5 Ways to Reduce Costs of Your Industrial Vehicle Fleet
Overview

To be lean, competitive and profitable, companies that operate warehouse and distribution facilities need to accomplish more with less. Today it is more critical than ever to focus on the highest cost centers and identify quickly achievable cost savings and productivity improvements. Every day your business is paying significant amounts of money to own and operate your fleet of forklifts and other industrial trucks. The cost for each truck can be up to $250,000 per year - inclusive of operator salaries, benefits, overtime, truck leases, maintenance, damage, and battery/fuel expense. For a 50 vehicle fleet, that multiplies to over $12 million per year!

Some approaches to managing industrial vehicles, like outsourced maintenance and traditional fleet management programs, help make costs predictable, which is beneficial, but does not necessarily provide a meaningful way of reducing costs. Achieving productivity and cost benefits through the deployment of technology is a well established concept, but can it be applied to forklift fleet and operations management? Can behaviors and costs that have long been considered just “part of doing business” be changed? The answer is YES!
Common Industry Challenges

Do your job responsibilities involve lift trucks in one way or another - buying them...maintaining the fleet...supervising the operators...overseeing safety training...or analyzing material handling process efficiency? If you take on any (or all) of these roles, you probably face some common problems:

- **Controlling damage caused by lift trucks.** Everyone's worst lift truck operator is “Anonymous,” who routinely bangs up racking, products, and the vehicles themselves. And, of course, he (or she) never admits to what happened.

- **Maintaining safety and training requirements.** OSHA regulates lift truck usage because these vehicles are the second leading cause of death in the industry, and they cause tens of thousands of injuries every year. Your company may also have its own internal rules on lift truck safety.

- **Managing operators' pre-shift vehicle inspections.** If you have any process at all, it's bound to involve a lot of paper and filing, and its hard to put those records to good use - or some times even find them when you need them, like after an accident.

- **Controlling Planned Maintenance (PM).** Do you plan your PMs by the calendar, perhaps every month or two, without looking at vehicle usage beforehand? Or even worse, do you wait for vehicles to break before they fix them? Planning PMs can be challenging, and enforcing the PM schedule is typically time-consuming and inefficient.

- **Fighting for budget to buy vehicles.** It can be hard to justify buying more vehicles, especially in lean economic times - and particularly if senior management sees idle vehicles sitting around when they walk through your facility.

- **Improving material handling productivity.** Senior management always wants to do more

Solution

How can you achieve meaningful cost reductions while simultaneously enhancing throughput? Vehicle Management Systems (VMS) are a proven technology being deployed in many Fortune 500 companies with lift truck operations.

What is a Vehicle Management System (VMS)?

VMS systems vary in function and sophistication, but they all share one fundamental purpose: operator accountability. Associating vehicle activity with the operator through vehicle access control is fundamental to addressing lift truck damage, safety, maintenance, and vehicle utilization.

A VMS device mounted on the lift truck requires an operator to present electronic identification (typically a card or fob), and enables the vehicle to be driven only if the operator has the proper credentials. By controlling who can start up and use the vehicle, a VMS enforces one of OSHA's primary safety mandates: only trained, authorized individuals are allowed to operate industrial trucks.

Another device common to most VMS systems in as impact sensor, because vehicle-related damage is so often a high-priority problem. Impact sensing measures the G-force of sudden deceleration, caused when a second object in motion collides with another solid object (a scenario all too familiar to everyone involved in managing and maintaining lift trucks). When an impact incident occurs, a VMS will record and report relevant data about the event and, in some cases, automatically react to the event in a range of ways that are helpful to management.
5 Ways to Reduce Costs through Proven Technology

1 Reduce Labor Costs

Operators are typically paid for three to four TIMES more hours than they actually spend moving material.

Across multiple industries, VMS data has revealed a very similar and startling pattern of vehicle operation:

- Typical Shift Pay: 8 hours
- Operator Logged in to Truck: 4 hours
- Truck In Motion: 2 hours
- Truck Moving with a Load: 1 hour

One hour of product moved for every 8 hours paid!

This data has been collected from over 50,000 VMS vehicle installations. Of course, some operators are more effective than others, but VMS provides operational visibility and productivity metrics that are not achievable in any other way.

Industry Example

An international Tier 1 automotive supplier recently increased the productive work time of their operators (time spent actually handling product) by 60% while simultaneously reducing the amount of unloaded travel by 38%. The overall result was an average improvement in daily operator throughput of more than 10%.

WMS is not enough!

A Warehouse Management System (WMS) or voice system tells people where and when to complete tasks. You can see when a task was received and scanners tell you when they are completed. What happens in between? Why do certain jobs take longer for one operator vs. another? By tracking and measuring precise vehicle use and combining VMS data with your WMS data, you now have a more complete picture of material movement. As a result, your operations can significantly improve – up to 30-40% in increased productivity and decreased task times. In addition, a VMS is a measurement tool for jobs that WMS does not and cannot monitor or initiate.

Incentive pay means you are paying for work that can already be achieved.

Many managers pay incentives to maximize operators’ productivity. Pick more, get paid more. Without tracking and measurement, that can translate into paying bonus cash for work that can be accomplished in the allotted time. A VMS allows you to modify your standards and score your operators’ performance based upon motion hours, lifts made, and login time. Lower performers are logged in/moving less and can be readily identified and retrained, and of course true star performers are still rewarded.
Overtime costs must be reduced…but how?

VMS allows you to monitor and control overtime pay. Why pay 10% of your operators overtime when the bottom 30% are logged into their vehicle for less than 4 hours a shift? You can not only reduce overtime, but also reduce the need to hire temps for peak work periods by looking at task data and relocating staff to areas of need.

Engineering standards – they drive staffing levels, but are they accurate?

Many facilities plan and staff their operations based upon industrial engineering standards. VMS lets you refine the standards for each task based upon actual data from drivers collected over months, rather than a one-time “time and motion” study which is costly and time consuming to implement for every workflow change. A VMS is like having a constant, ongoing industrial engineering study performed on every vehicle in your fleet.

2 Reduce Fleet Size

Do you find that certain areas of your facility “need” more forklifts and more overtime? How do you allocate vehicles to various departments? Do you rent or consider renting vehicles for peak periods? How many vehicles are out of service in maintenance at any time? What if those vehicles had less down time?

Vehicle Management Systems provide unique insight into fleet operation by evaluating how your current vehicles are used and if there are any opportunities to better allocate them. At any given time, you can identify the peak use of your fleet by each department or area in your facility. In other words, you can evaluate how many vehicles are being used at once. In addition, you can evaluate overall utilization, including peaks and valleys of productivity, so that your operations can be better balanced over time and work areas. Why buy or rent vehicles to meet perceived peak needs when data can provide real metrics to evaluate this decision?

Many VMS customers have not purchased new trucks in years because they were able to reallocate their vehicles without affecting efficiency.

![Vehicle Analysis - Charts Report Point in Time 05 Minutes](image)
Industry Example

Visibility of how many vehicles are actually used to satisfy the demands of the overall operation, and individual departments, enabled a national distribution enterprise to be able to reduce the total vehicle fleet at its sites by more than 11%.

3 Reduce Planned and Unplanned Maintenance Costs

The more vehicles in Maintenance (“the Shop”), the more vehicles you need in your fleet. By using VMS to schedule Preventative Maintenance (PM) based on actual motion hours (vs. hour meter or calendar time), you can typically reduce PM costs by nearly 50%. Hour meters generally run when the key is turned, not when the vehicle is actually moving. Ask your dealer/manufacturer’s rep, how many hours of motion time are assumed when the 300 hour PM is scheduled. They will typically say “all 300 hours.” However, a VMS will show that motion time is typically 50% of logged hour meter time. Reducing PM cycles means lower costs, as well as more vehicles in operation since they are only being serviced when necessary.

Industry Example

A major government organization recently adjusted its preventative maintenance schedule from servicing each of their 35 trucks once per month, to maintenance based on actual vehicle motion time. Within a year they reduced their maintenance events by 70%, while still maintaining compliance with forklift manufacturer requirements.

Additionally, by executing vehicle inspections via VMS electronic checklists, operators can identify emerging problems in real time. Maintenance is automatically notified and can address the issues, before they become more costly repair items that keep vehicles out of service.

Without the ability to measure or collect data, your supervisors and managers run their operation based on what they know and can see. However, a VMS opens a wealth of possibilities to use your existing fleet differently– even just slight changes not only increase effectiveness, but provide significant cost savings.

4 Reduce Damage and Increase Safety

Lift truck damage accounts for 90% of rack failures.†

Inventory and facility damage often become just another “cost of doing business.” When you purchase new vehicles, you usually see immediate signs of abuse, like dents and paint chips within the first few weeks. It is generally accepted that forklift abuse and the subsequent damage that comes with it is a sign of “good use” of that truck. However, each dent represents damage not just to the lift itself, but to the rack, wall, pole or goods that were hit.
Industry Example

By being able to accurately monitor vehicle impacts, and hold operators accountable for their actions, a major manufacturer was able to reduce the number of impacts that occurred per vehicle operating hour by 39%. This improvement in overall operator behavior resulted in a 45% reduction in the costs associated with vehicle-related damage.

Reduce Damage and Increase Safety (continued)

There are numerous OSHA safety regulations in place to help insure a safe work environment. The most prominent are summarized below:

• **Before use, drivers are required to inspect vehicles for unsafe conditions**
  
  OSHA requires that industrial trucks be examined before being placed in service. They shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examination shall be made at least daily. When industrial trucks are used around the clock, they shall be examined after each shift. When defects are found, they shall be immediately reported and corrected [29 CFR 1910.178(q)(7)]. Source: CDC/NIOSH

• **Employers need to ensure that only TRAINED operators can use forklifts and like equipment**
  
  OSHA has promulgated the Final Rule for Powered Industrial Truck Operator Training [29 CFR 1910.178(l)], which became effective March 1, 1999. The standard requires operator training and licensing as well as periodic evaluations of operator performance. (Source: CDC/NIOSH) Ultimately, everyone needs to comply with these regulations. A VMS can help you do so by enforcing daily vehicle safety checklists as well as tracking and authorizing drivers’ access to vehicles.

Once you have trained operators, how can you cost effectively ensure that only those drivers are using the vehicles? **Access control ensures only trained operators can access vehicles and electronic vehicle checklists ensure that each vehicle is inspected every day or shift.** A VMS also identifies unsafe driving patterns, including speeding and impacts. All of these benefits together makes the workplace safer not just for the drivers, but for all other employees and pedestrians that work so closely around them.

The cost of one incident, whether it’s from an untrained driver, or major damage to a rack from careless driving can more than justify an investment in a VMS technology that helps manage these conditions.

Reduce Lost Productivity

Each day or week, supervisors assign drivers to various areas of a building or to perform certain tasks based upon their best projection of demand. By using a VMS, supervisors have a tool to identify work performed by each driver and match it against peak work flows. By reviewing this data, daily assignments can be fine tuned to match actual needs vs. perceived needs.

Industry Example

A leading automotive manufacturer has been able to increase the effectiveness of its material handling resources by a range of 58% to 76% by rebalancing material delivery methods that minimized the hour-by-hour variability of equipment and resource demands within each shift of operation.

Find “Missing” Trucks

Without access control, anyone can use any truck at any time, so there is nothing enforcing a vehicle’s return to its designated area. You may have invested in WMS, barcoding, RFID or voice, but none of these technologies can be optimized if the trucks are not in service or in their assigned location. When trucks are not where they are supposed to be, what is the cost of operators or supervisors walking the floor looking for an available truck?

Evaluating the Right Vehicle Management System

When considering a VMS vendor, it is essential to evaluate the following criteria:

Will the system void your truck manufacturers’ warranty? You should require that the proper concurrences are in place from the original equipment manufacturers and dealers to ensure that the VMS will not interfere with UL approvals and other key safety endorsements. Does the vendor have concurrences in place or will that potentially slow down your deployment?

The system should work on ANY type of truck, now and in the future. To provide the most value, a VMS needs to be installed on all trucks in the workplace. You may not want to be “locked into” a particular truck manufacturer for your next year’s truck purchases and this can happen if you buy a VMS system that only works on one truck type. The data capture also needs to be consistent regardless of model/type/age. One motion hour on one truck type should be identical to one motion hour on a different type.

Select a vendor with years of experience, that can offer best practices learned from thousands of installed vehicles. On the surface, VMS systems can appear the same. However, very few vendors’ systems have been in place for years and can therefore address the myriad day-to-day issues that will inevitably arise. If an operator forgets his badge one day, is that day’s data lost? If an operator is deleted from the system, how do historical reports address this? Ensure that the VMS system you select doesn’t create more work than before you had the system!
Evaluating the Right Vehicle Management System (continued)

The VMS should easily integrate with other systems. If you already have a maintenance, WMS, timecard, or safety database, ensure that the selected VMS system can easily exchange data with those software programs. Also, be sure that the VMS system will not be a burden on your IT department.

The VMS vendor should team with you to achieve the Return on Investment you expected when the project was approved. Whether it’s 6 months or 12 months, the time horizon you need to show a return on investment is going to be quick. Identify a company that will work with you to meet your goals, find ways to exceed them, and produce a smooth deployment of the VMS.

In Summary
The supply chain is a significant cost center for your business. If the same work can be done with less expense, the savings flow directly to your company’s bottom line. Technologies that have proven to cut costs WITHOUT reducing efficiency are a business imperative. I.D. Systems has worked with the most efficient companies in the world to derive significant and meaningful economic value from the daily use of VMS in their supply chain. With VMS technology, you can have it all – reduced costs, increased productivity and an ROI that supports technology investments in any type of economy.

PowerFleet® is the industry-leading VMS from I.D. Systems. Manage your fleet of industrial vehicles by increasing safety, reducing damage and optimizing vehicle use, including:

- Operator management through access control
- Vehicle safety through automated OSHA checklists
- Damage reduction through impact detection and management
- Optimized utilization through measurement of vehicle use
- Plus, reduced maintenance costs, visibility, text messaging and battery management

For more information on I.D. Systems’ Vehicle Management System, please go to www.id-systems.com or contact us at info@id-systems.com or +201.678.5565.
I.D. Systems is a leading provider of M2M solutions for securing, controlling, tracking, and managing high-value enterprise assets, including vehicles, powered equipment, trailers, containers, and cargo. The company’s patented technologies address the needs of organizations to monitor and analyze their assets to improve safety, security, efficiency, and productivity.

I.D. Systems is listed on the NASDAQ stock exchange under the symbol IDSY.

For more information
I.D. Systems
(201) 678-5565
www.id-systems.com
info@id-systems.com