STRONG FOUNDATION

BUILT ENVIRONMENT, CONSTRUCTION AND INFRASTRUCTURE
"From the houses we live in to the shape of our cities and how we respond to the environmental challenges facing us, RMIT is tackling the big questions that will make a difference to our future.

— PROFESSOR MARGARET GARDNER AO
VICE-CHANCELLOR AND PRESIDENT
MESSAGE FROM THE VICE-CHANCELLOR

It is with pleasure that I present this overview of RMIT University's capability in the Built Environment, Construction and Infrastructure industry. This booklet is a window into the many areas of RMIT expertise specific to this sector and into the work being carried out by some of the many talented people at the University who work in close collaboration with the industry both in Australia and internationally.

RMIT prides itself on strong industry links developed over the University’s more than 120-year history. RMIT’s collaboration with industry is integral to our leadership in applied research and education, and to the development of work-ready, highly skilled and globally focused graduates.

More than a century of commitment, hard work and vision has gone into developing a global university of technology with a strong reputation in teaching and research.

There are multiple layers of engagement between industry and RMIT. All our education programs are guided by discipline-specific program advisory committees made up predominantly of industry representatives. RMIT also seeks advice from industry leaders through the annual Built Environment, Construction and Infrastructure Industry Forum, which has made an invaluable contribution to the University’s strategic direction, research and collaborative work and to the way we develop and tailor our degrees and diplomas.

Organisations provide industry experience to hundreds of undergraduates each year through our Work Integrated Learning program. Work Integrated Learning is a component of every RMIT program. It is an important part of the way we ensure that the training of our graduates is focused on industry needs.

RMIT is a national leader in education and research for the built environment, construction and infrastructure sector. We are proud of our broad research program of industry collaboration and the many research projects underway throughout the University.

The innovative research highlighted in this report – ranging from sustainable technology, new materials and nanotechnology to work on intractable urban issues in cities around the world – reflects a wealth of experience and expertise. From the houses we live in to the shape of our cities and how we respond to the environmental challenges facing us, RMIT research is tackling the big questions that will make a difference to our future.

Collaboration between universities and industry is integral to the sustained growth and development of the built environment, construction and infrastructure industry, globally and nationally. We welcome, acknowledge and encourage your further engagement with RMIT University.

Professor Margaret Gardner AO
Vice-Chancellor and President
RMIT University
Our success is demonstrated by the diversity of our research projects, the success of our students and the benefits to our industry partners.

— PROFESSOR MARGARET GARDNER AO
VICE-CHANCELLOR AND PRESIDENT
The University has established an international reputation for excellence in professional and vocational education and high-quality outcome-oriented research. We are committed to delivering innovative and practical solutions to the challenges facing industry and society. We achieve this through our valuable industry collaborations and by attracting outstanding researchers and students from across the globe to work and study with us.

Collaborative research with our industry partners is being undertaken in a range of areas including urban sustainability, construction materials, business innovation, bushfire management, ecologically sustainable design and climate change adaptation. Our applied research provides industry with breakthrough solutions and innovative findings that deliver real outcomes for the environment in which we live.

RMIT has established three research institutes that directly address the local and global challenges facing this industry, demonstrating the University’s leadership and commitment to providing research that is focused on industry and community needs. Our Institutes are multi-disciplinary centres of excellence working on smart, practical solutions that will have an impact on the cities we live in.

RMIT provides high quality, industry-relevant education for more than 9000 students across vocational training, undergraduate, postgraduate and PhD programs in the built environment, construction and infrastructure sector. Our courses cover a variety of disciplines and levels including architecture, construction, engineering, planning, environment, geospatial sciences and business.

Our strong commitment to work-relevant learning has resulted in an impressive roll of alumni who have made important contributions in this industry. Our graduates are sought-after and work in key positions in Australia and around the world.

RMIT is a university that is global in outlook and action, offering students an international passport to learning and work. With a campus in Vietnam and programs delivered throughout Asia, we provide staff and students with opportunities to participate in significant international projects. These projects enhance the lives of communities, and provide our students and staff with valuable experience that feeds back into the industry and the community.

City within a city

RMIT’s Melbourne campus has a significant impact on the city’s landscape. Historic University buildings including the Capitol Theatre, the former Melbourne Magistrates’ Court, and the Francis Ormond Building are a significant part of the city’s architectural history. The University maintains strong links with the City of Melbourne and the State Government to enhance the RMIT quarter of Melbourne.

RMIT also has a long history of commissioning innovative architecture and continues to set the standard with a $500 million investment in the city campus.

A $55 million landmark Swanston Street building will house a Design Hub and provide a home for the Design Research Institute, postgraduate education in design and a modelling and prototyping workshop. It will also offer exhibition facilities and collaboration space.

A $200 million development of RMIT’s Swanston Street Academic Building will set new benchmarks in sustainable design, provide a new home for the College of Business and give greater access to student services and facilities. The Emily McPherson Building in Russell Street is undergoing a $23.2 million renovation and will house the Graduate School of Business.

RMIT—the big picture

- RMIT is the largest dual-sector university in Australia
- The University offers 924 programs, from apprenticeship training to doctoral programs, to more than 70,000 students
- RMIT has campuses in Melbourne and Vietnam
- There are about 10,000 international students at RMIT’s Melbourne campus
- About 4,000 students are enrolled at RMIT Vietnam campuses in Ho Chi Minh City and Hanoi
- A further 12,000 RMIT students are studying in other countries
- RMIT delivers 55 programs to 11,700 students in association with 23 offshore partners in Singapore, China, Hong Kong, Malaysia and elsewhere
- RMIT has teaching and research connections on every continent
- The University is a member of the Australia Technology Network and the Global GU8 Consortium
RMIT makes a difference to the economic, social, environmental and cultural wellbeing of the communities within which we operate here in Australia and internationally, through the excellence, relevance and innovation of our research. The passion, energy and intellect of our researchers creates positive outcomes for the world we live in. Our success is demonstrated by the diversity of our research projects, the success of our students and the benefits to our industry partners.

On the fringe

Australia’s peri-urban areas – belts of non-urban land that fringe metropolitan centres – are being looked at by researchers from RMIT’s School of Global Studies, Social Science and Planning.

Neither fully urban nor fully rural, these belts can form a mosaic of often incompatible and unplanned uses. They usually contain important natural resources, remnant biodiversity and significant landscapes. They often remain important for agriculture and recreation, and attract diverse populations of people.

Neglected as an area of research until now, these areas around the world are under increasing threat from development and overuse.

The Peri-Urban Group of Rural Councils has been delighted to work with RMIT in establishing the most comprehensive and authoritative research undertaken on Victoria’s peri-urban areas.

— ROBERT DOBRZYNSKI

CHIEF EXECUTIVE OFFICER, MOORABOOL SHIRE COUNCIL

RMIT research in this area included a study of six Victorian peri-urban municipalities: Bass Coast Shire, Macedon Ranges, Mitchell Shire, Moorabool Shire, Murrindindi Shire and the Surf Coast Shire. Researchers looked at trends in land use, agriculture, water resources, biodiversity and socio-economic sectors.

Further research will involve looking at adaptation to climate change, which has major implications for peri-urban areas relating to land use and scenario planning for bushfire risk.
The passion, energy and intellect of our researchers creates positive outcomes for the world we live in.

Remaking Suburbia

Imagine an environmentally integrated, fully sustainable Australian suburb. The Centre for Design is drawing on researchers from around the University to find ways to design and create more sustainable places where we can live.

The Remaking Suburbia project focuses on critical aspects of the transition towards environmentally sustainable home improvements, exploring the varied issues associated with improving the environmental performance of Australian housing.

In another project, Re-imagining the Australian Suburb, researchers have been examining the social, economic and environmental impacts of outer suburban communities, and developing ideas for achieving more sustainable outcomes in the future.

Centre for Design

Now entering its third decade, RMIT’s Centre for Design is recognised around the world for its innovative research in environmentally sustainable product and service design – everything from packaging and consumer products to buildings, suburbs and cities.

The Centre is committed to developing approaches to sustainable systems, underpinned by a strong focus on information sharing and capacity building.

As Australia’s key hub of research activity in Life Cycle Assessment, the Centre applies this technique to design and social context, and undertakes fundamental research to inform related policy and practice.

A project on the sustainability of building materials and interiors that led to the development of the Ecospecifier™ is widely regarded as pivotal in helping designers and specifiers develop green office buildings across Australia.

Current research projects in sustainable built environments, climate change and social context, sustainable products and packaging, and Life Cycle Assessment all provide globally relevant solutions for a greener urban future.

The Centre’s education and training programs in a range of areas including green building and design, Life Cycle Assessment and sustainable design have become a key source of information for design professionals and industry organisations.

Associate Professor Ralph Horne
Director, Centre for Design
New materials

RMIT researchers are investigating new construction materials in a range of projects, from the use of sawmill waste in the manufacture of particleboard to understanding the properties of cellular lightweight concrete; from reducing pollution of waterways in freshly cast concrete located underwater to the use of fibre-reinforced polymer composites in reinforcing concrete.

The School of Civil, Environmental and Chemical Engineering has strong research and development interests in the sustainable management of all civil infrastructure.

This includes research on the sustainable management of council-owned community buildings, the management of aging bridge structures, and predicting the life expectancy of concrete septic tanks in country Victoria. The development of nanopigments for commercial paints that can replace hazardous heavy metals is being carried out by the Rheology and Materials Processing Centre.

School cements reputation

RMIT researchers from the School of Property, Construction and Project Management are developing ideas on prefabricated housing in an initiative with the Cement Concrete and Aggregates Australia, the peak body for the cement and concrete industry.

Prefabricated construction has made inroads into the commercial construction market, although most homes are currently made from wood or brick veneer. Prefabricated concrete housing offers three main advantages: sustainability – these houses have a better energy performance; affordability – they are constructed more quickly; and durability – they last longer.

By using readily available, easily transportable and low-maintenance prefabricated concrete components, housing can become affordable, thanks to the simpler and quicker construction.

China calling

Two lecturers in landscape architecture have been approached by the Chinese Government to design a sustainable and completely self-sufficient eco-resort on a lake island in central China.

The Design Research Institute researchers – Ms Rosalea Monacella and Mr Craig Douglas – are developing designs for a 1000-room resort that will be completely self-sufficient in terms of energy, water, communications and waste management.

Construction on the project will be completed within two years. Part of the OUTR research group, the pair were approached after they made a presentation on sustainability and cities at the Shanghai Biennale in 2008.

The researchers are using the project in the classroom to test and engage their students, and almost each year take a group of undergraduate and Masters students on study tours overseas.
RMIT researchers travelled to areas devastated by the Victorian bushfires in early 2009, working with state fire agencies and other organisations to examine the key issues that emerged from the disaster.

Teams of researchers were brought together by the Bushfire Cooperative Research Centre to provide Australian fire and land management agencies with an independent analysis.

The focus of RMIT’s bushfire research is human behaviour and community safety, the decision-making of residents, community responses to warnings and the implications of these events for policy.

Research teams assembled by the Bushfire CRC brought a mix of expertise including building and planning analysis, community education, bushfire behaviour, electrical engineers, fire weather and fire investigation. The teams examined strategic fire behaviour, how fires move across different landscapes and vegetation, and in variable weather conditions.

Building and planning issues were also considered, with researchers examining patterns of loss and survival of buildings and structures, the notion of defendable space and the impact of building styles on patterns of building losses.

The results of these combined efforts will be shared around Australia and internationally.

In collaboration with fire and land management agencies, researchers have also been working with communities from Far North Queensland to Victoria’s western districts, Canberra, Hobart and South Australia’s Eyre Peninsula looking at how these communities manage bushfire risk, how they respond to warnings and advice from fire agencies, and how they receive messages through the media – with the aim of improving bushfire community safety across Australia.

Australians need to find ways to adapt to changing climate, demographics and economic circumstances so that our settlements are safe and sustainable in the face of a possible increase in these kinds of extreme events.

— PROFESSOR JOHN HANDMER
DIRECTOR, CENTRE FOR RISK AND COMMUNITY SAFETY

Hot research set to stop fires

Bushfires and power blackouts may be a thing of the past if two RMIT senior lecturers succeed in changing the way power pole maintenance is managed.

Dr Alan Wong and Dr Wayne Rowe, from the School of Electrical and Computer Engineering, are investigating a new way of monitoring failing overhead transmission lines to prevent bushfires and power blackouts using electromagnetic sensors to detect radiation, which is released when transmission line insulators are about to fail.

‘Most of the transmission line infrastructure is more than 20 years old and prone to failure. This causes fires which ignite the old wooden poles,’ Dr Wong said.

A prototype of a power line monitoring system to prevent pole top fire is currently in development and several Australian power companies have shown strong interest in testing the technology. RMIT has also developed a novel leakage current shunting system that will reduce the risk of pole top fire.
Key areas of research include:

**WATER**

RMIT is a member of the CRC for Water Quality and Treatment, with expertise in catchments and reservoir management, water treatment and distribution along with the treatment and recycling of waste water. RMIT’s water research helps practitioners develop and implement sustainable water management practices with a focus on problem-solving through projects ranging from the design of urban stormwater infrastructure to the optimal use of rainwater tanks in the domestic environment and recycling cigarette butt waste into construction materials.

**LANDSCAPE LOGIC**

The School of Mathematical and Geospatial Sciences is a research partner with the Federal Government’s Landscape Logic research hub. This aims to assist natural resource managers by providing better environmental information on ecosystem services and to assess the technical and social feasibility of proposed management interventions. Researchers investigating Remote Sensing are using high spatial resolution satellite imagery and airborne LiDAR to quantify, map and evaluate threatened landscapes by creating ‘3D images’.

**E-GOVERNMENT SERVICES**

This research investigated the use of e-government services by people in urban areas. Three cities were studied and the researchers concluded that the age of users, their level of education, income and internet access all have a strong bearing on the adoption of e-government services. The researchers noted that people with medium to high incomes were more likely to have internet connections at home, and the convenience of internet access from public venues – more popular in urban areas – was also an advantage for potential users of these services.

**SUSTAINABLE UNIVERSITIES**

A team of RMIT researchers are working with a range of industry partners to embed sustainability into the University’s curriculum. The Build Capacity for a Sustainable Future project involves researchers from the schools of Global Studies, Social Science and Planning; Property, Construction and Project Management; the Graduate School of Business, and the College of Design and Social Context.

‘The models and processes that this project is developing can be adopted by universities, governments and corporations throughout the world, increasing Australia’s reputation as a world leader in institutional and corporate sustainability,’ said Associate Professor Ian Thomas, Head of Discipline Environment and Planning.

**GREEN BUSINESS PRACTICES**

Businesses are coming under increasing pressure to balance their economic and environmental performance. RMIT’s College of Business is embracing this challenge through research and initiatives aimed at achieving business outcomes that are both profitable and environmentally responsible. Researchers at the School of Business Information Technology are investigating green IT models to reduce energy consumption and cost along with the use of environmentally friendly technologies and management practices.

Leading researchers in the School of Accounting and Law are working on accounting systems that reflect the environmental performance of organisations, helping them to find ways to reduce costs, manage risks and seek new business opportunities presented by this changing landscape.

**URBAN ARCHITECTURE LABORATORY**

The Urban Architecture Laboratory is researching the diverse forces that shape Melbourne, including baby-boomer retirement housing, high-density housing and the densification of suburban municipalities in the context of the 2030 Melbourne development plan along with other projects looking at socially sustainable urban planning for rural towns in the Mallee region, sea change development pressure on beach towns, revised context character guidelines for historic inner-city Melbourne and an analysis of urban infrastructural ecosystems in Melbourne and Tokyo.
RMIT Australian Housing and Urban Research Institute

RMIT AHURI (Australian Housing and Urban Research Institute) has been in the media spotlight with its cutting-edge research on housing affordability, the credit crunch, and negative equity for home owners – all pivotal in the events leading to the global financial crisis.

An important component of this research is a collaboration between researchers from RMIT and Durham University in Britain which has been looking at the mortgage choices of Australian and British homeowners from 2001-2005 – a period when house prices boomed and innovation in mortgage products made access to home equity easier than ever before.

AHURI is a national organisation specialising in housing and urban research and policy development with research centres at a number of universities around the country.

Safe environments

RMIT’s School of Property, Construction and Project Management is a national leader in occupational health and safety (OH&S) research and consultancy in the construction industry.

The research programme takes a ‘life-cycle’ approach that makes OH&S relevant to a building from the planning stage to its design, construction, occupation, maintenance and, ultimately, its demolition. Current research projects include: an investigation of supervisory practices for improving OH&S behaviour in construction teams; defining professional responsibility for health and safety in construction design; and improving work/family interaction in project-based construction work and employee wellbeing.

The School provides OH&S expertise, research, consultancy and training services in the following areas:

- Designing for optimum OH&S
- OH&S business management systems
- Client-led occupational health initiatives
- OH&S in facilities and maintenance management
- Incident investigation and root cause analysis
- Working conditions and health in the construction industry
- Risk perception and management of OH&S risk
- IT applications for improving OH&S
RMIT’s Research Institutes represent areas of excellence and expertise within the University that focus on important and practical research questions, furthering RMIT’s mission to deliver research outcomes to meet the needs of industry and the community.

The Institutes bring together research teams, from across the University’s diverse discipline base, to achieve the greatest possible impact and relevance.

**RMIT Global Cities Research Institute**

The Global Cities Research Institute addresses the challenge of sustainability, resilience, security and adaptation through research with significant on-the-ground impact, particularly in the face of globalisation and climate change.

The Institute focuses on a number of cities in the Asia-Pacific region through research with pressing consequences for communities, governments and organisations. Key research areas include: climate change adaptation and technological solutions; the intensification of cultural flows through globalising cities; understanding the effects of social change on communities; addressing ways in which cities can respond in a sustainable way to growing demands; looking at recovery from conflict and disaster; and investigating the impact of globalisation on higher education.

**Future Melbourne**

The City of Melbourne and RMIT’s Global Cities Research Institute have developed a vision for Melbourne over the next decade called Future Melbourne 2020, and are now continuing the collaboration around the theme of climate change and energy use.

The collaboration encompasses joint research projects, stakeholder workshops, strategic input, advice and academic review. The collaborative research on the future planning of Melbourne brings benefits to both institutions and evidence-based outcomes for the City of Melbourne.

**UN GLOBAL COMPACT CITIES PROGRAMME**

Melbourne is at the heart of a global effort to combat the problems of city life, with RMIT chosen to lead a major United Nations international urban governance program. RMIT’s Global Cities Institute provides the home for the International Secretariat of the United Nations Global Compact – Cities Programme, which explores new ways of dealing with the social, environmental and economic problems facing the world’s urban centres.

Long-term and intractable urban issues – from slums to human rights and anti-corruption, traffic safety and water, waste and sanitation management – are the focus of the program. It provides a unique framework for helping cities bring together business, government and the community to produce practical, local and sustainable solutions.

Under the program, 15 cities around the world are conducting major projects targeting priority issues, while another 60 cities have signed onto the Global Compact principles. Melbourne was among the first to sign up – with its first project looking at access to essential services by people in financial hardship, before going on to focus on the challenges of climate change.

Other cities involved include Berlin, San Francisco and Jinan in China.
The challenges that we have set ourselves in contemporary society cannot be addressed by individual design disciplines on their own: designers must work in transdisciplinary teams.

— PROFESSOR MARK BERRY, DIRECTOR DESIGN RESEARCH INSTITUTE
RMIT joins United Nations to look at cities

In 2008, the United Nations agency for urbanisation, UN-Habitat, named RMIT as its Asia-Pacific research and academic partner.

The University is now collaborating with UN-Habitat through the RMIT Global Cities Research Institute, which works on the ground with urban communities in 15 countries to build their sustainability, security and adaptability.

RMIT Vice-Chancellor Professor Margaret Gardner said the partnership reflects the University’s commitment to research on urban development and its deep interest in the issues facing the world’s cities.

‘RMIT joins a select group of nine international tertiary institutions chosen to work closely with the key body within the United Nations that focuses on cities,’ she said.

‘RMIT is already the international base for the only other UN institution focusing directly on urbanisation, the United Nations Global Compact – Cities Programme.

‘This new strategic partnership with UN-Habitat reinforces the University’s position at the heart of global research and policy development in urban issues.’

Institute and Program Director Professor Paul James said the UN-Habitat partnership enables RMIT to establish an urban observatory to co-ordinate the social mapping of key cities in the Asia-Pacific region including Melbourne, Port Moresby, Dili and Kuala Lumpur.

‘Our social mapping will start in Melbourne, looking at the barriers and opportunities for innovative, concrete and sustainable solutions to the intractable issues faced by our local urban community,’ Professor James said.

‘The UN-Habitat works particularly on the entrenched problems of urban slums, home to one in six people that move from rural areas to cities around the world.’
Design Victoria

Design Victoria is a $15 million Victorian Government initiative delivered by RMIT that aims to develop the design-led innovation of Victorian industries, increasing competitiveness and export performance while creating new markets for Victorian design.

Through the Business Ready program Victorian designers, design consultancies and in-house design teams are provided with skills and knowledge to grow their business and better engage with industry.

Design Victoria’s Design Ready program demonstrates to Victorian small to medium-sized businesses how to use design to create innovative, profitable products and services that improve business performance.

Design Victoria is developing a valuable world-class body of localised knowledge on how design is used by private and public enterprises to deliver cultural, social, environmental and economic benefits.

Global Sustainability

Global Sustainability is committed to fostering collaborative, multi-disciplinary approaches that achieve practical, real-world solutions to sustainability challenges.

Global Sustainability works across portfolios and schools to strengthen teaching and learning through the inclusion of sustainability principles and to support relevant and leading research and consultancy opportunities around sustainability issues.

Global Sustainability’s project work with government, business and the community delivers planning, training, reporting and governance approaches related to sustainability including energy, water and carbon emissions.

Carbon Offset Guide

Global Sustainability and the Environment Protection Authority (Victoria) have produced an up-to-date online directory for Australian carbon offset providers. The website provides independent information on carbon offset providers in Australia.

The Carbon Offset Guide (www.carbonoffsetguide.com.au) is a valuable resource for businesses, organisations, government agencies and individuals seeking information about the offset market.
Working with Industry

“Industry engagement is integral to our teaching and learning.”

Industry engagement is an approach that the University is strongly committed to – we have been doing this for 120 years and it is deeply embedded in our education and research philosophy.

There are many facets to our engagement with industry, ranging from joint collaborations and alliances to input and advice, working with students, and guest lecturing.

Industry engagement is integral to our teaching and learning. We continually get positive feedback from our industry partners about the impact they make on the shape and direction of our education and research programs.

And our engagement with industry provides many different ways for businesses to connect with our talented pool of students and skilled graduates who are ready to enter the workforce and make a contribution to the built environment, construction and infrastructure sector.
We strive to provide outstanding graduates equipped with high-quality training, work experience and a global focus as they step out into the workforce.

INDUSTRY FORUMS
Each year the University hosts industry forums in five key industry areas. During these forums a small group of industry leaders advise and discuss key issues and developments with senior University staff. The annual Built Environment, Construction and Infrastructure Forum provides an invaluable contribution to the University’s strategic direction, education programs, facilities and research focus.

PROGRAM ADVISORY COMMITTEES
Industry also plays an important ongoing role through the University’s Program Advisory Committees. Each school has a range of committees responsible for guiding the development of new TAFE and Higher Education programs, ensuring that existing programs are relevant to the industry.

GRADUATE EMPLOYMENT
RMIT’s Careers, Development and Employment group helps employers to promote work opportunities to our graduates. Services include the online jobs board, eJOBS, which is powered by CareerHub, and the annual RMIT Careers Expo, which is held each March and attracts more than 130 exhibiting employers and up to 2500 students.

SUPPORTING STUDENTS: SCHOLARSHIPS, AWARDS AND PRIZES
RMIT was founded 120 years ago on philanthropy and the financial support of industry and the community. This partnership continues today. Scholarships, awards and prizes are among the many ways that industry can continue to support students and the University. Many of the generous scholarships offered by the business community involve embedding our students in the workplace, sending students overseas to look at best practice in the global industry as well as supporting and promoting researchers working on industry-relevant projects.

RMIT STAFF AND INDUSTRY
There are a number of opportunities for expert academic staff to work with industry. These include linkage research, work secondments and the Business Faculty in Industry program.

WORK INTEGRATED LEARNING
RMIT is committed to education that equips its graduates to be ready to enter the workforce. Work Integrated Learning and partnerships with industry help us to deliver programs that are focused on industry needs and issues.

Work Integrated Learning is built into our TAFE and Higher Education programs and ranges from paid co-operative education, field placements and internships to collaborative research projects with industry, and simulated experiences.

Work Integrated Learning is a strategic priority for RMIT and an integral component of how the University delivers education that is industry-relevant by encouraging students to ‘learn by doing’ in a work context with direct feedback.

RMIT is committed to providing graduates with a sophisticated understanding of the skills, knowledge and attributes they will need in the workplace. More than half of RMIT’s higher education, vocational education and training programs include work placements.

Urban appeal
For the past decade Melbourne City Council has been closely involved with RMIT’s Planning students through practical initiatives including student work placements, classroom activities, mock tribunals and the evaluation of complex planning applications.

‘We have a long, robust and valuable relationship with Melbourne City Council,’ Associate Professor John Jackson, Program Co-ordinator for the Bachelor of Applied Science (Planning), said.

‘Students in work placements work on current statutory planning applications and issues to make sure they comply with the City’s Planning Scheme.

‘The mock tribunal is run using recent planning applications selected by Council planners. It is a simulation of a real tribunal and involves students acting out roles as lawyers, engineers, consultants, designers, acoustic and traffic engineers etc. Students argue their side’s case trying to outwit their opponents so that they win the appeal.’

In 2009 the first class-based project with Melbourne City Council evaluated a planning application on Elizabeth Street at the edge of the CBD. Melbourne City Council’s Senior Planning Officer, Josephine Lee, said, ‘The enthusiastic students often provide fresh insights into the planning process and the Council has been able to recruit many high-calibre planners who have undertaken this course at RMIT.’
Bright ideas

Deloitte is leading the way in showing how the business community can work closely with RMIT to come up with great ideas.

And budding entrepreneurs are having an impact even before they graduate, developing innovative business proposals through a collaborative project with Deloitte.

*Bachelor of Business (Entrepreneurship)* students have teamed with Computer Science students in an industry placement program that sees students embedded in the Accelerated Innovation Group at Deloitte’s Melbourne office.

The teams report on the viability of the innovations and are involved in developing the prototypes and business models for their commercialisation.

Deloitte’s Director of Innovation Wes Sonnenreich said, ‘This year’s student group has brought a fresh and different way of looking at problems, which is one of the ways we define innovation at Deloitte.’

Team leader of the group that won the 2008 RMIT-Deloitte Innovation Project, Helen Barclay, said their proposal identified business opportunities for Deloitte through software that enabled firms to monitor and manage their carbon emissions.

RMIT’s Entrepreneurship Program Director Dr David Gilbert said several academic papers had been published on the learning approach used in the Deloitte project, and the ground-breaking work on a standardised business-reporting software is now the subject of a joint RMIT-Deloitte funding application to the Australian Research Council.

‘It’s a great example of how RMIT equips students not just with the skills they need to achieve their goals but also with the practical experience so they can hit the ground running when they graduate,’ he said.

Set to sail

In 2008 Scottish artist Martin Boyce came to Australia to install an art work he made for RMIT’s city campus.

Part of the 2008 Kaldor Public Art Project, the sculpture – *We are Shipwrecked and Landlocked* – became a learning experience for students from a diverse range of disciplines – from Property, Construction and Project Management to Drawing, Photography and Sculpture, Arts Management and Public Relations who worked on many practical aspects of the project.

John Kaldor, Founder of Kaldor Public Art Projects, said, ‘This project was ground-breaking and pioneering as it’s the first time a Kaldor project has had a direct educational role.’
Greenhouse challenge

Now in its sixth year, the RMIT-NORTHLink Greenhouse Challenge Plus sees Bachelor of Engineering and Master of Engineering (Sustainable Energy) students work with local firms on ways to reduce emissions and gain economic benefits.

The Greenhouse Challenge is a partnership between the School of Aerospace, Mechanical and Manufacturing Engineering and NORTHLink, the northern region of Melbourne’s business networking organisation.

In 2008, it was calculated that the 16 firms involved could potentially cut their greenhouse gas emissions by 730,000 tonnes of carbon dioxide equivalent – a huge improvement on the previous year’s achievement of 40,000 tonnes – a saving that equates to a cut in annual fuel bills of more than $3.7 million.

At Honda, students researched the feasibility of a wind turbine to generate electricity on site at the company’s head office in Tullamarine. The students estimated potential greenhouse gas reductions by collecting data on annual energy consumption as well as greenhouse gas emissions, obtaining annual wind speeds and direction and estimating the energy output from the turbines.

Riverside eco-resource centre

Building Design students are working on a contemporary sustainable design that will support corporate enterprise called the “Eco-Resource Centre” on the banks of the Yarra River in Toorak.

The Centre provides an issues-rich design project for students from the Advanced Diploma in Building Design and Project Administration in the School of Design (TAFE). Their involvement will include site works, landscaping and building design, incorporating different areas within the building such as a café, exhibition area, reception, offices, storage and service areas.

Students will work on the project from inception to completion, right through to recycling of materials. A holistic approach to the project takes into account the client’s needs as well as all other aspects of the development including contract documents, the river’s flood levels, power supplies and access to the site.

Painting the town

A major public art work launched at the University’s city campus in 2008 was an RMIT first – it was created by a student. The 15-metre high Common Gesture was painted on 55 clear vinyl panels attached to the side of Building 15 by Master of Art (in Public Space) student Rowena Martinich, who said the work was a modern version of a stained glass window.
In 1998, RMIT was invited by the Vietnamese Government to establish the first foreign-owned university in Vietnam, delivering undergraduate and postgraduate education, training and research. RMIT Vietnam now has 4000 students studying at its Hanoi and Saigon South campuses. Saigon South is a new state-of-the-art campus with modern laboratories and teaching facilities over a 12-hectare site. The University boasts a truly global population with students from 12 countries across Asia, Europe and the US.

All degrees are recognised by the Vietnamese Ministry of Education and Training and are awarded by RMIT in Australia. This means that Vietnamese students can receive an international tertiary qualification without having to leave home.

RMIT Vietnam is leading the way in creating an innovative and high-quality teaching and learning culture, and will contribute to the development of Vietnam by producing graduates with the qualifications, skills and confidence essential for the leaders and managers of the future.

“Today’s students will have the opportunity to work anywhere in the world and universities must provide education and work experiences that prepare graduates for the future.”

— PROFESSOR MARGARET GARDNER AO VICE-CHANCELLOR AND PRESIDENT

Mapping out the future

In a tale of two cities, Second-year Cartography and Geomatics students have been travelling to Vietnam mapping sites in Hanoi and Ho Chi Minh City and making environmental comparisons in water quality, housing and infrastructure between the two cities.

The two-week field trips during 2007 and 2008 were offered as an elective and formed part of the coursework for the School of Mathematical and Geospatial Sciences students who each year produce a calendar that showcases their work.

The 2009 calendar features 12 student maps of well-known sites across Vietnam including the Hanoi Opera House, the Saigon Zoo and Ho Chi Minh’s Tomb (www.rmit.edu.au/geospatial).

During the 2008 trip, students presented a seminar at RMIT’s Hanoi and Saigon South campuses. The Director of the United Nations office for HIV/Aids, RMIT graduate Dr Patrick Griffith, spoke to them about work being undertaken with ethnic minorities in northern Vietnam. And in Ho Chi Minh City RMIT Masters geospatial student Ramon Shinkfield spoke to them about the country’s program to control dengue fever. Mr Shinkfield is a volunteer Youth Ambassador working as a Geographical Information System Officer with the Australian Youth Ambassadors for Development Program.

FRESH START

RMIT students have been travelling to Vietnam to design housing for underprivileged youth in Hoi An, a small river port town in central Vietnam.

Australian non-profit organisation Lifestart Foundation invited RMIT and Architects Without Frontiers to design a 12-student dormitory in the town as part of its Kids at Risk project to keep local young people out of exploitative workplaces by providing education, job training and accommodation.

Students from the schools of Architecture and Design and Property Construction travelled to Hoi An in 2007 and 2008 to participate in the “Building the Community” electives.

In 2007, a team of 20 students developed five concepts in consultation with the clients, local professionals and the local Hoi An community. The following year, nine students travelled to Vietnam to refine the project and develop two designs. During the visits students participated in the lives of the young people of Hoi An – eating with them, visiting their homes and their workplaces. Students from Architecture, Industrial Design, Landscape Architecture, Property Construction and Project Management worked together on the design proposals. The designs were further developed through workshops with RMIT Vietnam students.

RMIT students broadened their skills through applying problem-solving on the ground and through working to understand the social structures, patterns of daily life and environmental constraints such as flooding and typhoons. Lifestart and Architects Without Frontiers will work towards constructing a building in 2009 using the student designs.
RMIT is committed to providing graduates with a sophisticated understanding of the skills, knowledge and attributes they will need in the workplace.

At the core of RMIT’s approach to education is a commitment to providing teaching that anticipates and responds to the needs of students and industry. We strive to provide outstanding graduates equipped with high-quality training, work experience and a global focus as they step out into the workforce.

We deliver a broad cross-section of educational programs through 11 academic schools to more than 9000 students. Our extensive range of programs and short courses range from apprenticeships and undergraduate studies to postgraduate levels with multiple entry and exit paths.

Working closely with industry partners, RMIT has a long history of developing specialised training programs to meet the needs of companies and industry sectors. We offer a broad range of training from undergraduate, postgraduate and vocational training to short and single courses. Our innovative and flexible approach to program design and delivery means we develop customised programs that can be delivered in the workplace, and many of our courses provide learning pathways to academic qualifications.

The following courses are available:

**School of Property, Construction and Project Management**
- Agents’ Representative
- Certificate III (Traineeship) in Real Estate
- Certificate IV in Property Services (Real Estate)
- Bachelor of Applied Science (Construction Management)
- Bachelor of Applied Science (Project Management)
- Bachelor of Applied Science (Property)
- Bachelor of Applied Science (Valuation)
- Graduate Certificate/Graduate Diploma in Property
- Graduate Certificate/Graduate Diploma in Valuation
- Graduate Certificate/Graduate Diploma in Construction Management
- Graduate Certificate/Graduate Diploma in Project Management
- Master of Business (Property)
- Master of Project Management
- Doctor of Philosophy (Project Management)

**School of Global Studies, Social Science and Planning**
- Bachelor of Applied Science (Planning)
- Bachelor of Social Science (Planning) (Honours)
- Bachelor of Social Science (Environment)
- Bachelor of Environmental Science
- Bachelor of Social Science (Environment)
- Master of Social Science (Environment and Planning)
- Master of Social Science (International Urban and Environmental Management)
- Doctor of Philosophy (Global Studies, Social Science and Planning)

**School of Mathematical and Geospatial Sciences**
- Bachelor of Applied Science (Geomatics)
- Bachelor of Applied Science (Multimedia Cartography)
- Bachelor of Applied Science (Surveying)
- Graduate Diploma in Geospatial Information
- Master of Applied Science (Geospatial Information)
- Doctor of Philosophy

**School of Design (TAFE)**
- Certificate IV of Arts (Interior Decoration)
- Diploma of Arts (Interior Decoration & Design)
- Advanced Diploma of Building Design (Architectural)

**School of Architecture and Design**
- Bachelor of Architectural Design
- Bachelor of Design
- Bachelor of Design (Interior Design)
- Bachelor of Design (Industrial Design)
- Master of Arts (Interior Design)
- Master of Architecture
- Master of Design (Industrial Design)
- Master of Landscape Architecture
- Doctor of Philosophy Architecture and Design

**RMIT’s Graduate Certificate in Construction Management** addresses the need for advanced management training for trade supervisors, foremen and superintendents (with trade qualifications and field management experience) to gain higher qualifications and develop their careers. This qualification aims to provide training within an accelerated time-frame to suit industry.
School of Aerospace, Mechanical and Manufacturing Engineering
- Bachelor of Engineering
- Master of Engineering (Sustainable Energy)

School of Civil, Environmental and Chemical Engineering
- Bachelor of Engineering (Civil and Infrastructure)
- Graduate Certificate/Graduate Diploma in Sustainable Practice
- Master of Sustainable Practice
- Master of Engineering (Civil Engineering)
- Doctor of Philosophy (Civil Engineering)

School of Engineering (TAFE)
- Certificate II Plumbing – Prevocational
- Certificate III in Plumbing
- Certificate IV in Commissioning and Balancing HVAC Systems
- Certificate IV in Plumbing and Servicing (Operations)
- Certificate III in Fire Protection
- Certificate III in Engineering – Fabrication Trade-Welding
- Certificate IV in Engineering – Welding
- Certificate I in General Construction
- Certificate III in Spatial Information Services
- Certificate IV in Building and Construction

In collaboration with the facilities management industry, RMIT has designed an industry base qualification in Certificate IV in Property Services (Operations), which commenced in 2000. All participants are existing workers who are offered Recognition of Prior Learning. This program offers project-based teaching and learning aligned to the individual’s workplace. Training delivery is flexible with evening classes provided. The program will extend to national delivery in 2010, incorporating e-learning, and will also focus on articulation pathways into higher education.

- Certificate IV in Operational Works – Local Government
- Certificate IV in Property Services (Operations)
- Diploma of Building
- Diploma of Building and Construction
- Diploma of Surveying
- Diploma/Advanced Diploma of Spatial Information Services
- Advanced Diploma of Engineering Design
- Associate Degree in Engineering Technology (Civil Engineering)

School of Life & Physical Sciences
- Cert IV in Occupational Health and Safety
- Diploma of Occupational Health and Safety

Transfield Services, a global provider of operations, maintenance and asset and project management services, chose RMIT to deliver the Certificate IV in Occupational Health and Safety to its employees. Transfield has more than 28,000 employees working across Australia, New Zealand, the United States, South America, the United Arab Emirates, Qatar, South East Asia, India and Canada.

Double Degrees
- Bachelor of Design (Landscape Architecture) / Bachelor of Applied Science (Planning)
- Bachelor of Engineering (Civil and Infrastructure Engineering) / Bachelor of Business (Management)
- Bachelor of Engineering (Civil and Infrastructure Engineering) / Bachelor of Arts (International Studies)
- Bachelor of Engineering (Mechanical Engineering) / Bachelor of Business (Management)

School of Management
- Bachelor of Business (Logistics and Supply Chain Management)
- Bachelor of Business (Entrepreneurship)
- Master of Business (Logistics Management)

Graduate School of Business
- Master of Business Administration
- Master of Business Administration – Executive
- Doctor of Business Administration
- Master of Business
- Doctor of Philosophy (Business)

RMIT’s Graduate School of Business has a reputation for producing graduates with high-quality business management and leadership skills who can manage the complex issues and challenges facing their industry.

The school delivers MBA programs and customised packages. It works with industry and government organisations to provide a wide range of training, professional development and consultancy services integrating theory with practical and relevant coursework to ensure participants make a positive impact amid the ever-changing demands and challenges of today’s business world.

The school also provides customised solutions to address the needs of organisations and individuals, which are developed by academic staff working with selected industry experts and clients to formulate case studies, workshops and seminars.

Many of the school's courses provide learning pathways to academic qualifications.

Business Plan Competition

RMIT’s Business Plan Competition gives students across the entire University the opportunity to take their exciting and innovative ideas and turn them into businesses and growing organisations.

Over the past nine years, more than 2000 students have participated in the competition. In 2008, teams were in the running to share in cash and prizes to the value of $70,000.

The prestigious annual competition encourages student teams to turn their creative business ideas into competitive business plans. Many former competitors now run successful companies in Australia and overseas – success that was boosted by the generous prize money they won to develop their initial ideas.

The competition is a year-long program of educational, team-building and judging events aimed at nurturing budding entrepreneurs. Students can take part in business development seminars run by industry professionals and join entrepreneurship and innovation networks. The program provides a range of opportunities for students to form industry and government contacts and networks – and a way for mentors from Melbourne's business community to meet some of the University’s best and most promising students.

Some like it hot

A pioneering business that harnesses renewable energy from the earth for heating and cooling won RMIT’s prestigious 2008 Business Plan Competition – scooping both the first prize and the sustainability award.

EnergyCore, which supplies and installs geothermal heat pumps that tap into the natural heat of the earth to save up to 70 per cent on energy bills, was awarded $35,000 in prizes.

RMIT PhD student Carlos Da Silva and fellow team members Donald Payne and Eugene Filippov, an RMIT Bachelor of Commerce student, were thrilled that their business received such high recognition from the judges.

“Geothermal heat pumps work by exchanging heat with the ground, which keeps a stable temperature all through the year,” Dr Payne said. “If every Australian household installed a geothermal heat pump we could single-handedly meet our 2020 renewable energy target.”

The team said advice they received from RMIT’s Entrepreneur in Residence Marcus Powe was invaluable in launching EnergyCore as a national business.

Back to business
Please direct enquiries to
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Our Industry Engagement team will connect
you to the relevant academic staff and
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