A Forrester Total Economic Impact™ Study

Commissioned By Sage

Project Director:
Bob Cormier
Vice President And
Principal Consultant

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The Total Economic Impact™ Of Sage Business Cloud Enterprise Management Solution

Cost Savings And Business Benefits Attributed To Enterprise Management

FORRESTER®

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Executive Summary

Sage commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study to examine the potential return on investment (ROI) organizations may realize by deploying its Enterprise Management solution as part of Sage Business Cloud. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Enterprise Management within their organizations.

To better understand the benefits, costs, and risks associated with an investment in Enterprise Management, Forrester conducted in-depth interviews with two Enterprise Management customers. For a brief description of each customer, see the Analysis section. According to Sage, Enterprise Management is an integrated and global enterprise business management solution for purchasing, manufacturing, inventory, sales, customer service, and financial management. For more details on the Enterprise Management solution, see Appendix A.

Quantified Benefit Categories Of Enterprise Management

(Risk- and present value-adjusted over three years)

The total benefits of $1,722,180 are as follows:

- **Financial management — labor savings for reporting — $119,369.**
- **Purchasing savings — $334,233.**
- **Sales management — sales discount savings — $492,397.**
- **Inventory management savings — $348,159.**
- **Customer service savings — $125,870.**
- **Manufacturing management savings — $302,153.**

For this TEI study, Forrester has created a composite *Organization* to illustrate the quantifiable benefits and costs of investing in Enterprise Management. Based on characteristics of the interviewed customers, the *Organization* is a global, midsize enterprise in the business of manufacturing, distribution, and services. It is headquartered in North America and Europe with multisite operations globally. It has been using Enterprise Management for two years to enable its business process activities. For more information, see the section titled: The Composite *Organization.*

ENTERPRISE MANAGEMENT PROVIDES SIGNIFICANT LABOR AND OPERATIONAL COST SAVINGS

Our interviews and subsequent financial analysis found that the composite *Organization* experienced the risk-adjusted ROI, benefits, and costs shown in Figure 1 for the Enterprise Management solution.

The analysis points to risk-adjusted benefits of $1,722,180 over three years versus implementation and operating costs of $620,870, equating to a net present value (NPV) of $1,101,310. The risk-adjusted ROI was a very favorable 177%, and the payback period was a quick five months.

FIGURE 1

Financial Summary Showing Three-Year Risk-Adjusted Results — Enterprise Management Solution

ROI: 177%	Benefits PV: $1,722,180	Costs PV*: $620,870	NPV: $1,101,310

*Pertains to cloud deployment of Enterprise Management. For on-premises deployment of Enterprise Management, the Costs PV is calculated to be $706,620, or an additional $85,750 over three years, with an expected ROI of 144%.

Source: Forrester Research, Inc.

The following are the benefits quantified in this case study:

- **Total benefits associated with Enterprise Management — $1,722,180.** The *Organization* experienced the following benefits (risk- and present value-adjusted) over three years (further detailed in the Benefits: Quantified section):
  - Financial management labor savings for reporting — $119,369.
  - Purchasing savings — $334,233.
  - Sales management — sales discount savings — $492,397.
  - Inventory management savings — $348,159.
  - Customer service savings — $125,870.
  - Manufacturing management savings — $302,153.

The interviewed customers identified the following *additional* benefits of using Enterprise Management but were not able to quantify the benefits at the present time:

- One interviewed customer reported that Enterprise Management's workflow automation and alerts functionality 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 Enterprise Management, the automated workflow alerts notify the appropriate staff, and approvals are done in a more reasonable amount of time.
- With Enterprise Management's documentation and office collaboration functionality, every vendor invoice is scanned into a document management system and PDFs are uploaded into Enterprise Management 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 Enterprise Management, employees don't have to search physical file cabinets anymore; they just access Enterprise Management on their computers.

- **Costs associated with the Enterprise Management cloud solution— $620,870.** The *Organization* experienced the following costs (present value-adjusted) over three years (further detailed in the Costs section):
  - Labor to plan and deploy Enterprise Management — $50,000.
  - Incremental hardware, database, and operating system license and maintenance — $0 * (does not apply to the Enterprise Management cloud solution).
  - Enterprise Management cloud fees — $297,316.*
  - Ongoing administrative labor for Enterprise Management — $273,554.

*Note: For an on-premises deployment of Enterprise Management, the *Organization* will incur an additional $24,000 in hardware, database, and operating system fees, and additional Enterprise Management fees of $63,000 over three years.

If the risk-adjusted ROI and NPV of costs and benefits still demonstrate a compelling business case, it raises confidence that the investment is likely to succeed because the risks that threaten the project have been taken into consideration and quantified. The risk-adjusted numbers should be taken as "realistic" expectations, as they represent the expected values considering risk. Assuming normal success at mitigating risk, the risk-adjusted numbers should more closely reflect the expected outcome of the investment.

Disclosures

The reader should be aware of the following:

- The 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 return on investment that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in Enterprise Management.
- Sage reviewed and provided feedback to Forrester, but Forrester maintained editorial control over the study and its findings and did not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.
- The interviewed customers' names were provided by Sage, and they were users of the Enterprise Management on-premises solution. Sage did not participate in the interviews.

TEI Framework And Methodology

INTRODUCTION

From the information provided in the interviews, Forrester has constructed a Total Economic Impact (TEI) framework for those organizations considering investing in Enterprise Management. The objective of the framework is to identify the benefits, costs, flexibility, and risk factors that affect the investment decision.

APPROACH AND METHODOLOGY

Forrester employed four fundamental elements of TEI in modeling Enterprise Management: benefits, costs, flexibility, and risks.

Forrester took a multistep approach to evaluate the impact that Enterprise Management can have on the composite *Organization* (see Figure 2). Specifically, we:

- Interviewed Sage marketing, sales, and product management personnel to better understand the value proposition for Enterprise Management.
- Conducted in-depth interviews with each of the two customers to obtain data with respect to costs, benefits, flexibility, and risks.
- Designed a composite *Organization* based on characteristics of the interviewed customers.
- Constructed a financial model representative of the interviews using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews.
- Risk-adjusted the financial model based on minor issues and concerns the customers raised in the interviews. Risk adjustment is a key part of the TEI methodology. While the interviewed customers provided cost and benefit estimates, some categories included future projections or a broad range of responses, or had a number of internal or external forces that might have raised or lowered costs and benefits. For that reason, each benefit has been risk-adjusted and is detailed in the Benefits: Quantified section.

Given the increasing sophistication that enterprises have regarding ROI analyses related to technology investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix B for additional information on the TEI methodology.

FIGURE 2

TEI Approach

Source: Forrester Research, Inc.

Analysis

INTERVIEWED CUSTOMERS

Forrester derived its conclusions in large part from information received in a series of in-depth interviews we conducted with personnel at two Enterprise Management customers, each of which had been using Enterprise Management for at least 30 months. The following is a brief description of the interviewed customers, each of which was promised anonymity:

- A European-based process manufacturing company that engineers, designs, and manufactures a variety of specialty products. It has 800 employees with additional operations in the US and APAC. It has been using all Enterprise Management on-premises modules for 30 months. Forrester interviewed the company's group manager for enterprise systems.
- A US-based manufacturer of custom molded products. It has 140 employees, 55 of whom are regular Enterprise Management users. It has been using all Enterprise Management on-premises modules (except document and office collaboration) for over three years. Forrester interviewed the vice president and chief information officer (CIO).

THE COMPOSITE *ORGANIZATION*

For this TEI study, Forrester created a composite *Organization* to illustrate the quantifiable benefits and costs of investing in Enterprise Management. The composite *Organization* is a global, midsize enterprise in the business of manufacturing, distribution, and providing services. It is headquartered in North America and Europe with multisite operations globally. It has been using Enterprise Management for two years to integrate its business process activities and currently has 50 active users of Enterprise Management.

After an extensive review process evaluating several vendors, the *Organization* selected Enterprise Management as it believed it could satisfy the following business goals and objectives:

- Consolidate disparate business systems into one enterprisewide ERP solution.
- Achieve process and product consistency across its varied operations.
- Gain real-time visibility and insights across the global supply chain.
- Accommodate future merger and acquisition activity.
- Have a more lean and agile organization.
- Have web access support for its mobile salesforce.

The *Organization* was hoping an investment in Enterprise Management could mitigate the following challenges and pain points:

- The *Organization* was outgrowing the capacity of existing business management software.
- Inefficiencies of its legacy business management systems were undermining 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 ERP solution.

The *Organization* has invested in and is using the following Enterprise Management modules in production:

- Financial/accounting management.
- Purchasing.
- Sales management.
- Inventory management.
- Customer service.
- Manufacturing management.
- Reporting and business analytics.
- Workflow automation and alerts.
- Document and office collaboration.

BENEFITS: QUANTIFIED

Enterprise Management's Financial Management Module — Productivity Improvements In Reporting

According to the interviewed customers, the implementation of the Enterprise Management financial management module resulted in labor and time savings in the following areas and tasks.

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

Based on customer interviews, our *Organization* would have needed to add one full-time equivalent (FTE) to produce real-time reports with the legacy ERP environment and to match the current reporting capabilities of Enterprise Management. Forrester used a fully loaded annual cost of $60,000 for the one FTE (a financial analyst). The labor savings of $144,000 over three years has been risk-adjusted (reduced) by 20% in Table 1 because the *Organization* never hired the financial analyst, so there's some uncertainty as to the benefit amount. See the section on Risks for more detail.

TABLE 1

Enterprise Management Financial Management Module — Labor Savings For Reporting

Ref.	Metric	Calc./Source	Year 1	Year 2	Year 3	Total
A1	Labor savings — financial reporting	1 FTE	1	1	1	
A2	Labor savings — fully loaded cost per FTE	Industry average	$60,000	$60,000	$60,000	
At	Financial module — labor savings for reporting	A1 * A2	$60,000	$60,000	$60,000	$180,000
	Risk adjustment	↓ 20%				
Atr	**Financial module — labor savings for reporting (risk-adjusted)**	**At-20%**	**$48,000**	**$48,000**	**$48,000**	**$144,000**

Source: Forrester Research, Inc.

Enterprise Management Purchasing Module — Materials And Productivity Savings

With Enterprise Management, the *Organization* is now able to standardize its purchasing process globally, with purchasing managers adhering to standards to ensure the best possible prices from suppliers. This results in the *Organization* managing purchasing and inventory levels across all sites, saving 4% annually ($80,000) on the cost of certain materials through global volume discounts from suppliers. In addition, Enterprise Management facilitated a more streamlined, less labor-intensive purchasing process, saving the *Organization* 1.1 FTEs annually ($88,000).

To be conservative, the materials and labor savings have been risk-adjusted (reduced) by 20% in Table 2 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*. See the section on Risks for more detail.

TABLE 2

Enterprise Management Purchasing Module — Materials And Productivity Savings

Ref.	Metric	Calc./Source	Year 1	Year 2	Year 3	Total
B1	Annual materials purchased	Interviews	$2,000,000	$2,000,000	$2,000,000	
B2	Materials cost savings	B1 * 4%	$80,000	$80,000	$80,000	
B3	Purchasing labor savings (FTEs)	Interviews	1.1	1.1	1.1	
B4	Fully loaded cost per FTE	Industry average	$80,000	$80,000	$80,000	
B5	Purchasing labor savings (FTEs)	B3 * B4	$88,000	$88,000	$88,000	
Bt	Enterprise Management purchasing module savings	B2 + B5	$168,000	$168,000	$168,000	$504,000
	Risk adjustment	↓ 20%				
Btr	**Enterprise Management purchasing module savings (risk-adjusted)**	**Bt - 20%**	**$134,400**	**$134,400**	**$134,400**	**$403,200**

Source: Forrester Research, Inc.

Enterprise Management Sales Management Module — Reduced Discounting

With Enterprise Management, the *Organization* has standardized sales processes, allowing account managers worldwide 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 globally and monitor, manage, and reduce discount levels. Prior to Enterprise Management, account managers would get discounts approved locally, in some cases exceeding the allowable discount levels and creating unprofitable business. Interviewed customers agreed that having one ERP system and one sales management database reduces unauthorized discounting. The *Organization* is saving two-tenths of 1% of sales on discounts, representing pure bottom-line profit.

To be conservative, the reduced discounting benefits have been risk-adjusted (reduced) by 10% in Table 3 to reflect variations in discounts approved and denied within the *Organization*. See the section on Risks for more detail.

TABLE 3

Enterprise Management Sales Management Module — Sales Discount Savings

Ref.	Metric	Calc./Source	Year 1	Year 2	Year 3	Total
C1	Annual revenues	Forrester	$110,000,000	$110,000,000	$110,000,000	
C2	Discount savings (.02% of revenues)	C1 * .002	$220,000	$220,000	$220,000	
Ct	Enterprise Management sales management module — discount savings	C2	$220,000	$220,000	$220,000	$660,000
	Risk adjustment	↓ 10%				
Ctr	**Enterprise Management sales management — sales discount savings (risk-adjusted)**	**Ct - 10%**	**$198,000**	**$198,000**	**$198,000**	**$594,000**

Source: Forrester Research, Inc.

Enterprise Management Inventory Management Module — Savings

With its investment in Enterprise Management, the *Organization* now has visibility into its entire production inventory for all global sites. For example, if a China distribution site does not have a product, it can see that the product is available in the UK and request shipment from there. The *Organization* is experiencing a reduction in average levels of certain inventory using Enterprise Management inventory management functionality to increase inventory turns. The *Organization* was able to increase inventory turns, resulting in a 10% reduction in average levels of certain inventory, saving the *Organization* $360,000 (before risk adjustments) in inventory carrying costs over three years.

The *Organization* was also able to reduce headcount associated with inventory management activities, such as quickly capturing inventory transactions and relocating inventory. The *Organization* was able to benefit from these activities and permanently reduce inventory analysts' workloads by one FTE, or $165,000 (before risk adjustments) over three years.

To be conservative, the materials and labor savings have been risk-adjusted (reduced) by 20% in Table 4 to reflect variations in inventory levels and how long it may take to redeploy inventory management staff to other tasks or positions in the *Organization*. See the section on Risks for more detail.

TABLE 4

Enterprise Management Inventory Management Module — Savings

Ref.	Metric	Calc./Source	Year 1	Year 2	Year 3	Total
D1	Average level of certain inventory before Enterprise Management	Interviews	$8,000,000	$8,000,000	$8,000,000	
D2	Average inventory using Enterprise Management	Interviews	$7,200,000	$7,200,000	$7,200,000	
D3	Average 10% reduction in inventory using Enterprise Management	D1 - D2	$800,000	$800,000	$800,000	
D4	Carrying cost savings of certain inventory (15%)	D2 * 15%	$120,000	$120,000	$120,000	$360,000
D5	Increased productivity — inventory transactions labor savings	1 FTE	1	1	1	
D6	Cost per inventory control FTE (fully loaded)	Industry average	$55,000	$55,000	$55,000	
D7	Labor savings using Enterprise Management	D5 * D6	$55,000	$55,000	$55,000	$165,000
Dt	Enterprise Management inventory management savings	D4 + D7	$175,000	$175,000	$175,000	$525,000
	Risk adjustment	↓ 20%				
Dtr	**Enterprise Management inventory management savings (risk-adjusted)**	**Dt - 20%**	**$140,000**	**$140,000**	**$140,000**	**$420,000**

Source: Forrester Research, Inc.

Enterprise Management Customer Service Module — Productivity Improvements

Enterprise Management's customer service functionality provides the *Organization* with more visibility into customer service and accounts receivable issues. There has been productivity and customer relationship improvements in the way relationships are managed. The *Organization*'s 10 customer service agents have experienced productivity benefits, saving each agent a half-hour per day for a total of 5 hours per day. At an average cost of $45,000 per year ($21.63 per hour), annual customer service agent productivity savings are $56,238 ($21.63 * 10 * 5 * 52 weeks), or $168,714 (before risk adjustments) over the three years of our analysis.

To be conservative, the productivity improvement benefits have been risk-adjusted (reduced) by 10% in Table 5 to reflect how long it may take to redeploy agents to other customer service tasks in the *Organization*. See the section on Risks for more detail.

TABLE 5

Enterprise Management Customer Service Module — Productivity Improvements

Ref.	Metric	Calc./Source	Year 1	Year 2	Year 3	Total
E1	Number of customer service agents	Interview	10	10	10	
E2	Total hours saved per week per agent	Interview	5	5	5	
E3	Cost per hour — customer service agents	$45,000/ 2,080 hours per year	$21.63	$21.63	$21.63	
Et	Enterprise Management customer service savings	(E1 * E2) *E3 *52 weeks	$56,238	$56,238	$56,238	$168,714
	Risk adjustment	↓ 10%				
Etr	**Enterprise Management customer service savings (risk-adjusted)**	**Et - 10%**	**$50,614**	**$50,614**	**$50,614**	**$151,843**

Source: Forrester Research, Inc.

Enterprise Management Manufacturing Management — Overall Savings

The investment in Enterprise Management allowed the *Organization* to move to a completely automated process at most sites. Prior to Enterprise Management, manufacturing analysts would record production transactions once per month and do a physical inventory at the end of each month. With Enterprise Management, the *Organization*'s manufacturing transactions and inventory are accessed in real time with more accurate inventories and production schedules. The *Organization* also has immediate access to inventory scrap rates and the ability to fix the manufacturing problems if scrap rates trend higher. Enterprise Management allows the *Organization* to reduce its overall cost of producing certain goods by one-half of 1% due to current and more accurate reporting.

Consistent with previous benefit categories, Forrester risk-adjusted (reduced) the manufacturing management benefit by 10% in Table 6 to reflect variability in manufacturing processes. See the section on Risks for more detail.

TABLE 6

Enterprise Management Manufacturing Management — Overall Savings

Ref.	Metric	Calc./Source	Year 1	Year 2	Year 3	Total
F1	Costs of producing certain goods before Enterprise Management	Interviews	$27,000,000	$27,000,000	$27,000,000	
F2	Savings with Enterprise Management	One-half of 1% of costs	0.50%	0.50%	0.50%	
Ft	Enterprise Management manufacturing management savings	F1 * F2	$135,000	$135,000	$135,000	$405,000
	Risk adjustment	↓ 10%				
Ftr	**Enterprise Management manufacturing management savings (risk-adjusted)**	**Ft - 10%**	**$121,500**	**$121,500**	**$121,500**	**$364,500**

Source: Forrester Research, Inc.

Total Quantified Benefits

Table 7 shows the total of all benefits as well as present values (PVs) discounted at 10%. Over three years, the *Organization* expects risk-adjusted total benefits to be a PV of $1,722,180.

TABLE 7

The *Organization* — Total Quantified Benefits (Risk-Adjusted)

Ref.	Metric	Year 1	Year 2	Year 3	Total	Present Value
Atr	Enterprise Management financial management labor savings for reporting	$48,000	$48,000	$48,000	$144,000	$119,369
Btr	Enterprise Management purchasing savings	$134,400	$134,400	$134,400	$403,200	$334,233
Ctr	Enterprise Management sales management — sales discount savings	$198,000	$198,000	$198,000	$594,000	$492,397
Dtr	Enterprise Management inventory management savings	$140,000	$140,000	$140,000	$420,000	$348,159
Etr	Enterprise Management customer service savings	$50,614	$50,614	$50,614	$151,843	$125,870
Ftr	Enterprise Management manufacturing management savings	$121,500	$121,500	$121,500	$364,500	$302,153
Ttr	**Total quantified benefits (risk-adjusted)**	**$692,514**	**$692,514**	**$692,514**	**$2,077,543**	**$1,722,180**

Source: Forrester Research, Inc.

BENEFITS: UNQUANTIFIED

The interviewed customers identified the following *additional* benefits of using Enterprise Management but were not able to quantify the benefits at the present time:

- One interviewed customer reported that Enterprise Management's workflow automation and alerts functionality 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 Enterprise Management, the automated workflow alerts notify the appropriate staff, and approvals are done in a more reasonable amount of time.
- With Enterprise Management's documentation and office collaboration functionality, every vendor invoice is scanned into a document management system and PDFs are uploaded into Enterprise Management 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 Enterprise Management, employees don't have to search physical file cabinets anymore; they just access Enterprise Management on their computers.

FLEXIBILITY OPTION BENEFITS

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

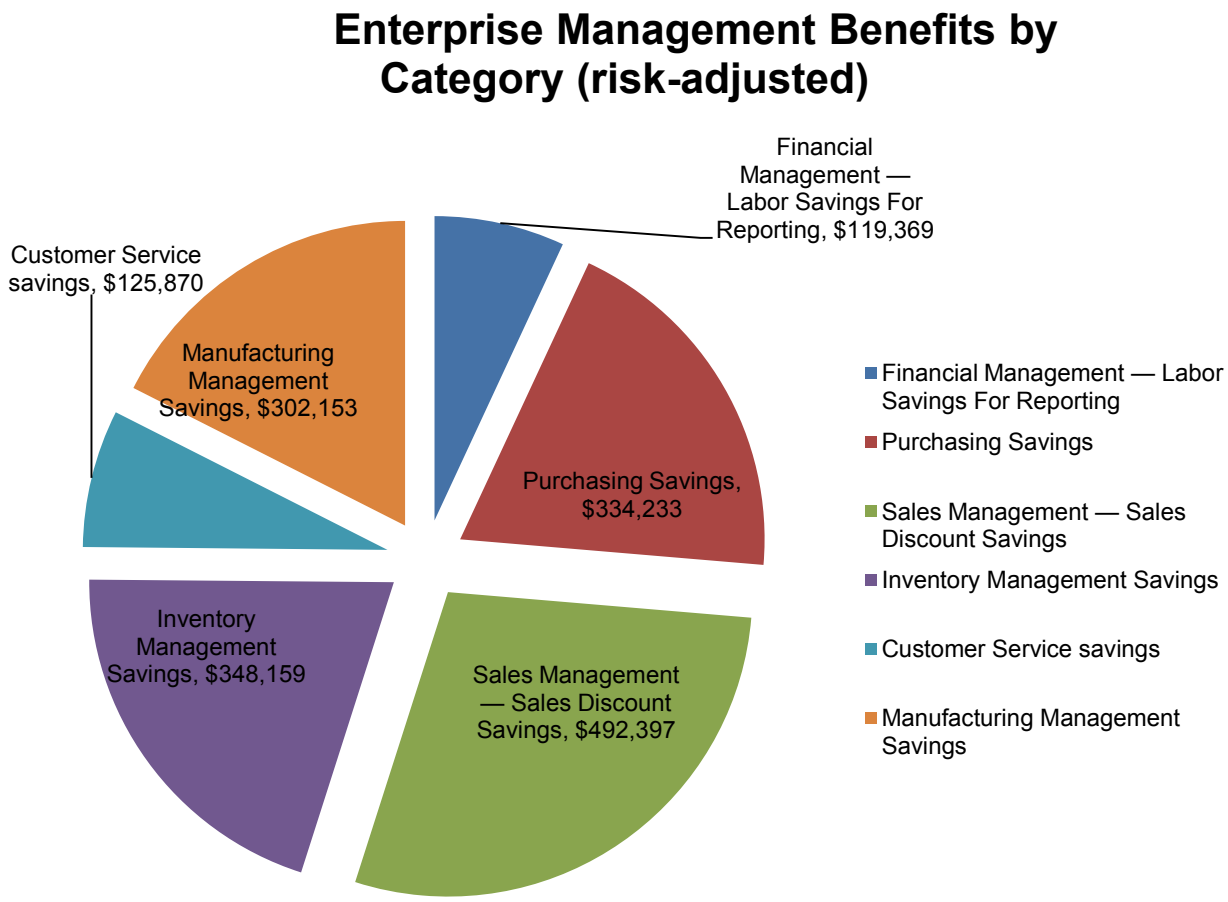
Forrester asked each interviewed customer the following question: "Now that you have invested in Enterprise Management, what other features or functionality can your organization take advantage of?" The following represents the future options available to the *Organization*, or any Enterprise Management customer:

- Mobile. Enterprise Management can be used on any familiar web browser or mobile device.
- Mergers and acquisitions. According to one of the interviewed customers, having Enterprise Management allowed it to acquire companies and move them onto the company ERP model much faster and easier. The interviewed customer commented: "We just had an acquisition two months ago, and they're already assimilated into the Enterprise Management system. We couldn't have done that before with our previous system. With Enterprise Management, we have policies and procedures so acquired companies get turned on and up and running very quickly. From a flexibility standpoint, we can acquire a business and assimilate it much faster than we could before."
- Web stores and eCommerce. According to Sage, its Symphony eCommerce enables wholesale and distribution businesses to increase growth by providing cloud-based eCommerce capabilities that display and sell their products and services online, integrated with Enterprise Management in real time.

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. For the purpose of this analysis, we have assumed that the *Organization* sees future value in being able to take future advantage of the above Enterprise Management features and functionality. The value of the flexibility option is based on the Black-Scholes Option Pricing model. (For information regarding the flexibility calculation, please see Appendix B.)

FIGURE 3

Quantified Benefits By Category (Risk- And Present Value-Adjusted)



Source: Forrester Research, Inc.

COSTS

Costs Associated With The Enterprise Management Cloud Solution

The *Organization* incurred costs in the following categories associated with a cloud deployment of Enterprise Management:

› **Labor to plan and deploy Enterprise Management — $50,000.** The internal labor associated with planning and deploying Enterprise Management equated to one FTE across three staff members over six months. Preplanning and deployment tasks included:

- 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 Enterprise Management.

- The average annual fully loaded cost of an FTE is $100,000. Three FTEs spent about one-third of their time over six months (in aggregate) for planning and deployment of Enterprise Management at a cost of **$50,000** as an initial investment period expense.

› **Incremental hardware, database, and operating system license and maintenance — $0.** The *Organization* incurred none of these costs with the Enterprise Management cloud solution.

› **Enterprise Management fees — $327,794.** Enterprise Management cloud solution fees include the following:

- **Sage or partner Professional Services.** This includes software installation in a cloud environment, post-installation support, configuration setup, data conversion, analysis and modeling, testing, and training.
- **Sage cloud subscription fees.**

› **Ongoing administrative labor for Enterprise Management — $330,000.** 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.

Table 8 shows the total costs of the Enterprise Management cloud solution as well as associated present values discounted at 10%, over three years. Forrester chose not to risk-adjust costs because the *Organization* received fixed price quotes for Enterprise Management fees, and other costs are actual costs incurred by the interviewed customers. The *Organization*'s total costs for the Enterprise Management solution are $707,794, with a present value of **$620,870**.

TABLE 8

The *Organization* — Total Costs Associated With The Enterprise Management Cloud Solution

Ref.	Metric	Initial	Year 1	Year 2	Year 3	Total	Present Value
G1	Labor to plan and deploy Enterprise Management	$50,000	$0	$0	$0	$50,000	$50,000
G2	Incremental hardware, database, and operating system license and maintenance*	$0	$0	$0	$0	$0	$0
G3	Enterprise Management fees (cloud)*	$149,611	$59,395	$59,395	$59,395	$327,794	$297,316
G4	Ongoing administrative labor for Enterprise Management	$0	$110,000	$110,000	$110,000	$330,000	$273,554
Gt	**Total costs associated with the Enterprise Management cloud solution**	**$199,611**	**$169,395**	**$169,395**	**$169,395**	**$707,794**	**$620,870**

Source: Forrester Research, Inc.

*Note: For an on-premises deployment of Enterprise Management, the *Organization* will incur an additional $24,000 in hardware, database, and operating system fees, and additional Enterprise Management license fees of $63,000 over three years.

For the *Organization*, Enterprise Management fees (both cloud and on-premises) reflected the average discount provided to similarly sized customers in the December 2015 timeframe.

RISKS

Forrester defines two types of risk associated with this analysis: “implementation risk” and “impact risk.” Implementation risk is the risk that a proposed investment in Enterprise Management may deviate from the original or expected requirements, resulting in higher costs than anticipated. Impact risk refers to the risk that the business or technology needs of the customer may not be met by the investment in Enterprise Management, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for cost and benefit estimates.

While the interviewed customers provided cost and benefit estimates, some categories included future projections or a range of responses, or had a number of internal or external forces that might have raised or lowered costs and benefits. However, the interviewed customers had a solid average three years’ experience with the Enterprise Management on-premises solution. For that reason, each benefit has been conservatively risk-adjusted downward as detailed in the Benefits: Quantified section. See Table 9 for a summary of risk adjustments by benefit category.

Note: Forrester chose not to risk-adjust costs because the *Organization* had received fixed price quotes for Enterprise Management fees.

TABLE 9

Benefit And Cost Risk Adjustments

Benefit Categories	Adjustment
Financial management labor savings for reporting	↓ 20%
Purchasing savings	↓ 20%
Sales management — sales discount savings	↓ 10%
Inventory management savings	↓ 20%
Customer service savings	↓ 10%
Manufacturing management savings	↓ 10%

Costs	Adjustment
(Costs were not risk-adjusted)	↑ 0%

Source: Forrester Research, Inc.

Highlighting risk by adjusting the benefits produces more meaningful and accurate estimates and a more accurate projection of the ROI. In general, risks affect costs by raising the original estimates, and they affect benefits by reducing the original estimates. The risk-adjusted numbers should be taken as “realistic” expectations since they represent the expected values considering risk.

The following implementation risk that could affect costs is identified as part of this analysis:

› Although Forrester did not risk-adjust Enterprise Management fees, other organizations’ costs may vary due to different levels of users and variable discounts from Sage.

The following impact risks that affect benefits are identified as part of the analysis:

› The interviewed customers were using Enterprise Management as an on-premises solution. The Enterprise Management cloud solution is fairly new and does not yet (as of this writing) have 100% of the extended functionality (e.g., fewer plug-ins and ISVs). Customers should diligently evaluate their requirements before deciding which implementation (cloud or on-premises) works best for their environment.

Table 9 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates. The TEI model uses a triangular distribution method to calculate risk-adjusted values. To construct the distribution, it is necessary to first estimate the low, most likely, and high values that could occur within the current environment. The risk-adjusted value is the mean of the distribution of those points. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

Financial Summary

The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the *Organization*'s investment in Enterprise Management.

Table 10 shows the risk-adjusted ROI, NPV, and payback period values for the Enterprise Management solution. The cost and benefit values are from summary Tables 7 and 8.

TABLE 10

Cash Flow — The Enterprise Management Solution (Risk-Adjusted)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs*	($199,611)	($169,395)	($169,395)	($169,395)	($707,794)	($620,870)
Total benefits	$0	$692,514	$692,514	$692,514	$2,077,543	$1,722,180
Net benefits	**($199,611)**	**$523,120**	**$523,120**	**$523,120**	**$1,369,748**	**$1,101,310**
ROI						**177%**
Payback period						**Five months**

*Pertains to cloud deployment of Enterprise Management. For on-premises deployment of Enterprise Management, the total costs PV is calculated to be $706,620, or an additional $85,750 over three years, with an expected ROI of 144%.

Source: Forrester Research, Inc.

The ROI for the Enterprise Management solution was a very favorable 177%, and the payback period was a quick five months.

If risk-adjusted costs, benefits, and ROI still demonstrate a compelling business case, it raises confidence that the investment is likely to succeed because the risks that threaten the project have been taken into consideration and quantified. The risk-adjusted numbers should be taken as "realistic" expectations, as they represent the expected values considering risk. Assuming normal success at mitigating risk, the risk-adjusted numbers should more closely reflect the expected outcome of the investment.

Appendix A: About The Enterprise Management Solution

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

ADOPT A FAST, SIMPLE, FLEXIBLE BUSINESS MANAGEMENT SOLUTION

Enterprise Management is the next generation of business management solutions for enterprises to grow faster and stay agile. Enterprise Management takes the complexity out of running a business. It simplifies every part of operations, leaving the business lean and ready for whatever comes next. With Enterprise Management, you are choosing the next-generation business management solution for your enterprise to grow faster and run an agile organization.

FAST

Enterprise Management runs businesses fast, with a cohesive, enterprise-class solution to manage all core business processes — from purchasing to manufacturing, inventory management, sales, customer service, and financials — locally and internationally. It also accelerates collaboration and reporting and delivers real-time insight into all costs and operational performance.

FLEXIBLE

Enterprise Management is ready for various industries. Built-in functionality for process manufacturing, other manufacturing, distribution, and services tasks adjusts to accommodate a company's unique rules and processes. It's also easily scalable — never running out of capacity again — and quickly adapts to changing needs, growing with the business as it expands to new markets or geographies, and makes it simple to manage a global business.

SIMPLE

Enterprise Management is easy to use in a familiar web browser and on mobile devices, providing the freedom to work where it's needed. It is also simple to manage and highly configurable to adapt to unique processes, roles, and preferences. Enterprise Management is a versatile solution — use it as a service in the cloud and reduce demand on in-house teams to maintain the system, or deploy the solution on a choice of infrastructures.

Enterprise Management offers rich and integrated functionality to support all core business processes with minimal IT investment and resources. Below are brief descriptions of the Enterprise Management modules.

FINANCES

Control the bottom line. Enterprise Management covers financial, personnel, cost and budget accounting, commitments, and fixed assets. In addition, it easily handles transfers from one country to another and between subsidiaries and headquarters. The flexible accounting structure (multiledger and multichart of accounts) promotes a real-time global vision while accommodating local operational requirements.

REPORTING AND ANALYTICS

Provide the entire team with the information they need to make faster and more strategic decisions. Real-time analytics, alerts, and notifications empower each role in the organization to respond quickly to changing business conditions.

MANUFACTURING

Get to market quickly by managing all manufacturing processes with one complete system. Enterprise Management supports planning, scheduling, and production control activities for both process and discrete manufacturing. It is also flexible enough to adapt to unique or mixed manufacturing modes.

INVENTORY

Keep up with demand and ensure optimal efficiency through real-time monitoring of inventory status. Inventory control is configurable by site with the application of the multisite, multiwarehouse, and multilocation management. Incorporate powerful quality control functions, including total traceability of inventory quantities and lot and serial numbers in real time, both upstream and downstream, through material flow management.

PURCHASING

Seamlessly manage the purchasing process from beginning to end, starting with management of requests for quotes (RFQs), input and follow-up of replies, and integration into the price list database. Enterprise Management helps to buy smarter by tracking purchase requests, orders created, deliveries, subcontract orders, and buyer workloads, and by managing the approval process from order through receipt and invoicing.

SALES

Provide the best experience possible for customers while improving the topline performance. Enterprise Management provides quick and easy access to information concerning products, price lists, discounts, and carriers. Issue customer quotations and book orders, transmit order acknowledgements, manage contracts, view and allocate goods from stock, and manage the dispatch and loan of goods prior to invoicing.

CUSTOMER SERVICE

Delight customers with exceptional service. Full integration with sales, inventory, purchasing, finance, and manufacturing provides a 360-degree understanding of customer activity — all within a single business management system.

Appendix B: Total Economic Impact™ Overview

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 technology initiatives to both senior management and other key business stakeholders.

The TEI methodology consists of four components to evaluate investment value: benefits, costs, flexibility, and risks.

BENEFITS

Benefits represent the value delivered to the user organization — IT and/or business units — by the proposed product or project. Often, product or project justification exercises focus just on IT cost and cost reduction, leaving little room to analyze the effect of the technology on the entire organization. The TEI methodology and the resulting financial model place 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. Calculation of benefit estimates involves a clear dialogue with the user organization to understand the specific value that is created. In addition, Forrester also requires that there be a clear line of accountability established between the measurement and justification of benefit estimates after the project has been completed. This ensures that benefit estimates tie back directly to the bottom line.

COSTS

Costs represent the investment necessary to capture the value, or benefits, of the proposed project. IT or the business units may incur costs in the form of fully burdened labor, subcontractors, or materials. Costs consider all the investments and expenses necessary to deliver the proposed value. In addition, the cost category within TEI captures any incremental costs over the existing environment for ongoing costs associated with the solution. All costs must be tied to the benefits that are created.

FLEXIBILITY

Within the TEI methodology, direct benefits represent one part of the investment value. While direct benefits can typically be the primary way to justify a project, Forrester believes that organizations should be able to measure the strategic value of an investment. Flexibility represents the value that can be obtained for some future additional investment building on top of the initial investment already made. For instance, an investment in an enterprisewide upgrade of an office productivity suite can potentially increase standardization (to increase efficiency) and reduce licensing costs. However, an embedded collaboration feature may translate to greater worker productivity if activated. The collaboration can only be used with additional investment in training at some future point. However, having the ability to capture that benefit has a PV that can be estimated. The flexibility component of TEI captures that value.

RISKS

Risks measure the uncertainty of benefit and cost estimates contained within the investment. Uncertainty is measured in two ways: 1) the likelihood that the cost and benefit estimates will meet the original projections and 2) the likelihood that the estimates will be measured and tracked over time. TEI applies a probability density function known as "triangular distribution" to the values entered. At a minimum, three values are calculated to estimate the underlying range around each cost and benefit.

Appendix C: Glossary

Discount rate: The interest rate used in cash flow analysis to take into account the time value of money. Companies set their own discount rate based on their business and investment environment. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult their respective organizations to determine the most appropriate discount rate to use in their own environment.

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.

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.

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.

Return on investment (ROI): A measure of a project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits minus costs) by costs.

A NOTE ON CASH FLOW TABLES

The following is a note on the cash flow tables used in this study (see the example table below). The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1. Those costs are not discounted. All other cash flows in years 1 through 3 are discounted using the discount rate of 10% at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations are not calculated until the summary tables are the sum of the initial investment and the discounted cash flows in each year.

TABLE [EXAMPLE]

Example Table

Ref.	Metric	Calc./Source	Year 1	Year 2	Year 3

Source: Forrester Research, Inc.