



University of
South Australia



Barbara Hardy
Institute

Nicholas
Chileshe

Research Profile

Research Area Specialisation

Total Quality Management (TQM) focussed on the development and application of the assessment and monitoring of quality management initiatives among small and medium sized construction related organisations. Now with an inter-disciplinary approach, Nicholas explores how some of the concepts – such as quality management, risk management and reverse logistics – can act as catalysts for the evaluation of sustainability issues within the Construction and Project Management disciplines.

Nicholas also uses his expertise in modelling techniques such as structural equation modelling (SEM) in understanding the interactions among the sustainability constructs.

Contributing to a better and sustainable environment

The current premise within the sustainability agenda is structured around two themes. The first theme focuses on the end result (process and impact); whereas the second is associated with the management processes and practices (means to achieve results). However, the conceptualisation of sustainability has its drawbacks as the relationships among these different levels are not normally captured.

Nicholas' research will contribute to a better and sustainable environment through redressing the drawbacks thus identified. By using statistical modelling techniques such as Structural Equation Modelling (SEM), better outcomes such as cost savings and material efficiency can be achieved. This would be through effective assessment of the levels and strength of relationships among the various indicators of a sustainability measurement system.

In the future, Nicholas' work will shift towards the application of Strategy as Practice (SAP) frameworks when conducting research in a number of areas such as Project Management, Sustainability and Risk Management.

This will entail a shift from a prescriptive oriented research agenda, whose research questions are embedded within the 'What's and



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*Great Research
into Sustainability*

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CRICOS provider number 00121B

People

- Our researchers are scientists, engineers and social scientists
- We work collaboratively on real-world issues
- Over 100 researchers and 130 research students

Projects

- Multidisciplinary projects focused on sustainability
- We work in partnership with government, industry and academia
- Extensive testing and evaluation services and consultancy expertise
- Our work is underpinned by community participation and education

'How's to the 'Why's' issues associated with the praxis and phronesis of research related to the built environment.

Research Abstract

Nicholas is currently collaborating with the Zero Waste SA Sustainable Design and Behaviour Centre (sd + b) in the project 'Designing for reverse logistics (DfRL) within the building life cycle: practices, drivers and barriers'.

While there are numerous studies associated with waste management practices in Australia (forward logistics), some reverse logistics (RL) best practices associated with resource recovery in the SA construction industry is still problematic and under explored. This study will provide suggestions on what is required to improve the proper disposal of the waste stream from the 'point of consumption' to the 'point of origin'.

Research areas of interest

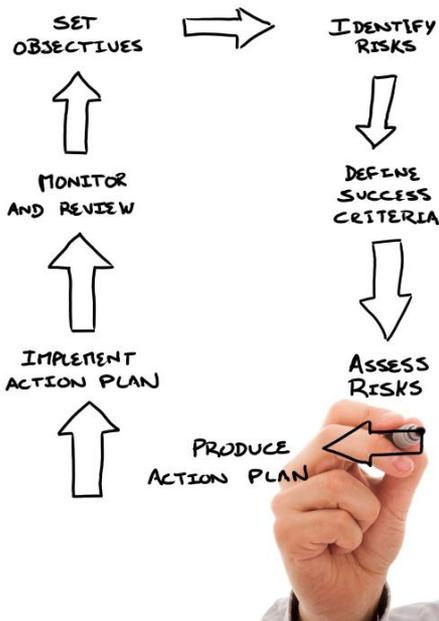
- Impacts and measurement of sustainability on project outcomes
- Integrating Quality Management (QM) and Project Risk Management (PRM) principles into the sustainability agenda
- Development of assessment and rating instruments for sustainability initiatives
- Reverse logistics

Barbara Hardy Institute

Members of the Barbara Hardy Institute have the opportunity to showcase their research outputs, networking with other researchers within the University, unlocking the doors to industry engagement and building stronger industry partnerships. We have support for potential research grant submissions and most importantly, we are able to contribute to the University's aspiration of being a 'World Class University'. On a personal level, the Institute also provides opportunities for capacity building by attending research workshops and seminars specifically developed for members of the Institute.

Keywords to describe Nicholas's research

- Total Quality Management (TQM)
- Project and Risk Management
- Strategy and Practice
- Cultural Change Agents



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