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Small Data, Big Impact

The importance of extracting actionable insights from lift truck telematics to improve efficiency and protect the bottom line

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Abstract

In an era of expanded digital networks, smarter connected devices and integrated systems, businesses are turning to data-driven intelligence to guide decisions to help improve efficiency and protect their bottom line. For operations with lift truck fleets, telemetry programs can produce a wealth of relevant small data insights for quick conversion into actionable business intelligence.

Even as materials handling operations face serious pressure to maximize output and efficiency, most facilities do not utilize fleet data to its full potential. A recent survey indicates that while 80 percent of companies track lift truck fleet data in some way, only 25 percent track equipment and utilization by specific drivers. The cost of not knowing this can be high, especially since more than ever companies are focused on improving profitability, productivity and operator safety.

This white paper outlines the strategic advantage of working with small data insights to optimize fleet size and labor, and demonstrates the value of actionable lift truck intelligence in the overall productivity equation.



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Case 1:

Right-sizing the fleet

An e-commerce retailer began the fleet optimization process in order to reduce operating costs while maintaining flexibility to accommodate seasonal spikes and future growth. Based on current and future truck applications, labor resources and demand, distribution center staff identified fleet requirements and instituted a telemetry system from their local dealer to provide data-driven views into fleet utilization and productivity.

After gathering only months' worth of data, facility staff identified areas with idle trucks, found opportunities to reduce fleet size through process improvements and identified specific order selector models well-suited to picking processes.

By cutting excess trucks, instituting more efficient processes and adopting trucks tailored to fulfillment applications, the company reduced fleet size by 10 percent over the first year.

Evolving beyond asset management: Effortless, actionable insight

Historically, telemetry systems were prized as big data repositories, collecting live information from smart connected devices. They cataloged equipment and operational information, but didn't necessarily provide consumable and actionable data. Instead they offered numerous reports and spreadsheets that fleet managers had to sift through and summarize – a tedious and time consuming task.

Today, telemetry systems offer effortless access to immediate and actionable data. With the ability to evaluate utilization and maintenance information alongside expected demand and specific truck applications, fleet managers can make quick and informed decisions about fleet size and composition. This allows them to continuously improve operations and maintain a right-sized fleet composed of equipment tailored to meet their specific operational challenges. With telemetry system data, operators can right-size fleets to eliminate the cost of running excess trucks.

While a lean truck fleet eliminates idle time and reduces cost, it leaves businesses with a low tolerance for downtime. With insufficient fleet availability to serve demand, operations can endure significant costs such as delayed shipments and lost revenue, placing a premium on preventive maintenance and fault code monitoring. Properly utilized telemetry analytics can help refine preventive maintenance schedules to ensure sufficient support while avoiding overspending.

Exclusive to telemetry systems from an original equipment manufacturer (OEM), fault code monitoring triggers an automatic alert that instructs dealers to perform a proactive service. This can prevent minor issues that may not be readily apparent to operators, such as a loss of hydraulic pressure or slight controller damage from escalating into more serious problems that may result in crippling downtime and costly repairs. In addition, fault codes help dealers improve first pass completion, specifically by pre-determining the parts that may be needed to address the issues, helping reduce customer downtime.

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Case 2:
Proactive approach reduces total maintenance cost

Grocery retailers rely on high transactional volumes of low-margin goods to keep business moving. In such a competitive space, any savings accrued in logistics costs go straight to improving profitability, but mistakes can result in lost sales and expired inventory.

To keep time-sensitive distribution running efficiently, a grocer relied on a mission-critical fleet of lift trucks to move inventory from storage to shipping docks. Introducing a telemetry system added an extra layer of business intelligence to more cost-effectively ensure fleet uptime.

The telemetry system provided automated alerts and fault code tracking to trigger preventive service and refine predictive maintenance schedules. The fault codes prevented minor issues from resulting in major outages, maintaining uptime and avoiding spikes in maintenance costs from more costly repairs. The total effect of telemetry data guiding fleet maintenance resulted in the grocer reducing overall maintenance costs by 20 percent over the previous year.

A tool for labor management

Managing a successful lift truck fleet requires paying special attention not only to the equipment, but also the drivers. Assigning utilization and impact data to individual operators adds an extra layer of accountability for ineffective, unsafe drivers while incentivizing high-performing employees, yielding more informed labor management decisions.

Telemetry can also enhance safety regulation compliance by restricting truck access to only those operators with proper certification and providing automated checklists to guide drivers as they start their shift. In-dash displays provide drivers with self-management capabilities through speed and impact information to further incentivize safe operator behavior.

These in-dash displays even facilitate direct communication between drivers and management to keep supervisors connected with movements on the floor. Supervisors can notify drivers when trucks require service, manage operator training, solicit updates on ground-level conditions and even check to see if certain employees have shown up for work.

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Case 3:
The popularity problem - tracking idle time

While workplace satisfaction is important, one of the most curious small insights is the relationship between idle time and worker popularity.

A wholesale distributor of hunting and fishing equipment faced pressure to reduce warehouse costs. In an effort to increase overall profitability, they implemented a productivity check to evaluate their operations. Using lift truck telemetry data sorted by employee, management evaluated labor performance to reward the highest performers, and identify those with high impact rates and idle time for corrective action.

The results produced a few surprises. Data revealed that one of the most popular employees – a favorite among management thanks to strong social skills – actually turned out to consistently accumulate the highest amount of idle time. After recognizing the productivity of less visible workers, the company reallocated staff and restructured the facility layout to minimize idle time, helping to achieve greater throughput and lower costs.

The distributor saved tens of thousands per year in labor expenses alone and experienced relief from opportunity costs due to low-performing labor, such as lower throughput, missed orders and compromised quality.

Support that simplifies: The dealer advantage

For companies that are more accustomed to visually managing their fleets rather than using data and metrics, well-trained lift truck dealers and experienced OEM fleet management specialists can provide reliable local assistance. A proactive dealer partnership leverages specialized knowledge to guide installation, setup and ongoing reporting to ensure maximum return from any telemetry investment. This value-add relationship can help reach uptime goals and provide a quick, qualified response in the event of a technical complication.

When it comes time to put data to use, the dealer acts as a business consultant to advise fleet managers on key performance indicators, establish a pragmatic reporting structure and guide sound analysis. With an effective reporting structure, fleet operators can distill data into actionable insights to reduce total cost of operation, optimize preventive maintenance and inform staffing decisions.

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Reap the advantages of OEM telemetry with Yale Vision:

A common argument against adopting OEM telemetry is rooted in accountability, illustrated by the analogy of the fox guarding the hen house: If an end user wants a complete picture of fleet performance, why would they consult an OEM who has incentive to withhold data that reflects poorly on its own fleet of trucks? In reality though, using telemetry services provided by the fleet OEM offers numerous advantages, including:

- **Fault codes** - Only OEMs offer fault code monitoring, providing actionable, preventive maintenance alerts to keep trucks running at peak efficiency.
- **Direct integration** - Only OEM telemetry systems directly integrate with the truck's onboard computer to provide the most in-depth reporting and accurate information.
- **Simplicity** - Using a trusted OEM partner consolidates vendor relationships and can help reduce transactional costs.
- **Local support** - Relying on a local OEM affiliate ensures access to knowledgeable technical and training support to ensure maximum utility.

A data-driven future

As traditional materials handling environments evolve from burdensome cost centers to competitive assets, integrated wireless asset management and telemetry systems offer a pathway for fleets to join the fully visible, interconnected supply chain of the future. Continued upgrades to telemetry systems offer potential to build a more visible and quantifiable understanding of processes, with lower costs and competitive benefits as the ultimate reward. Enhancements promise an extra layer of data to mature incident tracking with location information, empowering operations to identify high-risk zones for collisions and adjust layouts accordingly.

Keeping pace with rapid technology innovation requires that fleet operators translate theoretical advantages from data into tangible benefits. This is often easier said than done but responsive OEM experts and trained dealers can help guide the way.

For more information about putting a lift truck telemetry system to work for real operational efficiency, contact your local Yale® dealer.

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