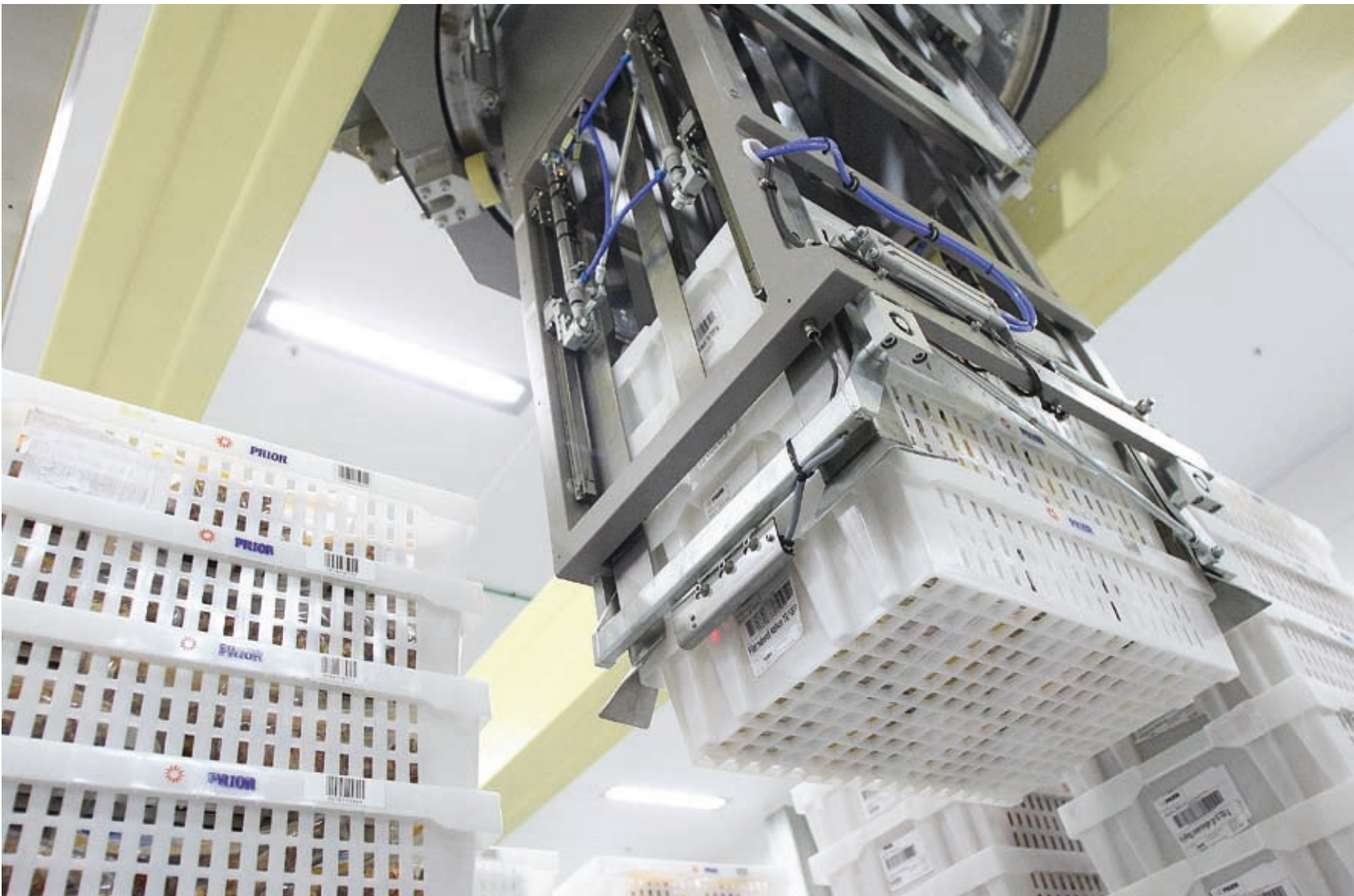


Robotic picking is helping a Norwegian poultry, meat and eggs supplier to meet its customers' needs

Nortura BA is one of Norway's leading suppliers to the food industry. Formed by the merger in 2006 of Gilde Norsk Kjøtt BA (which specialized in red meat) and Prior Norge BA (which specialized in white meat), Nortura

BA supplies fresh and frozen meat, eggs and some convenience foods to retailers, catering outlets and the food industry. The company – which owns a number of strong brand names, including Gilde and Prior – bases its operations ▶



on Norwegian traditions and food culture. A co-operative owned by some 31,000 Norwegian farmers, Nortura enjoys annual sales of approximately NOK 15 billion (USD 2.5 billion) and employs some 7,000 staff in 41 production plants across Norway.

Nortura Hærland AS is a subsidiary of Nortura BA, located in the region of Østfold, some 75 km southeast of Oslo and just 30 km from the Swedish border. Known before the merger as Prior Hærland AS, the company has over 400 employees and is responsible for processing white meat for Nortura BA, as well as undertaking some product development. Most of Nortura Hærland's products are marketed through the group's sales network under the Prior brand.

Centralizing distribution

In 2002, Prior decided to centralize the distribution of its fresh meat products at one location, rather than the six smaller facilities it operated. **Bo Eriksson** explains, Warehouse Manager for Nortura Hærland AS, "The objective was to concentrate order picking in one location and the natural choice was the Hærland site, where most of the meat was produced."

The new distribution center (DC) at the Hærland site was designed and built by Swisslog, as main contractor, with the robotic handling systems supplied by Cimcorp. Construction began in October 2003 and the site was operational by May 2005. Although

originally conceived by Prior, the DC is now operated by the Nortura group – rather than merely Nortura Hærland AS – and is used to distribute mainly chicken and turkey products, as well as eggs.

The 12,000 m² DC, which operates on two shifts from Monday to Friday, distributes goods to the whole of Norway. The site handles some 200 chilled chicken and turkey lines and about 50 frozen poultry products, as well as eggs and whole chickens that come from other facilities. "We distribute some 30,000 tonnes of fresh products and some 5,000 tonnes of frozen products a year," says Bo Eriksson, "with up to 700 fresh and 400 frozen order lines per day. Shelf lives differ from product to product, with over 80% of the fresh goods usable for up to 21 days."

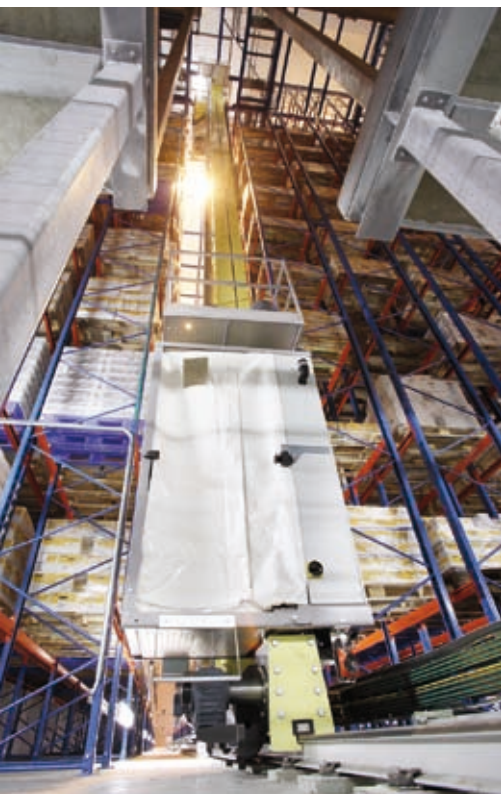
A variety of picking techniques

The Hærland DC uses a range of different picking techniques, employing the optimum method to suit product storage needs and customer order requirements. In addition to goods receipt, order consolidation, marshalling and dispatch areas, the DC features three storage areas and a manual picking zone. The three storage areas are: a manual pallet store at 4°C, an automated pallet warehouse at -20°C and a robotic floor-based storage area at 4°C. Frozen goods are picked semi-automatically using the goods-to-man technique, while mixed tote picking of fresh

goods – where customer totes contain more than one product type – is performed manually in the picking zone. Full tote picking of fresh products – where totes contain only one product type – is handled fully automatically by four MultiPick robots supplied by Cimcorp.

Accurate and hygienic robotic picking

MultiPick uses gantry robot technology to integrate the sorting, storage and picking of totes in stacks. Robotic operation ensures both rapid handling and accurate order picking. The robot heads pick the required number of totes from the top of the stacks to meet customer orders, creating customer-specific stacks of up to eight totes and placing them on the outfeed conveyor. Since the MultiPick system also replenishes the manual picking area, its floor area is divided into four, with each zone containing products required for the adjacent manual picking faces. It is also possible to transfer stacks of totes from one robot zone to another. The MultiPick area itself is replenished by pallets from production, the manual store and goods-in, using an automatic depalletizing system. An added benefit has been the hygiene advantages offered by the gantry-based system. Mr Eriksson explains, "As storage takes place on the floor, without the need for any racking, the area can easily be cleared of totes and thoroughly cleaned to maintain the hygiene standards that we require in a food-handling environment."



Centralizing its distribution at one facility and employing a range of order picking techniques have resulted in lower costs and improved efficiency for Nortura Hærland AS.



The DC manager, Bo Eriksson, says process automation has reduced handling costs for Nortura Hærland.

Faster deliveries

The centralization and automation have allowed Nortura to shorten the time from order to delivery. “Goods are reaching the store shelves more quickly than before,” says Eriksson, “and this lengthens the time that the products are available to customers.” Orders come in at 7am and goods are generally ready for loading by 11am. The firm also monitors delivery accuracy, for which it has a target of 97%. “At the moment, it’s 95.5%,” admits Eriksson, “but that’s due to raw material supply problems, rather than picking errors.” The company makes some 50 deliveries per day, using third party carriers, but demand is seasonal. “Our peaks are at Christmas and Easter, of course, but also January, May and June,” says Eriksson. “So far this year, our peak was in week 2 in January,

when we delivered 62,000 totes. Usually we deliver some 10,000 per week.”

Lower handling costs

The automation of many of the handling processes at Nortura Hærland AS has resulted in reduced handling costs. Before automation, some 80 to 90 staff were needed per shift, whereas only 25 – including administrative staff – are required now. Bo Eriksson says, “We still need to increase the volumes handled at the site to improve the economic benefits of the automation. We’re not fully utilizing the capacity of the system right now but, following the merger, there are excellent opportunities for developing the DC to handle more product lines, including those under the Gilde brand.” Eriksson is impressed with the system’s availability: “After

the running-in period, we quickly saw that the equipment had few problems. Operation is very smooth and we can rely on the fact that deliveries will be made on time.”

MultiPick robotic picking system

- *Products handled: ArcaSystems plastic totes and Stack-Nest Containers with dimensions of 610 x 400 x 150 mm and a maximum weight of 25 kg*
- *Storage capacity: 2,400 stacks, making 36,000 tote locations*
- *Throughput: 16,000 totes per day (1,000 totes per hour)*
- *SKUs: 200*

