

CASE STUDY

Drakes Supermarkets

Automates and maximises order picking productivity at its new South Australian warehouse



Drakes.

Edinburgh North
South Australia

- ▷ **Drakes Supermarkets is an independent and privately owned Australian retail chain based in South Australia, named after owner Roger Drake. Specialising in supermarket retailing, Drakes is now the largest independent grocery retailer in Australia, operating over 60 stores across South Australia and Queensland.**

As a company, Drakes has an annual turnover of more than \$1 billion, employing over 5,500 staff members nationally. The company's strengths lie in operating on the principles of a family business and a commitment to supporting local manufacturers and suppliers. Drakes has kept its focus on the important aspects of the business, which concentrates heavily on consumers and their shopping experience.

DRAKES SUPERMARKETS' NEW IN-HOUSE SUPPLY CHAIN

After significant growth, Drakes became independent of previous partner Metcash in late 2019 in its South Australian operations, in an effort to re-brand its position within the retail grocery market and to construct a self-sufficient supply chain.

During the process of becoming independent from Metcash, Drakes soon began to restructure its business and move its supply chain operations in-house, which resulted in the launch of its new distribution centre (DC) in Edinburgh North, South Australia. The large-scale 55,000 square metre DC now employs over 80 full-time staff, features \$15 million worth of robotics, and houses 23,000 separate product lines.

Roger Drake, owner of Drakes Supermarkets, says the new centre is part of the business' self-supply model.



As part of its plan to build the new South Australian DC, following a thorough tender process, Drakes initiated a new partnership with leading intralogistics innovator, Dematic, who designs, builds and supports intelligent, automated solutions for manufacturing, warehouse and distribution environments for customers that are powering the future of commerce.

“It is really important to us to continue to innovate as a business and provide opportunities and training for our existing staff and future local employees,” said Roger. “We want to stimulate the South Australian economy by keeping it local and looking out for the interest of everyday families and customers in our state. Our aim is to save the average South Australian family around \$20 per week at the check-out, which equates to over \$1,000 per year, by just having direct relationships with our suppliers and cutting out the middle-man.”

Roger Drake, owner of Drakes Supermarkets

“Since we were constructing our new South Australian DC from the ground up, we wanted to ensure we were installing the most advanced supply chain systems that would be fit for purpose now and into the future. Our goal in working with Dematic was to integrate a warehouse system that would streamline our operations, optimise store fulfillment and service levels and achieve a positive return on investment (ROI) through an increased level of productivity,” said Roger.

“It was also important that in switching to our new supply chain, we were confident that our operations and systems would be highly reliable and able to achieve maximum efficiency, so that the service delivered to our end customer – in this case, our stores - was meeting or exceeding their needs and expectations,” added Roger.

Drakes selected Dematic as its partner because of its well-established presence as an Australian company, its solid experience in the supply chain industry, its extensive experience in multi-million-dollar projects within the Asia Pacific region, and its knowledge of and experience working on Australian building sites.

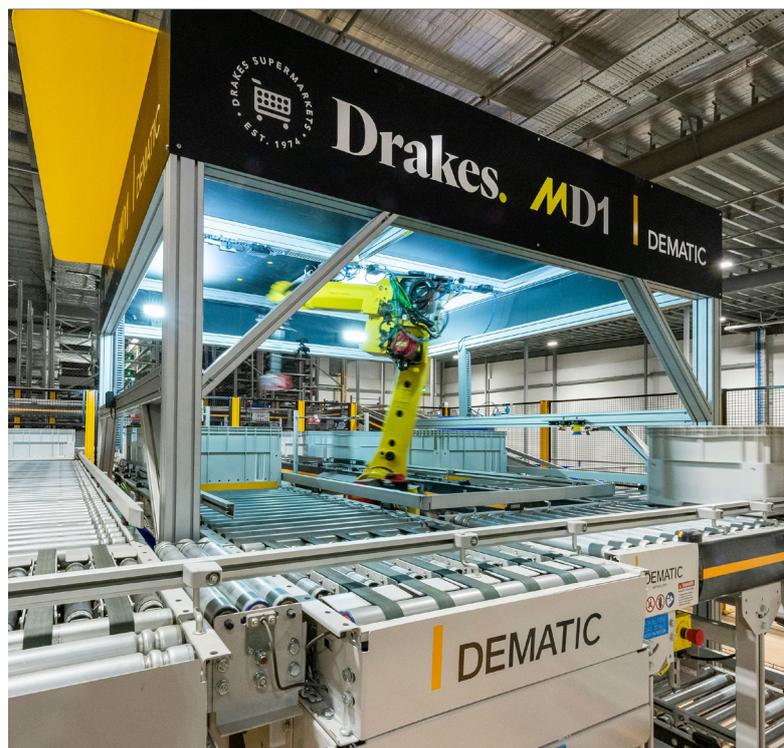
A SOLUTION TO AUTOMATE AND STREAMLINE OPERATIONS

Drakes selected the Dematic Goods-to-Person (GTP) Picking Solution as the system to be deployed at the new South Australian DC.

“The central objectives that we wanted to achieve from the implementation of the Dematic GTP Picking Solution, was the establishment of a supply chain system capable of high levels of efficiency and productivity through automation. Another goal in implementing the new solution was for it to be cost competitive against the previous Metcash model, so we could achieve a lower cost of distribution as a result,” said John-Paul Drake, Director of Drakes Supermarkets.

Tailored to Drakes’ operational needs, the Goods-to-Person Picking Solution, which is also integrated with robotic technology, was selected because of the pick rate it offered – completing over 600 order lines per hour and per operator, together with further picking productivity through the robotic picking cell.

“The major goals that we wanted to achieve for Drakes in deploying the GTP Picking Solution, was for it to be self-sufficient, and for all robotic, automated and technological advancements provided by the system to streamline operations and achieve maximum productivity within the DC,” said Darren Rawlinson, Dematic’s Regional Solutions Development Director, APAC.



The GTP Picking Solution delivers items directly to pick stations – eliminating the need for operators to spend time manually locating and retrieving items and travelling across the DC floor. The solution focuses on the challenging aspects of fulfilment by combining high-density secure storage with the rapid rate and high accuracy of directed picking, equipped with an ergonomic design to enhance operator performance.

The GTP Picking Solution receives inventory at decant workstations, where operators scan barcodes and transfer items into inventory totes, which are automatically weighed and then conveyed and stored in three aisles of Multishuttle Storage. This ensures maximum inventory accuracy in the system. For order picking, inventory totes are retrieved and sent to the picking stations, where lights and graphical instructions direct operators to pick the required items from the inventory tote. The operator then places the items into order totes which can then be stored in a storage buffer ahead of despatch. Once the delivery run is released, the totes are retrieved prior to automated lidding, labelling, weighing, and scanning, and are routed to the despatch sorter. The inventory totes are then returned to storage, ready for the next order.

Drakes' staff can work in parallel at the two Dematic RapidPICK stations, unaffected by each other's pace, and the pick stations can be opened and closed according to the business volume of a particular shift. This ensures optimal picking performance regardless of daily, weekly, or seasonal fluctuations in throughput volumes.

"The solution requires minimal customisation, as all of the hardware and software are pre-configured – which significantly reduces costs and enables rapid installation and start-up," added Darren. "The system's compact configuration also uses space efficiently, allowing Drakes to better utilise space in its new DC."

The GTP Picking Solution runs on Dematic iQ software, which optimises all aspects of supply chain fulfilment, including direct picking into right-sized shipping containers through to reducing cycle times, labour costs, and shipping/transportation costs. Dematic iQ is also fully interfaced with Drakes' existing Warehouse Management System (WMS).

Dematic also installed a storage solution at the new Drakes DC, with all materials that made up the pallet racking made in Australia.



THE SOLUTION ROLLOUT

Drakes had a strict project deadline for its new South Australian DC, and the implementation of the GTP Picking Solution had to align with this. The design, planning and approvals for the DC was completed successfully within the six-month timeline, with the building, fit out and testing phases taking a further 11 months for completion; employing over 300 local trades people throughout the process. The new DC was finalised and started supplying to all South Australian stores in September 2019.

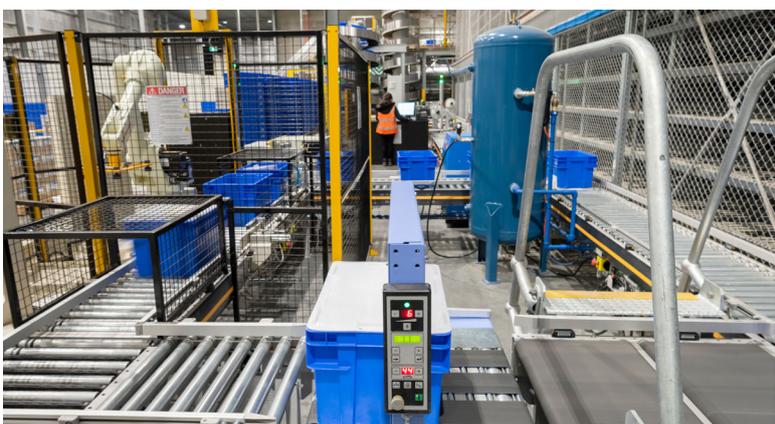
"Through large amounts of coordination, Dematic worked in collaboration with all other partners contributing to the construction of the DC, such as builders, technicians, and on-site managers," said Terry Jamieson, Business Development Manager at Dematic. "We had our highly experienced team onsite providing end-to-end management and support to ensure a successful rollout was achieved as quickly as possible."

Dematic had a team of in-house project management, mechanical commissioning and controls and software personnel on-site throughout the implementation and testing phases of the GTP Picking Solution deployment project. Dematic also helped Drakes to develop guidelines and work processes and procedures for staff.

"During the rollout, Dematic's highly qualified team worked to ensure that the system was integrated seamlessly," said Glenn Sutcliffe, Logistics Manager at Drakes Supermarkets. "They employed a detailed level of coordination that helped to optimise not only the DC space, but all elements of the system so that it was tailored to Drakes' unique conditions."

The GTP Picking Solution onboarding and training phase for Drakes' staff was run by Dematic; providing an in-depth understanding of how to use all materials handling equipment, and the correct procedures to follow to ensure safe and efficient operations.

"Dematic encouraged a 'train the trainer' approach to developing a good working knowledge and understanding of the system amongst key operational and management personnel, so our supervisors could then pass on their knowledge to all employees working with the system. This



helped to ensure that things were done correctly from the outset, so that the technology could be utilised properly and safely to achieve the best results for the overall business,” said Glenn.

SERVICE AND SUPPORT

For all GTP Picking Solution requirements, Drakes is supported by Dematic’s ongoing service and support program, to help optimise system uptime and continuity of production efficiency at all times. This includes 24/7 support for all equipment and controls, as well as software and IT.

“Our service and support program helps to provide resources that ensure the best level of productivity is achieved. By working to reduce things like system downtime due to component failures, we can in turn reduce the overhead costs of system maintenance for Drakes. The program offers assurance to Drakes that the system has been executed in the best possible way, by us, the people who designed and built it,” said Terry.

BENEFITS OF THE NEW SOLUTION

For Drakes, being able to successfully take over the end-to-end management of its own supply chain has been the biggest achievement overall.

“We are very proud to have successfully built our own supply chain operations from the ground up,” said John-Paul. “This was a major endeavour for us to take on and manage ourselves. I am so pleased that we are now able to independently manage our supply chain. I am confident we are meeting the expectations of our stores, our customers, and our staff.”

The biggest benefits Drakes achieved by implementing the Dematic GTP Picking Solution within the new South Australian DC, was the system’s ability to offer high productivity and accuracy rates, as well as real-time visibility of order fulfilment. From these improvements, Drakes now has the capacity to load 30 semi-trailer loads of orders per day and process 180 cartons per total labour hours. This compares to 58 cartons per hour being processed in other areas of the warehouse.

Operators using the GTP picking solution are picking over 700 units per labour hour. The Dematic GTP Solution runs 16% of the warehouse throughput using only four staff, which means only 5% of the warehouse’s staff process 16% of the product. The solution also delivers a very high picking accuracy rate for Drakes of 99.996%, with the use of weigh scales following the picking stage resolving most errors before shipment.



Due to the automated warehouse system needing less warehouse space, Drakes was also able to drastically reduce the footprint of the new warehouse, leading to a saving of \$10 million in land and building costs for their \$11 million build. This meant the Dematic GTP Solution was able to deliver an immediate return on investment (ROI) for Drakes.

Moreover, the modular and scalable solution provides the flexibility to accommodate future changes and alterations to further optimise operations or to expand the system as the business grows.

Drakes is provided with performance insights from the Dematic iQ software, which helps to ensure all the KPIs of the system are being achieved and that Drakes can assess areas of the operation that can be further enhanced.

“From implementing the GTP Picking Solution, we have seen some incredible results for not only our overall DC operations, but also the efficiencies of our DC staff who, after using the new system, have greatly benefited from the easy-to-use process and overall task visibility that it provides,” said Glenn.

FUTURE PLANS

In the next six months Drakes has plans to extend the modular Dematic GTP Picking Solution to increase order fulfilment capacity at the South Australian DC. The new DC was built with enough space for the system to be extended, with the addition of new modules, to increase capacity as Drakes continues to grow.

Power the Future of Commerce.

▶ If you are interested in learning more about this topic and how we can help, please contact us.

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