



UNIVERSITY OF
NEWCASTLE

CENTRE FOR CONSTRUCTION SAFETY AND WELL-BEING (CCSW)

Human-Centred Safety Innovation

The Centre for Construction Safety and Well-being (CCSW) at the University of Newcastle is a pioneering initiative dedicated to improving health, safety, and well-being across the construction industry through human-centred design, systems thinking, and artificial intelligence. We work in partnership with industry leaders to co-design innovations with frontline workers and organisational leaders.

PARTNERSHIP CAPABILITIES

- **AI-Enabled Risk Management Tools:** Advanced artificial intelligence systems for predictive safety analytics and incident prevention
- **Immersive Training Simulations:** Virtual reality and augmented reality platforms for safe, realistic training experiences
- **Technology Enabled Worker Insight Applications:** Digital platforms supporting enhanced site-based decision-making and communication
- **Animated Learning Videos:** Engaging educational content targeting high-risk construction activities
- **Research Partnerships:** PhD projects investigating site management practices and health and safety leadership

PROVEN IMPACT

- **Industry Partnerships:** Successfully established collaborative projects with a number of large organisations
- **Technology Innovation:** Developed Worker Insight Training Simulation and Technology Enabled applications
- **Knowledge Transfer:** Created comprehensive animated learning video suites for high-risk activity training
- **Leadership Development:** Advanced research into health and safety leadership and assurance practices

REVOLUTIONIZING CONSTRUCTION SAFETY THROUGH TECHNOLOGY

The Centre for Construction Safety and Well-being is developing groundbreaking AI-enabled risk management tools and immersive training simulations that transform how construction workers learn and apply safety practices. Through our partnership with several industry partners, we're creating technology-enabled applications that support real-time decision-making on construction sites, demonstrating how academic-industry collaboration can drive meaningful safety innovation.



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