forrester Research, Inc., January 9, 2015.