

# ASSOCIATED *advantage*

PROVIDING INNOVATIVE SOLUTIONS WHICH CREATE SUSTAINABLE VALUE FOR  
THE STORAGE AND RETRIEVAL OF INVENTORIES WITHIN THE  
SUPPLY CHAIN

## Engineering Studies... Increase Productivity and Reduce Operating Costs by Doing More With Less

Material handling is now a strategic decision rather than a tactical activity. Businesses are under increased pressure to reduce inventories, improve order-to-delivery cycles, and adapt to changing buying patterns and behaviors. Whether driven by expansion, consolidation or simply application of best practices, minimizing space and labor costs while maintaining flexibility for future growth is mission critical in today's operating environment.

Today's most challenging distribution center concerns include: increasing operational flexibility to handle fluctuating volumes, organizing daily workloads to meet changing demands, increasing storage capacity utilization, tracking pallets, improving bin management, increasing accuracy, implementing more efficient picking methods and increasing the efficiency and effectiveness of existing resources. And at the center of managing your warehouse is managing inventory.



Although it is the very reason for warehousing, inventory causes problems. It also generates tremendous returns when managed efficiently. Traditionally, appropriate storage mediums and order fulfillment processes have been developed utilizing a question and observation methodology. Today, that technique has been enhanced to include a data-driven analysis of your unique material handling systems, storage mediums and processes through the use of an engineering study.

The core of this approach focuses on thoroughly evaluating historical order activity. The process begins by reviewing the total number of daily orders, lines and pieces over a representative time frame. Daily averages are calculated and then adjusted based on business forecasts and historical review of peak activity. This information allows system staffing to be right sized once the optimal layout and processes are identified.

The second component is an evaluation of individual item activity and sizes. This allows segmentation based on pick frequency and required cube. The processes for zoning by items according to Pareto's Law, 20% of the items generate 80% of the movement, is quickly confirmed or denied. Storage medium alternatives are reviewed and optimized for warehouse throughput and space utilization.

Finally, order sizes are analyzed to determine potential agility enablers. Without question, the demands of filling one order with twenty-seven lines are significantly different than picking twenty-seven separate one-line orders. The benefits of zone, wave and batch picking are measured against the challenges of marshalling, staging and packaging to ensure efficiency is maximized.

An engineering study's data-driven approach to evaluate a company's unique business needs will result in real world, actionable recommendations to optimize labor, storage resources, material handling equipment and business systems. Payback periods of twelve to eighteen months are generally realized by implementing the recommendations resulting from a well developed engineering study.

Whether your warehouse is large or small, engineering studies offer real world potential to generate significant returns.

# Lease or Purchase Capital Equipment?

## Major Factors to Take into Consideration Before Making a Decision

The pressure to reduce operating costs has made more stringent reviews of capital equipment acquisitions imperative. Given this, many companies struggle over whether to buy or lease capital equipment. While purchasing has been the traditional method of acquiring equipment, leasing often can be more cost-effective. Careful consideration of the alternatives can help you arrive at the most cost effective decision and lead to the best use of the company's resources to meet its financial goals.

Analysis of major capital equipment acquisitions needs to go beyond a simple return on investment (ROI) and consider other factors, including the estimated technological life of the equipment and the company's financial position.

Significant factors to consider when choosing to lease or buy equipment are:

- 1. Acquisition Cost** — Instead of a large up front investment when purchasing equipment, leasing minimizes it. Another way of asking that question is: "Do I have enough extra capital to spend today for something that will make me money (pay back) in months and years to come?"
- 2. Equipment Value** — There is little financial benefit for leasing, when acquiring equipment under \$5,000, due to fees and higher rates for lower dollar lease amounts.
- 3. Technological Life of the Equipment** - The equipment's useful technological life should be considered in light of the company's long-term goals. Equipment that is projected to become obsolete over an anticipated period of use is a good candidate for leasing. A properly structured lease allows the user to shift the risks of technological obsolescence to the lessor and acquire new technology at the end of the lease term.
- 4. Credit Lines** - Leasing provides an easy, affordable method of using equipment that allows a monthly payment without obtaining a bank loan or worrying about budget justification. Leasing also keeps your other lines of credit open and total system financing, including delivery and installation, can be spread over the lease term.

Overall, there are several lease versus purchase models that companies can use to determine the best method of procuring capital equipment. By analyzing the alternatives, companies can make informed decisions on the best use of their resources to accomplish their goals.



## Gas Vs. Electric Lift Trucks

### The Importance of Looking at Total Cost of Ownership over Acquisition Price

Today, many fleet managers are faced with the dilemma of whether to employ gas or electric lift trucks while still maintaining their budget and efficiency goals. Unfortunately, there is no best practice that we can refer to that will give the "right" answer, since there are too many variables that need to be considered when making this decision. However, with many budgets shrinking and costs ranging from \$15,000 to \$100,000, many buyers are tempted to select a truck on the basis of the sticker price, yet by making that decision without thought to the cost of maintenance over the vehicle's life, it may end up that substantially more is paid over the life of the forklift just to keep it working.

Though many times electric trucks are more expensive to purchase than their gas counterparts, they typically boast a lower cost per year of operation over the life of the vehicle. Electric lift trucks save money because they don't require fuel, oil changes or replacement parts like points and plugs.

For example, it is estimated that electric forklifts can save you over \$8,000 in fuel costs alone over internal combustion forklifts. Please see the table below for a further explanation.



	Gas	Electric
Fuel Cost (Per Gallon/KWH & KW Demand)	\$2.50	\$0.0890 Per KWH
Fuel Size / Battery KWH Size	8 Gallons	42 KWH
Tanks & Batteries Used Per Shift (1.6 for FC)	1 Tank	1.6 Batteries
Daily Fuel Required / KWH Used	16 Gallons	67.2 KWH
Fuel Cost Per Work Day	\$40.00	\$5.98 Daily
*Total Annual Fuel / Energy Costs	\$10,000	\$1,495
*Based on 250 work days and 2 shifts per day.		

It is recommended that buyers look at the overall cost of the vehicle over its life and not just the purchase price. Although a lower priced truck may seem attractive at first, its lifetime maintenance and operational costs could ultimately exceed the initial price., especially given the major strides in the performance of electric vehicles vs. gas. For that reason, smart buyers are the ones who consider the total anticipated cost of ownership in purchasing a lift truck.

## Safety Corner

### Loading Dock Safety

Loading docks can be one of the busiest and most hazardous areas of your warehouse. Every year, many workers are killed or seriously injured when the forklift they are operating falls off the loading dock. Forklift operators must be aware of hazards such as congested staging areas, pedestrian traffic, restricted views, wet and slippery floors, overhead obstructions, trailer drop and trailer creep, and many other hazards found in or around a loading dock. One or more of these hazards can be present at anytime so it is important that all of your workers are trained on the types of hazards they may encounter when working at your loading dock.

In order to determine what hazards may be present at your loading dock a detailed hazard assessment should be conducted and the proper safety and operational procedures must be established and enforced. It is also very important that your forklift operators, as well as any employee working in or around the loading dock, receive the proper training on dock safety. The following is a list of recommendations that will help improve safety in your dock area:

**Always use wheel chocks or truck restraint devices while loading or unloading trailers.** Trailer creep occurs when a lift truck enters and exits the trailer causing it to separate from the loading dock. Using wheel chocks, or other restraint devices, will help prevent trailer creep from occurring.

**Inspect trailers before loading and unloading.** Many older trailers will have damaged or rotting floor boards that could cause your lift truck to fall through the trailer floor.

**Use the proper equipment to load and unload.** Lift trucks used in your warehouse will often have different mast heights, which could mean that not all of your lift trucks will be able to drive into a trailer. Always check the mast height on your lift truck to ensure that you are able to enter and exit the trailer safely.

**Keep dock areas clean and organized.** It is very important to have designated areas for staging used and empty pallets. Painting or taping these areas will help your employees recognize these designations.

**Use physical barriers and restraints near open doors.** Many times, dock doors are left open creating additional fall hazards for lift truck drivers and other dock workers. Using physical barriers around open doors will help prevent lift truck operators from driving their lift truck off the dock.

**Provide training to all employees working in the dock area.** Lift truck operators aren't the only employees at risk in the loading dock. Do not limit your safety training to only lift truck operators.

These are just a few recommendations for improving dock safety. Remember, the majority of dock accidents can be prevented through proper training, using the proper equipment, and enforcing company safety rules and operating procedures. If rules and procedures are not enforced, employees will not follow them!



## Are You Missing Opportunities....

### To Save Money and Create Efficiencies Within Your Supply Chain?

If you would like to learn more about how to identify possible areas of opportunity in your facility that will allow you to "do more with less" then join us for a free "Optimizing Labor and Space Utilization" Educational Webinar.

This webinar will give you additional insight into your operation that will allow you to save money by solving space, labor and inventory management challenges, including:

- Increasing operational flexibility
- Organizing the daily workload to meet changing demands
- Increasing storage capacity utilization

From the real world perspective of an experienced expert you will gain insight into industry metrics and best practices.

#### Optimizing Labor and Space Utilization

**Date: Wednesday, August 24, 2011, 12:00PM - 1:00PM CDT**

To register for this event please visit: <http://www.associated-solutions.com/edge>





## ABOUT ASSOCIATED:

Celebrating over 50 years of providing customers with innovative solutions that optimize storage and order fulfillment operations within their supply chain, Associated understands that handling materials in the supply chain should be more than material handling. By utilizing their unparalleled experience and industry best practices they are able to evaluate current methods and processes for storage, order fulfillment and equipment utilization and recommend practical strategies to enhance its effectiveness and reduce overall cost.

Featuring leading edge engineering and fleet management services to complement industry leading sales, service, rentals and parts, Associated has been the recipient of multiple awards in recognition of being a premier organization in the material handling industry.



Innovation • Sustainability • Reliability



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# How Can We.....

# SERVE YOU BETTER?

Our goal at Associated is to provide you with innovative logistics solutions that create sustainable value within your supply chain. It is important to us that all of our customers receive prompt, efficient, courteous and professional attention. To help us determine how we can improve in these areas, we will be sending you a Customer Satisfaction Survey in the next few weeks. We ask that you take a few minutes to answer some questions about our service and how we can better serve you.

