



**Creative automation  
solutions – intelligent  
and adaptive technologies  
customising products for  
complex challenges**

IRL Engineering Innovation is a multi-disciplinary team that provides innovative solutions to complex automation challenges. We have the experience and expertise to apply advanced automation technology to product handling, processing and sorting to increase efficiency and throughput.

We engage in research and development to meet the demands of a wide range of industries. Our activities cover the gamut of technology development from initial concept to production prototype, working with technology partners to deliver a viable commercial solution.

The Auckland-based Engineering Innovation team specialises in automating the processing of products that are naturally variable in size, shape, texture and colour such as sheep and shellfish. Drawing on our combined expertise in advanced automation technology and industrial systems design, we provide appropriate technology that is cost-effective, robust and reliable. We have developed intelligent machines that can detect variations between products and adapt the machines accordingly to process product on high-speed production lines.

These machines use the most up-to-date robotic technology and offer state-of-the art solutions that are already being applied in the meat and seafood industry. They are designed to be strong and sturdy so they work reliably in the toughest environments. Examples of our commercial successes are the intelligent y-cut robotic system for sheep and the half-shell mussel opening machine. Both technologies are acclaimed as world firsts.

## Expertise

- ▶ Automation systems – Automation of naturally varying product processing
- ▶ Vision guided robotics – Using vision to plan robotic motion
- ▶ Mobile robotics – Cognitive mapping, robot navigation, local and global positioning
- ▶ Tele-operated / tele-robotic system – Human and machine share control of robot
- ▶ Knowledge-based control – Applying inherent knowledge gained by experienced operators for machine control.

## Key capabilities

- ▶ Automation and robotic systems
- ▶ Industrial systems design
- ▶ Machine vision and image analysis
- ▶ Finite element analysis
- ▶ 3D CAD design engineering
- ▶ Embedded systems and software.

## Services

- ▶ Research and development
- ▶ Product development
- ▶ Consultancy.

For all enquiries please contact the Industry Engagement team on 0508 CALL IRL (0508 225 5475). If calling from overseas phone +64 4 931 3000 or visit the *Contact Us* page on our website.

[www.irl.cri.nz](http://www.irl.cri.nz)

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