



The Holmesglen Centre for Applied Research and Innovation

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CRICOS Provider Code: 00012G. RTO: 416



Holmesglen Centre for

Applied Research and Innovation





Holmesglen recognises the important link between applied research, education and training, and industry in ensuring Australia's competitiveness and its capacity to withstand the challenges of rapid globalisation and advances in new technologies.

The Holmesglen Centre for Applied Research and Innovation acts as an important driver of our relationships with industry and the community in the development of an innovation driven economy. It works closely with faculties and provides a supportive environment for Holmesglen researchers: it is an important complement to our teaching and learning programme.

OUR PURPOSE

Our research effort is faculty based, with research hubs or centres of excellence operating in co-operation with the Holmesglen Centre for Applied Research and Innovation. The centre provides both support and direction to the faculties through:

- Assistance in the identification of applied research and innovation opportunities;
- Provision of advice and administrative support for researchers and innovation project teams;
- Support for the development and consolidation of industry/community/ government alliances and partnerships;
- The development of training and/or mentoring programmes for staff researchers and innovation teams;
- The fostering of student involvement in applied research and innovation; and
- The development of policies and practices that ensure ethics and research integrity remain an integral part of our research and innovation programme.

OUR PEOPLE AND FACILITIES

Holmesglen has a wide range of skilled and experienced staff drawn from across key industry sectors as well as the capacity to engage student interest in our programme of applied research and innovation. Our industry and community partnerships enable us to source external advice in developing creative solutions to problems affecting industry and the community sector.

Facilities and equipment are state-of the-art and provide an effective laboratory for the conduct of applied research and the completion of projects associated with innovations in technology, product, or work processes.

OUR COMMITMENT

The Centre for Applied Research and Innovation is committed to the development of Holmesglen's applied research and innovation profile and to increasing the number and complexity of projects involving Holmesglen researchers.

The centre has formulated guidelines for the development of a research capability among Holmesglen researchers. These guidelines assist in the identification of research opportunities for both vocational and higher education and support faculties in the building and strengthening of alliances and industry partnerships. The centre also promotes its programme of research innovation through knowledge exchange and technology transfer with industry and community.

We are committed to improving services to our partners and ensuring that the benefits of our research and innovation are channelled into teaching and learning and the continuing relevance of our courses.

Our research

The Centre works closely with faculties to build upon Holmesglen's impressive record in the field of applied research and innovation. This research includes:

- Augmented reality and virtual reality resources for the building construction industry (BCE). This research project in collaboration with industry researches the development and trial of learning and assessment resources for VET level programmes in building construction. It aims to provide a resource to students via the web utilising augmented reality and virtual reality packages to simulate a range of building construction scenarios
- A co-operative venture with South East Water in the development of heating processes for harvested water for use in domestic dwellings;
- Digitising practical skills developed from applied research in fashion studies. This project Recording and digitising the research outcomes of a co-operative research project into the design and manufacture of British Army red coats for use at Sovereign Hill open air museum. This research provided teachers, students and industry with a learning resource along with the technological capability to undertake future projects of this kind;
- A partnership with Healthscope in the provision of health services and health services training in Melbourne's southeast that includes a focus on the development of joint capability in applied research.
 Current projects include improving collaboration and

communication in health care and establishing the effectiveness of an Interprofessional ward round for the assessment, diagnosis, and management of delirium in post-operative cardiac patients;



- JasperVR: A Virtual Reality Simulation Program for Vocational & Higher Education in TAFE. JasperVR research will make use of Virtual Reality to expose nursing students to the different and complex situations they are likely to face in their future professional work. It will use 360 degree-video technology to capture the variations and potential outcomes resulting from a typical scenario. The videos are transformed into a VR Simulation Training Program. By using the VR headset and by means of gaze feedback, students will be able to make decisions that in turn will determine the future trajectory of the patient. JasperVR will enable 100% of students to actively participate in an immersive simulated learning experience at their own pace, time and venue; and
- The establishment of a Centre of Excellence for the Design Installation and Commissioning of heating, ventilation and air-conditioning (HVAC) Systems. This is in partnership with the Air Conditioning and Mechanical Contractors' Association of Victoria. This centre enables both partner organisations to collaborate on applied research designed to enhance work practices in industry and improve the training outcomes and productivity of mechanical services technicians.

LOOKING TO THE FUTURE

Holmesglen research provides the services needed to support applied research activity ranging from strategy, partnerships and stakeholder relationships, to research ethics and integrity and the sourcing of funding for current and proposed projects.

Partnering for success

Historically, Holmesglen has worked closely with employers, industry and professional bodies, Commonwealth and State Governments, and local communities across a range of research related projects and in the trialling of industry innovations. This new centre continues this tradition of partnership and collaboration and assists industry and community to be better prepared to meet the demands of what may be an uncertain future.

Developing partnerships

The Holmesglen Centre for Applied Research and Innovation is a key vehicle for Holmesglen's collaboration with industry, the public sector, universities and TAFEs, and the community through a range of partnership opportunities.

Our model for industry based research

Holmesglen's research and innovation involves the application of new knowledge and new processes to small and medium

enterprises and to community organisations. These may include organisational change or refinements to work processes, the testing and application of improvements to products for industry, and revised training to help introduce these improvements.

How do these partnerships benefit Holmesglen and its students?

These partnership projects further develop Holmesglen's applied research capability. Through a diverse range of professional development opportunities and research experience, staff are able to maintain their understanding of current industry practice. The knowledge and experience derived from applied research and innovation in industry and community programmes contributes to a more innovative curriculum and enhances the learning experiences of students, better preparing them for the world of work.