



The Wark™ adds \$436 million value to the Minerals Industry.

If you want to maximise your returns from Australia's mining boom, consider asking The Wark™ some big questions.

For more than a decade the Ian Wark Research Institute (The Wark™) at the University of South Australia (UniSA) has been a part of finding business solutions for mining leaders such as Rio Tinto and BHP Billiton, and major corporates including Dow and Unilever.

The Wark has been dubbed an 'Australian national treasure',¹ and Dr Megan Clark from BHP Billiton² says it is 'one of only three institutes in the world we are working with that is positioned for breakthroughs in science relevant to several industries.'

The Wark has state-of-the-art facilities currently worth in excess of \$30 million and attracts a strong flow of external funding and repeat business. Its researchers are internationally published and its graduates are forging highly successful careers around the world.

One institute, many roles.

The Wark has had a groundbreaking role in becoming the lead partner for the Australian Mineral Science Research Institute (AMSRI), an institute supported by the largest single research grant ever awarded by the Australian Research Council. AMSRI is backed by \$26 million from industry, State and Federal governments and four participating universities. AMSRI also has 24 international collaborating partners.

The Wark has also been the Australian government-sponsored ARC Special Research Centre for Particle and Material Interfaces since 2000. Its impact in forging valuable international research relationships has been described as 'exceptional' and the filing of six patents since the inception of the facility has 'demonstrated the excellence and commercial impact of research undertaken by the Centre'.³



INTERNATIONAL COLLABORATIONS

Research without borders.

The Wark's operating revenue has more than doubled since its foundation in 1994 and it has established formal links with more than 19 institutions on five continents. This includes world leaders such as the Max Planck Institute for Metals in Germany.

Founding Director Laureate Professor John Ralston (2007 South Australian of the Year⁴ and Scientist of the Year⁵) believes the strength of The Wark's achievements and these global networks foster genuine, international collaboration.

The Wark is distinctive in its creative and flexible approach to research and development, where a mixture of fundamental and applied research is conducted across a wide range of project areas. Its unique structure combines academic rigour and inquiry with an appreciation of industry imperatives.

'It's the ability to explore new realms to create knowledge and then turn those ideas into effective industrial outcomes that is our distinguishing feature.'

Laureate Professor John Ralston, Director, The Wark™

Independent report reveals \$436 million value added to the Minerals Industry.

Since 1988, the AMIRA International project P260 has been conducted with the aim to improve flotation of minerals in the minerals processing industry. The project also has applications across other industry sectors.

To evaluate the benefits from this project since its inception up until 2006, AMIRA International and The Wark commissioned RMDStem Limited⁶, an independent organisation with an extensive track record and proven experience, to conduct the study.

Study outcomes reveal results for industry.

The study showed industry end-users were very effective in transferring the AMIRA P260 Project research outputs into useful outcomes. The financial value derived by end-users:

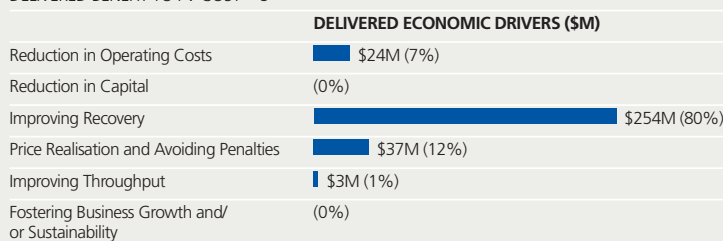
- Delivered Net Present Value (NPV) \$318M – primarily through improved recovery, price realisation (by improving grade and quality of concentrates), and reduced operating costs.
- Expected NPV \$118M – primarily improving recovery, price realisation, reduction in operating costs and improving throughput.
- Total value \$436M.

The benefits NPV to cost ratio is (21.5 to 1) for industry. The benefits to cost ratio for The Wark is (18.5 to 1).

Full details can be obtained by contacting The Wark (www.unisa.edu.au/iwri) or AMIRA International (www.amira.com.au)

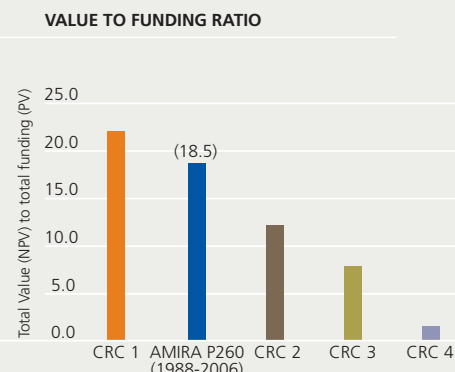
DELIVERED ECONOMIC BENEFITS FROM IMPLEMENTED CHANGES

TOTAL DELIVERED VALUE NPV = \$318M
DELIVERED BENEFIT TO PV COST = 5



BENCHMARK STATUS

- The **value** is the NPV of the delivered and expected value calculated @ 8% for a 10 year period.
- The **total funding** is the present value of the research funds contributed by industry, university and government (cash and in-kind).
- These CRCs range from IT, Manufacturing, Minerals, and Agriculture (unsorted).



SOURCE: Evaluation of the AMIRA Project P260 1988–2006, RMDStem Limited.

¹ Australian Academy of Science citation, May 2005
² Dr Megan Clark, Vice President Technology, BHP Billiton Limited
³ 2005 Review Panel, ARC Special Research Centre six-year review
⁴ 2007 South Australian of the Year Awards
⁵ 2007 South Australian Science Excellence Awards
⁶ RMDStem Limited is a resource management and consulting group specialising in providing consulting and contracting services to the mining and mineral processing industries.

Make the decision today to incorporate The Wark™ into your business strategy.