



# 2016 B/HERT AWARD WINNERS

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**Awarded to:** Monash University, Sydney Water, University of Technology Sydney, University of Newcastle, South East Water, Water Corporation, Water Research Foundation and UK Water Industry Research Ltd

**Project:** Advanced Condition Assessment & Pipe Failure Prediction

**Project Summary:** Communities around the world face the escalating problem of the failure of ageing buried pipes in water supply/distribution networks, resulting in inconvenience to households and industry, as well as significant economic and political costs. In 2011, the Advanced Condition Assessment (CA) and Pipe Failure Prediction, a six year project commenced in collaboration with three universities led by Monash University and nine Australian water utilities led by Sydney Water and two international peak water bodies, UKWIR and WaterRF USA.

The project has produced significant outcomes to improve water pipe inspection and prediction of pipe failure to reduce renewal/maintenance costs and to improve customer service and reliability. Specifically, it has produced innovative models to predict the probability of pipe failure verified through field case studies, a world first calibrated model to predict the long-term exterior corrosion of cast iron pipes, and enhanced interpretations of existing pipe CA tool results through innovative machine learning techniques.

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**Honourable Mention:** University of South Australia, Grain Research & Development Corporation, de Bruin Engineering and RB Harrington Farms

**Project:** The Crushing Truth: Development of an Integrated Weed Seed Destructor

**Project Summary:** World grain production is continually under threat by competition from in-crop weeds, which are increasingly herbicide resistant. Physically crushing weed seeds is an optimal alternative. Using impact theory, computer simulation, physical build and germination testing the collaborative team designed and developed the IHSD.

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**Awarded to:** Monash Centre for Additive Manufacturing, Amaero Engineering P/L and Safran Power Units

**Project:** Transforming Metal 3D Printing into Aerospace Application: Performance Optimisation of Additive Manufactured Components

**Project Summary:** In 2011, the Monash Centre for Additive Manufacturing (MCAM) recognised the incredible potential of 3D printing to transform metal manufacturing. Powdered metals are fused into a one-piece 3D object directly from a computer design file in one step. Without the constraints of machining, casting, and forging the design possibilities are endless. What we imagine, we can create. MCAM is now leading the way in 3D printing metallic components, discovering ways to significantly reduce production time, engineer customised properties in metals, and produce optimum performing metals that are lighter and cheaper. This ground-breaking work has drawn global attention. MCAM has attracted as research partners some of the largest global aerospace companies, including Safran, Airbus and Bombardier.

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**Honourable Mention:** Avexa Ltd, Monash University, Grey Innovation and Torus Games

**Project:** The TALI training programme – using new technology to improve childhood attention, learning and long-term outcomes

**Project Summary:** Based on 25 years of research, TALI Train is a ground-breaking game-based training programme for young children, designed by neuroscientists at Monash University, and commercialised by game developers Torus Games and software engineers Grey Innovation. After acquisition by publicly listed medical technology company Avexa Limited in 2016, TALI Train became the company's lead product.

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**Awarded to:** ATSE, AusBiotech, La Trobe University, The University of Melbourne, Monash University, University of South Australia, Curtin University, Techn/BioSA

**Project:** Industry Mentoring Network in STEM (IMNIS)

**Project Summary:** IMNIS is a national industry-led mentoring initiative of the Australian Academy of Technology and Engineering (ATSE), linking PhD students in STEM with experienced industry mentors who provide advice and act as role models for industry-based STEM careers. The aim is to develop a new generation of industry-aware PhD graduates; through engagement with industry mentors, graduate students expand their knowledge of, and appreciation for research and development, and commercial activities in relevant industries.

Over the past 2 years programmes have been established in 3 States with 100 PhD students from 11 Universities, partnering with industry groups such as AusBiotech, Engineers Australia (WA) and TechnSA (formerly BioSA) to recruit leading professionals in their fields to mentor these students.

In 2017, the plans are to expand the existing programmes into other States and to develop mentoring programmes in the Agriculture and ICT sectors, with the aim of having over 500 PhD students each year being mentored by industry leaders. On the 24<sup>th</sup> of October, the Industry, Innovation & Science Minister Greg Hunt announced a grant of \$200,000 over two years from the MTPConnect Project Fund Programme to extend the academy's mentoring scheme. This funding will expand the successful Victorian IMNIS pilot in biotechnology to all States in collaboration with AusBiotech which will be responsible for recruiting mentors. The focus will be on PhD students in all fields of relevance to the medical technology and pharmaceutical industry sector.

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**Honourable Mention:** intersective, Ernest & Young, StudyNSW, UNSW Business School, University of Technology Sydney, Macquarie University and Performance Education

**Project:** NSW Government Global Scope programme

**Project Summary:** 'Global Scope' is a collaboration project between intersective, StudyNSW, education partners and industry partners, funded by a \$50,000 government grant. The 2015/16 pilot of 'Global Scope' brought 180 international students from 4 NSW education providers together to complete 35 projects for 7 government departments between March and June 2016. This pilot was preceded by a review of barriers to providing work integrated learning experiences in the NSW Government for international students, and identify opportunities to provide these on a sustainable and significant basis.

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## Best Community Engagement 2016

**Awarded to:** Swinburne University of Technology, Arnhem Land Progress Aboriginal Corporation, Dept. of Business – Northern Territory Government, East Arnhem Regional Council, Deltareef P/L, Milingimbi Furniture and Bukmak Construction

**Project:** Growing Employment in Remote Northern Territory Communities

**Project Summary:** The Growing Employment in Remote Northern Territory Communities programme, led by Swinburne University and Arnhem Land Progress Aboriginal Corporation (ALPA), aims to develop the trade skills of local Aboriginal people which leads to sustainable and meaningful employment in the remote communities in East Arnhem Land, Northern Territory.

In 2014 the project commenced with the key goal of addressing Indigenous disadvantage through training and employment in order to facilitate business development.

Over 400 people, from three remote communities, have now engaged in nationally accredited training. The programme has ensured that the local communities can contribute to a local labour workforce to provide expertise in building and construction projects rather than rely on the services of fly in/fly out trades people. The programme has built a sustainable workforce in these communities, contributing to the local community and economic and social development.

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**Honourable Mention:** University of Qld, Australian Native Food Industry Ltd., Queensland Dept. of Agriculture & Fisheries, Australian Prawn Framers Assoc., Karen Sheldon Catering, Kindred Spirits Foundation, Charles Darwin University, Gundjeihmi Aboriginal Corp. and Mamabulanjin Aboriginal Corporation

**Project:** Kakadu Plum - Fruitful collaboration puts indigenous industry on the world stage

**Project Summary:** A native Australian plum, the size of an olive and packed with Vitamin C and antioxidants is transforming industries and Indigenous communities across the Top End of Australia. In collaboration with researchers, industry and government, communities have developed an innovative cooperative business to harness the Kakadu plum's unique antimicrobial properties, which can extend the shelf life of food and beverages. The cooperative's central business hub is supplied by numerous community-based collection hubs, which are Aboriginal-owned and operated businesses in their own right. This model is considered a benchmark for development of new native food industries.

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**Awarded to:** Asia Pacific Social Impact Centre - Melbourne Business School, Kinaway - Victorian Aboriginal Chamber of Commerce and Supply Nation

**Project:** MURRA Indigenous Business Masterclass programme

**Project Summary:** The MURRA Indigenous Business Masterclass is a postgraduate executive education programme designed for Indigenous managers and entrepreneurs. Created in partnership with Kinaway, the Victorian Aboriginal Chamber of Commerce, it is the first of its kind in Australia. The programme is based on the idea that the growth of Indigenous-owned and operated enterprises not only enhances community economic outcomes but also fosters innovation, strengthens cultural heritage and creates a platform for leadership development within the Indigenous community. By impacting at the family level, the programme supports Indigenous business people who are working towards reducing the economic divide for Indigenous Australians and contributing to regional development and Indigenous employment. Since 2012, 90 participants have completed the MURRA programme. The programme and its founders have received the University of Melbourne award for excellence in Indigenous education, Australian Research Council multi-year research funding, created a similar programme for Native title organisations, and attracted support from corporate, government and individual philanthropists.

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**Nominated by:** University of New England

**Awarded to:** Max Schroder

**Project:** Max Schroder Indigenous Scholarship Programme

In 2008, Max Schroder provided a scholarship for one Indigenous student to pursue a UNE degree. Since then Mr Schroder's ongoing support and generosity has grown, to date supporting 32 scholars pursuing degrees in Education, Nursing, Medicine and Law.

Indigenous education remains an issue of vital importance in Australia with continued efforts to 'close the gap' of inequality experienced by Indigenous Australians throughout many aspects of their lives. The University has been successful in attracting and increasing the number of Indigenous students year on year. Retention and completion remain the focus for ongoing improvement activity. The Max Schroder Scholarship programme supports this objective but the influence of Mr Schroder's philanthropic investment is also deeply personal. Mr Schroder's support extends beyond making financial contributions.

The financial support provided to the students by Mr Schroder is significant, covering the majority of their accommodation expenses in most cases. However, it is the level of his commitment, personal involvement and care for the students that distinguish these scholarships and this programme from others. Mr Schroder is changing and impacting the lives of the students, their families and the communities from which they have come.

UNE is honoured to nominate Mr Schroder for this award.

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**Nominated by:** University of Western Australia

**Honourable Mention:** The McCusker Charitable Foundation

**Project:** The McCusker Centre for Citizenship

In 2015, The McCusker Charitable Foundation (MCF) donated \$5M to The University of Western Australia (UWA) to establish the McCusker Centre for Citizenship (MCC). As the first of its kind in Australia, the MCC promotes "active citizenship" by providing a transformational student experience that fosters critical thinking and leadership in addressing complex social challenges in our community.

In 2016, more than 200 students applied for 100 internships from amongst MCC's 150 partner organisations. Over 10,000 hours of community service will be provided by this cohort in 2016. Programmes for scholarships, international exchange and awards will be implemented in 2017.

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## The Ashley Goldsworthy Award for Sustained Collaboration between Business & Higher Education 2016

**Awarded to:** Sustainable Built Environment National Research Centre (SBEnrc) - and partners Aurecon Australasia, BGC Residential, John Holland, New South Wales Government (Family and Community Services, Roads and Maritime Services), Queensland Government (Housing and Public Works), Western Australian Government (Treasury, Finance, Commerce, Main Roads, Housing Authority), Curtin University, Griffith University and Swinburne University.

**Project:** Sustainable Built Environment National Research Centre

The Sustainable Built Environment National Research Centre (SBEnrc) is a unique and highly successful long-term collaboration in construction supply chain research between 40 business, government and research partners across Australia.

Since 2001, the centre's industry-led research collaborations and those of its predecessor, the Cooperative Research Centre for Construction Innovation, have been the key providers of research and innovation across the Australian built environment supply chain, an industry which undertakes \$160B of work annually. The centre's multi-disciplinary research supports skills development, policy setting and identification of the best tools for growing the industry's sustainably.

**Awarded to:** Bankwest and Curtin University

**Project:** Bankwest Curtin Economics Centre, Curtin University

The Bankwest Curtin Economics Centre (BCEC) is a key strategic partnership between Curtin University and Bankwest, with a core mission to deliver high-quality, accessible research providing a deep understanding of the economic and social issues facing Western Australia.

The real success of the Centre stems from a fundamental belief that research has the greatest influence when it is grounded in community participation, shaped through extensive collaboration, and communicated in a form that is accessible to all who draw value and insights from the findings – whether from industry, government, policy agencies, not-for-profits, community groups or the public.

Multi-layered engagement strategies ensure all stakeholders have a voice in shaping research priorities, and can draw lasting benefit from the work that the centre delivers.

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