

## **Robots set to improve safety in manufacturing logistics**

*Australia has one of the leading safety records in the world, according to WorkSafe Australia, but that doesn't mean manufacturers and logistics organisations can afford to be complacent when it comes to worker safety. By Martin Keetels.*

In fact, most Australian organisations are well aware of the need for vigilance. This is especially true when it comes to the use of forklifts. This understanding of the risks has contributed to an increase in demand for robotic technology that prevents pedestrians from ever coming into proximity with a forklift.

The safety issues around forklifts have been well-known and reported since the 1960s. The most important, and potentially preventable, forklift-related injury comes from the interaction between a forklift and pedestrians. In fact, a Monash University study found that pedestrians hit by forklifts made up 45% of the injuries in the study. As far back as the early 1990s, expert recommendations included finding ways to separate forklifts and people.

However, finding ways to do this effectively without creating inefficiencies or high costs has been a conundrum facing manufacturers and material handling organisations for decades. Indeed, every year since 2012, WorkCover Queensland has accepted an average of 430 workers compensation claims with most of these relating to pedestrians struck by forklifts.

However, it's likely that these numbers will begin to decline as more manufacturers and logistics firms adopt robots in different guises.

The most obviously safety-oriented of these is using robots to move pallets of goods. This removes the needs for pedestrians to go anywhere near a forklift. Instead, the forklift operator loads the palletted goods onto a platform and the robot then moves it to wherever it needs to go throughout the facility.

The robots use built-in sensors, lasers and cameras alongside market-leading technology that lets the robot collaborate safely with humans. No cages or designated human or robot areas are required. These types of robots keep humans away from machinery driven by human beings, dramatically reducing the chances of injuries from collisions.

Robots can also reduce injuries in the manufacturing environment in other ways. For example, currently, many manufacturing and logistics organisations employ people whose job is to move trolleys around all day. This is a tedious, low-skilled, and low-value task. By putting a robot in place to do that work, the employee can move into a role that is far more interesting, varied, and valuable.

This results in more engaged employees who are less likely to be injured through complacency as they repeat their manual tasks. Anecdotally, manufacturers who retain their workforce and redeploy them to more valuable tasks are able to manufacture more and sell more goods, contributing to the bottom line.

This can overcome the fear that some workers have of being replaced by robots. Instead of being replaced, the worker can be promoted, leading to better outcomes for all. As organisations are

starting to realise the benefits of robotic technology and overcome this fear, there is a greater uptake of robots in the manufacturing industry.

As people become more familiar with robotics, the technology itself is getting better and safer. Managers are more inclined to introduce robots into manufacturing and logistics environments. As more organisations take the lead in this area, others will follow.

As robotic technology has become more advanced, it has also become more affordable. This means that manufacturing organisations of all sizes are not only likely to be able to afford robotics in their operations, but can also gain very fast returns on that investment.

Getting up and running with these types of robots is very straightforward. The technology is highly intuitive, with managers normally requiring nothing more than a single day's training. From there, they can train staff to use the robot and program it with new missions as required.

While cost reductions and efficiency improvements are automatic benefits of adopting robotic technology, manufacturing and logistics organisations are seeing their greatest benefits in improved worker health & safety. Keeping workers clear of forklifts is key, as is removing the need for workers to lift or push heavy items. Doing so could potentially reduce musculoskeletal disorders, which account for 90% of workers' compensation claims and almost six weeks of lost time per claim on average. Addressing the risk of worker injury either by collision with a forklift or due to a musculoskeletal disorder can potentially save manufacturers and logistics businesses significantly, making robots a highly attractive proposition.

**Martin Keetels is the National Manager of Robotics & Innovation at Konica Minolta Australia. Konica Minolta will be exhibiting at Austech 2019 at Stand AM48.**

**[www.konicaminolta.com.au](http://www.konicaminolta.com.au)**