

SAGE MAS 90 SAGE MAS 200
SAGE MAS 500



Distribution

Realizing Enterprise ROI through Sage MAS 90, 200, and 500

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TABLE OF CONTENTS

Sage MAS 90, 200, and 500 ROI Study in Distribution Companies..... 3
About the Gantry Group, LLC 3

Abstract..... 4
Methodology 4
Business Benefit 4

Industry Sector Overview 5

Customer Challenges 5

Sage MAS 90, 200, and 500 Address These Challenges..... 6

Sage MAS 90, 200, and 500 ROI Scorecard..... 8

Total Benefit 9

Total Investment..... 10

ROI Methodology..... 11

ROI Scorecards 11
Benefit Analysis 11

Overall Analysis 13

Notes 14

Sage MAS 90, 200, and 500 ROI Study in Distribution Companies

About the Gantry Group, LLC

The Gantry Group is a strategic advisory and custom market intelligence firm. They apply primary market research to help companies cost-effectively accelerate the successful market adoption of their products and services—both online and offline. Gantry Group has helped over 165 client companies drive sales, acquire new customers, increase brand equity, and increase customer lifetime value through our market analysis, marketing testing, and ROI/TCO benchmarking service suites. Gantry Group creates customized market research studies to better understand customers' needs and experiences. They use both qualitative and quantitative techniques, including online and traditional surveys, focus groups, and one-on-one interviews. Gantry Group benchmarks a client company's opportunity and competitive landscape, and their offering's ROI impact on its target market. The result is a quantified value proposition that is crisply differentiated within a receptive market.

Today more than ever, companies are looking for near-term return on investment in this overall budget-constrained climate—and the sooner, the better. Successful solution vendors must now use a much more analytical approach to selling. Customers want assurances that an investment will pay for itself over an acceptable time period—either by increasing the top line, decreasing operating expenses, or both.

The Total Cost of Ownership, or TCO, is a vital ingredient to any rigorous ROI calculation. TCO informs prospects and customers as to the economic benefits an offering brings AFTER they subtract out the cost of an offering. A TCO calculation requires a vendor to work closely with customers to discover underlying cost drivers that may not be apparent on the surface. A technology product for example, may require new infrastructure investments and the hiring of new skills that its operation may require. New business processes that must be put in place to accommodate a new system may require training and support. The lifetime of some technologies must be factored into TCO to reflect the replacement cost of new units when old ones fail.

The Gantry Group designs custom TCO and ROI studies to help companies communicate factual quantified value propositions to prospects and customers. Based on in-person interviews, Gantry Group first designs custom ROI and TCO calculators to comprehensively profile the *impact* equation of a company's offering. Using such tools, Gantry Group then conducts online and in-person studies to consistently profile ROI/TCO across a carefully selected sample of participating companies. Gantry Group has equipped many product and service firms with credible TCO and ROI models that communicate value in the terms of the business metrics that customers and prospects use to assess the performance of their own companies.

Their executive team of experienced business executives combines deep operations experience with proven strategic planning, research methodology and market intelligence to grapple with the most challenging business goals and problems. Gantry Group works with CEOs, senior marketing and sales executives in technology, financial services, health care, and retail sectors. The company can be reached at 978-371-7557 or www.gantrygroup.com.

TCO is a vital ingredient to any rigorous ROI calculation.

Abstract

Sage Software, a leading provider of business information management solutions, has known for several years that implementation of our Sage MAS 90, Sage MAS 200, or Sage MAS 500 ERP software systems results in significant enhancements in productivity, efficiency and streamlined business processes. The net benefits of the deployment and use of these products in distribution businesses has been documented in numerous case studies (www.sagesoftware.com), which illustrate both increased revenues and cost reductions, or even cost eliminations. These benefits significantly over-shadow the investment in the software solution itself and are typically realized in the first year of deployment.

Sage Software engaged the Gantry Group to conduct an objective ROI study to quantify the net business impact of Sage MAS 90, 200, or 500 solutions. Gantry Group has developed definitive ROI tools that address the unique business benefits of software to wholesale goods distributors. This white paper explores experiences of Sage MAS 90, 200, and 500 distribution customers.

Methodology

By conducting objective interviews with Sage Software's distribution customers, the Gantry Group developed a realistic, payback-modeling tool that measures the ROI impact that a deployment of Sage MAS 90, 200, or 500 has on key business metrics and cost drivers. Nine distribution companies contributed to the development of this quantitative cost/benefit tool.

To ensure that the ROI model is conservative and credible, the Gantry Group identified only tangible costs and benefits that can be directly measured. No estimate-based assumptions of intangible benefits were included in the model. Customer input was thoroughly crosschecked to protect against "double-counting" and inclusion of cost savings that were theoretical but not realized.

However, non-cash benefits were captured and are included as a line item in the ROI Scorecard, although they were not used in the ROI calculation.

Business Benefit

The companies profiled in this case study realized, on average, actual ROI of 7,000 percent over a three-year time period, with payback occurring in less than eight months. These organizations shared a common set of challenges, which drove the adoption of one of the three Sage Software solutions:

- Inconsistent, questionable data in various business units
- Costly manual data entry into systems
- Duplication of data entry for non-integrated systems
- High inventory overstock
- Lengthy inventory reconciliation and end of month closing
- Inability to scale legacy systems
- Frequent errors and delays between customer order and customer shipment
- Delays in action and problem resolution

Deployment of Sage MAS 90, 200, or 500 resulted in direct, tangible benefits derived from:

- Seamless data flow due to integration of systems
- Reduction of staff or re-utilization of existing resources
- Improved sales and repeat sales
- Increased transaction volume through the business
- Reductions in inventory overstocks and increased inventory turns
- Reduction in payments to third-party accounting firms
- Reduction in payments to outsourced IT firms to handle data loss and down time incidents
- Reduced average days outstanding of receivables and shorter collection times
- Decreases in returned merchandise and inventory scrap costs
- Decreases in redundant IT infrastructure

Industry Sector Overview

Wholesale distribution includes a broad range of businesses, from consumer goods to the recycling of business assets. However, distribution companies all have some common operating characteristics. These include:

- **Sales through various distribution channels** – There are two main sales channels for wholesale distributors: direct-to-consumer or business-to-business. Not all distributors have both sales channels. While sales processes can vary between the two, there are also many similarities.
- **Maintaining inventories** – Inventory asset management is a primary focus of operations. In a highly competitive market, distributors are constantly looking for low-cost suppliers. Inventory turns are also a concern, as is maintaining accurate costing and pricing for a complete profitability picture.
- **Real-time decision making** – Throughout a given day, customers frequently need immediate access to historical or current data concerning the company's operation. As a result, there is a pressing need for fast generation of reports or online inquiries.

Customer Challenges

No matter what specific items are being distributed, businesses are typically faced with a set of common challenges that drive the costs of their business activities. These include:

- **Inconsistent, questionable data across the business** – when multiple software systems are being run for different business processes in the workflow, companies often find it difficult to reconcile inventory, or shipments do not align with sales orders.
- **Costly manual entry into systems** – for those businesses that have not automated all their information systems, doing manual entry is costly and

Businesses are typically faced with a set of common challenges that drive the cost of their business activities.

time-consuming. Many hire temporary staff to do this task while others outsource.

- **Duplication of entry for non-integrated systems** – even companies with automated business systems sometimes are running multiple software packages that are not interoperable. As a result, some data must be entered in duplicate, which creates delays.
- **Unreliable processes to transfer sales orders to shipping** – many companies still post sales orders on a board in shipping area. These processes are inherently unreliable and result in missed customer orders or inaccurate shipments.
- **High overstock in inventory** – without visibility into the inventory systems, companies do not know the status or availability of finished goods. As a result, purchasing personnel often overstock to avoid shortfalls. This results in overbuying and unnecessary inventory-carrying costs.
- **Lengthy inventory reconciliation and end of month closing** – inventory reconciliation is a lengthy process in a non-automated company. As a result, period-end closings can require that the entire business information system be frozen until all accounts are reconciled.
- **Inability to scale the volume of existing MIS systems** – some companies find that they cannot scale their automated information systems to meet the demands of their growing businesses. As transaction volume increases, many software systems grind to a halt or have unacceptable delays to accomplish everyday tasks like generating reports.
- **Customer satisfaction issues** – delayed or incorrect orders can mean customers will quickly go elsewhere for product. The ability to fulfill orders accurately and on time is highly correlated with repeat sales.
- **Delays in action and problem resolution** – without immediate access to historical and current customer data throughout the business, customer service representatives are challenged to resolve customer queries fast. This is true not only for customers but for any employee or manager with a question about the business.

Sage MAS 90, 200, and 500 Address These Challenges

The implementation of Sage MAS 90, 200, or 500 can have an immediate effect on many of the challenge areas listed above. Once staff members are trained and the data migration from a prior system has been completed, businesses can begin benefiting right away. Areas of benefit include:

- **Seamless data flow due to integration of systems** – when software systems are consolidated into a single solution, business processes are interconnected with data that is reliable and consistent. Data is timely and

When software systems are consolidated into a single solution, business processes are interconnected.

easily accessible so businesses are able to take on more transactions than with previous systems.

- **Reduction of staff or re-utilization of existing resources** – businesses find that increased productivity and elimination of the need for manual or duplicate data entry enables them to reduce staff, reshuffle employees to other needed positions, or to hire fewer additional staff to support growth.
- **Improved sales and repeat sales** – with dependable, streamlined business processes, businesses can process more transactions. Additionally, repeat business increases as customers realize the distributor is dependable. Finally, there are some customers who require unique reporting, notification, and reconciling procedures from their distributors.
- **Improved sales due to better stocking** – some companies are able to remove products that do not sell well and replace them with goods that sell faster. With new visibility into their inventory, businesses can track and reduce slow-moving products, enabling them to increase sales.
- **Reductions in inventory costs due to more accurate purchasing** – when companies have an accurate view of current stock and forecasted demand, they can purchase only what they need when they need it. The resulting increase in inventory turns means less cash is tied up in inventory at a given time. The benefit to the company is equivalent to the cost of capital of that cash.
- **Reduction in payments to accounting firms** – because Sage Software products fully integrate distribution operations with accounting functions, there is less need to outsource bookkeeping. That allows companies to leverage their accounting partner for strategic financial advice rather than daily transaction processing.
- **Reduction in outsourced IT** – without scalable business process software, companies have often lost critical data or experienced crashes as systems attempt to keep pace with business transactions. These companies usually end up hiring expensive IT experts to help them recover data. The Sage MAS 90, 200, and 500 software solutions help businesses avoid these costs.
- **Reduced receivables** – another benefit of an integrated, automated business information solution like Sage MAS 90, 200, or 500, is that invoices can be processed faster. With accounting personnel freed from wrestling with the system, they can stay up on outstanding receivables and make timely collection calls, all of which act to reduce the number of days outstanding for receivables. The benefit to the company is the increased interest on the cash as it comes in sooner.
- **Decreases in returns and waste** – for some companies, returned goods equal waste or scrap. Increased accuracy of customer orders due to the integration of business processes from Sage MAS 90, 200, or 500, can reduce the number of returns (i.e. waste) from incorrect order fulfillment.

- Decreases in redundant IT infrastructure** – many companies have been running automated information systems on multiple software platforms and multiple hardware servers. With Sage MAS 90, 200, or 500, they can consolidate their systems and eliminate annual software and hardware maintenance fees from redundant systems.

Sage MAS 90, 200, and 500 ROI Scorecard

There are key determinants that are common to any company implementing Sage MAS 90, 200, or 500. It should be noted that business metrics used to determine an ROI Scorecard vary somewhat with the particular industry.

This model uses textbook algorithms for measuring ROI and ROI as a percentage for a given time period:

$$ROI = Total\ Benefit - Total\ Investment$$

$$ROI\ (\%) = Total\ Benefit / Total\ Investment$$

This model measures ROI over a three-year time period, paying particular attention to the returns realized the first year after Sage MAS 90, 200, or 500 deployment and the cumulative effect after three years.

Payback Period computes the time period required for the enterprise to recoup its software solution investment.

Three-year ROI is calculated by taking the Net Present Value of the three-year net cash flows, using a discount rate equal to the 30-year T-Bond rate (3.46%).

Increased accuracy of customer orders can reduce the number of returns.

Mobile Solution ROI Scorecard			
In Thousands of Dollars			
	Year 1	Year 2	Year 3
Increased Revenues	\$__	\$__	\$__
Cost Savings	\$__	\$__	\$__
Avoided Costs	\$__	\$__	\$__
Total Benefit	\$__	\$__	\$__
Total Investment	\$__	\$__	\$__
ROI (\$)	\$__	\$__	\$__
ROI Benefit (%)	__%	__%	__%
Payback Period	_____		
3-Year ROI (NPV)	\$__	(__%)	

Total Benefit

Total Benefits realized by the implementation of the Sage MAS 90, 200, or 500 solution are calculated as follows:

Total Benefit = Increased Revenues + Cost Savings (include avoided costs)

- **Increased Revenues** are sales directly attributable to the application implementation and are derived from the following factors:
 - Increased transaction volume** due to the acceleration of the business process following the software deployment
 - Sales dependent upon enhanced reporting capability** that would not otherwise have been closed
 - Higher capacity utilization** resulting from fewer delays and streamlined business processes
- **Cost Savings** are derived from savings that directly result from the application deployment. In addition to reductions in existing expenditures, the implementation of Sage MAS 90, 200, or 500 also leads to elimination of some costs. Note that labor cost reductions that do not result in staff eliminations are not included in the ROI calculations as the affected employees are simply redeployed within the organization (i.e. there is no net increase in cash to the company).

Cost reductions that result directly from the use of Sage MAS 90, 200, or 500 are numerous and generally not all quantifiable within a given company. Key categories for cost reduction include the following:

- **Increase in inventory turns per year** after implementing the Inventory Management module of Sage MAS 90, 200, or 500, results in a net cash increase to the company because purchasing staff are no longer over-buying to avoid out-of-stock delays. The net cash benefit is equal to the saved cost of capital outlay.
- **Reduction in inventory carrying costs** including pricing, storage, and counting, results in cheaper cost of capital on the money the company would have otherwise spent on these activities.
- **Reduction in average days receivables** and a shorter collection cycle can be achieved once the Accounts Receivable module of the software is implemented, giving the company an opportunity to earn interest on money deposited sooner than it would have been before the implementation.
- **Decrease in returns and waste** results from an increased accuracy of picking and shipping.
- **Reduction in staff required (or avoidance of need to hire more)** affects both direct and indirect labor costs and is a direct result of the new efficiencies that are created with implementation of the software.

- **Reduction in accounting fees** stems from the reduction in need for accountants to be as closely involved with operational accounting issues. Post implementation in-house staff can handle many of the outsourced accounting activities.
- **Elimination of redundant IT infrastructure** will result in savings on maintenance charges made to the software or hardware provider that is eliminated due to consolidation of systems post-implementation.
- **Cost savings from manual or duplicate entries** converts into direct and indirect labor cash savings if these tasks are performed by temporary employees or outsourced. However, this item is not used in the ROI calculation if staff members perform the tasks in question in-house.

Time savings are quantified non-cash benefits derived from reductions in general productivity improvements, efficiency in accounting activities, and other components of the workflow resulting from the software deployment. Time savings are very important benefits but as they do not result in measurable cash benefits to the company, they are not included in the ROI calculation. They are, however, captured and entered as a line item on the ROI scorecard. Sources of time savings include:

- **Faster resolution of issues due to transparency**, resolving issues much quicker due to advanced querying capability of the software. This effect can also be measured through the more general **overall indirect labor time savings from transparency, integration, and ease of use** of the software.
- **Faster closing of accounting periods** and other reporting requirements can be achieved after the implementation of the General Ledger and Accounts Payable modules.
- **Faster order processing** can be attained if the Sales Order module is implemented.
- **Faster payroll processing** may result after installation of the Payroll module.
- **Faster inventory reconciliation** can be achieved if the Inventory Management module is implemented.
- **Decreased time to reconcile bank statements** can follow after the implementation of the Bank Reconciliation or Cash Management modules.

Total Investment

Total Investment is calculated as follows:

Total Investment = Software License Costs + Training/Support Costs + Customization/Implementation Costs + IT Costs

- **Software license fees** include the initial capital outlay for the user licenses.

- **Training and support costs** include the training and support services provided to the company by either Sage Software or the reseller. At times, companies may choose to buy technical support packages from both the reseller and Sage Software. Annual maintenance fees from Sage are also included to support upgrades and FAQ access.
- **Customization and implementation costs** include annual fees charged by resellers. The customization fee comprises the cost of customizing the Sage solution to fit the unique needs of a given client. The fee for implementing the software is usually a one-time installment in Year 1.
- **Additional IT costs** include the costs of any additional servers and/or hardware required for implementation of the Sage solution. This charge varies greatly from client to client based on their internal setup and infrastructure. These IT costs are usually charged in only Year 1.

ROI Methodology

Sage Software retained the Gantry Group, LLC to develop an ROI Scorecard Tool tailored to the deployment of Sage MAS 90, 200, and 500 in companies in the distribution business.

Gantry Group employed a structured methodology to collect quantitative ROI metrics via interviews with companies implementing Sage MAS 90, 200, and 500 applications as part of their business process automation solution. The ROI Scorecard focuses on direct and indirect quantitative ROI components; qualitative, intangible components were not modeled due to the possible inaccuracy they might introduce.

The ROI Scorecard is based upon data prior to software implementation as compared with the same business metrics 12 months, 24 months, and 36 months following deployment. The ROI calculation considers the costs associated with one, discrete deployment within the enterprise. If additional modules were purchased and deployed in the three time periods following initial deployment, costs and benefits associated with follow-on units were not included. Therefore, the ROI calculation has a single start date upon which the three future time periods are based.

For each of the three future time periods, the ROI tool calculates ROI as the difference between the investment and benefits for the period. The ROI, expressed as a percentage return, is calculated by dividing the total benefits by the total costs for each of the three time periods. The three-year ROI is calculated by taking the Net Present Value of the three-year net cash flows, using a discount rate equal to the 30-year T-Bond rate (3.46%).

ROI Scorecards

Benefit Analysis

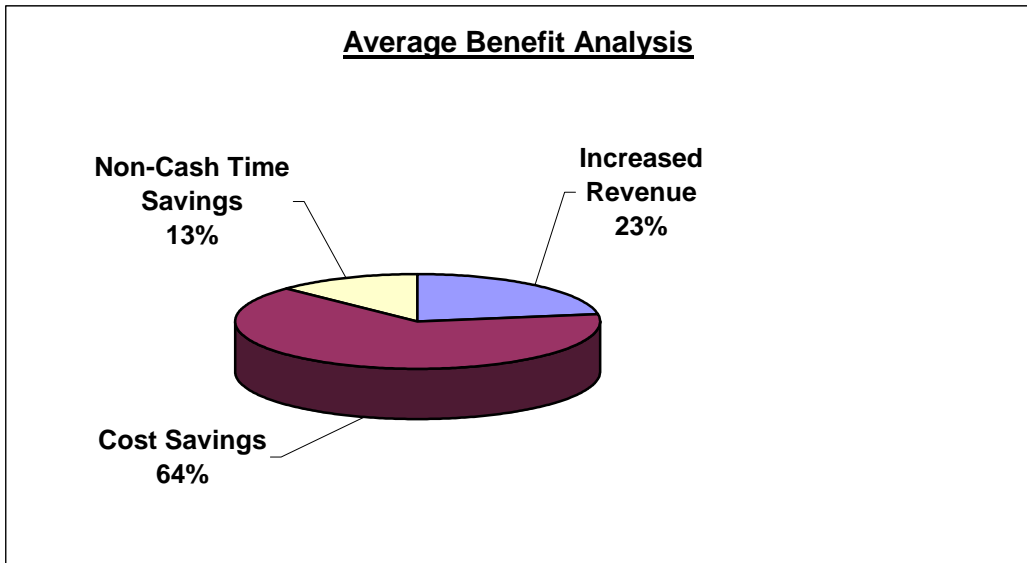
The data collected from the ROI scorecards of the 10 respondents gives a clear and relatively consistent picture with regards to the benefits derived from the implementation and utilization of the software. As was mentioned above, the study

The bulk of the total benefit of Sage MAS 90, 200, and 500 is realized through cost savings.

captured the total benefits for the next three years; thus, the average benefit analysis presented below is the average net present value of the derived benefits for the next three years across the 10 participating companies.

The bulk of the total benefit of Sage MAS 90, 200, and 500 is realized through cost savings. As the graph below indicates, the cost savings account for an average of 64 percent of total benefits. Increased revenues comprise an average of 23 percent. Furthermore, on average, 13 percent of the total benefit is attributed to the non-cash time savings. It is important to note that one interviewed company was able to achieve IT savings after the implementation of the solution. However, this kind of benefit was an exception, and was not included in the overall analysis.

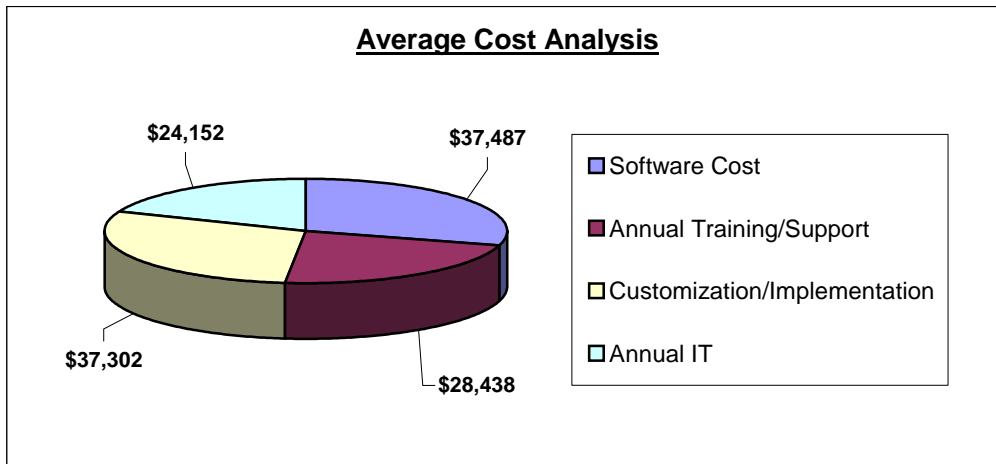
Note: While non-cash savings from productivity enhancements is included in the benefits pie chart, that figure is not included in the calculation of the ROI.



Cost Analysis

Consistent with Benefit Analysis, the net present value of cost considerations of a Sage MAS 90, 200, or 500 deployment is calculated summarizing the costs to be incurred by interviewees over the following three years. After comparing the average costs associated with the purchase and implementation of the software, the Gantry Group discovered that on average Software Cost and Customization/Implementation Costs each account for some 29 percent of total average expenditures, \$37,487 and \$37,302 respectively. Training/Support and IT costs account for the other \$24,152 and \$28,438 respectively.

Software cost and implementation costs each account for some 29 percent of total average expenditures.



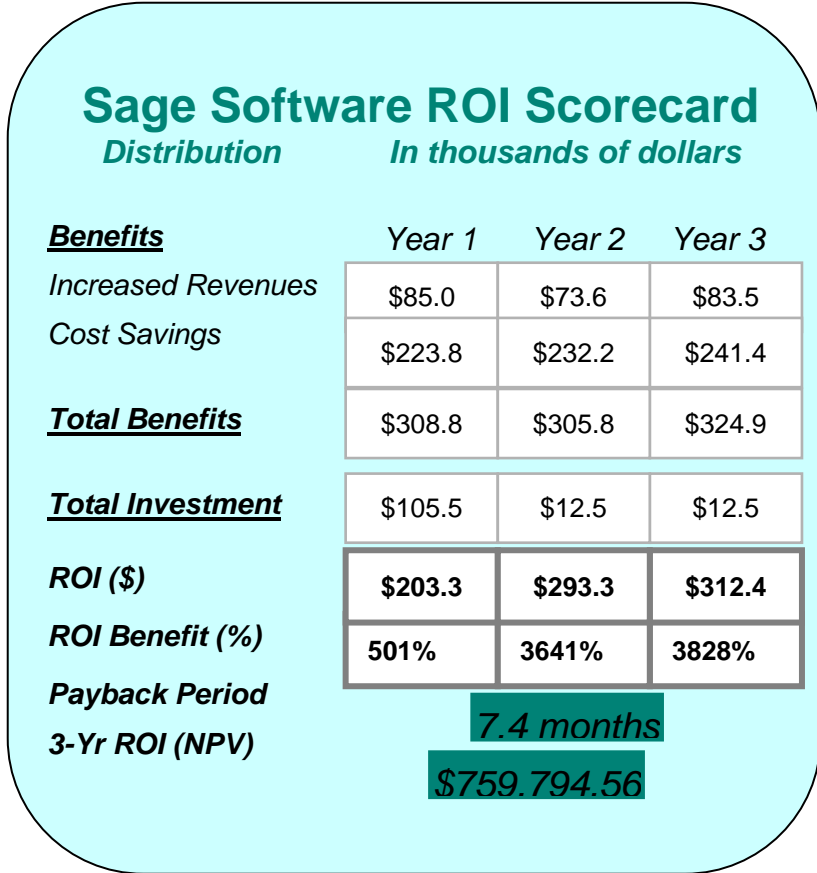
Overall Analysis

The summary of the key findings is presented below. Based on the research data, Gantry Group found both the increased revenues and cost savings effect of the software deployment are spread out almost evenly across Year 1, Year 2, and Year 3, after implementation. As mentioned above, cost savings comprise the bulk of the total benefits experienced by the companies studied. On average, interviewees experienced a \$223,809 reduction in costs in Year 1, \$232,158 reduction in Year 2 and \$241,256 in Year 3. In addition, the companies' revenues increased by an average of \$85,000 in Year 1 comprising approximately 1.5% of the total projected revenues for that year. Respondents accumulated \$73,650 and \$83,529 in increasing revenues in Years 2 and 3 respectively.

An analysis of the investment required to deploy Sage MAS 90, 200, or 500 shows that the bulk of the costs associated with the implementation occurs in Year 1. This is consistent with the front-loaded investment structure of any business software of this type. The average total investment in Year 1 was \$105,458 across the nine participants of the study. It is important to note that the costs faced by the companies in Year 2 and Year 3 were as little as \$12,490.

In monetary terms, the Return on Investment in Sage MAS 90, 200, or 500 across the respondents, averages to \$203,350 in Year 1 and remains relatively steady at \$293,319 in Year 2 and \$312,395 in Year 3. Therefore, the firms recouped an average of 501 percent ROI in Year 1, 3,641 percent ROI in Year 2 and 3,828 percent

in Year 3. While the average payback period is around 7.4 months, the periods varied greatly based on the individual company in the study. The shortest payback period among the interviewees is less than 1.4 months, while the longest is 19.8 months. The Net Present Value (NPV) 3-year ROI based on this study is \$759,794.56.



Notes

It is important to follow the ROI guidelines described below in order to calculate an accurate ROI analysis. It should be noted that this ROI model is tuned to specific business metrics for distribution companies.

- The ROI model discussed in this document is highly quantitative and focuses on actual, tangible business performance metrics. These performance metrics are specific to distribution companies implementing Sage MAS 90, 200, and 500 software solutions. Every effort to maintain the integrity of the calculation and rigor of the model has been made to protect against “double counting” of benefits and incomplete assessment of total costs.
- Users of this ROI model should exercise caution when providing data on labor savings. Only those labor savings that actually result in staff reduction should be included in the model.

Other tangible, but non-measurable business metrics, should also be input with care. In particular, increased inventory turns means that materials have less risk associated with sustaining unexpected damage

Other tangible, but non-measurable business metrics, should also be input with care.

and incurring unknown liability. Unless users can actually track liability data and have quantified risk, these factors—though significant if incurred—should not be included in the ROI calculation.

- When using this model, managers are encouraged to carefully assess each of the ROI components—whether costs, savings, or revenues. In many cases, the business metrics listed in the model will not all be applicable, while a given company may not even measure others.
- The software investment section is divided into four cost categories:
 - Initial per license software cost
 - Training and ongoing support costs
 - Custom software development and implementation costs
 - Hardware and other infrastructure costs

In this study, The Gantry Group conducted personal phone interviews with representatives from nine (9) companies that have already deployed Sage MAS 90, 200, or 500. While every company is involved in distribution, they represent a wide range of industries. Below is a summary of the study participants. Please note that each company is at a different stage of the implementation process.

Industry (Distribution)	Average Revenue	Product Purchased	Number of Licenses	Years of Implementation
Nursery and Landscape	\$439.4 M	Sage MAS 200	35	0.5
Garden Supplements	\$36.4 M	Sage MAS 200	25	4
Water Treatment	\$18.6 M	Sage MAS 90	5	3
Manufactured Housing	\$15.9 M	Sage MAS 90	15	2
Vacuum Industry	\$12.1 M	Sage MAS 90	7	2.5
Ceramic Tile	\$5.0 M	Sage MAS 90	10	3.5
Laboratory Chemicals	\$4.0 M	Sage MAS 90	13	6
Moving Supplies	\$4.0 M	Sage MAS 90	6	4
Petroleum Equipment	\$1.2 M	Sage MAS 90	5	1



SAGE MAS 90	SAGE MAS 200
SAGE MAS 500	

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