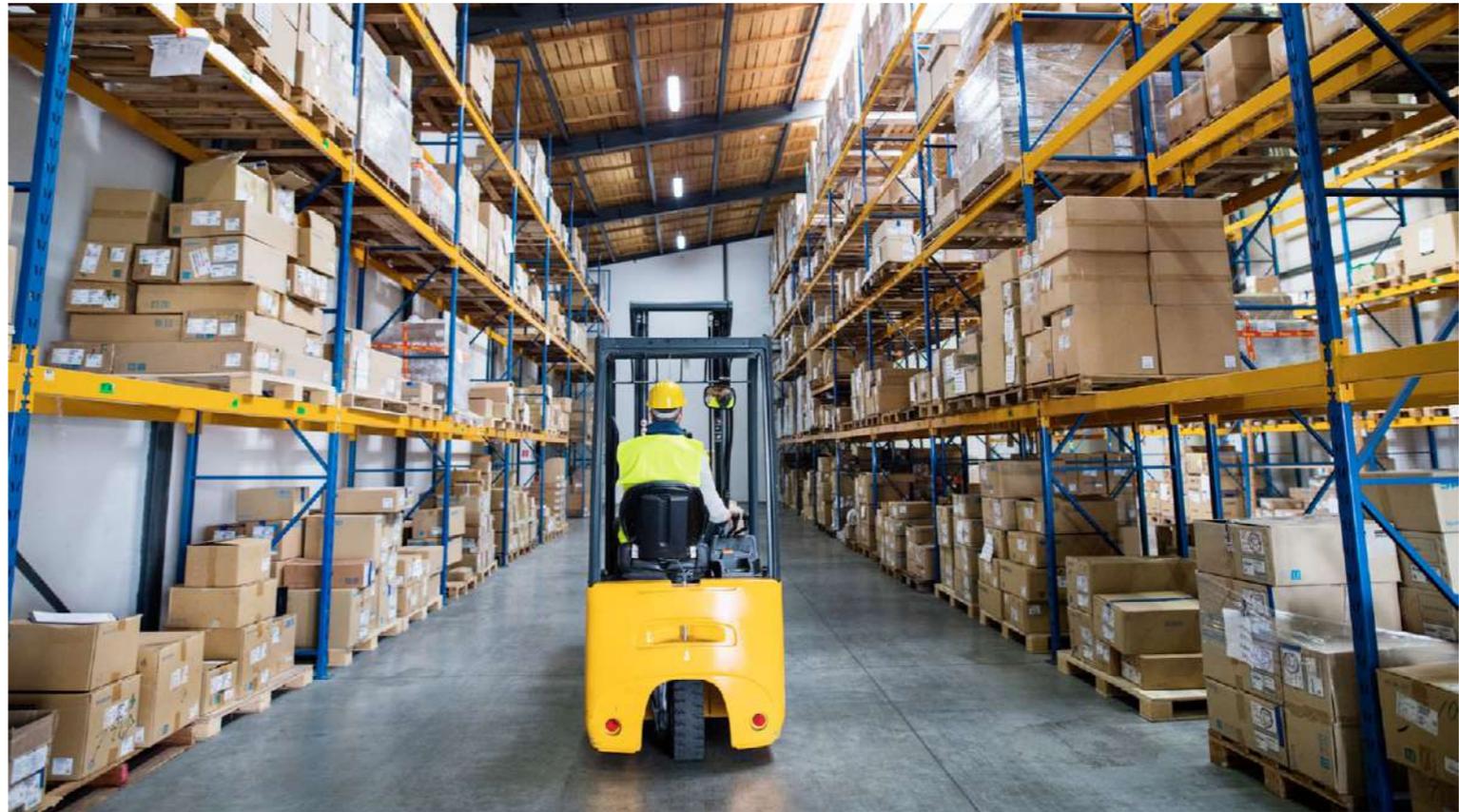


# SAPICS Warehouse management is a vital link in supply chain optimisation

Warehouse management is a vital link in an efficient, resilient, sustainable supply chain, but according to SAPICS (The Professional Body for Supply Chain Management), the crucial role that the warehouse plays in the supply chain and in organisational success is often overlooked by companies. "Today, more than ever, qualified and skilled personnel are needed to ensure optimisation across the entire supply chain, to add value and deliver a competitive advantage," says SAPICS president MJ Schoemaker.

"Warehouses that are not functioning well can have a significant impact at every stage of the supply chain. Warehouse management helps to ensure the availability of the right goods, in the right quantity at the right time; the safe, secure and optimal storage and distribution of goods; and their timely delivery, in perfect condition, to ensure customer satisfaction and business success. There have been great advances in warehousing technologies over recent years, but many warehouse managers still find inefficiencies in their operations. At the same time, consumer expectations for customised products, product transparency, and faster delivery are putting increased pressures on supply networks," Schoemaker says.

Warehouses must even function well in reverse, she notes, and this, too, is more important than



ever because with the rise of e-commerce, product returns are higher. Reverse logistics encompasses all the activities associated with a returned product or product components that are effectively moving backwards through the supply chain. "One downside to e-commerce is the high rate of returns. Up to 40 per cent of goods purchased online end up being returned. This is substantially higher than in-store returns, where shoppers return just five to 10 per cent of their purchases. The high rate of returns in e-commerce means that 20 per cent more space and labour is needed for reverse logistics."

## Supply chain sustainability

"Supply chain sustainability leaders are increasingly citing the energy used in their facilities as one of the best levers supply chains have to reduce their emissions. While material and product use are significant contributors, supply chains usually have more control over the decisions concerning energy sourcing for their facilities."

Warehousing specialist Adri McCaskill, who is the General Manager for iPlan's Warehouse Management business unit, likens a failing warehouse to a critical patient in an emergency room.

# Mobile racking in SA Fruit Stores



Southern Storage Solutions – DEXION, has installed numerous mobile rack installations in conjunction with Barpro Storage which has increased the storage capacity of each facility without the expensive task of increasing the room size to cater for conventional pallet racking or drive in racking with all the associated extra refrigeration and electrical costs.

Traditionally pallets of packed fruit were stored by securing steel corner posts to each pallet and then storing another level of pallets on top. While doubling store capacity, this form of block storage effectively prevented stock rotation, increased stock damage and in some situations prevented adequate cooling. As fruit packaging became further differentiated, accessing stock quickly for an order became practically impossible.

Pallet racking was introduced into existing fruit stores to solve these problems. "Drive-In" racking made better theoretical use of the chilled space and reduced product damage. However the accessibility problem was not solved leading to "drive-in" lanes being only partially utilised for immediate access to individual product lines. The alternative was to use fixed selective racking, giving immediate access to every pallet but greatly reducing storage capacity.

Mobile racking was first used in 1997 in a fruit store outside Grabouw in the Western Cape.

## WHAT IS MOBILE RACKING?

Mobile racking consists of special rails that are laid in the floor during construction. Rails can also be retrofitted in existing rooms provided the floor is suitable by levelling the rails on the existing surface and pouring a 150mm reinforced slab. A low ramp is needed at the entrance. The mobile bases run on the rails and support pallet racking which is specially designed for use in a mobile application. The bases are motorised and energy efficient.

Maximum tonnage per base varies but should not exceed 360 tons. In larger stores mobiles are arranged in banks of up to 10 bases, each with its own moving aisle. The bases are controlled either by push buttons, remote control, or by an interface with the warehouse management system. An access aisle is created at the push of a button.

Safety measures include photoelectric beams down the length of each base and across the front of each mobile bank with additional emergency stops. To move one or multiple bases takes approximately one minute twenty seconds. Mobiles are designed to give lighting signals so that the lights come on only in open aisles. This results in energy savings as each light produces heat which must be removed by the refrigeration system.

The possibility of pallets breaking was removed by using a pallet support or saddle

beams in the middle of each pallet slot. These were painted yellow to assist with pallet placement especially on higher levels and increase rack strength. Another challenge arose when packed fruit stores remained in use for extended periods.

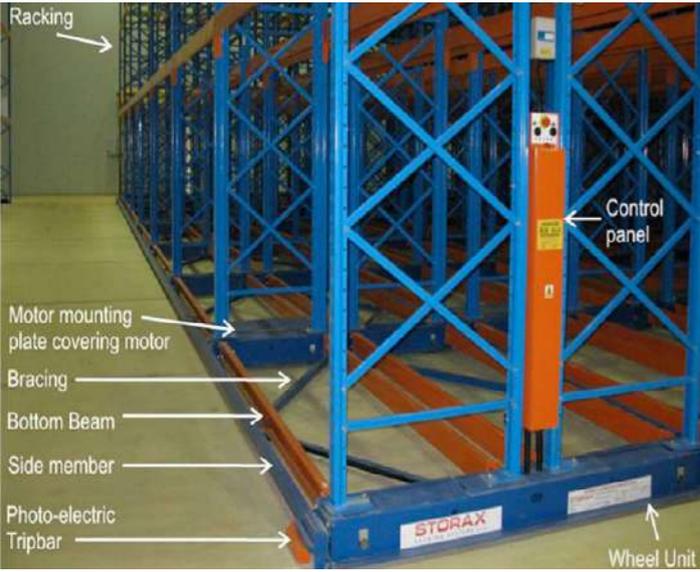
Improved ventilation in the mobiles allowed packed fruit to be chilled and store temperatures were reduced to around 0 degrees C. Frost heave, caused by moisture freezing under the floor, is not good for mobiles and recent installations have under floor insulation and heater mats to make sure this doesn't happen.

The advantages of using mobiles in fruit stores have become apparent over the years. More expensive than "fixed selective" or "drive in", mobiles can increase the practical capacity of a store by up to 75 or 80% while still giving immediate access to every pallet.

For all your storage solution requirements, contact Ron Bonthuys at Dexion.

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# Need a Storage Solution?



## Company Profile

With the head office based in Cape Town, **Southern Storage Solutions-Dexion** network provides support to customers on a national basis and into Africa. With over 55 years international experience in Materials Handling and Storage Systems, Dexion have the expertise required to solve any storage requirements.

Dexion offer a complete range of products, including all forms of racking, steel shelving, mobile shelving, conveyor systems, mezzanine floors, small parts bins, staff lockers and fencing as well as a complete advisory and system design service incorporating the latest CAD technology.

The company also offers a full racking inspection service which can be completed every six months, or where necessary on a more frequent basis. This includes a full audit on the storage system, a detailed report and recommendations on damage prevention. Certification can be provided on request.

The Dexion Brand is consistently known around the world for:

- High quality products;
- Market-leading ideas surrounding concepts such as space utilisation and the effective storage and handling of items associated with a business;
- Excellence in customer service.

The brand is supported by training of our people, the latest design tools, active research and development, rigorous product testing and after-sales service.

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Please be assured of our commitment to provide you with only the highest quality of product and service.

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Mobile racking



Drive-in racking



Push back racking



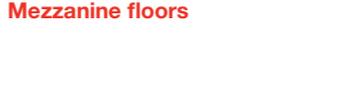
Rack supported multi pick levels



Retail shelving



Staff lockers



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“Turning around a failing warehouse operation is similar to an emergency doctor’s methodology. First you check the vitals, then you stop the bleeding through a triage approach, and finally you stabilise for the long term,” McCaskill explains.

“An exploration of the vitals for a warehouse operation includes evaluating the quick and efficient movement of inventory; the control and ownership of operations; and the interaction between people, process and technology. Triage prevents a worsening situation by prioritising focus areas, putting controls in place to act as a tourniquet, and implementing stop-gap temporary processes as needed.

For long-term stabilisation, we must design process improvements, document detailed work instructions and provide extensive training and handholding.

Warehouse managers must be able to identify the critical processes, understand who needs to take ownership and control, and ascertain where the problems typically lie when a warehouse is ailing. It is crucial to be able to identify the vitals among the chaos,” she stresses. **SR**



# SUPPLY CHAIN METAMORPHOSIS

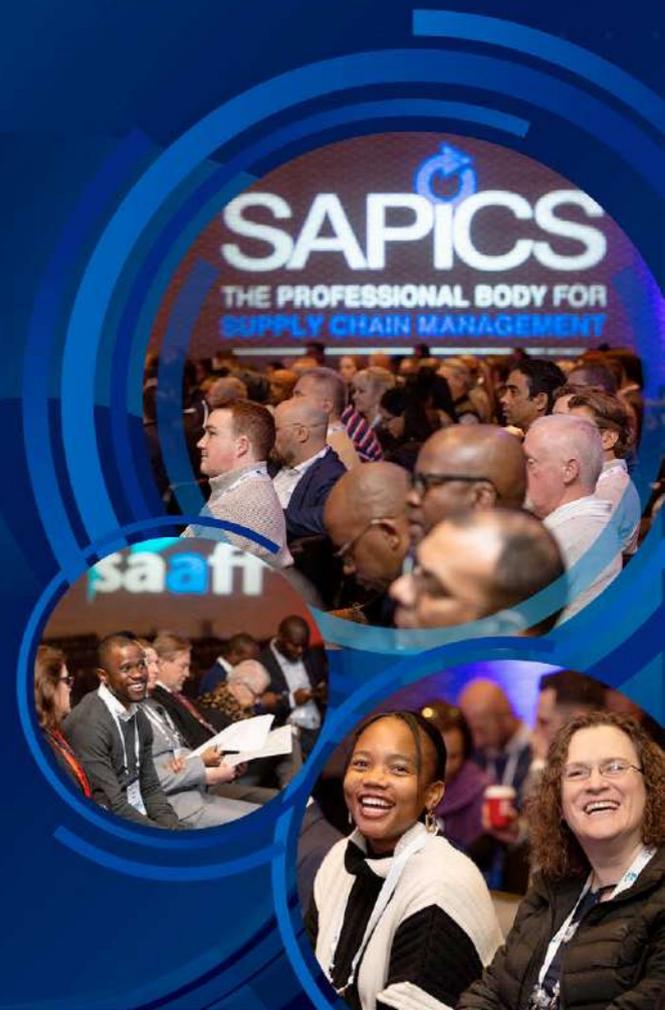
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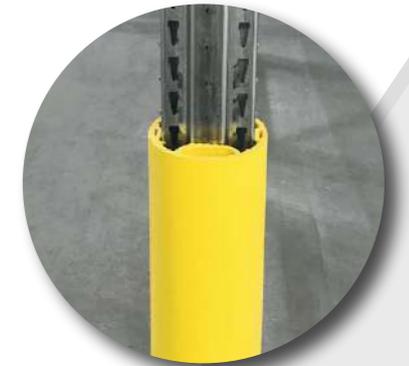
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