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HOW TO GET **BUY-IN** FOR YOUR NEXT AUTOMATION PROJECT.





Introduction

As a manager or director of warehouse operations, you are under pressure to increase throughput, improve productivity, and reduce damage costs while keeping employee morale high and turnover low. If you are using legacy systems and processes, it can be tough to keep up with the modern supply chain.

You know that incorporating automation can increase efficiency and help your company achieve its goals, but you need to appeal to the executive team to get support and approve the necessary investment. How do you secure this support? Assemble a business case to get executive buy-in for your warehouse automation project, which may include automated equipment, integrated systems, and/or software.

In this white paper, we'll walk you through the three major steps to prove the value and benefit of automation — from how to use language that resonates with executives, to how to calculate the ROI from automated equipment.

3 STEPS

to Get Executive Buy-In:

1

Explain the Benefits: Take a look at your automation project and explain the benefits that align with your business strategy.

2

Focus on the Numbers: Using the language of executives — metrics — explain the costs of continuing in your current state (before automation) vs. the improvements gained by moving to your ideal state (after automation).

3

Prove ROI: Show the value to the business and expected timing to recover your investment with ROI analysis and projections.

STEP 1:

EXPLAIN THE BENEFITS

Today, implementing warehouse automation technology can be fairly seamless with systems migrations taking place in the background of day-to-day operations, preventing any loss of data or downtime. Designed for scalability, automation allows for rapid expansion and changes, while enabling your team to continue processing and shipping orders as they come in. Also, today's technologies have significantly shorter implementation timelines to help appease stakeholder concerns while boosting productivity.

There is no doubt that automation and advanced logistics technologies are key to delivering at the accelerated speed of modern customer expectations. However, when it comes to garnering support and buy-in from the executive team, it's important to highlight the key benefits and positive effects on warehouse operations and product cycles.

The benefits you choose to emphasize should directly correlate to the results you can expect from the automated systems and equipment you are recommending. Some benefits for automation solutions you may incorporate are included on the next page.



Automated Guided Vehicles:

- **Improved safety and fewer accidents.** Technologies such as laser navigation provide precise accuracy when interfacing with other elements in your warehouse, improving warehouse safety by eliminating common accidents that happen due to human error.
- **Increased flexibility and productivity.** You can use AGVs in mixed operations alongside manual trucks and pedestrians. AGVs help support pick-to-AGV operations enabling an employee to stay in the picking area while items are transported by an AGV, which can increase productivity by up to 33%.
- **Reliable operational control.** AGVs feature control systems that manage the transportation of orders, control traffic flow, and constantly update order statuses. AGV control systems also optimize the route of each AGV for the most efficient path through your facility to increase delivery speed and process orders more efficiently.

Automated Storage and Retrieval Systems:

- **Safer, more reliable storage.** Automated storage systems are built to be sturdy and reliable, providing long-lasting benefits for your warehouse operations. Plus, since AS/RS often reduce the number of operators needed, these systems help offset challenges caused by scarce or unreliable labor.
- **Optimized storage space.** Using AS/RS in your warehouse can increase available storage space by at least 85% while also reducing overall costs of equipment and labor by 60% or more.
- **Increased accuracy and order fulfillment pace.** Automated storage and retrieval systems operate at much higher speeds than human-driven machines, which results in swift order picking and faster delivery times. AS/RS also help eliminate manual processes that can be subject to human error, improving the accuracy of orders.

Automated Racking, Conveyors and Sortation:

- **Lower operating costs.** With the implementation of automated racking, conveyors and sortation systems, warehouses and distribution centers can handle a broader range of products and streamline the flow of goods from points of origin to points of sale.
- **Faster order delivery.** A well-designed sortation and conveyance system offers operational efficiencies such as reduced staffing to operate the system, less manual transport of products and a streamlined workflow. These enhancements reduce the time required to fill orders, decreasing delivery times and improving the cycle time from order to revenue.
- **Increased scalability and integration.** Incorporating automated racking, conveyors and sorters into your order-picking, packing and processing strategies helps you streamline repetitive tasks and product transfers. As your company grows and you process higher volumes of orders, modern systems will scale along with your business needs.

Warehouse Management Systems:

- **Insight into employee performance and decreased staff turnover.** Performance metrics provide real-time feedback, which helps keep employees motivated and focused on continuous improvement.
- **Reduced employee theft and improved inventory visibility.** Greater accountability for inventory reduces the risk of theft, which is estimated to cost the industry up to \$80 billion each year. Plus, an accurate picture of inventory allows you to sell products at higher prices and distribute from the optimal facility.
- **Gain a competitive advantage.** Optimizing fulfillment systems can enable a company to gain efficiencies and meet the constantly increasing expectations of today's consumers in terms of price, quality, and timeliness.

STEP 2:**FOCUS ON THE NUMBERS:
METRICS THAT MATTER**

Executives are often more in tune with business performance metrics than the daily operations on the warehouse floor. Therefore, the best way to get their attention may be by explaining your business case using numbers in the form of charts, graphs and other data-based visuals.

The language of executives is based on the metrics that show improvement in productivity, increased revenue, and decreased costs and risks. Automation projects designed to reduce downtime and improve process efficiency appeal to executives since these projects align with C-suite goals to improve profitability and grow the business.

Warehouse Metrics Supply Chain Executives Care About

Metrics, also referred to as key performance indicators (KPIs), allow more insight into your warehouse performance and overall operation. Actively monitoring the right metrics helps you identify bottlenecks in your warehouse processes that could benefit from automation. Tracking warehouse data will inform what changes you need to make to meet business goals such as profitability, productivity, and efficiency. Key metrics to consider fall into these four major categories:

**General Warehouse Management Metrics:**

These are broad metrics vital for effective supply chain management to help you identify lost opportunities and areas for improvement. By evaluating the various costs and percentage rates of these specific metrics you will be able to improve processes and recognize any problems with performance to ensure profitability.

**Picking Metrics:**

Picking metrics help you focus on the details of specific processes. Monitoring performance in these metrics will help you to review training protocols and inefficient procedures leading to a safer, more productive warehouse.

**Customer Metrics:**

While other metrics focus on improving the customer experience by getting the right product to the right consumer, these metrics help with future scalability. For example, if you see a higher percentage of new customers and enjoy a high customer retention rate, you can use these metrics to project future growth and explore ways to increase throughput at your distribution center.

**Employee Performance Metrics:**

Employee performance metrics help define effective labor management and encourage better warehouse management. Other metrics to consider include employee-related expenses such as training, benefits, and supplies for team members.

FOCUS ON THE NUMBERS:

METRICS THAT MATTER

General Warehouse Management Metrics:

- Distribution Cost per Unit Shipped
- Distribution Costs as a Percent of Sales
- Carrying Cost of Inventory
- On-Time Shipments
- Order Fill Rate
- Number of Cartons Picked and Shipped Per Hour
- Peak Warehousing Capacity Used
- Lines Picked and Shipped Per Hour
- Backorders as a Percent of Total Orders
- Material Handling Damage
- Dock-to-Stock Cycle Time in Hours
- Order Picking Accuracy
- Total Order Cycle Time
- Dock-to-Load Time

Picking Metrics:

- Pick-to-ship time
- Pick-to-packaging time
- Ship-to-promise

Customer Metrics:

- Customer retention rate
- New customer percentage
- Return percentage
- Lost Sales or the Percent of SKUs Stocked Out
- Percent of On-Time Delivery From Suppliers

Employee Performance Metrics:

- Labor Cost Per Unit
- Costs for Recruitment, Training, Benefits, and Supplies
- Average Employee Turnover
- Employee Pick Averages
- Process Throughputs



FOCUS ON THE NUMBERS:

METRICS THAT MATTER

COMMON QUESTIONS TO EXPECT FROM EXECUTIVES

Even if you are the most seasoned warehouse professional or can think on your feet, it's important to anticipate common questions posed by the executive team. See below for a list of questions you may be asked about your warehouse automation project, so you can plan for how you would answer them:

How can we get there more quickly?

Can we see ROI in less time? Can this be broken into smaller parts that will pay off sooner?

What happens if we do nothing?

What are consequences if we don't make a change or adopt automation?

What is your suggestion?

Can you present multiple, cost-effective solutions? Will this be a phased approach?

How will this impact employees?

What is the impact of automation on our employees in terms of training or reskilling, layoffs, and hiring?

What do you need from me?

What resources and support do you need from them? This is a good way to encourage decision makers to become personally invested.

How will our competitors react?

How will our competitors recognize and react to the change?

What are your assumptions?

How much savings or cost reduction can we expect to see?



STEP 3:

PROVE ROI

CALCULATING ROI AND SAVINGS FOR YOUR WAREHOUSE AUTOMATION PROJECT

Now that you've outlined the benefits of automation and determined the key metrics to capture your executive's attention, you'll want to prove the investment will be worth it. When thoughtful automation solutions are properly implemented in your warehouse, there is no question that your company will receive a return on investment. It's only a matter of when and how much. Depending on the type of automated system you select and the level of automation, you will have different degrees of complexity and different rates of return. Some of the most common automated solutions that companies are considering include Automated Guided Vehicles (AGVs). Let's take a look at calculations used to prove ROI on AGVs.

FORMULAS FOR AGVS

If you've determined that incorporating Automated Guided Vehicles will benefit your operations, you'll want to calculate the ROI to justify the initial investment. One calculation is to take the annual burdened cost of an employee, including benefits and overtime costs, then multiply the number of positions to get the total yearly position costs. After that, take the cost of buying new manual forklifts and then add this to total yearly position costs. These costs added together represent your Year 1 Cost - without using AGVs.

$$((\text{Burdened Wages} + \text{Overtime}) \times \text{Positions}) + (\text{Forklift Cost}) = \text{Year 1 Cost}$$

Assuming these values below, we will compare the costs of a manual solution to an AGV solution:

Typical cost of a lift truck (capital purchase)	\$40,000
Lift truck operator wage	\$18.00 per hour
Working hours per year	2,000 / Single shift
Annual wages per operator	\$36,000
Additional costs of benefits and expenses	40%
Total annual cost per operator	\$50,400
Total cost of one operator over 5 years (working 1 shift)	\$252,000

In the tables below, you will see that the initial capital investment for buying manual equipment is lower in the first year, yet the costs of the operators continue each year. With AGV systems, the initial capital investment may be higher the first year, however since you are no longer paying annual operator costs, the cumulative cash flow becomes positive quickly, freeing cash for future investments. In the example below, you reach the break-even point in just under 2 years, as shown by the cumulative cash flow.

While calculating the break-even point is important, it is critical you emphasize the impact over time, since most Automatic Guided Vehicle systems will last up to 30 years. Showing the impact at least 5 years out will prove long-term savings, helping you show the value of implementing an AGV solution. The break-even point is even sooner if you will be using the equipment across multiple shifts.

Year 1 Costs		
$\$36,000 \times 1.4 = \$50,400$ cost per operator x 75 operators (Wages + 40% benefits/expenses x number of operators)	\$3,780,000	Operator Costs
$\$40,000 \times 75$ trucks (Typical cost of a lift truck x number of trucks)	\$3,000,000	Equipment Costs
Operator Costs + Equipment Costs = Total Year 1 Cost of adding operators and lift trucks	\$6,780,000	Year 1 Cost of Manual Solution

	Year 1	Year 2	Year 3	Year 4	Year 5
Manual Solution Cost	\$6,780,000	\$3,780,000	\$3,780,000	\$3,780,000	\$3,780,000
AGV Solution Cost	\$10,000,000	\$0	\$0	\$0	\$0
Annual Cash Flow of AGV Solution	-\$3,220,000	\$3,780,000	\$3,780,000	\$3,780,000	\$3,780,000
Cumulative Cash Flow of AGV Solution	-\$3,220,000	\$560,000	\$4,340,000	\$8,120,000	\$11,900,000

*All costs are for example only. Regular maintenance and other costs not included.

These formulas help you present the value and payback period of using AGV equipment to increase productivity instead of hiring additional operators and buying more lift trucks. However, AGVs offer other benefits such as reducing accidents and product damage, and therefore their associated costs. Of course, your automation project may include solutions beyond AGVs such as WMS implementation, conveyors, AS/RS and more. Make sure you use calculations that specifically highlight the value of the solution or solutions you are considering. It is also important to bring in a professional integrator to help examine the nuances of your project, identify ways to streamline implementation and point out areas where costs can accrue to help you stay within your budgetary targets.

FINAL STEP:

PARTNER WITH A WAREHOUSE SOLUTIONS INTEGRATOR.

As a warehouse operations and supply chain leader, you may find it difficult to evaluate what may seem like endless alternatives for automating your facilities. Working with a knowledgeable partner or integrator is a great step in the right direction to kick-start your automation initiatives and prove value to your business's stakeholders. If you need help making a business case for automation, our **EQ SOLUTIONS™** team of experts can help you evaluate your processes and select the warehouse management and automation technology that supports your long-term business strategy. Call 832.376.5305 to schedule a free site evaluation and begin your journey toward the highest levels of intralogistics efficiency.



Contact Us

832.376.5305
inquiries@eqdepot.com

Website

eqdepot.com

Address

16330 Air Center Blvd.
Houston, TX 77032