NATIONAL FORKLIFT SAFETY DAY 2024

The Role of Telematics in Preventing Forklift-Related Accidents in the Workplace

The increasing use of automation in next generation forklift trucks is becoming more widespread as the technology involved continues to develop. Essentially, the automated functionality has two main purposes – to improve the efficiency and productivity of businesses and, just as importantly, improve the safety of those who operate the equipment and their co-workers.

Telematics systems have been a staple of the material handling industry for the past decade and the technology has undoubtedly had benefits in terms of both safety and productivity. As we conclude the 2024 National Forklift Safety Day campaign on incident response, here we examine how this technology is vital in shaping the final part of the campaign – Prevention, or more widely, developing the processes helping to prevent serious accidents and injury.

What is Telematics?

Essentially, in a material handling environment such as a warehouse or factory, telematics systems identify, relay and store critical information related to how lift trucks and other material handling equipment (MHE) operate within a workspace. The various systems can gather data about the location, movement and status of the lift trucks using a mix of GPS tracking, onboard diagnostics and wireless communications. This provides fleet managers with real-time insights into how workspaces are operating and how efficient these operations are, helping them improve decision making to constantly optimise efficiency.

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Its Role in Improving Safety

Importantly, telematics has a critical role to play in the safety of operations and can be of critical importance in environments such as warehousing, factories and construction sites where material handling equipment is in constant use and potentially operating in close proximity to personnel and site visitors.

Effective telematics systems can monitor operator behaviour to identify instances of unsafe practice such as late braking or speeding. Such actions may be about to damage the truck or risk collision with a pedestrian. Supervisors can assess the behaviour and decide whether the operator needs a rest break or maybe relieved of their shift if the practice is considered dangerous.

The data collected by the system may be useful in identifying whether the operator needs additional training or other instruction. Helping to improve operator behaviour has a beneficial effect all round by reducing the chances of damaging the truck or putting personnel at risk. In this way, managers can evolve efficient safety procedures for their sites, helping to show staff in the process that their safety is taken seriously.

Enhanced automation offers even more benefits for trucks with functions such as collision avoidance and proximity alerts helping to manage risk more effectively. These systems work by using sensors to detect obstacles, such as persons or other vehicles, offering real-time information to the equipment operator. By helping to prevent collisions and near misses, such systems can significantly reduce the risk of accidents, helping to ensure staff, stock and equipment are all kept safe.

With telematics systems widely available for new trucks, either fitted as standard or as an option, more sites are being encouraged to utilise the equipment. Many systems can also be retrofitted to older machinery, proving age is not necessarily an obstacle to improved safety.

Cost-benefit analysis will be a factor to consider when deciding on what system is best but the costs should be weighed against a potential fine should something go wrong and a person is killed or seriously injured.

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Site Applications

In modern warehousing and factories, automation is common place and the telematics form a seamless part of many warehouse management systems and similar processes.

However, they don't work on all sites and poor connectivity can restrict the functionality. Accordingly, it is important that each application is individually assessed, and this should include a site survey.

Technology does not completely eliminate the need for risk assessments and regular visual inspections of a site are always recommended as they can identify potential problems such as trip hazards and unstable obstacles, such as stock incorrectly stored on shelving.

What do the truck manufacturers say

To find out what truck manufacturers think about the benefits of telematics and automated systems, the UK Material Handling Association (UKMHA), which oversees National Forklift Safety Day, discussed the issue with several of its manufacturer members.

There is hardly any forklift manufacturer which does not offer a telematics option for its trucks. But the technology is proprietary so the user has to assess which option will suit it best. However, the fundamental principles as previously outlined remain prerequisite.

All of the manufacturers interviewed agreed that the telematics systems play a vital role in improving efficiency and enhancing safety.

Read on the following pages to hear what they had to say...

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Linde Material Handling

"Here at Linde Material Handling we believe telematics is transforming how we approach forklift safety and operational performance. By harnessing real-time data, we not only gain deeper insights into equipment health and operator behaviour but also empower businesses to make proactive, data-driven decisions."

Linde Material Handling

"Through continuous monitoring and actionable feedback, telematics helps reduce risks, improve safety standards, and optimise fleet management. For companies looking to adopt telematics, the key is understanding the power of data collection and how it can guide safer, more efficient operations."

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Toyota Material Handling UK

"With an ever-increasing focus on improving efficiency and safety in material handling operations, it is vital for businesses to consider adopting a telematics system such as Toyota's I_Site. Using a telematics system to identify and address unsafe practises in real time can help prevent accidents before they happen and nip any unwanted driving patterns in the bud.

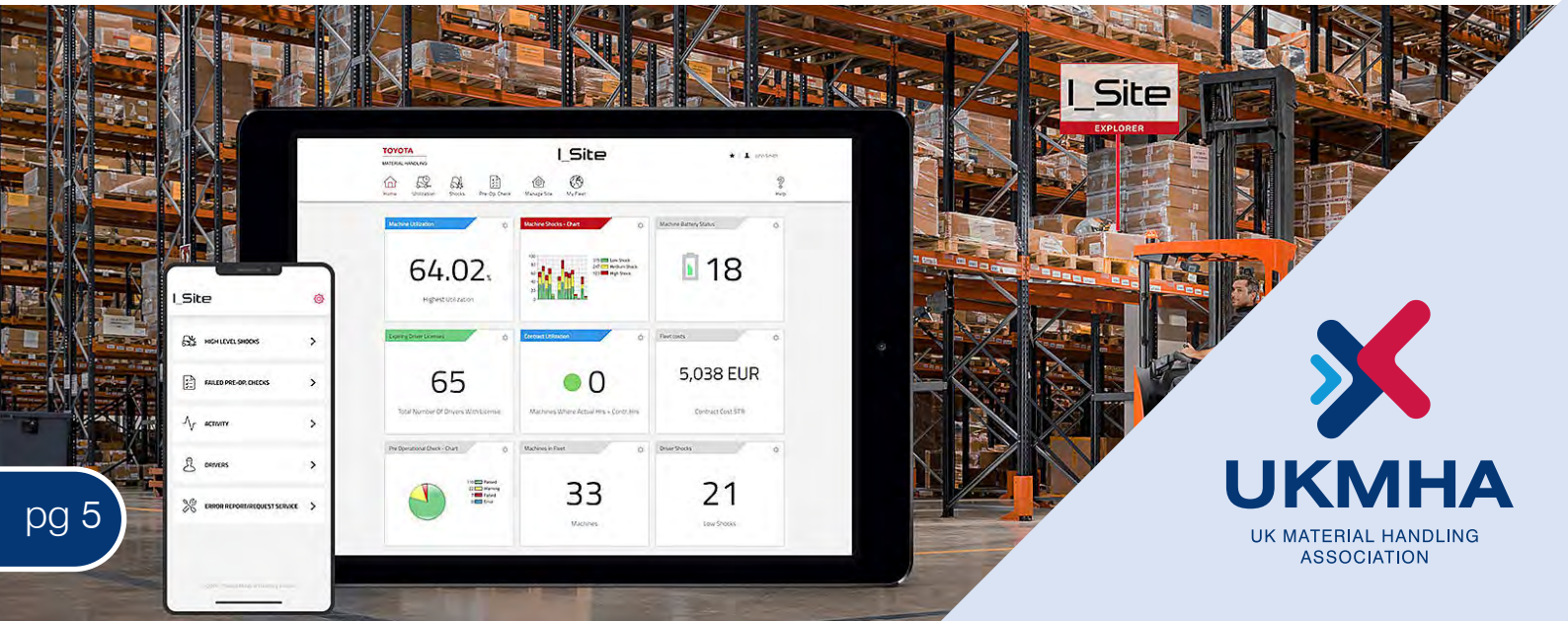
"Telematics systems can also help to ensure that only authorised drivers have access to machines. This means that the correct operatives are using the correct trucks, and have received the appropriate training to keep themselves and their colleagues safe."

Lee Joynt,
Toyota Material Handling UK, Connectivity Team Leader

TOYOTA
MATERIAL HANDLING

Pete Wooding, Head of Technology for Crown UK said its InfoLink system was designed to comply with all current legislation. It can assess what drivers are doing and how data is managed to support and help them understand what is happening around them.

"It is important that safety is never compromised in the drive to improve productivity. The InfoLink system has been specially developed by Crown to provide unmatched insight into the performance and utilisation of connected equipment, people and processes.



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Crown Lift Trucks

> **"It is designed to improve the efficiency of fleet operations through the use of real time data, while improving the safety of equipment users with its inbuilt operational protocols."**

Pete Wooding,
Crown Lift Trucks, Head of Technology

The information gathered by the InfoLink system is relayed to the operator through a 7'' smartphone-style touchscreen, which is mounted in the truck cabin so it can be easily read and interpreted.

Fleet managers can programme the InfoLink system with a series of pre-shift checks. The system also displays random safety messages to the operator during their shift to ensure full compliance with safety protocols. Dynamic Coaching™ messages provide real-time feedback, aiming to reinforce what operators have already learned during training.

Full connectivity enables wireless downloads of real-time data to both the equipment operator and the fleet manager helping improve decision making. Real-time data is fed though the system providing fleet managers with a full breakdown of operator and truck performance.

Using intuitive, easy-to-read menus and configurable widgets, operators can customise their displays and receive tips for improving the operation of their truck. Each forklift truck's operational parameters can be tailored to individual operators' skills and experience, due to three programmable performance modes and support available in 25 language options.

Using their preferred language, operators can also choose from a growing selection of widgets displaying key forklift functions such as speed, operating time, steering angle and battery charge. To cycle through them, or to set favourites, the operator can swipe a finger across the display – exactly like a smartphone.

During the procurement process, one of Crown's major customers identified safety as its number one priority. Crown therefore recommended the InfoLink system be fitted to all its trucks.

Crown designed the InfoLink system to help improve the safety of operations and protect employees by making them more safety conscious, every shift, every day. The real-time dynamic coaching messages encourage safe behaviour when driving the trucks.

The customer benefits as it can effectively manage operator certifications and lift truck access electronically. This helps to prevent unauthorised truck operation while also monitoring impacts to help reduce accidents and unintended damage.

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Jungheinrich UK

Jungheinrich developed its telematics system, Jungheinrich FMS, as an effective digital solution for efficient fleet management and enhanced safety. The web-based tool combines truck data and commercial data in a single system and is designed to provide a comprehensive basis on which to make informed decisions.

“Telematics is a broad term and it is important this is understood. By relaying data directly to the cloud we are aiming to improve operational efficiency.”

Lee Sullivan,
Jungheinrich UK, Digital Products Manager

“We have taken the decision that due to the benefits offered to the operator by telematics, to fit the system as standard to all our new trucks. Previously it was an option. This means real-time fault checks are available to the user with the system relaying driver profiles, training requirements and pre-op checks directly to the fleet management system, plus the truck is placed in lockdown if there is an impact event.

“We have found the system very useful in changing the behaviour of drivers by eliminating bad practice.”

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What other benefits does a telematics system offer?

In addition to improving productivity and enhancing safety, telematics also offer other benefits to operators.

For example, the data produced by the system can be used to optimise power consumption by analysing forklift usage, what routes are used by the driver and how much time is spent in idle. This can lead to significant power saving with a subsequent reduction in operating costs.

Data can also be used for predictive maintenance cycles, which can expand the lifespan of a truck by ensuring it operates at peak efficiency more of the time. Downtime is also reduced, again helping reduce operational costs.

The automatic recording and documentation of impact events with full traceability also offers benefits to site management, helping to define future safety procedures and prevent accidents reoccurring.

In Summary

"Advances in technology through automation and telematics offer major benefits to forklift operations through helping to improve efficiency and enhance safety. When looking to identify ways of preventing forklift-related accidents the availability of real-time data and warning alerts to drivers and supervisors are invaluable."

David Goss,
UKMHA, Technical Director

"Data collection and analysis are useful tools to improve productivity and efficiency, but they can also be key to ensuring workplace safety. For example, geofencing through speed limits and proximity alerts are effective tools for reducing risk, and enforcing company seat belt policy is a legal duty on supervisors, as is identification of the need for refresher training."

Find out more about National Forklift Safety Day