Scott Technology Ltd are proud to be announced as the winner of the WorkSafe Victoria, Health and Safety Invention of the Year for our X-Ray Primal System.

In an industry where staff turnover is high, work is repetitive and processes are dangerous, accident and injury rates are very high. SCOTT delivered the X-Ray Primal & Middle Machine technology through Robotic Technologies Ltd, a joint venture between Scott Technology and Silverfern Farms.

The X-Ray Primal & Middle System replaces most of the manual bandsaw tasks thus significantly reducing the incidence of lacerations and amputations in the industry. Located at the start of the boning process the Scott equipment sets a steady rhythm by which the rest of the room operates, thus also minimising throughput spikes that can result in injuries (improving productivity at the same time).

To further break it down:

Repetitive strain injuries caused by the manual handling of lamb carcasses were a constant issue among meat processing plants. This coincided with the dangers associated with lifting and holding heavy carcasses at various heights.

Bandsaw operation was another safety issue. Bandsaw injuries could include anything from a small skin cut to a complete amputation, which in turn could cause severe physical and mental trauma to the operator. Causes for this are due to momentary loss of attention by the operators, the cold environment of the plant and pace setting of production also caused pressure to perform to a standard.

Another health and safety issue was bacteria and food handling procedures. Less human contact with the carcass also removed the issue of bacteria, being handled by the X-Ray Primal & Middle system allows a safer end product for the user.

The X-Ray Primal System automates the cutting of lamb primals, delivering highly accurate, clean primal cuts superior to anything produced by a human operator. The X-Ray Primal System creates a 3D map of the bones within the carcass. This is used to guide the primal cutter with an accuracy far greater than human capabilities. The x-ray data is also provided to all downstream boning room modules. The X-Ray System provides the correct height and angle measurements for each cut. This provides a precise cut location at the correct angle and the dual rotating knife blades ensure a cleaner accurate cut.
The Middle System automates the bone-in processing of lamb middles. The system delivers improved yield, minimises waste, improves safety, increases labour efficiency and enables product optimisation. Yield improvements are achieved through precision controlled cutting equipment aligned by the x-ray image system. This achieves cutting accuracy beyond any human operator capability. The imaging system enables flap removal to be undertaken in line with any required specification. Powered circular knives split the loin from the rack, according to cut requirements. Loin yield improvements are achieved due to the elimination of sawdust and excellent cutting accuracy.

You can view our Primal and Middle System in action **HERE**