

A Forrester Total Economic Impact™ Study  
Commissioned By Sage  
March 2020

# The Total Economic Impact™ Of Sage X3 Solution For Services Organizations

Cost Savings And Business Benefits Enabled By  
Sage X3

# Table Of Contents

<b>Executive Summary</b>	<b>1</b>
Key Findings	1
TEI Framework And Methodology	3
<b>The Sage X3 Customer Journey</b>	<b>4</b>
Interviewed Organizations	4
Key Challenges	4
Solution Requirements	4
Key Results	5
<b>Analysis Of Benefits</b>	<b>6</b>
Sage X3 Financial Management Module — Labor Savings For Reporting	6
Sage X3 Purchasing Module — Materials And Productivity Savings	7
Sage X3 Sales Management Module — Reduced Sales Discounting	8
Sage X3 Inventory Management Module — Savings	8
Sage X3 Customer Service Module — Productivity Improvements	9
Sage X3 Services — New Features: Supply Chain and Financial Reporting Productivity	10
Unquantified Benefits	11
Flexibility	11
<b>Analysis Of Costs</b>	<b>12</b>
Total Costs Associated With Sage X3 For Services	12
<b>Financial Summary</b>	<b>13</b>
<b>Sage X3: Overview</b>	<b>14</b>
<b>Appendix A: Total Economic Impact</b>	<b>15</b>

**Project Director:**  
Sri Prakash Gupta

## ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit [forrester.com/consulting](https://forrester.com/consulting).

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# Executive Summary

## Key Benefits



Total headcount saved:  
**4.5 FTEs**



Customer service annual hours saved:  
**2,496**



Reduction in service inventory levels:  
**12%**

Customer experience (CX) in the services industry has quickly moved from being a competitive differentiator to a business imperative. The services industry is under constant pressure due to fierce competition, market consolidation, and digital innovation. Orchestrating highly personalized experiences for customers and prospects is increasingly necessary to achieve business goals. Therefore, leading services organizations and brands are exploring business management solutions that automate business processes, reduce risks, produce new levels of customer and operational intelligence, and ultimately fuel digital transformation.

Sage provides a business management solution for services operations that assists customers with core functionalities from financial management to supply chain management. Sage commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) organizations may realize by deploying Sage X3. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of the Sage X3 on their services organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed two Sage X3 services customers, each with significant experience of using Sage X3.

For this TEI study, Forrester has created a composite *Organization* to illustrate the quantifiable benefits and costs of investing in Sage X3 for Services. Based on characteristics of the interviewed customers, the *Organization* is a midsize company in the services industry with major operations in Africa. It has been using Sage X3 for four years to enable business process activities. For more information, see the section titled: The Composite Organization.

## Key Findings

Quantified benefits. The composite *Organization* experiences the following risk-adjusted present value (PV) quantified benefits totaling \$1,942,417 (see the Financial Analysis section for more details):

- › Financial management — labor savings for reporting: \$193,974.
- › Purchasing — materials and productivity savings: \$502,033.
- › Sales management — sales discount savings: \$537,160.
- › Inventory management — reduced inventory levels: \$407,844.
- › Customer service — productivity improvements: \$107,432.
- › New features — supply chain and financial management productivity savings: \$193,974.



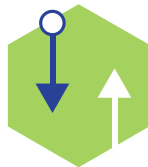
**ROI**  
**225%**



**Benefits PV**  
**\$1.9 million**



**NPV**  
**\$1.3 million**



**Payback**  
**6 months**

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

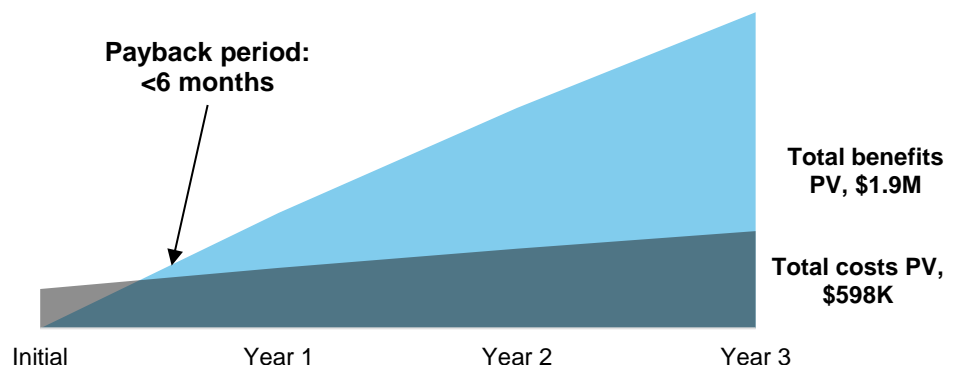
- › Interviewed customers reported that the workflow automation and alerts functionality within Sage X3 encourages users to adhere to policies and speeds up processes. In the past, an employee would have to chase somebody down to approve a purchase order. With Sage X3, the automated workflow alerts notify the appropriate staff, and approvals are done in a more reasonable amount of time.
- › With documentation and office collaboration functionality in Sage X3, every vendor invoice is scanned into a document management system and PDFs are uploaded into Sage X3 and attached to the records. Invoices are now accessible by anyone who needs to see them, including business units and purchasing, receiving dock, and accounts payable employees. With Sage X3, employees don't have to search physical file cabinets anymore; they just access Sage X3 on their computers.

**Costs.** The *Organization* experiences the following present value (PV) costs (see the Financial Analysis section for more details):

- › Internal labor to plan and deploy X3: \$60,000
- › X3 fees: \$358,948
- › Ongoing internal administrative labor for X3: \$124,343
- › Implementation costs will vary depending on the size and scope of implementation. Readers are encouraged to reach out to Sage for a more tailored quote based on specific requirements and planned business outcomes. To account for these risks, Forrester adjusts this cost upward by 10%, yielding a three-year risk-adjusted total PV of \$597,620.

Forrester's interviews and subsequent financial analysis found that the *Organization* experiences benefits of \$1,942,417 over three years versus costs of \$597,620, adding up to a net present value (NPV) of \$1,344,797, with a payback period of less than six months and an ROI of 225%. Depending on the size and scope of implementation, most services organizations would expect to receive payback within six to 12 months.

### Financial Summary



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 implementing Sage X3.

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 Sage X3 can have on an organization:



### **DUE DILIGENCE**

Interviewed Sage stakeholders and Forrester analysts to gather data relative to Sage X3.



### **CUSTOMER INTERVIEWS**

Interviewed two organizations using Sage X3 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 X3'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 Sage 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 an investment in Sage X3.

Sage 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.

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

# The Sage X3 Customer Journey

## BEFORE AND AFTER THE X3 INVESTMENT

### Interviewed Organizations

For this study, Forrester conducted two interviews with Sage X3 services customers. Interviewed customers include the following (each requesting anonymity):

INDUSTRY	REGION	INTERVIEWEE	NUMBER OF USERS
Transportation and warehousing services	Headquartered in South Africa	Enterprise systems manager	100
Fleet management services	Headquartered in South Africa	Chief information officer (CIO)	900

### The Composite Organization

For this TEI study, Forrester created a composite *Organization* to illustrate the quantifiable benefits and costs of investing in Sage X3 for services operations. The composite *Organization* is a midsize services company. It has major operations in Africa. It has been using Sage X3 for four years to integrate its services business process activities and currently has 100 active users of Sage X3. Functional modules include financial management (budgets, fixed assets, and financial reporting and dashboards) and supply chain management (purchasing and inventory management), customer service, and sales management.

### Key Challenges

The composite *Organization* shared the same issues and challenges as the two interviewed customers:

- › The *Organization* was outgrowing the capacity of existing business management software.
- › Inefficiencies of its legacy business management systems undermined growth potential.
- › It was losing insight into operations because of organizational growth and loosely integrated management tools.
- › It had a need to stay competitive within a limited budget.
- › It had a need for more agility and flexibility in an enterprise resource planning (ERP) solution.

“We had an extensive evaluation process before choosing Sage X3 over other solutions. Sage X3 is very competitively priced with a state-of-the-art technology, and it’s almost a one-stop shop for business management solutions. We are looking to optimize Sage X3 functionalities to make our business processes highly efficient and gain a competitive advantage in the marketplace.”

*Enterprise systems manager*



### Solution Requirements

The composite *Organization* searched for a solution that could:

- › Consolidate disparate services business systems into one solution.
- › Achieve process and product consistency across its varied operations.
- › Gain real-time visibility and insights across the companywide supply chain.
- › Accommodate future merger and acquisition activity.

- › Promote a leaner and more agile organization.
- › Have web access support for its mobile sales force.

## Key Results

The customer interviews revealed several key and beneficial results attributed to their investments in Sage X3 for Services. Here are the composite *Organization* results (more detail is available in the Financial Analysis section):

- › **Financial management.** The Sage X3 financial management module produced labor and time savings in the following areas and tasks:
  - The ability to report monthly company financials using multiple local currencies, along with consolidated financials using its headquarters' local currency.
  - The ability to adjust inventory levels and allow inventory control and services groups to monitor processes on a daily basis.
  - Better cash management insight and practices.
- › **Purchasing.** The *Organization* now has the ability to standardize purchasing processes across all sites, with purchasing managers adhering to standards to ensure the best possible prices and volume discounts from suppliers. In addition, Sage X3 facilitates a more streamlined and less labor-intensive purchasing process.
- › **Sales management.** Sage X3 promotes standardized sales processes, allowing account managers to operate under the same guidelines and within the same sales database. The *Organization* can review customer activity, monitor, manage, and adjust discount levels.
- › **Inventory management.** The *Organization* now has visibility into its entire inventory for all sites. It has experienced a reduction in average levels of certain inventory, using Sage X3 inventory management functionality to increase inventory turns.
- › **Customer service.** Customer service functionality in Sage X3 provides the *Organization* with more visibility into customer service and accounts receivable issues. There has been customer service productivity and customer satisfaction improvements in the way relationships are managed.
- › **New features.** The *Organization* achieves supply chain and financial reporting productivity by using the new Sage X3 features.

“Sage X3 is a very successful implementation for our organization. Generally, ERP implementation might extend over a year, but Sage X3 was deployed in six months. We started with version 6 and are currently on version 11 of Sage X3. And the product served us well. Our transaction volumes are very large and complex, but the system worked pretty well for our business.”

*Chief information officer*



# 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	Sage X3 Financial management — labor savings for reporting	\$78,000	\$78,000	\$78,000	\$234,000	\$193,974
Btr	Sage X3 Purchasing savings	\$201,875	\$201,875	\$201,875	\$605,625	\$502,033
Ctr	Sage X3 Sales management - sales discount savings	\$216,000	\$216,000	\$216,000	\$648,000	\$537,160
Dtr	Sage X3 Inventory management savings	\$164,000	\$164,000	\$164,000	\$492,000	\$407,844
Etr	Sage X3 Customer service savings	\$43,200	\$43,200	\$43,200	\$129,600	\$107,432
Ftr	New features: supply chain and financial reporting productivity	\$78,000	\$78,000	\$78,000	\$234,000	\$193,974
<b>Total benefits (risk-adjusted)</b>		<b>\$781,075</b>	<b>\$781,075</b>	<b>\$781,075</b>	<b>\$2,343,225</b>	<b>\$1,942,417</b>

## Sage X3 Financial Management Module — Labor Savings For Reporting

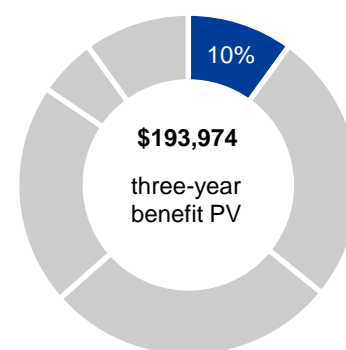
According to the interviewed customers, the implementation of the Sage X3 financial management module results in labor and time savings in the following areas and tasks for the *Organization*.

The *Organization* is now able to report monthly company financials using multiple local currencies, along with consolidated financials using its headquarters' local currency. Prior to Sage X3, the *Organization* made no attempts to produce interim reporting during the month, as it deemed the reporting too labor-intensive. With Sage X3, real-time reporting allows purchasing and inventory management groups to review and adjust inventory levels. It allows the inventory control and services groups to monitor processes on a daily basis, and the *Organization* has better cash management insight and practices.

**Modeling and assumptions.** Based on customer interviews, the *Organization* would have needed to add 1.50 full-time equivalents (FTEs) to produce real-time reports with the legacy ERP environment and to match the current reporting capabilities of X3. Forrester used a fully loaded annual cost of \$65,000 for the 1.50 FTEs (financial analyst).

**Risks.** Forrester considered the following potential risks when assigning a risk adjustment. The labor savings have been risk-adjusted (reduced) by 20% in the table below because the *Organization* never hired the financial analyst, so there's some uncertainty as to the benefit amount. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year risk-adjusted total PV of \$193,974.

The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total benefits to be a PV of more than \$1.9 million.



**Labor savings for reporting:  
10% of total benefits**



## Sage X3 Financial Management — Labor Savings For Reporting

REF.	METRIC	CALC./SOURCE	YEAR 1	YEAR 2	YEAR 3
A1	Labor savings — financial reporting	FTE	1.50	1.50	1.50
A2	Average cost for finance analyst	Industry average	\$65,000	\$65,000	\$65,000
At	Sage X3 Financial management — labor savings for reporting	A1*A2	\$97,500	\$97,500	\$97,500
	Risk adjustment	↓20%			
<b>Atr</b>	<b>Sage X3 Financial management — labor savings or reporting (risk-adjusted)</b>	<b>At-20%</b>	<b>\$78,000</b>	<b>\$78,000</b>	<b>\$78,000</b>

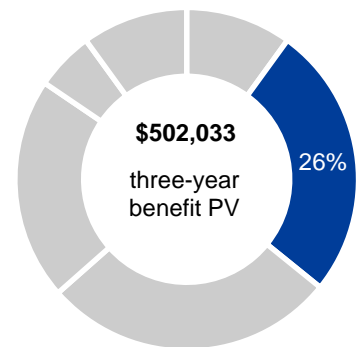
## Sage X3 Purchasing Module — Materials And Productivity Savings

With Sage X3, the *Organization* is now able to standardize its purchasing process across all sites, with purchasing managers adhering to standards to ensure the best possible prices from suppliers.

**Modeling and assumptions.** With Sage X3, the *Organization* now manages purchasing and inventory levels across all sites, saving 5% annually (\$125,000) on the cost of certain materials through volume discounts from suppliers. In addition, Sage X3 facilitates a more streamlined, less labor-intensive purchasing process, saving the *Organization* 1.5 FTEs annually. Forrester used a fully loaded annual cost of \$75,000 for the 1.50 FTEs (purchasing managers).

**Risks.** To be conservative, Forrester risk-adjusted (reduced) the materials and labor savings by 15% in the table below to reflect variations in inventory discount savings, as well as how long it may take to redeploy purchasing staff to other tasks or positions in the organization.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year risk-adjusted total PV of \$502,033.



**Purchasing savings:  
26% of total benefits**

## Sage X3 Purchasing — Materials And Productivity Savings

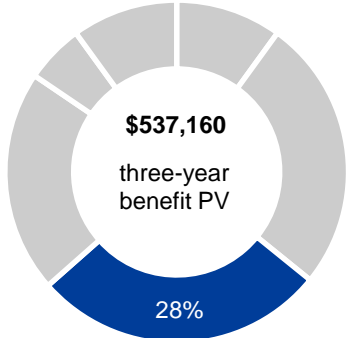
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
B1	Certain annual materials purchased	Interviews	\$2,500,000	\$2,500,000	\$2,500,000
B2	Materials cost savings	B1*5%	\$125,000	\$125,000	\$125,000
B3	Purchasing labor savings (FTEs)	Interviews	1.50	1.50	1.50
B4	Fully loaded cost per FTE	Industry average	\$75,000	\$75,000	\$75,000
B5	Purchasing labor savings (FTEs)	B3*B4	\$112,500	\$112,500	\$112,500
Bt	Sage X3 Purchasing savings	B2+B5	\$237,500	\$237,500	\$237,500
	Risk adjustment	↓15%			
<b>Btr</b>	<b>Sage X3 Purchasing savings (risk-adjusted)</b>	<b>Bt-15%</b>	<b>\$201,875</b>	<b>\$201,875</b>	<b>\$201,875</b>

# Sage X3 Sales Management Module — Reduced Sales Discounting

With Sage X3, the *Organization* has standardized sales processes, allowing account managers to operate under the same guidelines and within the same sales database. The *Organization* has a complex discount structure that is further complicated by multiple geographies and currencies. Now the *Organization* can review customer activity, monitor, manage, and reduce discount levels. Prior to Sage X3, account managers would get discounts approved locally — exceeding the allowable discount levels and creating unprofitable business in some cases. Interviewed customers agreed that having an ERP system with sales management capability built on a single database reduces unauthorized discounting.

**Modeling and assumptions.** The *Organization* is saving two-tenths of 1% of sales on discounts, representing pure bottom-line profit.

**Risks.** To be conservative, Forrester risk-adjusted (reduced) discounting benefits by 10% in the table below to reflect variations in discounts approved and denied within the organization. This yielded a three-year risk-adjusted total PV of \$537,160.



Reduced sales discounts: **28%** of total benefits

## Sage X3 Sales Management — Reduced Sales Discounting

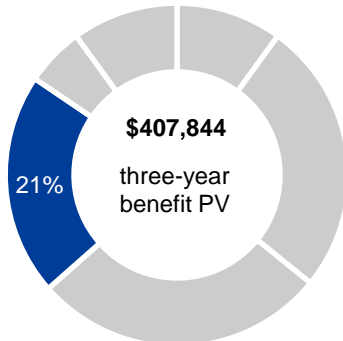
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
C1	Annual revenues	Forrester	\$120,000,000	\$120,000,000	\$120,000,000
C2	Discounts avoided (.02% of revenues)	C1*.002	\$240,000	\$240,000	\$240,000
Ct	Sage X3 Sales management — sales discount savings	C2	\$240,000	\$240,000	\$240,000
	Risk adjustment	↓10%			
<b>Ctr</b>	<b>Sage X3 Sales management — sales discount savings (risk-adjusted)</b>	<b>Ct-10%</b>	<b>\$216,000</b>	<b>\$216,000</b>	<b>\$216,000</b>

# Sage X3 Inventory Management Module — Savings

With its investment in Sage X3, the *Organization* now has better visibility into its entire inventory for all sites. The *Organization* is experiencing a reduction in average levels of certain inventory using Sage X3 inventory management functionality to increase inventory turns.

**Modeling and assumptions.** The *Organization* is able to increase inventory turns, resulting in a 12% reduction in average levels of certain inventory, saving \$345,000 (before risk adjustments) in inventory-carrying costs over three years. The *Organization* is also able to reduce headcount associated with inventory management activities, such as quickly capturing inventory transactions and relocating inventory. The organization is able to benefit from these activities and permanently reduces inventory analysts' workloads by 1.5 FTE, or \$180,000 (before risk adjustments) over three years.

**Risks.** To be conservative, Forrester risk-adjusted (reduced) the materials and labor savings by 20% in the table below to reflect



Inventory management savings: **21%** of total benefits

variations in inventory levels and how long it may take to redeploy inventory management staff to other tasks or positions in the *Organization*. This yielded a three-year risk-adjusted total PV of \$407,844.

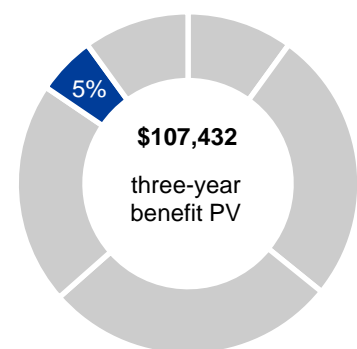
Sage X3 Inventory Management Savings					
REF.	METRIC	CALC./SOURCE	YEAR 1	YEAR 2	YEAR 3
D1	Average level of certain inventory before Sage X3	Interviews	\$9,500,000	\$9,500,000	\$9,500,000
D2	Average inventory with Sage X3	Interviews	\$8,350,000	\$8,350,000	\$8,350,000
D3	Average 12.11% reduction in inventory using Sage X3	D1-D2	\$1,150,000	\$1,150,000	\$1,150,000
D4	Carrying cost savings of certain inventory	D3*10%	\$115,000	\$115,000	\$115,000
D5	Increased productivity — inventory transactions	1.5 FTE saved per year	1.50	1.50	1.50
D6	Cost per inventory control FTE	Industry average	\$60,000	\$60,000	\$60,000
D7	Labor savings using Sage X3	D5*D6	\$90,000	\$90,000	\$90,000
Dt	Sage X3 Inventory management savings	D4+D7	\$205,000	\$205,000	\$205,000
	Risk adjustment	↓20%			
Dtr	<b>Sage X3 Inventory management savings (risk-adjusted)</b>	<b>Dt-20%</b>	<b>\$164,000</b>	<b>\$164,000</b>	<b>\$164,000</b>

## Sage X3 Customer Service Module — Productivity Improvements

Customer service functionality in Sage X3 provides the *Organization* with more visibility into customer service and accounts receivable issues. There are productivity and customer relationship improvements in the way relationships are managed.

**Modeling and assumptions.** The *Organization's* eight customer service agents experience productivity benefits, saving each agent six hour per week. At an average cost of \$40,000 per year (\$19.23 per hour), annual customer service agent productivity savings are \$48,000 ( $\$19.23 * 6 * 8 * 52$  weeks) or \$144,000 (before risk adjustments) over the three years of our analysis.

**Risks.** To be conservative, Forrester risk-adjusted (reduced) the productivity improvement benefits by 10% in the table below to reflect how long it may take to redeploy agents to other customer service tasks in the *Organization*. This yielded a three-year risk-adjusted total PV of \$107,432.



Customer service savings:  
**5% of total benefits**

## Sage X3 Customer Service Savings

REF	METRIC	CALC.SOURCE	YEAR 1	YEAR 2	YEAR 3
E1	Number of customer service agents	Interview	8	8	8
E2	Total hours saved per week per agent	Interview	6	6	6
E3	Average annual salary — customer service agents	Interviews	\$40,000	\$40,000	\$40,000
E4	Cost per hour — customer service agents	\$40,000/2,080 hours per year	\$19.23	\$19.23	\$19.23
Et	Sage X3 Customer Service savings	(E1*E2)*E4*52 weeks	\$48,000	\$48,000	\$48,000
	Risk adjustment	↓10%			
<b>Etr</b>	<b>Sage X3 Customer Service savings (risk-adjusted)</b>	<b>Et-10%</b>	<b>\$43,200</b>	<b>\$43,200</b>	<b>\$43,200</b>

## Sage X3 Services — New Features: Supply Chain and Financial Reporting Productivity

Sage has incorporated new features and improvements for supply chain, and financial management into Sage X3. Interviewed customers estimated value and benefits as follows:

### Supply chain management

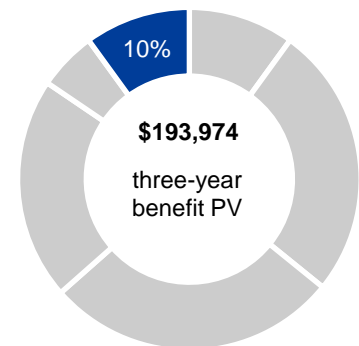
- › **eCommerce.** Build or customize a comprehensive webstore within days and manage catalogs, pricing, inventory, customers, and all transactions as part of the Sage X3 core supply chain management processes.
- › **Project management.** Manage all aspects of a project across financial and services processes, from quoting to planning resources and materials, tracking costs and schedule, invoicing, and analyzing profits

### Financial management

- › **Financial reporting and analytics.** Easily design reports with intuitive reporting capabilities integrated with Sage X3 financial management and automate the running and distribution of reports to teams or individuals.
- › **Automated bank statements.** Improve the efficiency of the financial process by automatically generating the transactions matching open items or unbalanced operations when importing bank statements.

**Modeling and assumptions.** Interviewed customers estimated the new features of Sage X3 would improve productivity by 0.50 FTEs for supply chain management and one FTE for financial reporting management.

**Risks.** Consistent with previous benefit categories, Forrester risk-adjusted (reduced) the new features benefit by 20% to reflect some uncertainty in achieving the productivity gains for this relatively new functionality. This yielded a three-year risk-adjusted total PV of \$193,974.



New features: supply chain and financial reporting productivity: **10%** of total benefits

## New Features: Supply Chain And Financial Reporting Productivity

REF.	METRIC	CALC./SOURCE	YEAR 1	YEAR 2	YEAR 3
F1	Supply chain management savings	FTE	0.50	0.50	0.50
F2	Financial management savings	FTE	1.00	0.50	0.50
F3	Average fully loaded cost of FTEs	Industry average	\$65,000	\$65,000	\$65,000
Ft	New features: supply chain and financial reporting productivity	$(F1+F2)*F3$	\$97,500	\$97,500	\$97,500
	Risk adjustment	↓20%			
<b>Ftr</b>	<b>New Features: supply chain and financial reporting productivity (risk-adjusted)</b>	<b>Gt-20%</b>	<b>\$78,000</b>	<b>\$78,000</b>	<b>\$78,000</b>

## Unquantified Benefits

**Unquantified benefits.** The interviewed customers experienced the following benefits that are not quantifiable for this study:

- › The workflow automation and alerts functionality within Sage X3 encourages users to adhere to policies and speeds up processes. In the past, an employee would have had to chase somebody down to approve a purchase order. With Sage X3, the automated workflow alerts notify the appropriate staff, and approvals are done in a more reasonable amount of time.
- › With the documentation and office collaboration functionality in Sage X3, every vendor invoice is scanned into a document management system and PDFs are uploaded into Sage X3 and attached to the records. Invoices are now accessible by anyone who needs to see them, including business units and purchasing, receiving dock, and accounts payable employees. With Sage X3, employees don't have to search physical file cabinets anymore; they just access Sage X3 on their computers.

## Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are scenarios in which a customer might choose to implement Sage X3's solution and later realize additional uses and business opportunities. There are two future flexibility options that the composite *Organization* considers:

- › **Mobile.** Sage X3 can be used on any familiar web browser or mobile device.
- › **Mergers and acquisitions.** According to the interviewed customers, having Sage X3 allowed them to acquire companies and move them onto the company ERP model much faster and easier.

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

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

# 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
G1	Labor to plan and deploy Sage X3	\$60,000	\$0	\$0	\$0	\$60,000	\$60,000
G2	Sage X3 fees	\$160,000	\$80,000	\$80,000	\$80,000	\$400,000	\$358,948
G3	Ongoing administrative labor for Sage X3	\$0	\$50,000	\$50,000	\$50,000	\$150,000	\$124,343
Gt	Total costs associated with Sage X3 solution (G1:G3)	\$220,000	\$130,000	\$130,000	\$130,000	\$610,000	\$543,291
	Risk adjustment	↑10%					
<b>Gtr</b>	<b>Total costs associated with Sage X3 solution (risk-adjusted up 10%)</b>	<b>\$242,000</b>	<b>\$143,000</b>	<b>\$143,000</b>	<b>\$143,000</b>	<b>\$671,000</b>	<b>\$597,620</b>

## Total Costs Associated With Sage X3 For Services

The internal labor associated with planning and deploying Sage X3 for the *Organization* equates to one FTE across three staff members over six months. The average annual fully loaded cost of an FTE is \$120,000. Three FTEs spend about one-third of their time over six months (in aggregate) for planning and deployment of Sage X3 at a cost of \$60,000 as an initial investment period expense. Preplanning and deployment tasks include:

- › Sharing documentation with Sage or Sage partners.
- › Working with Sage or Sage partner professional services on requirements, configuration setups, data conversion, analysis and modeling, and training.

Training employees to use Sage X3.

Sage X3 fees are \$358,948. Sage X3 solution fees include the following:

- › Sage or partner professional services. This includes software installation, postinstallation support, configuration setup, data conversion, analysis and modeling, testing, and training.

Ongoing administrative labor for Sage X3 is \$124,343. This includes ongoing labor to operate and maintain the integration points with other systems and applications, along with help desk support and training new users.

Implementation costs will vary depending on:

- › Resource salary/costs.
- › The size and scope of implementation.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year risk-adjusted total PV of \$597,620.

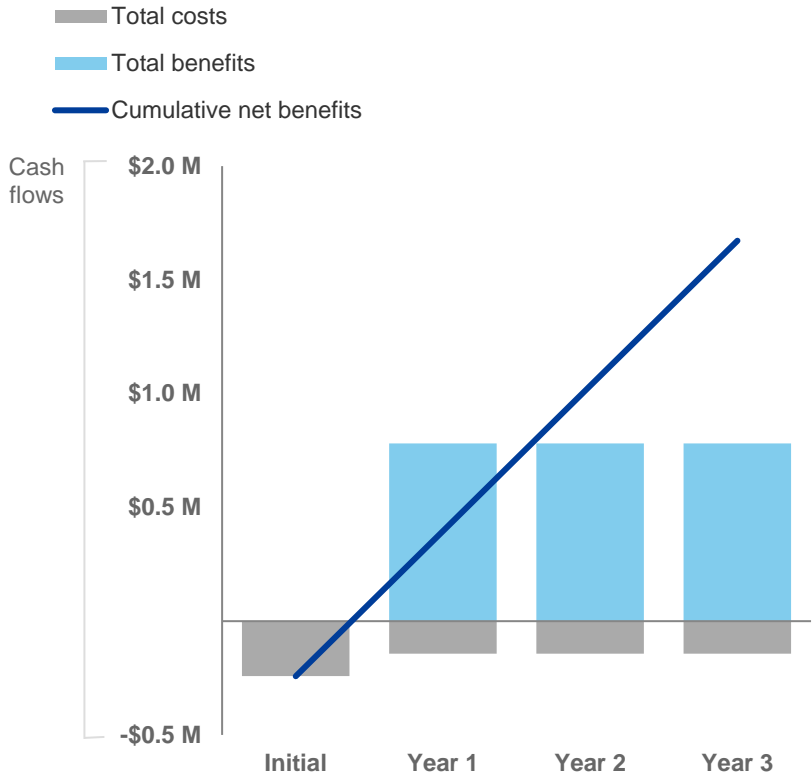
The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total costs to be a PV of \$597,620.

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.

# Financial Summary

## CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

### Cash Flow Chart (Risk-Adjusted)



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



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

### Cash Flow Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	(\$242,000)	(\$143,000)	(\$143,000)	(\$143,000)	(\$671,000)	(\$597,620)
Total benefits	\$0	\$781,075	\$781,075	\$781,075	\$2,343,225	\$1,942,417
Net benefits	(\$242,000)	\$638,075	\$638,075	\$638,075	\$1,672,225	\$1,344,797
ROI						225%
Payback period						<6

# Sage X3: Overview

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

Sage X3 helps business thrive and stay competitive in the face of growing complexity and competitive pressures. This complete business management solution transforms how organizations manage operations, processes and people, enabling businesses to respond faster to changing customer demands.

Sage X3 is faster, more intuitive, and tailored than conventional ERP. Sage X3 is available through multiple deployment options including on-premises and cloud giving organizations flexibility to choose the service offering that works the best for their organization.

Thrive as a global business	Gain faster business insight	Tailor your experience
Intuitively manage operations	Generate industry leading ROI	Flexible deployment



# 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.