

Summary of Linkage Projects Proposals for Funding to Commence in 2009

New South Wales

The University of Newcastle

LP0990739 Prof NL Boland; Dr PS Welgama; Dr AT Ernst; Prof MW Savelsbergh

Approved Project Title **Using Mathematics to Maximize the Efficiency of Shared Infrastructure in Australia's Coal Export Supply Chain**

2009 : \$ 79,000

2010 : \$ 159,000

2011 : \$ 165,000

2012 : \$ 85,000

Primary RFCD 2301 MATHEMATICS

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Port Waratah Coal Services Limited

Administering Organisation The University of Newcastle

Project Summary

Port Waratah Coal Services operates the world's largest coal export terminal, servicing about 14 coal mining companies in the Hunter Valley, NSW. It is responsible for around \$15 billion in annual export income for Australia. The coal supply chain is a complex operation, hampered by bottlenecks in critical shared infrastructure. Such limitations are estimated to cost Australia about \$2 billion pa in lost sales. This project will support the design of new infrastructure and processes to ensure an efficient supply chain. The new science resulting will benefit other coal operations in Australia, and potentially other bulk goods supply chains.

LP0990414 A/Prof CE Collins; A/Prof PJ Morgan; A/Prof R Callister

Approved Project Title **Development and evaluation of novel strategies to enhance Internet-based weight loss and weight maintenance programs**

2009 : \$ 82,694

2010 : \$ 101,825

2011 : \$ 37,303

2012 : \$ 18,171

Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

SP Health Co Pty Ltd

Administering Organisation The University of Newcastle

Project Summary

This project will demonstrate the innovation and commitment of an Australian company in providing effective weight management services in an accessible and cost effective manner. It will highlight the importance of University and Industry collaboration in developing novel approaches to treatment and management of overweight and obesity. This project has the potential to make an important and cost-effective contribution to care for the 7.5 million Australians already overweight or obese and help them to modify their lifestyle and improve their health and well-being.

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LP0991656 Prof MJ Ostwald; A/Prof AP Williams; Mr GJ Brewer; Dr LF Gul

Approved Project Title **Attitudes and Behaviours in Consumer Spaces: Quantifying the Benefits of a Sustainable Retail Environment**

2009 : \$ 26,500

2010 : \$ 55,500

2011 : \$ 41,000

2012 : \$ 12,000

Primary RFCD 3101 ARCHITECTURE AND URBAN ENVIRONMENT

Collaborating/Partner Organisation(s)

Bovis Lend Lease

Administering Organisation The University of Newcastle

Project Summary

The project provides a new level of understanding of the impact of retail environments that are ecologically responsible. Almost one quarter of the ecological footprint of the built environment in Australia is associated with some form of consumer space. While there are more than 8,000,000m² of lettable retail environments in major centres alone in Australia, the ecological footprint of this space is far higher. This footprint may be minimised if the right combination of design and behavioural solutions can be enabled. But before this can occur, a detailed understanding of these complex attitudinal and behavioural issues must be developed.

LP0992172 Dr CA Wheeler; Em/Prof AW Roberts; Prof MG Jones; Dr CM Wensrich; Dr A Katterfeld

Approved Project Title **Development of a High Capacity Steep Angle Belt Conveying System**

2009 : \$ 135,000

2010 : \$ 245,000

2011 : \$ 215,000

2012 : \$ 105,000

Primary RFCD 2905 MECHANICAL AND INDUSTRIAL ENGINEERING

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Hamersley Iron Pty Ltd

Innovative Conveying Systems International Ltd

Administering Organisation The University of Newcastle

Project Summary

Deep open-pit mining operations rely extensively on fleets of large haul trucks to convey both ore and waste rock. The aim of this project is to develop a high capacity conveying system with the ability to continuously convey ore and rock up steep inclines directly from the pit. The benefits of the research outcomes to the efficient handling of our most valuable export commodities are immense. This innovative new technology will significantly reduce the dependency on haul trucks, reducing energy consumption, minimising environmental impact of the mining process, and improve the health and safety of personnel and the surrounding community.