



BUILDING A WMS ROI

Develop a Solid WMS ROI and Reap the Savings and Benefits a Warehouse Management System can Deliver

WHITE PAPER

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RETURN ON INVESTMENT

Developing a solid return on investment (ROI) is an important first step in the justification process for a Warehouse Management System (WMS) purchase. The potential benefits and savings from the successful implementation of a Warehouse Management System can be significant. With proper due diligence, these benefits and savings can make developing a solid ROI fairly straightforward.

While the actual ROI will be unique to each company based on its current and future operations, there are certain basics that apply to returns that are common across most industries. These basics fall into three different categories: Tangible, Intangible and Compliance:

- **Tangible Return** – A return against an investment that can be measured and validated. This type of return is typically accepted as part of an ROI by most companies.
- **Intangible Return** – A return that can be difficult to measure or validate however it is apparent that a benefit exists.
- **Compliance** – These may be an industry, customer or government mandated requirement for doing business.

When building a WMS ROI there are key areas that should be taken into account:

- Inventory Savings
- Space Savings
- Compliance Savings
- Labor Savings
- Equipment Savings
- Increased Sales

Let's briefly look at each of these key areas to identify where some of the ROI opportunities exist.

ROI OPPORTUNITIES

Inventory Savings

The cost of inventory stored in the warehouse at any given time represents a sizeable and quantifiable cost to the business. Inventory savings can be achieved by a reduction in the stock levels that must be carried to effectively support customer demand and timely delivery.

- Excessive levels of safety stock are a result of accuracy issues in the warehouse. A [WMS](#) will allow the distributor to gain confidence in inventory and warehouse accuracy, so that safety stock levels can be significantly reduced.
- A warehouse with inventory accuracy issues will likely have 'lost product', which leads to overstock situations. A WMS will help the distributor gain control of inventory accuracy issues and provide visibility to real-time inventory, potentially eliminating lost product and reducing the opportunity for overstock situations.
- Scrap and spoilage can be a big issue for distributors who handle date sensitive product. A WMS can provide visibility to aging product and proper date rotation management that can limit the potential loss associated with date sensitive product.
- Reductions in inventory levels free up capital, generating on-going annual savings in carrying costs and, in some cases, providing the working capital needed to cover the cost of implementing the new system.

Space Savings

The cost of warehouse space required to house inventory is also a sizeable and quantifiable cost to the business. Space savings can be achieved not only by a reduction in the amount of space actually needed due to the reduction of stock levels described above, but also by more efficient use and management of the storage space in use.

- Improved bin level accuracy and proper management by the WMS of product storage and the flow of product throughout the warehouse, will regain and save space.
- A Warehouse Management System will allow a distributor to properly define storage areas and bin locations in the warehouse so the warehouse system can manage the storage of product based on the rules established in the WMS for the facility. This level of control and management will improve space utilization and reduce "honeycombing" by greatly reducing the number of partial pallets and spaces reserved for products that are not currently in stock.
- As [inventory accuracy](#) improves, stock levels will likely be reduced as a result of the adjustments made for safety stock and overstock situations. Space savings will be recognized as a result of a reduction in stock levels.

Compliance Savings

The cost of compliance with customer requirements and industry regulations is more difficult to quantify than the cost of the space or inventory stock, but it does represent a potentially substantial cost of doing business. Compliance savings can be achieved by implementing streamlined processes and by effectively and efficiently capturing and presenting relevant data elements therein satisfying customer and regulatory requirements.

- Customers often put additional requirements on distributors for special handling of orders. These fall under the category of value added services. Additionally, distributors offer value added services as either an additional revenue source or an enticement to lure business from a competitor. A Warehouse Management System can help enable and manage the efficient implementation of these value added services.
- Special labeling requirements have been on the rise with some being industry specific and others customer specific. Advanced labeling functionality is often provided as part of the Warehouse Management Software.
- Effective management of customer service level agreements is enabled by a WMS allowing the distributor to avoid penalties that can result from service failures.
- Industry and federal regulations can place requirements on distributors that, if not met, can lead to stiff penalties. A WMS can provide the controls required to ensure compliance with these regulations.

Labor Savings

Labor savings can play a major role in the development of a WMS ROI. Labor Savings result from a reduction in the number of employees required to manage current customer demand or from being able to handle an increase in customer demand without the need to increase staff.

- [Productivity gains](#) throughout the workforce are a key driver in Labor Savings. Productivity gains will be achieved through the discipline, organization and streamlined processes brought into the facility by a WMS. These efficiencies can allow the workforce to:
 - Minimize the amount of training required for new hires
 - Leverage resources across job functions or roles to satisfy a swell in activity
 - Get more done in less time and/or with fewer people
 - Effectively absorb business growth and increased volume in the warehouse with existing resources
 - Minimize or eliminate the need for time consuming, costly physical inventories
- A reduction in customer returns due to picking and shipping errors will further increase productivity. Improved picking and shipping accuracy will result in a measurable reduction in returns processing due to errors.
- A reduction in rework due to mistakes and errors that occur on the warehouse floor will free up the workforce to do other tasks and accomplish more in a given day.

Each of the above items will result in savings through one or more of the following means:

- Staff size reduction
- Redeployment of resources
- Reduction of costly overtime
- Elimination of interruptions or delays in shipping customer orders
- Avoid hiring additional staff
- Reduction in training costs

Equipment Savings

Reducing lift truck and related equipment travel can lead to lower maintenance cost and extend the life of equipment, both resulting in equipment savings.

- Directed activities and the use of equipment based on predefined routes in the warehouse
- Interleaving of warehouse functions limiting idle travel
- Management of the appropriate equipment by task
- No wasted travel locating product

Increased Sales

Accurate, on-time deliveries and a high percentage of ship completes will improve customer satisfaction. A happy customer can lead to an increase in sales.

SUMMARY OF SAVINGS

Evaluating and quantifying the above areas of savings will go a long way towards providing the information needed to build an ROI for a WMS project. Listed below are some of the possible savings from the areas we have identified to help provide some insights on what can be expected.

- Improvements in direct and indirect labor productivity up to 30% and even higher for administrative labor
- Better space utilization, up to 30%
- Improved utilization of equipment, up to 25%
- Elimination of physical inventory cost
- Reduction in inventory carrying cost by as much as 15%
- Decline in customer returns, up to 25%
- Decrease in the amount of rework by as much as 25%
- And much, much more

Having covered some of the key areas for ROI opportunities, let's look at how one Robocom customer approached building their ROI and the results.

ROBOCOM CUSTOMER EXPERIENCE

This Robocom customer faced the following challenges prior to implementing Robocom's WMS:

- Limited storage space in the main company warehouse forcing the use of expensive rental space during peak periods and excess inventory to be carried in the company's retail stores.
- A manual check-in process for inbound receipts that introduced numerous inventory errors, creating a domino effect throughout all warehouse operations.
- A paper driven picking process that required a double check of all orders during packing to catch and correct errors.
- Additional labor at the warehouse and retail stores required to manage the segmented inventory that was driven by the manual processes that were in place.
- Web order fulfillment from the retail store inventory.
- Inventory issues causing lost sales and increased shipping costs due to emergency shipments and multiple shipments to stores.

This Robocom customer decided that the best way to address these challenges was to centralize warehouse operations by moving to a larger distribution center and managing that distribution center with the Robocom WMS. In building the WMS ROI the savings were primarily based on a reduction in inventory and in labor.

The WMS and the automation of warehouse processes would:

- Eliminate the use of external rental storage
- Reduce errors in receiving and the ensuing inventory errors
- Limit excess inventory carried in the retail stores
- Provide for real time inventory and improve overall inventory accuracy
- Eliminate the need to fill web orders from the retail store shelves
- Do away with the double check required during packing
- Improve order fill rates and provide for on-time and accurate shipments

This Robocom customer experienced the following actual results:

- Elimination of rental storage and only shelf inventory carried in the retail stores
- Elimination of a full time inventory person in several of the company retail stores
- Reduction in the level of company owned inventory

- Web order fulfillment from the centralized warehouse along with replenishment orders for retail stores
- Emergency shipments to customers practically eliminated and unplanned multiple shipments to company retail stores a thing of the past
- Elimination of packing area bottlenecks and the associated labor to do the double check of orders
- Reduction in lead times to fill retail store special orders went from weeks to days
- Reduction in overall warehouse labor
- An ROI in less than 15 months

Additional ROI Results Experienced by Robocom Customers

- **Targeting an improvement in inventory accuracy**, this customer who carries an inventory of \$25 million was able to reduce an annual “lost” inventory amount of \$400,000 by 92.5%.
- **Targeting a reduced distribution network footprint**, this customer who had eight warehouses in Canada and the United States was able to close four warehouses as a result of operational improvements without reducing service levels. The closure of the four warehouses enabled significant cost savings including renegotiated freight contracts and a 40% drop in inventory.
- **Targeting productivity and efficiency improvements**, this customer was able to expand their distribution network and achieve productivity improvements as high as 15%, yielding over \$700,000 in savings annually.
- **Targeting improvements in inventory accuracy**, this customer who manages a distribution center with over 280,000 square feet of space achieved four inventories at 99.99 percent accuracy and has converted to a perpetual cycle counting plan, eliminating physical inventories. By not shutting down for two to three days to conduct the physical inventory there is no interruption to shipping schedules, no loss in service, no paid standard time or overtime for conducting a physical inventory and no loss of revenue.
- **Targeting operational efficiency to enable future growth**, this customer who has three primary distribution centers has reduced annual labor costs by 10 to 15%, total operation cost by 8 to 10%, improved space utilization by approximately 5% and reduced shipping errors by 2%. Supervisor time has been freed up to help employees improve performance. Increased business volumes have been handled by the existing workforce.
- **Targeting facilities consolidation to reduce costs and streamline operations**, this customer who had 13 warehouses was able to consolidate all 13 warehouses into a single distribution center and in doing so dramatically improve productivity

and efficiency while significantly reducing the cost of its distribution operations. Faulty part returns were reduced by over 98%, a 99% inventory accuracy rate based on dollar amount was achieved, cost per line item was reduced by 40% and shipping productivity was improved by 700%.

- **Targeting business scalability and improved inventory management**, this customer with 13 business units and four product lines has realized dramatic business results including a 39 percent increase in profits, a 20 percent increase in inventory accuracy, improved visibility across operations and the ability to quickly and easily support business change. Over a six year period, the company added very few additional full-time jobs but increased new business by 63%.

CONCLUSION

How you build your WMS ROI will depend on a number of variables; some of which we have outlined in this white paper. Using these variables as a base line and leveraging other factors that are important to a company's business can yield a solid ROI that can lead to a company reaping the benefits of a Warehouse Management System.

ABOUT ROBOCOM

Robocom Systems International has focused for nearly 30 years on developing and implementing Supply Chain Execution software solutions. Robocom's solutions include Warehouse Management, Transportation Management, Voice Technology, Order Management and Labor Management. Our investment in research and development is keenly focused on the needs of the business leaders responsible for the day-to-day results in warehousing, distribution center and trucking operations. For more information, visit www.robocom.com.



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