

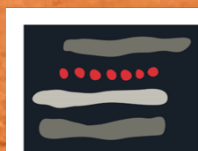
OCTOBER 2017

A policy paper commissioned  
by the Minerals Council of Australia

# Crafting the future Minerals industry engagement with Indigenous Australia

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POLICY PAPER



AUSTRALIAN  
INDIGENOUS  
CHAMBER OF  
COMMERCE

YAABUBIIN  
*Institute for Disruptive Thinking*



Minerals  
Council of  
Australia

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# Crafting the future

## Minerals industry engagement with Indigenous Australia

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**Nyunggai Warren Mundine AO and Elizabeth Henderson** authored this policy paper for the Yaabubiin Institute for Disruptive Thinking of the Australian Indigenous Chamber of Commerce on behalf of the Minerals Council of Australia.

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This publication is part of the overall program of the MCA, as endorsed by its Board of Directors, but does not necessarily reflect the views of individual members of the Board.

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# Introduction

In October 2016, Warren Mundine addressed the Minerals Council of Australia Workforce of the Future Forum in Canberra on the topic of Indigenous people and the future minerals industry workforce.

In that address he said:

The questions and answers on the future workforce and economic development are the same for Indigenous and non-Indigenous people. It's not corporate social responsibility. It's business. If you find the right solutions to the challenges, the outlook for Indigenous Australians and the future minerals industry workforce is bright.

Following that address, the Minerals Council of Australia commissioned this paper to expand on the key themes and explore how the minerals industry can meet the challenges put to it in that address. This includes how the industry can:

- Shape and guide economic development in Indigenous communities, particularly in remote and regional Australia
- Build resource pools for those communities beyond the minerals industry workforce, including by training workers of the future who meet the needs of both the industry and the communities from which they are drawn
- Develop new engagement models for Indigenous people and the minerals industry
- Prepare for the future workforce and future Australian economy.

Indigenous people have a seat at the table for virtually every mining project in Australia. The minerals industry will be able to build more effective and valuable partnerships with Indigenous groups that have sustainable communities with real economies.

Through its activities and engagement with Indigenous people and communities, the minerals industry can assist communities to achieve this, in turn helping to secure its own future workforce and network of resources.

The future workforce isn't just something that will happen to the minerals industry. It's something the industry can shape and direct.

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# Summary of recommendations

## Recommendation 1

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**Expand training of Indigenous workers to include equipping them with skills to work in their communities when they finish on the project, even if their communities have 'no jobs'.**

This may include:

- Working with the person to identify jobs in their communities for which someone could earn an income, including identifying work that needs to be done (which may not be currently being performed) and who would pay them to do it
- Identifying any extra skills they would need to do the work and a plan to build those skills
- Assisting them to establish a small business and acquire the basic knowledge and skills required to be self-employed and/or operate a small business (budget and business plan, administration, compliance)
- Liaising with relevant local authorities and approving bodies (if relevant).

Consider whether performance and success criteria for Indigenous employment act as a barrier to Indigenous staff moving on to work, or set up a small business, in their local community post-employment.

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Establish programs to train the minerals industry's Indigenous workforce in bookkeeping, accounting and other financial competencies.

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## Recommendation 2

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**Establish programs to train the minerals industry's Indigenous workforce in bookkeeping, accounting and other financial competencies.**

This would include selecting appropriate candidates (from the workforce and broader network of contractors, suppliers and community members) and offering them an opportunity to study and become qualified in bookkeeping/accounting, commerce/business and related or feeder disciplines, and even to work in graduate finance positions within mining companies themselves. The industry would best do this by collaborating with the accounting professional bodies – Chartered Accountants Australia & New Zealand, CPA Australia and Indigenous Accountants Australia.

## Recommendation 3

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**Create demand for locally supplied goods and services by buying local and actively sourcing supplies from local businesses to service mining projects and mining camps.**

Provide opportunities for new local businesses to service and sell into the mining camps and to FIFO workers. Start-up businesses have a better chance of succeeding if they have a major customer lined up. Identify opportunities to work with locals to establish businesses that can supply mine projects or mining camps e.g. supply of fresh produce (agri-business), cleaning and laundry services, construction and labouring, transport. Encourage established businesses that are in the mining company's supply chain to create joint ventures or partnerships with local Indigenous people that can become a local supplier to mining projects and mining camps.

## Recommendation 4

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**Establish programs to skill the minerals industry's Indigenous workforce in STEM disciplines and skills.**

## Recommendation 5

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**The minerals industry should be having a dialogue with local Indigenous communities as to what steps they are taking to ensure the factors necessary for investment and business.** There are sound business reasons for the industry to seek certain standards in local Indigenous communities in governance, social stability and local education levels and to seek to negotiate measures in agreements with local Indigenous organisations that reinforce and improve factors for doing business in those areas.

This is not the minerals industry telling Indigenous people how to run their lives and communities. It's about the minerals industry advising and creating awareness of the factors that need to be present for it to want to invest, hire and contract at a local level and seeking input from relevant Indigenous organisations and community leaders as to what steps they are taking to reinforce those factors as their business partner.

## Recommendation 6

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**In agreements with Indigenous organisations for access to land, royalty payments and facilitation of projects on Indigenous land and/or rules for use of funds:**

- Consider including pre-approved spend which is not subject to control of veto rights if certain pre-determined criteria are met, e.g. matching or matching a proportion of funds provided by third party or government providers of debt or capital assistance.
- Consider linking the level of control and veto to the level of capability and governance so that if certain thresholds are met control and veto rights will be lessened or released.

## Recommendation 7

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**The minerals industry should be closely focused on school attendance and access to quality education in remote and regional Australia, particularly by Indigenous children.** This is a business imperative and the industry should be having conversations with local Indigenous communities as to what steps they are taking to help ensure a local supply of job-ready adults over the life of projects.

Consider including 'mutual obligation' in agreements with Indigenous organisations that link benefits in the agreement with the community meeting certain targets in school attendance and adult job-readiness. For example, certain benefits being conditional on local schools meeting and sustaining school attendance levels, e.g. 50 per cent of students attending school 90 per cent of the time. (See also Recommendation 6) Consider how mining companies can partner with local communities to build better schools, including privately operated schools. Consider opportunities to fund scholarships for high school and tertiary students (including trades).

## Recommendation 8

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**As part of an agreement with an Indigenous community regarding access to land or other facilitation, work with that Indigenous community to develop an economic plan for that community and region.** (See Box 4)

## Recommendation 9

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**Focus on workforce and supply chain participation in head office and other office worksites major cities, and in the minerals industry's professional and white collar workforces.**

Consider what parity would look like in these parts of the business too. Focus on re-training, re-skilling and career development for Indigenous workers who have joined the industry in entry level/blue collar roles as part of an Indigenous workforce strategy. Target students in schools and universities as they plan career paths and to promote the minerals industry to Indigenous students as well as the wider community.

## Recommendation 10

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**Programs and initiatives to implement these recommendations should be structured with clear, measurable outcomes and clear individual accountabilities which are assessed and reported on.**

# Key factors impacting the future of work

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## Key points:

- **People are living and working longer**  
The type of work humans are needed to do is changing and is doing so more rapidly than ever before. In the future people will likely have 60-year working lives during which they will need to skill and re-skill multiple times.
- **More and more people will be self-employed**  
Independent workers will take on contracts or 'gigs'. Work will be disaggregated from jobs as companies increasingly move from a workforce to a network of resources.
- **STEM skills are becoming ubiquitous**  
and the distinction between STEM and non-STEM jobs increasingly blurred. Australia may have a gap between supply and demand for these skills.
- **Industries will find it increasingly hard to find the talent they need** and increasingly competitive and expensive to secure it.

Companies will want people skilled at learning new things and will invest in re-training existing resources.

- **Indigenous people are disproportionately represented in areas where most mining occurs** and they will have a seat at the table for almost every new mining project in Australia and for the rehabilitation of the old ones. Strong relationships with Indigenous groups will also be a key factor in meeting the increasing challenges from regulation/compliance and activism.
  - **The minerals industry will be able to build more effective and valuable partnerships with Indigenous groups** who have sustainable communities with real economies. The minerals industry can assist communities achieve this, in turn helping secure its own future workforce and network of resources.
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## Key trends and forces impacting the workforce of the future

Australians will retire later and work longer, well into their 70s or 80s and beyond. Many people will have careers spanning 60 years or more.

Vast improvements in longevity will see people living into their 90s and beyond and spending more of their life in full health. The proportion of the Australian population aged over 65 has already increased and will continue to. (See further discussion in Attachment 1)

The notional retirement age of 65 years is now decades below average life expectancies and some 25-30 years below life expectancies when future improvements in mortality rates are taken into account. That is a long time to be in retirement, especially when most of those retirement years will be spent either in full health or not requiring assistance to live independently. Australians will stay in the workforce for longer. This will be driven by two factors:

- **Financial need:** Retirement savings at the current superannuation contribution rate of 9.5 per cent will not be sufficient to fund these longer retirements. Government is likely to continue to reduce and restrict access to the aged pension as the number of Australians aged over 65 balloons which will increase the overall expenditure outlay on aged care while the revenue collected from income taxes decreases in relative terms.
- **Personal choice:** With people living longer in full health, many people will choose to continue working rather than spend decades of healthy, active years in retirement. They will do this for mental and intellectual stimulation, to keep themselves occupied and to benefit from continuing to earn an income.

Average Indigenous life expectancies are also improving, although remain around a decade lower than non-Indigenous on average and the gap is larger for certain age groups. There are several contributors to the gap and many of these are factors that go hand in hand with socio-economic disadvantage. Also, as and when specific contributors to the life expectancy gap are successfully addressed (e.g. infant mortality), there will be corresponding step changes in Indigenous life expectancy averages.

We believe average Indigenous life expectancy estimates don't provide the full picture and the cohort of Indigenous people who are educated, in employment and live in socially stable and functional families and communities should be experiencing life expectancies closer to the national averages. Therefore in this paper we draw no distinction between Indigenous and non-Indigenous people in the mining industry workforce in terms of retirement ages and working longer.

While human 'shelf life' is increasing, the shelf life of jobs is decreasing due to technology and automation changing and replacing the work humans do. People will need to skill and re-skill several times in their working life.

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Technology and automation is changing and replacing the work humans do. People will need to skill and re-skill several times in their working life.

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Technology and automation have been significantly changing, even replacing, the work that humans are needed to do, particularly since the industrial revolution. Initially in the form of mechanical machines and more recently in the form of computers and software agents that can do what humans do faster and more accurately and many things that humans can't do given the growth in computer power and processing speeds.

Human workers have been replaced by technology and automation in manufacturing, agriculture and mining. Now technology and automation is also replacing human process workers, particularly with robots – software programs, that can replicate repetitive process work faster and more accurately than

human workers. There are some who believe technology and automation has the capacity to substantially replace knowledge workers and to 'think' (or do something indistinguishable from thinking through sheer processing speed and muscle). The pace of developments in automation is also increasing.

So far in history, technology and automation has changed the type of work that humans are needed to do but have not reduced the demand for human labour. In fact, demand for human work has increased due to economic growth generated by innovation and by new technologies themselves. New jobs have been created particularly in technology, services and knowledge work.

Some speculate the growth of technology and automation will eventually replace the need for humans altogether. Others believe new jobs for humans will be created that we haven't anticipated because the need will arise from new technology we can't even imagine. It's impossible to know which (if any) of these will eventuate. The future is – as always – unknown. Presently there's no decline or expected decline in the demand for human labour and unemployment rates in developed economies, including Australia, are low with labour shortages in many areas. For the purposes of this paper we assume that there will continue to be ample demand for human labour but the nature of work humans are engaged to do will change and keep changing. Any major decline in the need for human labour would result in a major global economic shift that is beyond the scope of this paper.

What is not in dispute, however, is that the type of work humans are needed to do is changing and is doing so more rapidly than ever before. A young person commencing a job today will likely be doing very different tasks in a decade. Their original job may disappear entirely. However they will need to find jobs to occupy a 60-year working life. Most people will likely have to reinvent themselves several times in their working life, skilling and re-skilling multiple times during their working life. Traits like adaptability, resilience, resourcefulness and the ability to build networks and nurture relationships will matter

much more in a 60-plus year career than specific qualifications.

The skills industries require will also keep changing and the talent pools for those new skills will often be small. Industries will find it increasingly hard to find the talent they need and increasingly competitive and expensive to secure it. Companies will increasingly move away from looking for people who have particular skills to looking for people who are skilled at learning new things.

A recent feature in the *Harvard Business Review* on AT&T illustrates the point.<sup>1</sup> Most of AT&T's employees are trained for jobs that are disappearing. It needs people with different skills from fields advancing too fast for traditional training and development to keep up. The talent supply for those fields is limited and the market for it fiercely competitive. So AT&T embarked on a program to rapidly retrain its 280,000 people rather than hire new talent wholesale.

More people will be self-employed or independent workers, obtaining work themselves from multiple sources rather than being employed in jobs.

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More people will be self-employed, obtaining freelance work for themselves from multiple sources rather than one traditional job.

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Increasingly we are hearing phrases like the gig economy, the portfolio career, the sharing economy and the on-demand economy. These concepts describe the rise of self-employed or freelance workers. Independent workers are a growing cohort of the workforce. They are essentially people who run their own small business and take on short term work through direct contracts or gigs rather than working as employees of a corporate employer.

The Freelancer's Union in the USA says a third of working Americans (or 42 million people) are independent workers, with predictions this will rise to 50 per cent by 2020.<sup>2</sup> Not all will be exclusively freelancing but will be relying on self-employment for at least some of their income. This phenomenon is being driven by several factors including:

- Business models such as Uber and AirBNB underpinned by new technologies making it easier for buyers and sellers to connect
- Mobile technologies that allow people to work remotely and even allow people to carry with them all the tools they need to do their work
- A decline in full time employment – full time employees are the most expensive (30-40 per cent more to hire, depending on the jurisdiction and benefits accruing to permanent employees) and the least flexible labour source<sup>3</sup>
- A greater desire for flexibility and autonomy, lifestyle choices – sea changes and tree changes, and higher property prices driving people further from the CBD.

The cost of full time employees and preference of many people to be independent workers will see many companies move towards a small core group of permanent employees and sourcing the rest from service providers and independent workers. Work is being disaggregated from jobs. Companies will increasingly move from a workforce to a network of resources.

Science, technology, engineering and mathematics (STEM) capabilities are becoming ubiquitous. There is a growing need for workers with science, technology, engineering and mathematics training and expertise. In a recent report Australia's Chief Scientist said STEM skills are critical to Australia's future prosperity.<sup>4</sup> However while STEM jobs have grown at 1.5 times the rate of non-STEM jobs, Australia's STEM qualified population has grown at 15 per cent compared to the non-STEM population growth of 26 per cent. This signals a gap between supply and demand of STEM qualifications in Australia which employers will need to fill with foreign workers unless more Australians gain STEM qualifications.

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Science, technology, engineering and mathematics capabilities are becoming ubiquitous. There is a growing need for workers with STEM skills.

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STEM skills are also becoming relevant to jobs that have not traditionally been regarded as STEM professions. With increasing automation more and more manual jobs are being replaced with jobs operating applications and high-tech equipment. The distinction between STEM and non-STEM jobs is increasingly blurred with more workers expected to have technological literacy and/or be able to work seamlessly with STEM specialist colleagues. As people stay in the workforce longer many will have to re-skill and build technological competency and confidence and even those with existing STEM expertise will need to regularly update and re-skill with new technologies.

## Key demographics relevant to the Indigenous workforce

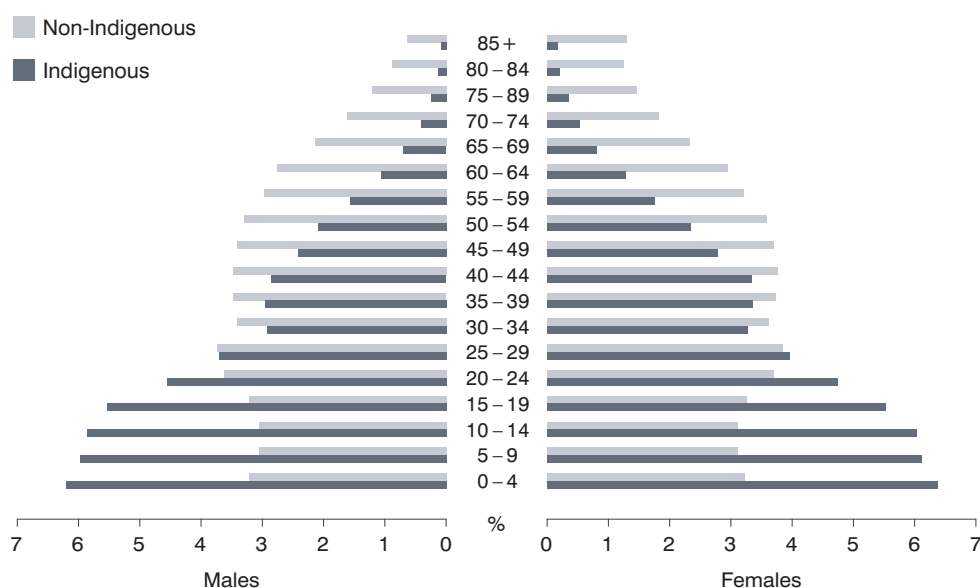
Indigenous demographics resemble those of emerging economies.

- **Growing population:** Australian Bureau of Statistics (ABS) modelling projects that the population of Indigenous Australians will increase to between 907,800 and 945,600 people by 2026, at an average growth rate of 2.0 per cent to 2.3 per cent per annum.<sup>5</sup> In comparison, the average growth rate of the Australian population overall is projected to be 1.5 per cent to 1.8 per cent per annum over the same period. To put that in perspective, India's 2016 population growth was 1.2 per cent per annum and Nigeria's 2.6 per cent per annum.<sup>6</sup>
- **Younger population:** The median age of Indigenous Australians at 30 June 2011 was 21.8 years, compared to 37.6 years for the non-Indigenous population. The Indigenous population pyramid resembles that of emerging economies, thick at the bottom and narrow at the top. This pattern is different from that for non-Indigenous Australians which follows the pattern of developed economies. (Figure 1)

The image of Indigenous Australians living in small remote communities in the north and west doesn't reflect the reality.

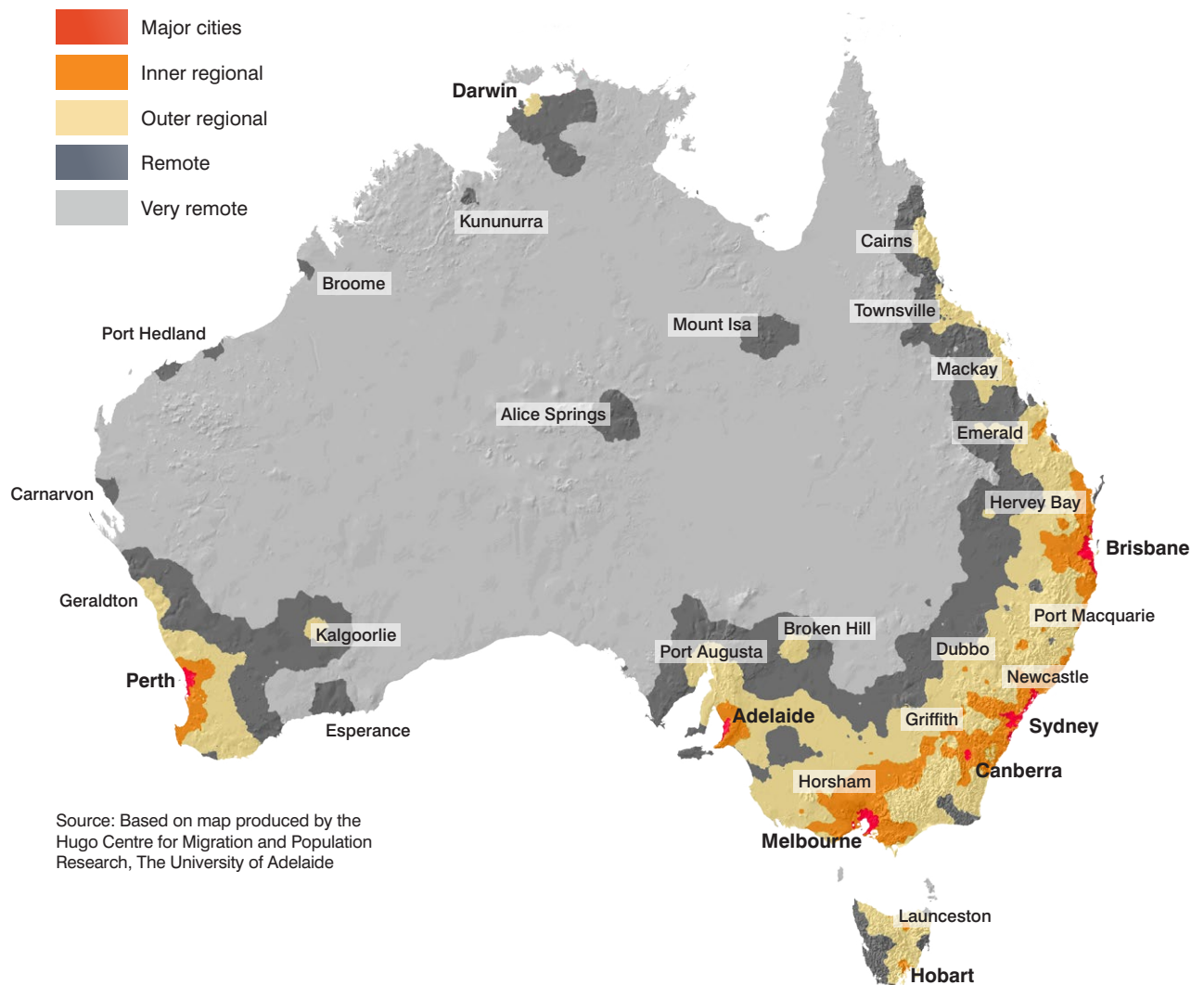
- Nearly 80 per cent of Indigenous Australians live in the areas shaded red, orange and cream in Figure 2. These are major cities (home to 35 per cent of Indigenous people), inner regional areas (22 per cent) and outer regional areas (also 22 per cent). The regions with the largest population clusters of Indigenous Australians are Sydney, Brisbane, central/north coasts of New South Wales and Perth.
- New South Wales has the highest Indigenous population (31 per cent of Indigenous people) followed closely by Queensland (28 per cent). 13 per cent of Indigenous people live in Western Australia and 10 per cent in Northern Territory. There are three times as many Indigenous Australians in New South Wales as in Northern Territory. (Figure 3)
- 30 per cent of Indigenous Australians live in northern Australia (north of the Tropic of Capricorn).

Figure 1 Indigenous and non-Indigenous population pyramid (June 2011)



Source: ABS, *Estimates of Aboriginal and Torres Strait Islander Australians June 2011*, 3238.0.55.001, 2013.

Figure 2 Accessibility/Remoteness Index Australia Plus (ARIA+) 2011

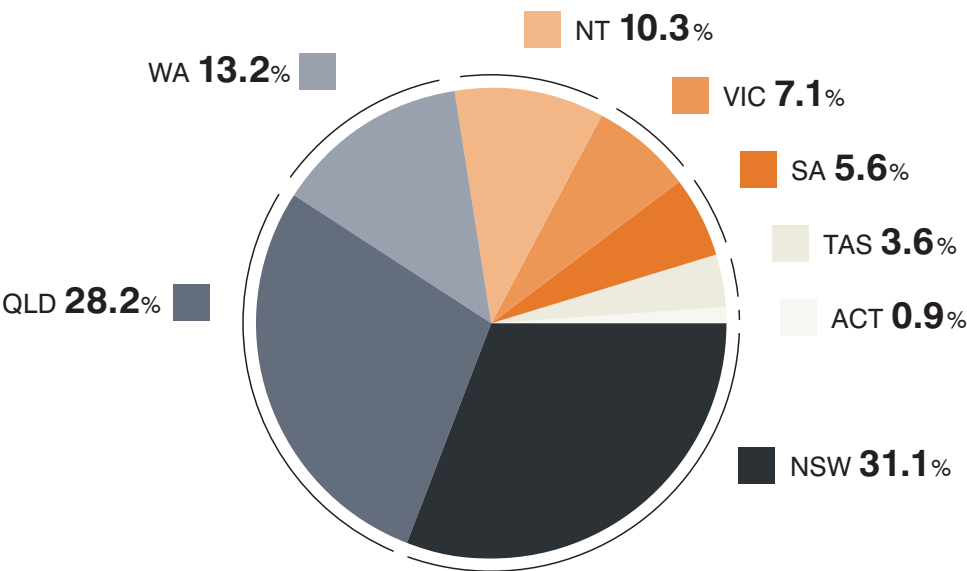


However Indigenous Australians are disproportionately represented in remote/regional populations and northern Australia compared to non-Indigenous Australians.

- Population distributions of Indigenous and non-Indigenous Australians are different. Indigenous people make up 3 per cent of Australia's population as a whole but represent 7.2 per cent of the population of outer regional areas, 16.3 per cent of remote areas and 45.1 per cent of very remote areas. Indigenous people represent 30 per cent of the population of the Northern Territory. Conversely Indigenous people are under-represented in major cities and in Victoria. (Figure 4)
- Indigenous Australians make up 14.6 per cent of the population of northern Australia. This proportion is growing due to higher birth rates and inter-marriage between Indigenous and non-Indigenous people. By 2050, it is estimated Indigenous Australians will make up more than half the population of Australia's north.<sup>7</sup>

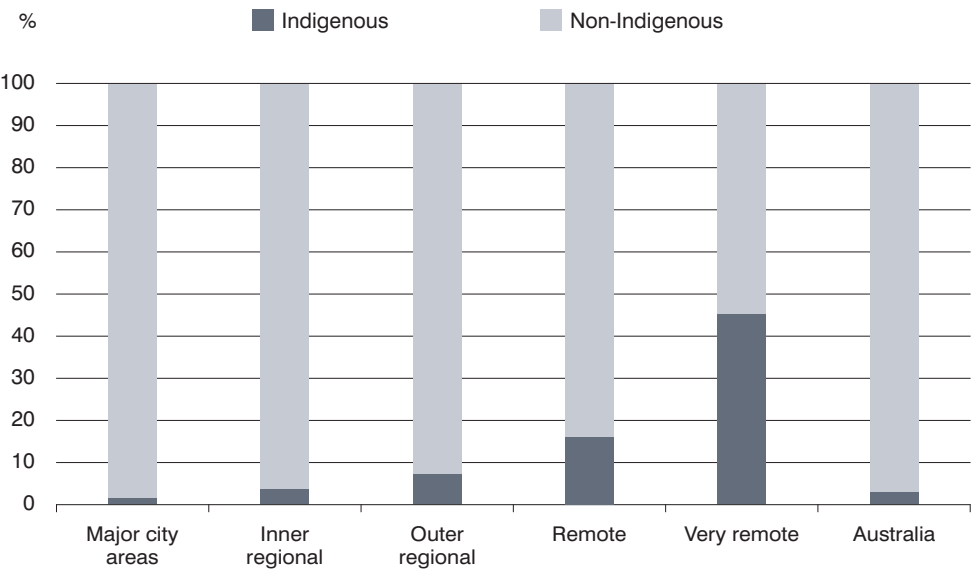


Figure 3 Proportion of Indigenous Australians in each state and territory



Source: ABS, *Estimates of Aboriginal and Torres Strait Islander Australians June 2011*, 3238.0.55.001, 2013.

Figure 4 Population distributions by remoteness



Source: ABS, *Estimates of Aboriginal and Torres Strait Islander Australians June 2011*, 3238.0.55.001, 2013.

Figure 5      **Satellite imagery of Australia at night**



Source: Imaging by Craig Mayhew and Robert Simmon, NASA Goddard Space Flight Center.

Australian development and infrastructure is heavily concentrated in south/east seaboard. Most of Australia's land mass is undeveloped and sparsely populated or unpopulated. Australian land development and infrastructure is concentrated on slivers of land along the south, south-west and south-east coasts of the country where most of Australia's population resides. This is illustrated by night satellite imagery of Australia (Figure 5). The north and north west are sparsely populated. Aboriginal people are disproportionately represented in these and other remote and regional areas.

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Aboriginal people are disproportionately represented in the north and north west of Australia and other remote and regional areas.

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Indigenous people have recognised interests over nearly three-quarters of Australia's land. Indigenous groups have land rights or exclusive possession native title over 22.4 per cent of Australia's land mass and non-exclusive native title possession over 10.7 per cent. Registered claims exist over a further 39.2 per cent of Australia's land mass. Most of this is largely undeveloped. (Figure 6)

Indigenous Australians are key to unlocking the opportunities in northern Australia.

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Indigenous people have recognised interests over nearly three-quarters of Australia's land.

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Northern Australia sits on the doorstep of the fastest growing and most highly populated region in the world. And it has vast tracts of undeveloped land and sea, abundant in natural resources. There are substantial opportunities for northern Australia, particularly in the pastoral, mining and agricultural industries. There are also the secondary industries that underpin these developments – like roads, wharves, electricity grids, ports and other facilities and the utilities and technology infrastructure needed to operate those facilities. Its vast geography has great unlocked potential. The development of northern Australia fits within a growing global focus on the growth of the tropical economies. However, there are key differences. (Box 1)

In 2015, the Australian Government released a White Paper *Our North, Our Future* on developing northern Australia.<sup>8</sup> The White Paper outlines a vision and plan to develop northern Australia and unlock the potential and opportunities of Australia's north, including:

- \$1.2 billion to support simpler land arrangements, develop the north's water resources and infrastructure development, improve the business, trade and investment gateway, support northern workforce growth, and effective governance arrangements

- \$5 billion for the Northern Australia Infrastructure Facility to provide concessional loans for infrastructure projects in the north.

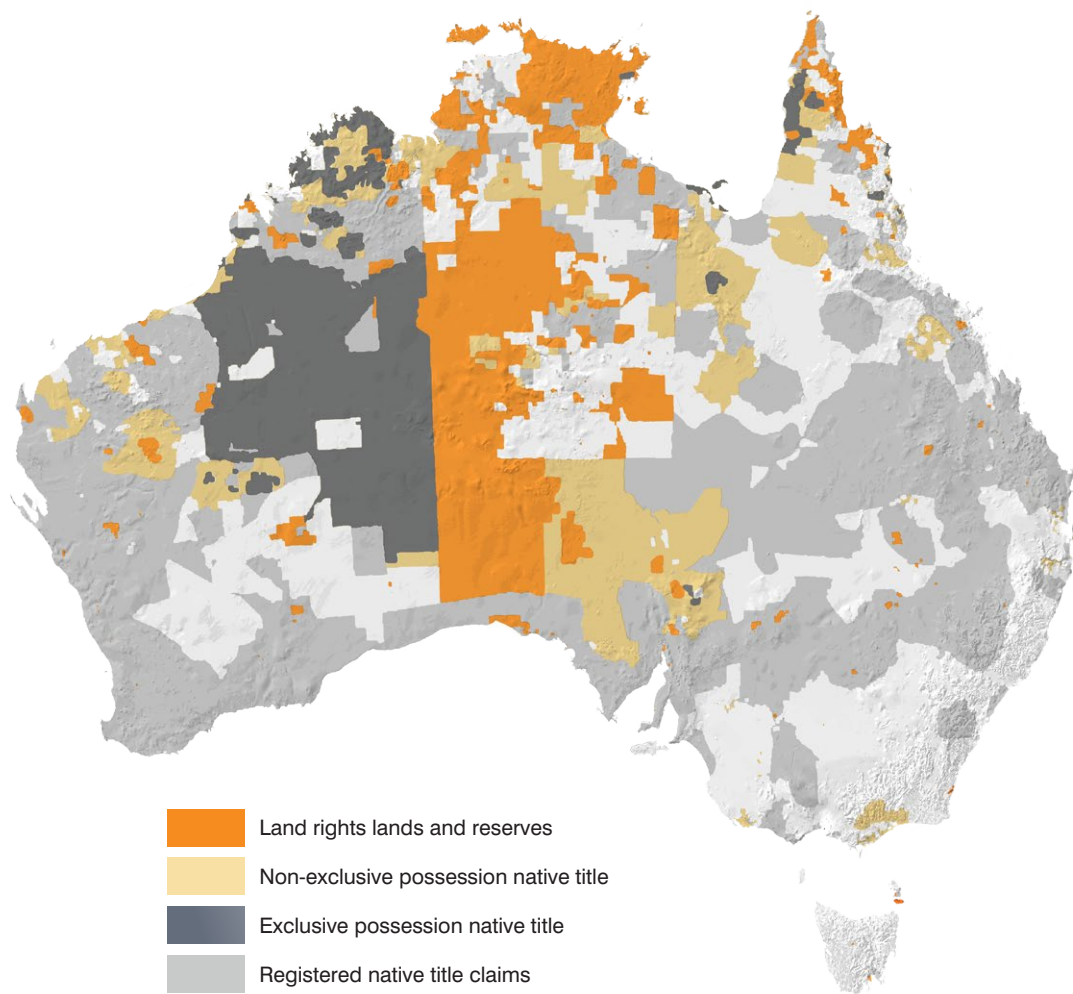
A recurring theme in the government's consultation, discussion and reports on northern Australia has been the need to increase the population of northern Australia. Infrastructure and other projects in northern Australia need local populations that are job ready and educated. The final report of the Australian Parliamentary Joint Select Committee on Northern Australia observed that a major constraint in northern development is building the northern population.<sup>9</sup> It said Australia must find ways to build its population in the tropical north and the great opportunities available in northern Australia won't be realised unless there are more people living and working there.

Within six months of that report there was another debate about the future of remote Indigenous communities and whether they should be closed and Aboriginal people should move south. How can there be a shortage of labour on the one hand and a shortage of jobs on the other?

Indigenous communities should be the first port of call to meet the demand for labour in northern Australia. The reason they are not is because many in these communities are not job-ready and have never worked in a real job due to chronic, intergenerational welfare dependence. Welfare reform and a commitment by governments to moving people from welfare to work is essential to northern development.

Indigenous people are disproportionately represented in the sparsely populated areas where most mining occurs, and increasingly so. However it's not enough that Indigenous people live in those regions. The minerals industry needs an educated and job ready local population. For this it will be critical that Indigenous communities in remote and regional areas develop real economies and become sustainable communities rather than wholly dependent on government assistance to exist.

Figure 6      **Land rights and native title (June 2013)**



Source: Australian Law Reform Commission, *Connection to Country: Review of the Native Title Act 1993 (Cth) Final Report*, Commonwealth of Australia, 2015. Based on map prepared by Jon Altman and Francis Markham.

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Indigenous communities should be the first port of call to meet the demand for labour in northern Australia. The reason they are not is because many in these communities are not job ready.

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## Northern Australia and the tropical economies

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Globally there is an increased focus on the development of tropical economies. However there are key differences between the characteristics of northern Australia (Australia's tropical region) and the tropical economies across the world.

### Population

- The tropics are home to 40 per cent of the world's population, over 3 billion people. This is predicted to rise to 50 per cent by 2050.
- Only 5 per cent of Australia's population live in northern Australia, about 1.3 million people sparsely spread over 3 million square kilometres.

### GDP

- Most tropical economies have low GDP per capita. Nearly 30 per cent of people in the tropics overall live in extreme poverty – which is defined as living on \$1.25 per day. Tropical economies have lower literacy and mean years of schooling.
- Being part of Australia, a developed economy, northern Australia has higher GDP per capita, higher adult and childhood literacy and higher average mean years of schooling than other tropical economies. Not even the poorest people in Australia are anywhere near extreme poverty. Australia has a generous welfare safety net.

### Development

- Because of its low population and lack of infrastructure outside of a few major population centres, most of northern Australia is undeveloped and less developed in terms of infrastructure and building than other tropical economies.
- However it is also part of one of the most developed economies in the world and, by comparison with other tropical economies, the standard of living in northern Australia is high.
- In emerging economies rapid growth occurs because people are poor, wages and the cost of living are low and there is limited welfare or public assistance for people in poverty. This creates intense – even desperate – drive. Often those economies are also much less regulated than the developed world. Northern Australia has the opposite.

### Indigenous Australians

- Northern Australia may have high GDP per capita compared to other tropical economies, but many Indigenous people don't partake in it.
- Northern Australia may have high literacy and average mean years of schooling, but many Indigenous people do not.

Source: James Cook University, *State of the tropics 2014*, 2014.



## Factors impacting the future minerals industry workforce

The minerals industry will continue to grow. The human appetite for resources shows no signs of abating. Technology and innovation, population and economic growth will only make that appetite stronger. Minerals extraction in Australia means engaging with Indigenous people. Indigenous Australians have recognised interests over nearly three quarters of the continent, including most of the areas where mining occurs or will occur (page 16 and Figure 6). The nature of those rights may vary from place to place but the fact is that Indigenous people have a seat at the table for almost every mining project in Australia.

The compliance and regulatory burden for the minerals industry will increase. There'll be greater focus on holding mining companies to account for things like site remediation. There are tens of thousands of abandoned sites across Australia and there will be increased expectation of cradle-to-grave accountability for mining sites and mined products. This is in addition to the rise of professional environmental campaigns, 'lawfare' and embrace of social licence.

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The minerals industry can assist Indigenous communities, in turn helping to secure its own future workforce and network of resources.

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Strong relationships with Indigenous groups will be a key factor in meeting these challenges. And the minerals industry will be able to build more effective and valuable partnerships with Indigenous groups who have sustainable communities with real economies.

A number of elements of the minerals industry's existing operational model will help the industry to adapt to the changing nature of work:

- Experience with project-based initiatives and cyclical business. Most companies in the industry already operate with a core full time workforce and source other resourcing needs from contractors and a network of external service providers.
- The industry has already been at the forefront of technology and automation driven in a large part by safety and productivity imperatives.
- The industry already relies heavily on STEM expertise across its operations.

The minerals industry can draw on its experience in scaling up and scaling down to meet cyclical requirements, building a portfolio of relationships, human capital, resources and networks, who are educated but also adaptable and capable of learning new skills and who the industry can draw on for whatever is needed, at whatever stage of the business cycle, the compliance cycle or the innovation cycle it happens to be in. Through its activities and engagement with Indigenous people and communities, including as an employer and as a partner, the minerals industry can assist communities to achieve this, in turn helping to secure its own future workforce and network of resources.

# Building real economies in Indigenous communities

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## Key points:

- **Every town and city in Australia started as a remote community with no jobs.**
  - The problem for Indigenous communities isn't a lack of jobs but that **the jobs which do exist are mostly done by people from outside the community** or not done at all.
  - **Numerous factors have caused Indigenous communities to be left behind.** These can be thought of in four categories – structural barriers, limiting mindsets, lack of conditions for investment and business inexperience. (See Box 2)
  - **Sovereign or 'tribal' wealth – communally owned capital (be it land or a compensation fund) isn't enough**, in itself, to generate economic development and participation in the real economy. Indigenous people need to be personally participating in commercial activity.
  - **We need to shift the focus from charity to commerce.**
  - **Real economies in Indigenous communities will develop from small business and jobs.** Indigenous people need to acquire skills, find employment or set up small businesses, gain independence and a livelihood.
  - The primary goal of any engagement between the minerals industry, its Indigenous workforce and Indigenous communities should be to **aid participation in the real economy via commerce.**
-

## Remoteness is not the problem

In 1788 Sydney was one of the most isolated and remote places on the planet – three months by ship from Britain, which was also the only means for communication (by written letter). The First Fleet had less than 1500 people. In the 1830s the settlement of Melbourne was established with a few hundred colonists. The first British colony in Western Australia was settled in 1829 and within two decades had less than 5,000 colonists. It was even more remote and sparsely populated than Melbourne. In both Melbourne and the towns of the Western Australia colony the main economic activities in the early years were agriculture and managing prisons for convicts. The boom in both economies came later from mining, primarily for gold, during which they developed diverse economies and greater populations. (See Figure 7)

Melbourne, Perth and Sydney started out far more remote and with far fewer jobs than in any Indigenous community today. And unlike Australia in the 1800s, even though it may take a day or more to physically travel to a remote Indigenous community, communication is instant. Telephony, internet, mobile and satellite mean that no place in Australia is anywhere near as isolated as the early colonies. Resource-rich regions in remote Australia the size of some countries can be self-sustaining economies with jobs and commerce too.

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The problem for Indigenous communities isn't a lack of jobs but that the jobs which do exist are mostly done by people from outside the community.

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Small remote communities exist all over Australia with real economies, commerce and jobs, where children get schooling. But it's as if Indigenous communities are in a different universe. Then people say there are no jobs and communities should shut down; or governments should simply accept people languishing in chronic welfare dependence, never going to school or having a job.

And it's not just Indigenous people in remote communities who are held back by chronic welfare dependence, unemployment and truancy. These problems are seen amongst Indigenous Australians living in urban and regional areas too where remoteness is not even relevant.

Sometimes people can't see what's right in front of them. We've visited remote communities with politicians and experienced businessmen who look around and say there are no jobs. Then they're amazed when we point out all the jobs. Teachers. Police. Health workers. Social workers. Doctors visiting regularly. Construction and repairs. Cleaning. Waste management. Bush taxis. There are buildings, electrical circuits, satellite dishes, fences, generators, plumbing, septic systems, water tanks, air conditioners, cars, roads, phone towers, airstrips and other infrastructure. Supermarkets. Art centres. Also regional jobs in the mining and agriculture industries and many locations attractive to tourists. Then there are all the

Figure 7 Remote communities in Australia



Source: ABS, Australian historical population statistics, 3105.0.65.001, 2014.

activities people would engage in if they could – like buy coffee or get a haircut or visit a dentist or get a takeaway meal or buy clothes. The things people currently do when out of town. Once you have small businesses and people with jobs then they may need an accountant to help with their accounts and tax returns or a lawyer to help with their contracts.

And it's not just at a community level. When we look at individual communities we may be talking a few thousand or a few hundred people. If you look at the region you find lots of communities and a larger population. People trained in a trade or skill or profession could service a wider region. East Arnhem Land has a population of close to 10,000 people for example.

## Sydney ▲

### A remote community with 'no jobs'

The penal colony established in 1788 in Port Jackson had little support from Britain and limited supplies. Arthur Phillip set up a system to emancipate convicts so that they could learn trades and set up enterprises. This was supported by the colony's adoption of the laws of England, a civil administration and courts of law.

By the time Phillip returned to Britain, whaling and sheep industries had been established, emancipated convicts had set up farms and ships had reason to take port in Sydney for trading. The early shoots of a sustainable economy were starting to sprout.





Source: About Australia website.

## Perth

### Thrived despite remoteness and a rocky beginning

The colony of Western Australia was established in 1829. But the colonists soon discovered that the area had poor conditions for agriculture due to the sandy soil and England received reports the following year that the colony was near starvation. By 1832 there were only 1500 colonists (excluding Aboriginal people who weren't counted) and by 1850 the population of the whole colony had only increased to just under 6000 people.

To help with economic growth the colony began to accept transportation of British convicts and became a penal colony. This as well as wool and wheat sustained the colony until the 1880s when gold was discovered and Western Australia became a mining region.



Source: Alexander, A, *The companion to Tasmanian history*, Centre for Tasmanian Historical Studies, University of Tasmania.

## Melbourne

### From remote to a real economy off the back of mining

Melbourne started with only a few hundred residents. The nearest community was Launceston, Tasmania, across the Bass Strait which had a population of a little over 2000 people. Hobart further south had around 24,000 people.

You could travel from Melbourne to Tasmania via sloops and schooners (sailing boats) along with everything else – sheep, cattle, timber, general cargo and the mail. Regular paddle steamers started a decade later and steam ferries not for another 20 years providing direct transport between Launceston, Melbourne and Sydney. At 10-15 knots it took up to a day to travel by boat from Melbourne to Launceston, up to 2 1/2 days to Sydney. Travel between Britain and the Australian colonies took 2-4 months.

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If you look at the region you find lots of communities and a larger population. People trained in a trade or skill or profession could service a wider region.

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## Barriers to economic development in Indigenous communities

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### Structural barriers

- Extra regulations/approving bodies over and above those applying to non-Indigenous
- Communally owned land. No private home ownership or commercial space to lease/buy. 99/40 year leases structures haven't been working/ happening in practice
- Indigenous organisations may have overlapping geographies, scope, interests. Forum shopping or bypassing Indigenous bodies via dissenting individuals (e.g. James Price Point)
- Organisational leadership can be gatekeepers or influenced by community politics/personalities. Indigenous bodies that control operations/ventures in an area may resist competition.

### Limiting mindsets

- Focus on charity not commerce
- Many Indigenous people/communities have become accustomed to look for government for everything after years of government control/dependence
- Governments and bureaucracies treat Indigenous people and communities like dependent children, don't want them to fail so constrain/try to control their activities. Private sector may also adopt this mindset
- Private sector businesses can be met with distrust, even suspicion
- Some Indigenous organisations may resist outsiders having influence over projects or taking profits which discourages investment.

### Lack of conditions for investment

- Local population not job-ready:
  - illiteracy and innumeracy
  - long term unemployed or never worked
  - other barriers to employment.
- Lack of social stability in communities stemming from intergenerational welfare dependence, alcohol and substance abuse, violence, property damage, truancy
- Governance issues within some Indigenous organisations and lack of transparency. Personality/small town politics
- Jobs that exist in communities are done by outsiders, reinforcing the dependency model.

### Business inexperience

- Most Indigenous bodies are community based groups with boards made up of community members who may not have experience in business, financial matters, governance or other relevant capabilities
- Leadership in Indigenous bodies may have little or no experience in negotiating commercial arrangements or operating commercial businesses
- A mismatch in business experience fuels communication problems including misreading of intentions and slows engagement/ progress.

## So what has been holding Indigenous communities back?

Numerous factors have caused Indigenous communities to be left behind. These can be thought of in four categories:

- Structural barriers
- Limiting mindsets
- Lack of conditions for investment
- Business inexperience.

(See discussion in Box 2)

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The single most important change required is shifting the focus from charity to commerce. Economic development lifts people out of poverty and is underpinned by commerce.

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## What needs to change?

The single most important change that is required is shifting the focus from charity to commerce.

- In a charitable relationship, a recipient needs the help of a giver; the giver does the recipient a favour
- In a commercial relationship, each party needs each other, even competing for the other's business.

Economic development lifts people out of poverty and is underpinned by commerce. Philanthropic and corporate social responsibility initiatives are essentially charity. (See Box 3)

### Box 3 Commerce and charity

Charity focused	Commerce focused
Government grant or donation	Private sector investment where the investor gets returns and makes a profit
Social enterprise micro finance (e.g. low interest/interest free, not-for-profit lender, non-commercial terms)	Commercial micro-finance (high interest rates linked to risk, for-profit lenders, strict repayment terms)
Concessional home loans from IBA	Bank loan on normal commercial and credit terms
Not-for-profit organisations	For-profit businesses
Activities (e.g. CDP)	Jobs
'Sit-down' money	Wages

## Tribal wealth is not a panacea

Many Indigenous communities are asset rich. But having communally-owned capital (be it land or a compensation fund) is not in itself enough to generate economic development for a community or enable its members to join the real economy.

The early model for engagement between the minerals industry was royalty agreements for access to land, often resulting in large sums of money being given to organisations or individuals unconditionally. Some of those arrangements resulted in adverse consequences. People receiving large sums of money and then blowing it, humbugging of recipients, misuse of funds and so on. Aboriginal people talk cynically about royalty day when large sums of money are doled out to people one day each year to be wasted.

Today the preferred model is payments into trusts for the benefit of communities at large and with a focus on preservation of funds. However mining companies often retain control or veto of how funds are used. So in many ways this is a new form of paternalism and reinforces dependency.

These two models are polar-opposites. And neither in itself generates economic development. Sovereign or 'tribal' wealth isn't a panacea for delivering economic development even with effective management. If Indigenous people remain asset rich and skills poor, the status quo won't change and Indigenous people will remain outside the real economy.

Real economies in Indigenous communities will develop in the same way they did the Australian colonies and in all other small settlements in global history – through jobs and small enterprises. Indigenous people need to acquire skills, find employment or set up small businesses, gain independence and a livelihood.

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If Indigenous people remain asset rich and skills poor, the status quo won't change and Indigenous people will remain outside the real economy.

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# A new framework for engagement

As the minerals industry grows in Australia it will need to engage with Indigenous people even more – both in accessing land and in securing labour and supplies. It will need job-ready and educated Indigenous people.

For Indigenous communities the future presents a different challenge. Here we are talking about people needing to re-skill many times to maintain a more than 60-year career and there are Indigenous people who've never had even one job. Here we are talking about STEM and many Indigenous children, even adults, can't read or write. Indigenous Australians don't have the luxury of time that other cultures had to get where they are today. Like developing economies, Indigenous people need to find a way to leapfrog ahead.

Indigenous people and the minerals industry actually want the same thing. They can sharpen their existing engagement model to achieve it by assessing activities against the following litmus test: how does the activity increase Indigenous participation in commerce?

Engaging in commerce includes things like:

- Having a job (a real job, not CDP or work for the dole)
- Training to do a job that satisfies unmet demand (e.g. training to be a hairdresser in a town that doesn't have a hairdresser; training for a guaranteed job via a VTEC)
- Learning the skills required to operate a small business
- Operating a small business, either alone or in a partnership
- Re-training in new skills during a career so as to work in a different role
- Supplying goods or services
- Raising capital/obtaining investment for a business venture.

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The minerals industry has a high level of maturity in engagement with Indigenous people and communities.

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The minerals industry was the first industry that needed to engage with Indigenous Australians in order to do business in Australia. Some of that engagement has been negative, even fraught, and some has been positive. As a result, the industry has learnt a lot about what to do and what not to do. It has developed deep relationships with Indigenous nations, leadership, representative organisations and individuals across the country and strong cultural understanding. The minerals industry has been a leader in Indigenous employment and in bringing Indigenous businesses into its supply chains.

The minerals industry engages with Indigenous people through many interfaces:

- Employing Indigenous people (employees and contractors) in its workforce
- Engaging Indigenous-owned businesses in its supply chains
- Negotiating access to land
- Working in and around Indigenous communities and in areas with high Indigenous populations
- Operating in remote and regional Australia where Indigenous people are disproportionately represented.

The minerals industry can take action across every one of these interfaces to aid the development of real economies in Indigenous communities and across remote and regional Australia.

Although Australia is one of the most developed economies in the world, the statistics and demographics for Indigenous people more resemble those in developing economies in many respects, particularly in remote and regional Indigenous communities. Like developing economies, amongst Australia's Indigenous population there is low GDP per capita as well as lower adult and childhood literacy and lower average mean years of schooling than the rest of Australia. Indigenous communities in remote and regional Australia have low levels of infrastructure and development.

The minerals industry has considerable experience globally operating in and engaging with developing economies. It can draw on these experiences also in engaging with Indigenous communities in Australia and identifying solutions to future workforce challenges.

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The minerals industry is well positioned to adapt to the changing nature of work.

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As outlined earlier, longevity and automation are changing the way people work and their relationships with organisations and industries. In the future companies will:

- Look for people who are skilled at learning new things (rather than having specific skills) and invest in re-training existing resources
- Need to build long term relationships with a resource pool that will come in and out of their enterprises in different capacities over many years
- Need access to a pool of human capital who are educated and adaptable, who can be drawn on for whatever is needed – at whatever stage of the business cycle, the compliance cycle or the innovation cycle the industry happens to be in.

A number of elements of the minerals industry's existing operational model will help the industry to adapt to the changing nature of work. The minerals industry can draw on its experience to build a portfolio of relationships, human capital, resources and networks, who are educated but also adaptable and capable of learning new skills.

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The global demand for minerals will only increase, and minerals extraction in Australia means engaging with Indigenous people.

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Indigenous people are disproportionately represented in areas where most mining occurs and they will have a seat at the table for virtually every new mining project in Australia and for regeneration of retired sites.

The minerals industry needs Indigenous people and strong relationships with Indigenous communities to meet its future business challenges, including access to land, access to local resources (workforce and suppliers) and meeting the increasing challenges from regulation/compliance and activism.

It's in the business interests of the minerals industry that Indigenous communities become sustainable, thriving communities with real economies, educated job-ready workforces, a range of businesses and commercial activities and suppliers of good and services. The minerals industry can focus its efforts to help achieve this.



Beyond royalties, beyond VTECs:

## Next generation workforce models

### Equipping Indigenous workers for their next job – in their own communities.

The VTEC model pioneered by Fortescue Metals Group was a revolution in job training for Indigenous people by training people for a guaranteed job, adopting a case managed approach to work on all barriers to employment and measuring success by retention in the job.

Mining is a cyclical industry and at some point in the cycle many of the workforce finish working on the project and go home to their communities. In theory, there they should be able to apply the skills they've learned on the job to a new job in their community. However, this doesn't always happen because the jobs aren't available and the physical and social infrastructure doesn't exist to enable it. (Box 2)

Also, the success criteria for Indigenous employment often focuses on retention such that an Indigenous employee leaving a mining company and going to set up a small business in their local community could register as a failure in relevant KPIs, rather than a success.

Mining companies can assist its workforce to identify jobs, identify work opportunities and set themselves up as self-employed and/or in small businesses to take these opportunities.



Mining companies can assist its workforce to identify jobs, identify work opportunities and set themselves up as self-employed and/or in small businesses.



### Recommendation 1

**Expand training of Indigenous workers to include equipping them with skills to work in their communities when they finish on the project, even if their communities have 'no jobs'.**

This may include:

- Working with the person to identify jobs in their communities for which someone could earn an income, including identifying work that needs to be done (which may not be currently being performed) and who would pay them to do it
- Identifying any extra skills they would need to do the work and a plan to build those skills
- Assisting them to establish a small business and acquire the basic knowledge and skills required to be self-employed and/or operate a small business (budget and business plan, administration, compliance)
- Liaising with relevant local authorities and approving bodies (if relevant).

Consider whether performance and success criteria for Indigenous employment act as a barrier to Indigenous employees moving on to work, or set up a small business, in their local community post-employment.

## Train the Indigenous workforce in financial competencies

Indigenous people – via Indigenous organisations such as land councils and prescribed body corporates – have substantial assets and funds. The value of these assets and funds are in the billions with potential to generate more.

At the moment many Indigenous communities are not fully equipped to manage their financial assets. In particular, Indigenous people are vastly underrepresented among the accounting profession. There are fewer than 50 Indigenous Australians among the more than 200,000 qualified accountants in Australia. And there is no indication that this is changing. By contrast there are estimated to be more than 550 Indigenous solicitors out of 66,000 total solicitors and more than 200 Indigenous doctors out of a total profession of nearly 100,000, with more than 300 Indigenous students studying to be doctors.<sup>10</sup>

In 2015, Indigenous tertiary students made up around 0.9 per cent of all domestic students in management and commerce education fields (which include accountancy), compared to 1.5 per cent of all domestic students across all fields. Those Indigenous students who do go to university are opting for other fields of study.<sup>11</sup>

Managing your own assets and money is essential to managing your own life. It's one of the main differences between adulthood and childhood and crucial to achieving independence and autonomy. This is true for individuals. And it's also true for organisations, communities and nations.

If Indigenous people are going to fully participate in the real economy and build prosperity from their assets, then Indigenous communities need people with financial expertise and who know how to manage, sustain and build wealth. Greater financial competency will also help Indigenous communities build real economies and negotiate with the private sector in projects and initiatives over their land. As identified above, business inexperience is a key barrier to Indigenous participation in the real economy. (Box 2)

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If Indigenous people are going to fully participate in the real economy and build prosperity, then Indigenous communities need people with financial expertise who know how to manage, sustain and build wealth.

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### Recommendation 2

**Establish programs to train the minerals industry's Indigenous workforce in bookkeeping, accounting and other financial competencies.** This would include selecting appropriate candidates (from the workforce and broader network of contractors, suppliers and community members) and offering them an opportunity to study and become qualified in bookkeeping/accounting, commerce/business and related or feeder disciplines and even to work in graduate finance positions within mining companies themselves. The industry would best do this by collaborating with the accounting professional bodies – Chartered Accountants Australia & New Zealand, CPA Australia and Indigenous Accountants Australia.

## Create demand for local supplies

The principle of supply and demand is one of the most fundamental in the field of economics. Suppliers can fill unmet demand. And building demand creates a market for supply. The minerals industry can be a vehicle for economic development at a micro-level by sourcing from local businesses.

There is already unmet demand in Indigenous communities for the kinds of goods and services supplied by small businesses. People in remote Indigenous communities like to do all the things that other Australians do. They buy food, drink coffee, get their hair cut, shop for clothes, use transport. In remote and regional Indigenous communities where there is no or minimal commerce, residents currently have to travel into town to do these things.

There is also demand at a larger scale level to service projects and operations going on in the regions, for example mining and infrastructure projects. These include goods and services for mining camps – related to housing, catering, supply of produce, cleaning, laundry, gardening, maintenance. These projects often source goods and services from outside and fly them in. FIFO workers who fly into a region also buy goods and services.

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The mineral industry's engagement with local suppliers can also help fuel innovation and the creation of experienced and quality local suppliers, helping to build and boost local economies.

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Procurement models in large corporations are typically designed to maximise efficiency by obtaining goods and services at least cost and using standardised specifications across competing suppliers, to enable competitive tendering, performance monitoring and process efficiency. This can make it hard for small, local suppliers to enter into procurement chains.

However there are recognised limitations of this approach, including stifling innovation by suppliers and potentially missing out on solutions drawn from close knowledge of the local physical, political and economic environment.

Internationally, mining companies have increasingly recognised that a social licence to operate involves more than payment of royalties but also includes being good citizens which in turn means greater engagement with the local economy rather than operating in isolation. This pressure will only increase as mine projects rely more and more on automation and less on human labour and therefore local jobs.

The minerals industry's engagement with local suppliers can also help fuel innovation and the creation of experienced and quality local suppliers, helping to build and boost local economies.

### Recommendation 3

**Create demand for locally supplied goods and services by buying local and actively sourcing supplies from local businesses to service mining projects and mining camps.** Provide opportunities for new local businesses to service and sell into the mining camps and to FIFO workers. Start-up businesses have a better chance of succeeding if they have a major customer lined up. Identify opportunities to work with locals to establish businesses that can supply mine projects or mining camps e.g. supply of fresh produce (agri-business), cleaning and laundry services, construction and labouring, transport. Encourage established businesses that are in the mining company's supply chain to create joint ventures or partnerships with local Indigenous people that can become a local supplier to mining projects and mining camps.

### **Up-skilling the Indigenous workforce in STEM skills**

As outlined earlier, Australia is at risk of a mismatch of supply and demand for STEM skills. Indigenous people on average are already behind on education compared to non-Indigenous people and can be expected to be even further behind on STEM skills.

#### **Recommendation 4**

**Establish programs to skill the minerals industry's Indigenous workforce in STEM disciplines and skills.**

## **Beyond cultural training: Building relationships between equals**

The model for engagement between the minerals industry and Indigenous communities has gone through many different phases. From the early dark days when mining companies ignored Indigenous rights altogether, through to royalty agreements, to today where engagement at the community level is focused on preservation of funds for the benefit of communities at large and over the longer term. The effort to avoid the 'royalty day' type waste means that mining companies often retain control or veto of how funds are used.

The objective should of course be to build a relationship between equals. However this is difficult when the two groups are not equals in terms of business experience and financial competency. It's important for the minerals industry to identify how it can help build these capabilities in its engagement with Indigenous communities and ensure that the models it adopts do not reinforce long term dependency and reinforce economic participation.

### **Enhancing the conditions for investment and business**

Building a relationship between equals is not just for the benefit of Indigenous communities. It's also very much in the business interests of the minerals industry because it is linked to creating the conditions necessary for investment and business operation.

There are certain factors that are necessary to encourage and facilitate investment and business and these apply to all areas of the world. If these factors are not present, companies will either not invest or do business or will do only so at a high risk. Some of these factors are listed in Box 2. These are the factors that enable business to operate at an acceptable level of risk and certainty and at an acceptable level of cost.

One critical factor is good governance – stable, representative governing authorities, a functioning bureaucracy, no systemic corruption, operation of the rule of law and transparency of dealings and fair, certain and transparent systems for dispute resolution. It's no coincidence that countries which don't have good governance are generally high risk for potential investors and discourage companies from doing business there, unless the returns are high and/or there are compelling reasons to operate there which make the risk acceptable.

Australia as a country has good governance and low sovereign risk. However, the same cannot always be said for the governance and risk on Indigenous lands, which have their own systems of governance in respect of Indigenous lands and native title areas. If the Indigenous organisations and communities mining companies deal with don't meet these same criteria for good governance, this increases business risk and lowers the attractiveness of doing business or investing in those areas. For example:

- If the Indigenous organisations are not truly representative and transparent, if there is a risk of corruption or mismanagement taking hold, if a lack of transparency or capability means this can't be verified or if there is over-governance or inefficiency in making decisions
- If there is a failure of the rule of law or lack of social stability in the Indigenous community. No one wants to invest or set up a business or deal with counter-parties in communities if the rule of law isn't enforced, if alcohol and substance abuse is out of control or if violence, abuse and property damage are rampant. This creates risk both for the company's employees and also risk of absenteeism or lack of performance by local employees, contractors and suppliers.

Other factors include recognition and enforcement of private property rights and a free market economy. Although the scope for these depends on the legal structures for communally owned land and native title areas which mining companies can't change, mining companies can recognise that where communities have taken steps to enable private home ownership or commerce in their communities that this is a sign of economic sustainability and lower risk than those communities which don't.

Another factor is access to a local population that is job-ready – adults who meet minimum levels of literacy and numeracy and children, the future workforce pool, who are going to school. Having to rely solely on external workers increases costs.

## Recommendation 5

**The minerals industry should be having a dialogue with local Indigenous communities as to what steps they are taking to ensure the factors necessary for investment and business.**

There are sound business reasons for the minerals industry to seek certain standards in local Indigenous communities in governance, social stability and local education levels and to seek to negotiate measures in its agreements with local Indigenous organisations that will reinforce and improve the factors for doing business in those areas.

This is not the minerals industry telling Indigenous people how to run their lives and communities. It's about the minerals industry advising and creating awareness of the factors that need to be present for it to want to invest, hire and contract at a local level and seeking input from relevant Indigenous organisations and community leaders as to what steps they are taking to reinforce those factors as their business partner.

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Building a relationship between equals is not just for the benefit of Indigenous communities. It's also very much in the business interests of the minerals industry.

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## New models for control and veto rights

Control and veto rights over use of funds reinforces dependency. Mining companies could therefore explore with traditional owner groups other ways to maintain vigilance over funding pools and achieve long term focus in a way that builds and reinforces independence and competency, rather than dependency.

### Pre-approvals

One approach could be to specify pre-approved funding that meets specific criteria that further economic participation, for example:

- Providing initial capital to new local small businesses that matches or matches a set percentage of funding provided by another source e.g. the Indigenous Entrepreneurs Fund or capital assistance provided to Indigenous businesses by the Minister for Indigenous Affairs under the recently announced Budget measures, or small business funding from Indigenous Business Australia (IBA) or a small business loan from a bank.
- Providing funding for private home ownership to match a proportion of a loan provided by IBA or a bank.

In this way the veto or control is waived, and the trust board and/or mining company doesn't need to make an independent assessment of the proposal, effectively relying on due diligence and review conducted by the external provider of capital or loan assistance.

### Linking level of control and veto to level of capability and governance

Another approach could be to link control and veto rights to the level of demonstrated community capability, governance and economic sustainability and to release or loosen control and veto rights on certain thresholds being demonstrably and sustainably met.

These thresholds could extend to whether the community is fostering the conditions that encourage investment and economic sustainability such as:

- The Indigenous community developing and implementing an economic plan. (Recommendation 8)
- The relevant local organisation(s) meeting governance standards e.g. director governance training, minimum qualifications/experience and financial training for directors, officers and staff, using external directors/officers/staff if locals don't meet criteria
- A minimum number of independent (non-community members) directors with specific expertise on the board or advisory board of the local organisations.

## Recommendation 6

**In agreements with Indigenous organisations for access to land, payment of royalties and facilitation of projects on Indigenous land and/or rules for use of funds:**

- Consider including pre-approved spend which is not subject to control of veto rights if certain pre-determined criteria are met, e.g. matching or matching a proportion of funds provided by third party or government providers of debt or capital assistance.
- Consider linking the level of control and veto to the level of capability and governance so that if certain thresholds are met control and veto rights will be lessened or released.

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Mining companies could explore other ways to maintain vigilance over funding pools and achieve long term focus in a way that builds and reinforces independence and competency, rather than dependency.

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## Actively promoting education and ensuring access to an educated local population

As minerals extraction in Australia increases, and as northern Australia opens up and develops, the minerals industry will increasingly need a local educated and job-ready population in remote and regional Australia where Indigenous people make up a disproportionate and increasing percentage of the population.

But many Indigenous children are not getting the education that the minerals industry is going to need them to have. Education of Indigenous children is not just a corporate social responsibility and altruistic goal to close the gap. It's a business imperative.

Low school attendance is a chronic issue in remote and regional Indigenous communities. This is a well-known problem and well-trodden in terms of attempted solutions. Research identified in The Forrest Review showed that if a child's school attendance falls below 90 per cent (i.e. they frequently miss more than half a day of school a week) their education is considered at risk. If attendance falls below 80 per cent (i.e. they miss a day of school every week) their education is significantly diminished. Attendance is even more important than the quality of the school.

Less than 80 per cent attendance at a school is no better than no schooling at all. And 90 per cent attendance is required for a child to receive the education required for job-readiness as an adult.

Aggregate school attendance data does not identify whether individual students are receiving adequate education. For example, an aggregate school attendance rate of 70 per cent could mean:

- All students attending 70 per cent of the time or
- Half are attending 90 per cent and the other half only 50 per cent of the time.

In the first situation no student is getting effective education. In the second case half are, because half are reaching the critical 90 per cent attendance threshold for effective education.

The *Closing the Gap Report* figures illustrates just how important this individualised data is.<sup>12</sup> In 2016 the aggregate attendance rate for Indigenous students was 83.4 per cent compared to 93.1 per cent for non-Indigenous students – a 10-point gap. But only 49.0 per cent of Indigenous students met the critical

90 per cent attendance threshold, compared to 79.3 per cent of non-Indigenous students – a 30-point gap. In very remote areas only 21.9 per cent of Indigenous students met the 90 per cent attendance threshold compared to 68.3 per cent for non-Indigenous students – a 46-point gap.

These figures suggest half of all Indigenous students in Australia are not getting effective schooling at all and in very remote areas only a fifth of Indigenous students are getting an effective education. When you consider that by 2050 more than half of northern Australia's population will be Indigenous, this paints an ominous picture for the minerals industry sourcing job-ready locals for its projects in remote Australia.<sup>13</sup>

Although attendance is the primary factor, quality of education accessible to Indigenous children in these areas is another challenge. In fact, in many of these areas the schools are not sufficiently resourced to educate all the children if they turned up and children in very remote areas often don't have access to a real school. Many Indigenous people are unhappy with their local schooling. Some communities would like to be able to set up private schools.

### Recommendation 7

**The minerals industry should be closely focused on school attendance and access to quality education in remote and regional Australia, particularly by Indigenous children.** This is a business imperative and the industry should be having conversations with local Indigenous communities as to what steps they are taking to help ensure a local supply of job-ready adults over the life of projects.

Consider including mutual obligation in agreements with Indigenous organisations that link benefits in the agreement with the community meeting certain targets in school attendance and adult job-readiness. For example, certain benefits being conditional on local schools meeting and sustaining school attendance levels e.g. 50 per cent of students attending school 90 per cent of the time. (See also Recommendation 6)

Consider how mining companies can partner with local communities to build better schools, including privately operated schools. Consider opportunities to fund scholarships for high school and tertiary students (including trades).

## Community planning – economic stocktake and creating economic plans

The minerals industry has experience all over the world in building communities from scratch. It is one of the most influential and well connected industries in the country and is built on entrepreneurship. How can it put these capabilities to work helping build remote and regional communities and assisting them to build sustainable and real economies?

### Recommendation 8

**As part of an agreement with an Indigenous community regarding access to land or other facilitation, work with that Indigenous community to develop an economic plan for that community and region. (See Box 4)**

#### Box 4

### Developing a community economic plan

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Developing an economic plan for a community should include the following elements.

**1. An economic stocktake of the community and region, identifying:**

- Jobs that exist in the community and broader region (i.e. teachers, police, government workers, retail, trades, transport, aviation, mining, infrastructure) and who is currently employed to do them
- Work that is currently being performed by someone outside of the community (including handyman work, maintenance and repairs, horticulture, cleaning, building, health services)
- Work that isn't being done at all but should be done or for which there would be demand if it was offered (i.e. local retail businesses, tourism, transport services, repairs and maintenance, cleaning of public buildings)
- Qualifications, skills and experience required for all of the identified jobs and work roles
- Existing skills and job-readiness levels of community members.

**2. A 10-20 year economic plan for that community, considering:**

- How long it would take and what would be required for each identified those jobs/work to be filled/supplied by locals (either individually or in their own small business)
- How to speed up skills transfer (e.g. through partnering with established businesses)
- What are the future service needs of the community including population projections, housing needs, schooling, other essential services, infrastructure
- Community social and economic objectives and vision
- Where funding is required how can it be sourced (including private funding)
- Timeframe for progress.

**3. Consider broader elements e.g. town planning, infrastructure requirements.**

**4. How can the mining company assist that plan – jobs, training, buying local, joint ventures, leveraging its supply chain.**

*Note: Look at the broader region, not just the individual community.*

Beyond the bush:

## What does real parity look like?

### What does real parity look like?

The epicentre of Indigenous and minerals industry engagement is typically engagement with Indigenous communities in remote and regional locations where mining projects occur. This is in a large part because the minerals industry has had to engage and negotiate with traditional owners of lands it needs access to for mining and related projects. In Indigenous employment in the mining industry there has been a high focus on blue collar work on mining projects.

Nearly 80 per cent of Aboriginal and Torres Strait Islander people live in urban and regional Australia, with two-thirds in the eastern mainland states of New South Wales, Queensland and Victoria. The regions with the largest population clusters of Indigenous Australians are (in order of size) Sydney, Brisbane, central/north coasts of New South Wales and Perth.

Therefore in thinking about Indigenous workforce participation, it's important to think beyond the bush. There are many Indigenous people living in or in the vicinity of Sydney, Perth and Brisbane, for example.

Mining companies employ thousands of workers in their head offices based in the cities. They also employ many white collar workers, both in head office and on operational sites. These include managerial staff, engineers, geologists, business analysts, finance professionals, lawyers and administrative staff and via businesses engaged in supply chains. Indigenous workforce participation should include these areas too, both as entry level and as progression and development for Indigenous workers in other parts of the operations.

### Recommendation 9

**Focus on workforce and supply chain participation in head office and other office work sites and major cities and in the minerals industry's professional and white collar workforces.** Consider what parity would look like in these parts of the business too. Focus on re-training, re-skilling and career development for Indigenous workers who have joined the industry in entry level/blue collar roles as part of an Indigenous workforce strategy. Target students in schools and universities as they plan career paths and to promote the minerals industry to Indigenous students as well as the wider community.

### If you can't measure, you can't manage it

Any initiatives adopted by the minerals industry or its members to further these objectives or implement these recommendations should be structured with clear, measurable outcomes which are assessed and reported on. Also important is clear accountabilities – which staff, managers and executives will be responsible for delivering outcomes and how will delivery of those outcomes be included in their KPIs and other performance measures.

### Recommendation 10

**Programs and initiatives to implement these recommendations should be structured with clear, measurable outcomes with clear individual accountabilities which are assessed and reported on.**

## Life expectancy data

### Life expectancies high and increasing

Australians already enjoy amongst the longest life expectancies in the world and this is expected to continue. United Nations data for 2010-15 shows Australia's cohort life expectancy at birth is ranked sixth highest in the world, behind only Japan Switzerland, Spain, Singapore and Italy.<sup>14, 15</sup>

According to the Australian Bureau of Statistics Life Tables, a child born between 2013 and 2015 has a life expectancy at birth of 80.4 (males) to 84.5 (females).<sup>16</sup> But these figures do not tell the full story because they are period life expectancies and do not factor in improvements in mortality rates over their lifetimes, or cohort life expectancies. (Box 6) Estimates of cohort life expectancies in the *2015 Intergenerational Report*, for example, show Australian children born today have a life expectancy of closer to 92 (males) to 94 (females).<sup>17</sup>

All life expectancies are averages. Some people will die younger and some will live longer. It has been estimated that half of the children born in developed countries this century will live to be 100 or more.<sup>18</sup>

### Living longer – living healthier

There are corresponding increases in healthy life expectancies – the average number of years a person can expect to live in full health and without needing assistance in basic activities.

The Australian Institute of Health and Welfare has estimated that a child born in 2012 could expect to live to aged 62.4 (male) or 64.5 (female) without any disability and to aged 74.2 (male) and 76.5 (female) without any severe or profound core activity limitation (e.g. not needing help with activities of self-care, mobility or communication).<sup>19</sup>

Again these figures don't factor in health and mortality rate improvements over a person's lifetime. The actual number of years that people can expect to live in full health or without major limitations on independent living will likely be greater, in line with the actual longer life expectancies.

It's not just today's children who will live long lives. A 60-year old Australian today can expect to live to their late 80s, a 40-year old to around 90 and a 20-year old to their early 90s.<sup>20</sup>

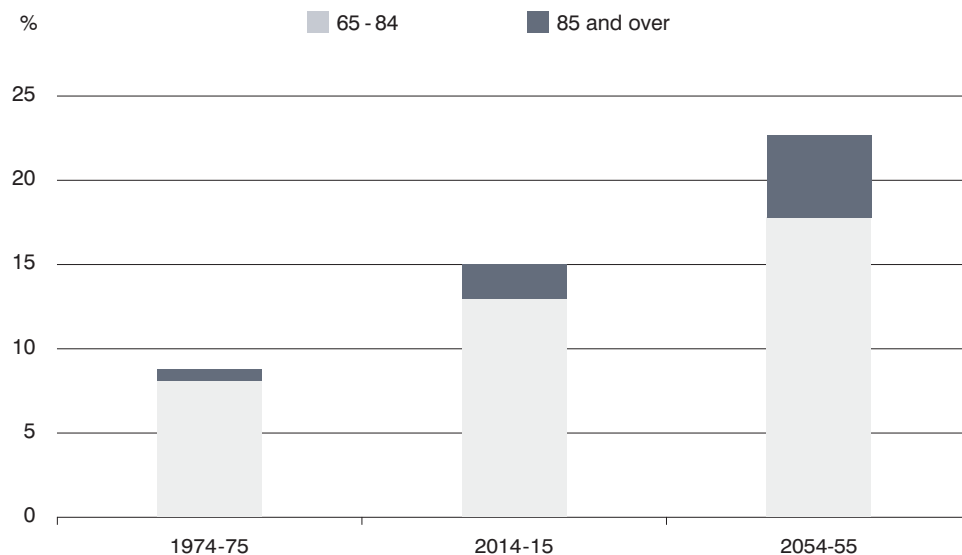
**Box 5 Working age and retirement age as a percentage of total population**

Age range	Percentage of total population			
	1974-1975	2014-2015	2034-2035	2054-2055
15-64 Working age	63.8	66.2	62.1	60
65 and over Retirement age	8.7	15	19.5	22.6

Source: Commonwealth of Australia, *2015 Intergenerational Report – Australia 2055*, March 2015.



Figure 8 Proportion of Australians aged 65 and over



Source: Commonwealth of Australia, 2015 *Intergenerational Report – Australia 2055*, March 2015.

### Aging population and workforce

A consequence of longer lifetimes is an aging population. The number of Australians aged 65 and over is increasing, both in raw numbers and as a percentage of the total population. The proportion of the population in the traditional working ages of 15-64 is decreasing. (Box 5 and Figure 8)

In 1974-75 Australia had 7.3 people in the traditional working age range of 15 to 64 years for every person in the retirement age range of 65 years and over. In 2014-15 there were only 4.5 working age people for every retirement age person. By 2054-55 this ratio is expected to drop to 2.7 working age people to every retirement age person. This has obvious implications for government revenue vs expenditure with a greater proportion of people eligible for the aged pension and fewer people in work paying taxes to fund those pensions. The number of Australians aged 65 and over is projected to more than double by 2054-55, with 1 in 1,000 people projected to be aged over 100. In 1975, this was 1 in 10,000.

### Indigenous Australians

It is well known that there is a significant gap in life expectancy between Indigenous and non-Indigenous Australians.

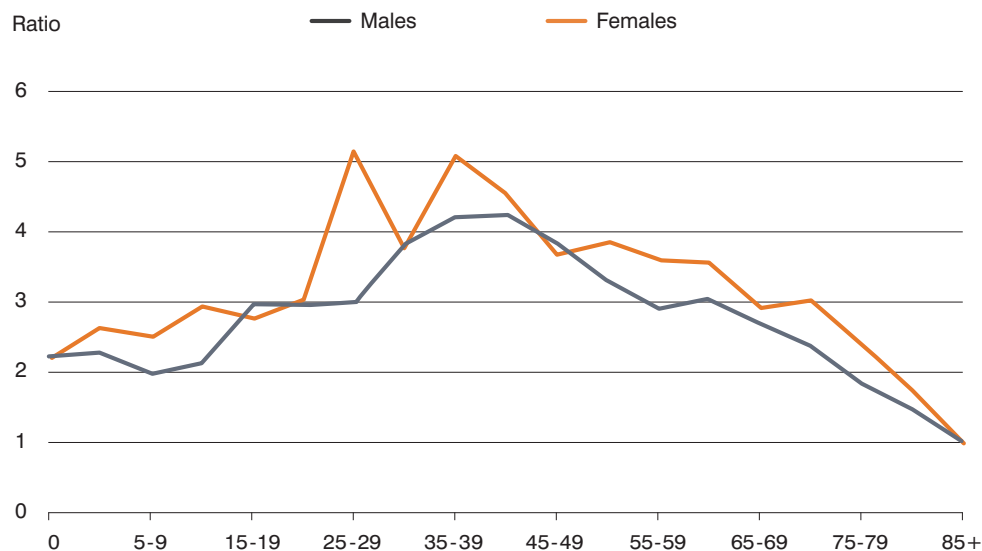
The Australian Bureau of Statistics Life Tables Aboriginal and Torres Strait Islander Australians indicate Indigenous children born 2010 to 2012 on average can expect to live until 69.1 (male) to 73.7 (females) years.<sup>21</sup>

These are **period life expectancy** estimates and do not factor in future improvements in health and mortality rates. These figures indicate that Aboriginal and Torres Strait Islander people live around a decade less than non-Indigenous Australians.

A number of factors are behind the gap in life expectancy. These include:

- **Higher mortality from disease:** Indigenous people experience higher mortality from many diseases, including cardio-vascular, diabetes, kidney and liver failure and cancer

Figure 9 **Mortality rates among Indigenous and non-Indigenous Australians (2010-12)**



Source: ABS, *Life Tables for Aboriginal and Torres Strait Islander Australians 2010-2012*, 3302.0.55.003, 2013.

- **Higher infant mortality:** Indigenous infant mortality rates are still nearly twice that of non-Indigenous. This gap has fallen considerably over the last 20 years.<sup>22</sup>
- **Higher smoking rates:** Indigenous Australians smoke at two to three times the rate of non-Indigenous people
- **Deaths of younger people:** The largest differences in mortality rates for Indigenous and non-Indigenous people are in the 35-39 and 40-44 age groups (for males) and the 25-59 and 35-39-year age groups for women. In these age groups there are significant spikes in death rates with mortality rates over four times higher for males and five times higher for females. (Figure 9) These spikes likely reflect the higher rates of death due to violence, misadventure, alcohol and drug abuse and suicide.

A significant cause of the gap between Indigenous and non-Indigenous life expectancy is poverty and socio-economic disadvantage and the social instability and dysfunction that inevitably accompanies that. Closing the gap in education and unemployment and addressing chronic inter-generational welfare dependence are key to improving Indigenous life expectancies, in particular in reducing the spikes of deaths of people under 45.

We would expect that if the data on Indigenous life expectancies were broken down by socio-economic status that it would show higher life expectancies for Indigenous people who are educated, in employment and living in communities which have high levels of social stability. However it's not possible to test this hypothesis against the available data.

## Box 6

### Estimating life expectancy

Life expectancy can be measured in two ways.

#### Period life expectancy:

- Period life expectancy estimates life expectancy as the average age a person is likely to live to assuming current age-specific mortality rates are experienced through their lifetime. This method assumes no further medical improvements to prolong life during those lifetimes.

#### Cohort life expectancy:

- Cohort life expectancy estimates life expectancy as the average age a person is likely to live to having regard to assumed improvements in mortality rates over their lifetimes. It is a more realistic estimate of the actual life expectancy that will occur.

Cohort life expectancies are higher than period life expectancies.

	Period method		Cohort method	
	Male	Female	Male	Female
<b>Life expectancy at birth</b>	80.4	84.5	91.5	93.6

Source: ABS, *Life tables, states, territories and Australia 2013-2015*, 3302.0.55.001, 2016; Commonwealth of Australia, *2015 Intergenerational Report – Australia in 2055*, March 2015.

The cohort method provides more useful and realistic data when looking at population projections and future demographics. However, even cohort life expectancy estimates can't anticipate all improvements in life expectancy that might happen, especially over several decades and beyond. The past 40 years, in particular, have seen dramatic leaps in medical technology and health care including in fields impacting older people such as cardiac medicine and oncology. These kinds of step changes in medical capabilities are not foreshadowed in cohort life expectancies.

The official Life Tables published by the Australian Bureau Statistics use the period method. The ABS produces separate period method Life Tables for Aboriginal & Torres Strait Islander people. The ABS uses cohort method estimates as inputs into its Population Projections but these are not the official estimates. Treasury's *2015 Intergenerational Report – Australia to 2055* now uses cohort method estimates. However, it does not identify the differences of Indigenous and non-Indigenous life expectancies under the cohort method.

# Endnotes

- <sup>1</sup> J Donovan and C Benko, 'AT&T's talent overhaul', *Harvard Business Review*, October 2016.
- <sup>2</sup> D Kedmey, '1 in 3 Americans work on a freelance basis', *Time*, 5 September 2014; M Kaufman, 'Five reasons half of you will be freelancers in 2020', *Forbes*, 28 February 2014.
- <sup>3</sup> Centre for Economic and Business Research, *The CEBR-FSB Employment Costs Index Report for the Federation of Small Businesses*, September 2014; C Campbell, 'The game industry's disposable workers', *Polygon*, 19 December 2016.
- <sup>4</sup> Office of the Chief Scientist, *Science, Technology, Engineering and Mathematics: Australia's future*, Australian Government, 2014.
- <sup>5</sup> Australian Bureau of Statistics, *Estimates and Projections, Aboriginal and Torres Strait Islander Australians 2001 to 2026*, 3238.0, 2014.
- <sup>6</sup> World Bank Open Data, Population Growth (annual %), online database.
- <sup>7</sup> Commonwealth of Australia, *Pivot North Inquiry into the Development of Northern Australia – Final Report*, Joint Select Committee on Northern Australia, 2014.
- <sup>8</sup> Commonwealth of Australia, *Our North, Our Future: White Paper on Developing Northern Australia*, 2015.
- <sup>9</sup> Commonwealth of Australia, *Pivot North Inquiry into the Development of Northern Australia – Final Report*, 2014.
- <sup>10</sup> K Loussikian, 'Move to boost number of indigenous accountants', *The Australian*, 2 September 2015; K Walsh, 'Indigenous lawyers on rise at top tiers', *Australian Financial Review*, 9 July 2015; Australian Indigenous Doctors Association, 'Twice as many Indigenous doctors', media release, 8 October 2014; A Rollins, 'Indigenous Doctors Double', *Australian Medical Association*, 28 October 2014; Indigenous Accountants Australia, [website](#).
- <sup>11</sup> Australian Government, Department of Education and Training, database: Selected Higher Education Statistics – 2015 Student data; Table 2.9: All Domestic Students by State, Higher Education Institution and Broad Field of Education, Full Year 2015; Table 6.1: Commencing and All Indigenous Students by Level of Course and Broad Field of Education, Full Year 2015.
- <sup>12</sup> Commonwealth of Australia, *Closing the Gap Prime Minister's Report 2016*, 2016. Data is for Semester 1 2016 for all states and territories other than New South Wales.
- <sup>13</sup> Commonwealth of Australia, *Pivot North Inquiry into the Development of Northern Australia – Final Report*, Joint Select Committee on Northern Australia, 2014.
- <sup>14</sup> United Nations, Department of Economic and Social Affairs, Population Division (2017). *World Population Prospects: The 2017 Revision*, DVD Edition. File MORT/7-1: Life expectancy at birth (both sexes combined) by region, subregion and country, 1950-2100 (years). Data shows the average number of years of life expected by a hypothetical cohort of individuals who would be subject during all their lives to the mortality rates of a given period, expressed as years.
- <sup>15</sup> Excluding Special Administrative Regions of China Hong Kong and China Macao.
- <sup>16</sup> Australian Bureau of Statistics, *Life Tables, States, Territories and Australia, 2013-2015*, 3302.0.55.001.
- <sup>17</sup> Commonwealth of Australia, *2015 Intergenerational Report – Australia in 2055*, March 2015. Table 1.1 Australians' projected life expectancy (years).
- <sup>18</sup> K Christensen, G Doblhammer, R Rau and JW Vaupel, 'Ageing populations: the challenges ahead', *The Lancet*, Volume 374, No. 9696, p 1196-1208, 3 October 2009.
- <sup>19</sup> Australian Institute of Health and Welfare, *Healthy life expectancy in Australia: patterns and trends 1998 to 2012*, Bulletin 126, November 2014.
- <sup>20</sup> Commonwealth of Australia, *2015 Intergenerational Report – Australia in 2055*, March 2015. Table 1.1 Australians' projected life expectancy (years).
- <sup>21</sup> Australian Bureau of Statistics, *Life Tables for Aboriginal and Torres Strait Islander Australians 2010-2012*, 3302.0.55.003, 2013.
- <sup>22</sup> High infant mortality reduces life expectancy averages. For example, in 1881-1890 in Australia life expectancy at birth for males was 47.2 years but life expectancy at aged 15 was 59.5 years. The high rate of infant and childhood deaths from diseases, for example, dragged down the averages. A person who survived to 15 could therefore expect to live longer than their life expectancy as a baby.

# Bibliography

## Books, articles and other publications

A Alexander (editor), *The companion to Tasmanian history*, Centre for Tasmanian Historical Studies, University of Tasmania.

A Rollins, 'Indigenous doctors double', Australian Medical Association, 28 October 2014.

Australian Government, *About Australia*, online publication, viewed September 2017.

Australian Indigenous Doctors Association, 'Twice as many Indigenous doctors', 8 October 2014.

C Campbell, 'The game industry's disposable workers', Polygon, 19 December 2016.

Centre for Economic and Business Research, *The CEBR-FSB Employment Costs Index report for the Federation of Small Businesses*, September 2014.

D Kedmey, '1 in 3 Americans work on a freelance basis', *Time*, 5 September 2014.

Deloitte Touche Tohmatsu, *Building the Lucky Country: Where is your next worker?*, 2012.

J Donovan and C Benko, 'AT&T's talent overhaul', *Harvard Business Review*, October 2016.

L Gratton, *The shift: The future of work is already here*, HarperCollins, 2011.

James Cook University, *State of the Tropics 2014 report*, 2014.

K Christensen, G Doblhammer, R Rau and JW Vaupel, 'Ageing populations: the challenges ahead', *The Lancet*, Volume 374, No. 9696, p. 1196-1208, 3 October 2009.

K Loussikian, 'Move to boost number of indigenous accountants', *The Australian*, 2 September 2015.

K Walsh, 'Indigenous lawyers on rise at top tiers', *Australian Financial Review*, 9 July 2015.

M Kaufman, 'Five reasons half of you will be freelancers in 2020', *Forbes*, 28 February 2014.

## Australian Government publications

Australian Institute of Health and Welfare, *Healthy life expectancy in Australia: patterns and trends 1998 to 2012*, Bulletin 126, November 2014.

Australian Law Reform Commission, *Connection to Country: Review of the Native Title Act 1993 (Cth) Final Report*, April 2015.

Commonwealth of Australia, *2015 Intergenerational report – Australia in 2055*, March 2015.

Commonwealth of Australia, *Closing the Gap Prime Minister's report 2016*, 2016.

Commonwealth of Australia, *Our North, Our Future: White Paper on Developing Northern Australia*, 2015.

Joint Select Committee on Northern Australia, *Pivot North Inquiry into the Development of Northern Australia – Final Report*, 2014.

Office of the Chief Scientist, *Science, Technology, Engineering, Mathematics: Australia's future*, 2014.

## Australian Bureau of Statistics publications

ABS, *Australian Historical Population Statistics 2014*, 3105.0.65.001, 2014.

ABS, *Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026*, 3238.0, 2014.

ABS, *Estimates of Aboriginal and Torres Strait Islander Australians June 2011*, 3238.0.55.001, 2013.

ABS, *Life Tables, States, Territories and Australia 2013-2015*, 3302.0.55.001, 2016.

ABS, *Life Tables for Aboriginal and Torres Strait Islander Australians 2010-2012*, 3302.0.55.003 2013.

ABS, *Population Projections, Australia, 2012 to 2101*, 3222.0, 2013.

*Note: 2016 Census data was not available at the time of completion of this report.*

## Databases

World Bank Open Data, *Population Growth (annual %)*

Australian Government, Department of Education and Training, *Selected Higher Education Statistics – 2015 Student data*. Table 2.9: All Domestic Students by State, Higher Education Institution and Broad Field of Education, 2015; Table 6.1: Commencing and All Indigenous Students by Level of Course and Broad Field of Education, 2015.

United Nations, Department of Economic and Social Affairs, Population Division (2017). *World Population Prospects: The 2017 Revision*, DVD Edition. File MORT/7-1: Life expectancy at birth (both sexes combined) by region, subregion and country, 1950-2100 (years).



## About the authors



### Nyunggai Warren Mundine AO

Nyunggai Warren Mundine AO is a highly respected and influential businessman, political strategist and advocate for empowering the First Nations of Australia to build businesses and sustainable economies. His life and career have been shaped by a personal commitment to community and economic development. He has nearly 40 years of experience working in the public, private and community sectors. He is the Chairman and Managing Director of Nyungga Black Group.

Warren's appointment as Chairman of the Prime Minister's Indigenous Advisory Council from 2013 to 2017 followed a long career in the public, business, policy, arts and community sectors. He is a former National President of the Australian Labor Party, Deputy Mayor and Councillor of Dubbo City Council, Commissioner of the NSW Local Government Grants Commission and President of the NSW Local Government Aboriginal Network. He also served on Prime Minister John Howard's National Indigenous Council. In 2016 he was appointed Chairman of the South Australian Government's Expert Panel on Reducing Reoffending.

Warren's previous executive roles include CEO of NTSCORP Ltd, CEO & Executive Chairman of Generation One, Land & Culture Manager of AGL Pipelines Pty. Ltd. and Co-ordinator of Northern Tablelands Regional Aboriginal Land Council. Warren has chaired several organisations and is currently Chairman of the Australian Indigenous Education Foundation, Australian Indigenous Chamber of Commerce and NAISDA Foundation. He is a Governor of the Committee for the Economic Development of Australia (CEDA) and a member of the NFP Chairs Forum of the Australian Institute of Company Directors.

Warren sits on advisory boards for Delaware North, Aligned Resources Group and the UTS Australia China Relations Institute and chairs the RISE Ventures advisory board. He is Chairman of the Board of the Waanyi ReGen Joint Venture. He is an Ambassador for White Ribbon Foundation, The Song Room and International Grammar. Warren is a regular opinion contributor to major Australian and Indigenous newspapers including *The Australian*, *Australian Financial Review*, *Daily Telegraph*, *Herald Sun* and *Courier Mail* and the *Koori Mail*. He appears regularly on Sky News and ABC television and radio. He is in high demand for public addresses and appearances.

Warren has received recognition for his contribution and commitment to Australia. In 2016 he was made an Officer of the Order of Australia. He has Honorary Life Membership of the NSW Local Government Aboriginal Network, was awarded the Centenary Medal for services to the community and local government and received the Bennelong Medal for Leadership in Indigenous Affairs. In 2012 he was made an Alan McGregor Fellow of the Centre for Independent Studies. In 2009 Warren was awarded a Doctor of the University (honoris causa) from Southern Cross University for services to the community, business and local government.

Warren is a member of the Bundjalung First Nation of Australia and a descendant of the Gumbaynggirr and Yuin First Nations of Australia.



## Elizabeth Henderson

Elizabeth Henderson is Executive Director of Loquemur, a boutique strategic advisory and management consulting firm, experienced in business transformation, cultural and workplace change, negotiation and communications. Loquemur particularly specialises in providing strategic, commercial and practical advice to new and growing businesses, helping them to establish and grow and advising on end-to-end business plan development and execution.

Elizabeth is an executive and professional with around 20 years of experience in the banking and financial services and professional sectors and nearly a decade's direct experience working with Australian Indigenous organisations focused on commercial and economic development.

Elizabeth was a senior manager and commercial director at Westpac, one of Australia's largest financial institutions, for over seven years, working in a range of senior roles within the bank, including as Director of Strategic Sourcing, Chief of Staff to the Chief Operating Officer and Director of WorkSMART, one of Westpac's largest organisational and cultural change programs. WorkSMART introduced new ways of working for over 15,000 employees in conjunction with moves to new corporate premises in Sydney, Melbourne and Brisbane. WorkSMART was recognised in the Australian HR Awards 2015, winner of the Best HR Strategic Plan award and finalist in the Best Change Management Strategy & Best Workplace Flexibility Program awards. Elizabeth led the design, strategy and integrated rollout of WorkSMART across the Westpac Group, delivering the execution of the program as well the vision and strategy underpinning it and also

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Elizabeth has also worked in the investment banking sector and as a Senior Associate at Freehills (now Herbert Smith Freehills) one of Australia's largest law firms.

Elizabeth is a director of the Australian Indigenous Chamber of Commerce and manages its Yaabubiin Institute for Disruptive Thinking. She is also Chair of the Advisory Board of Nyungga Black Group Pty Ltd. She is a former director of NTS Corp Limited.

She is active in the not-for profit sector including for Sydney's Royal Hospital for Women Foundation where she co-founded the Foundation's Annual Dinner, one of the leading corporate dinners and most successful fundraising events in Australia, which the *Australian Financial Review's* Rear Window described as 'a bit of an institution for those still in Australia during the colder months'.







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