



FACTSheet

#10, February 2017

Indicates no change from FACTSheet #9 September 2016

Indicates an increase from FACTSheet #9 September 2016

Indicates a decrease from FACTSheet #9 September 2016

- Indicates newly released or incomparable data

Introduction	1
The economy	1
Gross state product	1
Real expenditure on GSP	1
Industry sectors	1
Population growth	1
Labour market	2
Industry sector employment	2
Commodity prices	2
Business investment	2
Investment in resource projects	2
Minerals & petroleum sales	2
Major agriculture production	3
Merchandise exports	3
Major trading partners: 2015	3
Agriculture and food exports	3
Services exports	3
Iron ore & steel product prices	3
Major global iron ore producers	3
Major iron ore export markets	4
Iron ore sales	4
Iron ore sales and price outlook	4
Petroleum prices	4
Major global LNG exporters	4
Natural gas resources by basin	4
LNG sales	4
LNG sales, capacity & oil price	5
Gold sales	5
Crude oil and condensate sales	5
Alumina sales	5
Economic news	5
WA's construction industry	6
Reforming and Reshaping	7
Lifestyle	11
Knowledge and innovation	13
References	15

Introduction

This latest FACTSheet produced by the Committee for Perth contains a snapshot of key facts relating to the current performance of Perth and Western Australia.

It draws on data from a range of sources including FACTBase reports, Committee for Perth research, government departments and media sources.

The economy¹

Gross state product

- Western Australia's **gross state product (GSP)** was **\$240 billion** in 2015-16, 15% of Australia's gross domestic product (GDP). **GSP per capita** was **\$92,056**, 33% above the national average of \$69,134.
- Real GSP rose 1.9%** in 2015-16, below annual average growth of 5.0% over the past ten years.
- The WA Government Budget forecasts **real GSP growth of 1.25%** in 2016-17.
- Australia's real GDP rose 2.8%** in 2015-16 and the Australian Government Budget forecasts growth of 2.5% in 2016-17.

Real expenditure on GSP²

- Merchandise exports made the largest contribution to real GSP growth in 2015-16, up 6%**, in line with annual average

growth of 6% over the past ten years.

- Real business investment fell 17%** in 2015-16, compared with annual average growth of 6% over the past ten years.
- The WA Government Budget forecasts **real merchandise exports to rise 5.5%** and business investment to fall 19% in 2016-17.
- Mining was the largest industry** contributing to real GSP growth in 2015-16, **up 7%**.

Industry sectors³

- The **mining industry** accounted for 23% of Western Australia's GSP and 55% of Australia's mining gross value added in 2015-16.
- Mining industry gross value added, fell 15%** to \$54.9 billion in 2015-16, despite a 7% rise in volumes.
- Construction gross value added, fell 1%** to \$31.3 billion and volumes fell 3% in 2015-16.
- Agriculture, forestry and fishing, gross value added, fell 0.1%** to \$5.5 billion and volumes fell 4% in 2015-16.

Population growth⁴

- Western Australia's **population was 2.62 million** in the June quarter 2016, 11% of the national population.
- The 2015 WA Tomorrow report forecasts a population of 3.27 million by 2026.

↓ Population rose 1.0% or 27,137 people in 2015-16, below annual average growth of 2.5% over the past 10 years.

↑ Natural increase of 21,200 people and net overseas migration up 13,640, offset falling net interstate migration, down 7,703 in 2015-16.

↑ The WA Government Budget forecasts annual average population growth of 1.3% in 2016-17.

- Western Australia's estimated resident population grew by 1.2% for the year to March 2016. This is comparable to Victoria (1.9%), Queensland (1.3%) and New South Wales (1.4%). The seasonally adjusted participation rate in Western Australia increased to 67.2% in October 2016.

Labour market⁵

↑ WA's jobless rate was 6.5%, down from 6.6% in December, the highest in the country. The overall national rate was 5.7%.

↑ Western Australia's employment rate rose by 7,400 to 1.34 million in November 2016.

↓ Employment fell 0.2% or 3,200 through the year to November 2016, compared with Australia's growth of 0.7% or 84,900.

↑ The WA Government Budget forecasts annual average employment growth of 0.25% in 2016-17, with an average unemployment rate of 6.75%.

Industry sector employment⁶

- In 2015-16, Western Australia's employment comprised market services

at 47%, non-market services 24%, construction 10%, mining 8%, manufacturing 7%, agriculture, forestry and fishing 2% and utilities 1%.

↓ Total employment fell 1% or 11,000 people to 1.36 million in 2015-16, non-market services were down 17,500 or 5%, construction was down 14,400 or 9% and market services were down 4,300 or 1%.

↑ Employment rose in mining, up 18,200 or 19%, manufacturing was up 2,800 or 3%, agriculture, forestry and fishing up 2,200 or 8% and utilities up 2,000 or 13% in 2015-16

Commodity prices and exchange rate⁷

↑ The Reserve Bank of Australia's (RBA's) monthly index of non-rural commodity prices rose 12% in November 2016.

↓ The annual index fell 21% in 2015-16, down 24% in 2015. The RBA's monthly index of rural commodity prices rose 0.3% in November 2016. The annual index fell 9% in 2015-16, down 6% in 2015.

↓ The monthly average \$A exchange rate fell 2% to US74.7 cents in November 2016. The annual average \$A exchange rate fell 12% to US72.7 cents in 2015-16, down 17% to US74.6 cents in 2015 and is forecast by the WA Government Budget to be US75.7 cents in 2016-17.

Business investment⁸

↓ Business investment contributed 22% of Western Australia's GSP in 2015-16.

↓ Western Australia contributed 24% of Australia's business investment in 2015-16 it was 25% in 2015.

↓ Nominal business investment fell 16% to \$52.7

billion in 2015-16. It fell 12% to \$9.6 billion in the September quarter 2016.

↓ Mining new capital expenditure fell 23% to \$35.2 billion in 2015-16. Mining accounted for 82% of Western Australia's private new capital expenditure and 66% of Australia's mining investment.

↓ Mining new capital expenditure fell 16% to \$5.9 billion in the September quarter 2016.

Investment in major resource projects: September 2016⁹

➡ In October 2015, Western Australia accounted for 56% of the value of Australia's major resource projects under construction or committed.

↑ In September 2016, there was \$96.9 billion of major resource projects under construction or committed in Western Australia and \$46.1 billion under consideration.

↑ There was \$88.9 billion of LNG projects under construction or committed and \$19.5 billion under consideration.

↑ There was \$2.3 billion of iron ore projects under construction or committed and \$10.9 billion under consideration.

Major minerals and petroleum sales¹⁰

↑ Minerals and petroleum accounted for 92% or \$91.6b of Western Australia's merchandise exports in 2015-16.

↓ Minerals and petroleum sales fell 12% to \$87.9 billion in 2015-16.

- Iron ore accounted for 55% or \$48.4b of Western Australia's minerals and

petroleum sales in 2015-16, followed by LNG (12% or \$10.8b), gold (11% or \$10.0b), crude oil and condensate (6% or \$5.4b), alumina (6% or \$4.9b), nickel (2% or \$2.2b), base metals (2% or \$1.4b) and heavy mineral sands (1% or \$539m).

Major agriculture production¹¹

- ➔ Western Australia's agricultural commodity production fell 8% to \$7.9 billion in 2014-15.
- ➔ Production fell for wheat (down 17% or \$545m), canola (down 18% or \$194m), barley (down 11% or \$109m) and wool (down 7% or \$41m) in 2014-15.
- ➔ Production rose for cattle and calves (up 13% or \$76m) and sheep and lambs (up 17% or \$69m) in 2014-15.

Merchandise exports¹²

- ➔ Exports of goods and services accounted for 46% of Western Australia's GSP in 2015-16. Merchandise exports accounted for 43% of GSP while services exports accounted for 3% of GSP.
- ➔ The value of merchandise exports fell 10% to \$99.7 billion in 2015-16.
- ➔ Merchandise exports in 2015-16 were mainly iron ore (50%), gold (16%), petroleum – LNG, crude oil, condensate and LPG (15%) and alumina (5%).

Major trading partners 2015¹³

- ➔ Western Australia accounted for 41% of Australia's merchandise exports in 2015-16, it was also 41% in 2015, including

large shares of national exports to China (64%), Japan (40%) and Korea (37%).

- ➔ China was Western Australia's largest export market in 2015-16 (\$48.2b or 48%), followed by Japan (\$14.2b or 14%).
- ➔ Western Australia's exports fell to China, down 2% or \$868m and Japan, down 32% or \$6.7b in 2015-16.
- ➔ In the September quarter 2016, Western Australia's exports rose to China, up 3% to \$12.7 billion and Japan, up 35% to \$3.6 billion.
- ➔ China was Western Australia's largest source of imports in 2015-16 (\$4.8b or 14%), followed by Japan (\$2.8b or 8%)

Agricultural and food exports¹⁴

- ➔ Western Australia's agricultural and food exports rose 3% to \$7.8 billion in 2014-15, including wheat (38%), barley (13%), canola (10%), wool (6%) and rock lobster (6%).
- ➔ Wheat exports rose 6% to \$3 billion in 2014-15, in line with annual average growth of 6% over the past ten years.
 - Major agricultural and food export markets in 2014-15 were China (22%), Indonesia (14%), Vietnam (9%), Japan (9%) and Korea (6%).
- ➔ Agricultural and food exports to China rose 23.5% to \$1.7 billion in 2014-15

Services exports¹⁵

- ➔ Western Australia contributed 10% of Australia's services exports in 2015-16, it was also 10% in 2015.
- ➔ Services exports rose 4% to \$6.6 billion in 2015-16, below annual average growth of 5% over the past ten years.

- ➔ Services exports in 2015-16 included personal travel (30%), education travel (21%), transport (16%), property and business services (15%) and business travel (10%).
- Services exports growth in 2015-16 came mainly from increases in personal travel (up 10%) and education travel (up 8%). Business travel fell 14% in 2015-16.

Iron ore and steel product prices¹⁶

- Iron ore and steel prices are closely related given iron ore accounts for around half of the cost of producing steel at current prices. Around 1.4 tonnes of iron ore is required to produce a tonne of crude steel.
- ➔ The monthly average price of iron ore rose 24% to US\$73.0 a tonne in November 2016. The annual average price fell 28% to US\$51.6 a tonne in 2015-16, down 42% to US\$55.8 a tonne in 2015.
- ➔ The monthly average price of steel products rose 12% in November 2016. The annual average price fell 21% in 2015-16, down 27% in 2015.

Major global iron ore producers: 2015¹⁷

- ➔ Western Australia is the world's largest iron ore producer, accounting for 37% of world production and 52% of world seaborne exports in 2015.
- ➔ Western Australia accounted for 27% of global crude iron ore reserves in 2015.
- ➔ Western Australia had an estimated 63 billion tonnes of iron ore reserves in 2015-16, which could sustain its iron ore industry for

another 76 years at current production rates.

Major iron ore export markets¹⁸

- In 2015, Western Australia accounted for more than half of the iron ore imports to China (64% or 612mt), Japan (54% or 71mt), Korea (71% or 52mt) and Taiwan (59% or 15mt).

↑ China made up 82% of Western Australia's iron ore export volumes in 2015-16, followed by Japan (9%), Korea (6%) and Taiwan (2%).

↓ Western Australia's iron ore exports to China rose 8% to 633 million tonnes in 2015-16, below annual average growth of 18% over the past ten years.

↑ Western Australia's iron ore exports fell to Japan, down 2% to 73mt, Korea, down 3% to 50mt and Taiwan, down 6% to 15mt in 2015-16.

Iron ore sales¹⁹

↓ The value of Western Australia's iron ore sales fell 11% to \$48.4 billion in 2015-16, compared with annual average growth of 14% over the past 10 years.

↓ The volume of iron ore sales rose 5% to 757 million tonnes in 2015-16, below annual average growth of 12% over the past ten years.

↓ The annual average price of iron ore sales fell 15% to A\$64.0 a tonne in 2015-16.

Iron ore sales and price outlook²⁰

→ The WA Government Budget forecasts a rise in Western Australia's iron ore sales to 817 million tonnes by 2019-20.

- CITIC Pacific's Sino Iron (28mtpa) and Hancock

Prospecting's Roy Hill (55mtpa) projects are ramping up production.

- Rio Tinto is developing Yandicoogina/Oxbow, West Angelas F, Silvergrass and Nammuldi deposits (over 40mtpa), and proposing to develop the Koodaideri deposit (40mtpa) by 2021, to utilise newly installed infrastructure.
- BHP Billiton is ramping up the Jumblebar mine and optimising its supply chain to raise output. It is proposing to develop the South Flank deposit to replace Yandi mine production by 2021 (80mtpa).
- FMG needs to replace Firetail mine production by 2021 (23mtpa).
- The WA Government Budget forecasts an annual average price of iron ore of US\$47.7 a tonne in 2016-17, recovering to US\$54.0 a tonne by 2019-20.

Petroleum prices²¹

- The monthly average price of West Texas Intermediate (WTI) crude oil fell 9% to US\$45.6 a barrel in November 2016. The annual average price fell 40% to US\$41.8 a barrel in 2015-16, down 48% to US\$48.7 a barrel in 2015.

↓ The monthly average price of LNG imported by Japan was US\$7.2 a million British thermal unit in November 2016. The annual average price fell 41% to US\$8.0 a million British thermal unit in 2015-16, down 35% to US\$10.4 a million British thermal unit in 2015.

Major global LNG exporters: 2015²²

→ Western Australia is the world's third largest LNG exporter behind Qatar

(78.4mt) and Malaysia (25.0mt), accounting for 8% (20.4mt) of global LNG exports of 245 million tonnes in 2015.

→ The rest of Australia, excluding Western Australia, exported 9.1 million tonnes of LNG in 2015.

- According to EnergyQuest, 72% (4.6mt) of Western Australia's LNG exports went to Japan in the September quarter 2016, followed by China (18% or 1.2mt), India (7% or 0.4mt), Taiwan (2% or 0.1mt) and Korea (1% or 0.1mt).

Natural gas resources by basin (trillion cubic feet): November 2016²³

- Australia accounted for 2% of global natural gas reserves in 2015, with 60% of the reserves in offshore and onshore western and northern Australia.
- In November 2016, EnergyQuest estimated Western and Northern Australia had 72 trillion cubic feet of conventional natural gas reserves.
- Current natural gas reserves could sustain Western Australia's LNG and domestic gas industries for another 42 years at current production rates. However, Western Australia's LNG production will more than double over the next few years, reducing the reserve life to around 21 years.

LNG sales²⁴

↓ The value of Western Australia's LNG sales fell 22% to \$10.8 billion in 2015-16, compared with annual average growth of 9% over the past ten years.

↑ The volume of LNG sales rose 2.5% to 21.0 million

tonnes in 2015-16, below annual average growth of 6% over the past ten years.

↓ The annual average price of LNG sales fell 24% to A\$9.9 a million British thermal units in 2015-16.

LNG sales, capacity and oil price outlook²⁵

↑ The WA Department of State Development expects Western Australia's LNG production capacity to grow from 27 million tonnes a year in 2015-16 to 49.9 million tonnes a year in 2018-19, when the Gorgon, Wheatstone and Prelude projects are complete.

↑ The WA Government Budget forecasts the annual average price of West Texas Intermediate (WTI) crude oil will rise to US\$44.4 a barrel in 2016-17 and recover further to US\$50.9 a barrel by 2019-20.

Gold sales²⁶

↓ The monthly average price of gold fell 2% to US\$1,238 an ounce in November 2016. The annual average price fell 4.5% to US\$1,168 an ounce in 2015-16, down 8% to US\$1,161 an ounce in 2015.

↑ The value of Western Australia's gold sales rose 10% to \$10.0 billion in 2015-16, below annual average growth of 10.5% over the past 10 years.

↑ The volume of gold sales rose 1% to 195 tonnes in 2015-16, below annual average growth of 2% over the past 10 years.

↑ The annual average price of gold sales rose 9% to A\$1,460 an ounce in 2015-16.

Crude oil and condensate sales²⁷

↓ The value of Western Australia's crude oil and condensate sales fell 32% to \$5.4 billion in 2015-16, compared with annual average decline of 5% over the past ten years.

↓ The volume of crude oil and condensate sales fell 1% to 14.5 gegalitres in 2015-16, compared with annual average decline of 1.5% over the past ten years.

↓ The annual average price of crude oil and condensate sales fell 31% to A\$59.8 a barrel in 2015-16.

Alumina sales²⁸

↑ The monthly average price of aluminium rose 4% to US\$1,737 a tonne in November 2016. The annual average price fell 18% to US\$1,543 a tonne in 2015-16, down 11% to US\$1,665 a tonne in 2015.

↓ The value of Western Australia's alumina sales fell 2% to \$4.9 billion in 2015-16, compared with annual average growth of 2% over the past ten years.

→ The volume of alumina sales rose 1% to 14 million tonnes in 2015-16, below annual average growth of 2% over the past ten years.

↓ The annual average price of alumina sales fell 3% to A\$354 a tonne in 2015-16.

Economic news

- Western Australia fell to last spot in the CommSec State of the States ranking in October, as the end of the mining boom continues to hit the State's economy hard. Two years ago WA was at the top of the State economy ranking, but has steadily dropped since then, to finally fall to

last spot behind Tasmania and Queensland. The report takes into account eight key indicators: economic growth, retail spending, equipment investment, unemployment, construction work done, population growth, housing finance and dwelling commencements.³⁰

- Interest paid to service WA's ballooning debt is the fastest growing expense in the State Budget. The December mid-year update of State finances showed interest costs incurred by the general government sector, excluding corporations such as utilities were forecast to double between 2015-16 and 2019-20. Net interest expenses, which include the cost of borrowings as well as the income earned from loans made by the government, will reach \$943 million by the final budget out-year.³³
- External administrations in Western Australia were up more than 12% over the year to September 2016 according to the latest figures from ASIC. The trend was more pronounced during the three months to September 2016, with insolvencies up 14% on the precious quarter from 228 to 260.³⁷
- Retail sales have remained stagnant for two years in Western Australia, down 0.6% in November, to \$2.82 billion. Year on year, WA sales were 0.6% higher at \$33.9 billion.³⁷
- The State's economic downturn is hitting households hard with more than one in 10 customers needing more time to pay their electricity bill. The Economic Regulation Authority report showed that payment extensions rose to 11% in the 12 months to June 30 last year

compared with 8.7% in 2014-15.³³

- West Australians have turned to personal debt agreements rather than fully-fledged bankruptcy. Government statistics released in January show total personal insolvencies across Australia rose for the seventh year in a row, increasing by 0.9% in the December quarter compared to the same time last year. **Western Australia drove the increase with personal insolvencies surging 26.2% to 824 people.** Personal debt agreements were up almost 30% compared to the same time last year, bankruptcies rose 15.7%.⁴⁰
- **Higher fuel and domestic holiday travel have contributed to a 0.4% rise in Perth prices** in the December quarter. For the year, inflation was also 0.4%, as prices barely recovered from a significant deflation in the March quarter.³⁷

Western Australia's construction Industry³¹

- ↓ **The construction industry currently employs more than 10.4%** (annualised) of the overall State workforce. Compared to August 2015, at the end of August 2016 (annualised), there was a **30.5% decrease in construction apprentice commencements** and also a decrease of 19.5% in electrical apprentice commencements a combined decrease of 26.5%.
- ↓ There are **currently 4,021 building trades apprentices 'in training'** as at the end of August 2016. Together with electrical trade apprentices, there are 7,735 apprentices in training. Almost all trades show a

sound improvement since 2012, while the 'wet trades' have had a significant gain. The overall combined performances of 16.0% and 4.2% respectively still indicate a healthy rise since 2012.

- As at August 2016, **the industry employed 48% of all Western Australia's, apprentices,** building trades and electricians combined.
- It is estimated that more than **17,000 construction industry employees are working on resource construction projects.** This is a significant reduction from the 29,000 estimated to be employed in that sector in 2013.
- ↓ There are **currently 76 females undertaking an apprenticeship** in the industry. Over the past 10 years, the overall proportion of female apprentices in construction has risen from 1.3% to 1.9%.
- ↑ There are **currently 82 females undertaking a traineeship which is an increase from 3.5% to 11.5%** of total trainees over the past 10 years, with an increase of 215.0% in the actual numbers over the past two years. It is believed that one factor is the increased promotion of 'women in trades' subsidies and scholarships. Another factor is the concerted efforts by the civil construction sector to employ young women.
- ↓ There are currently **159 Aboriginal and Torres Strait Islanders undertaking an apprenticeship** in the industry. Over the past 10 years the overall proportion of ATSI apprentices has risen from 2.7% to 4.0% which remains indicative of the number of ATSI people in the general population. Currently there are 52 Aboriginal and Torres Strait

Islanders undertaking a traineeship, which represents approximately 7.3% of all building and construction trainees. This figure represents a concerted effort to recruit Aboriginal and Torres Strait Islanders by the civil construction sector.

- ↓ There are **currently 866 trainees in training,** primarily in the Civil Construction sector. Including the Civil Construction Supervisor Level 4 qualification, there has been an overall 84% increase since the 2009 figure of 470 trainees 'in training'.
- ↓ The **value of residential and non-residential construction work, excluding heavy engineering, in the year to September 2016 decreased by 11.0%** compared to September 2015. The engineering construction sector, excluding heavy engineering, decreased by 32.3%, in Western Australia between June 2015 and June 2016.
- ↓ The housing sector has declined in recent months, with **annual total dwelling unit approvals to September 2016 dropping to 22,683** (16,424 houses), compared to a previous peak of 31,269 (22,568 houses) in September 2015. Seasonally adjusted, **building approvals for total dwelling units increased by 5.5%** between August and September 2016, while building approvals in the July 2016 to September 2016 quarter decreased by 1.5% against the previous quarter.
- ↓ **Trend building approvals in Western Australia decreased by 0.6%** between August 2016 and September 2016 and **fell by 26.8% over the year** (annualised average).
- Seasonally adjusted, dwelling commencements

decreased by 9.6% in the quarter to June 2016; and on an annualised basis, compared to June 2015 figures, commencements decreased by 19.3%.

Reforming and Reshaping

- In January, the opponents of Roe 8 failed in another bid to stop work on the project, with a Federal Court judge knocking back a “weak” application for an injunction. Lawyers for the Save Beelihar Wetlands argued Main Roads WA had not been compliant with a condition to provide offset property for affected Carnaby’s black cockatoos and forest red-tailed black cockatoos. Environment Minister Albert Jacob welcomed the decision saying work would now continue on the project. Opposition Leader Mark McGowan said the Labor party will scrap the Roe 8 project if it wins the State election.³³
- If re-elected, Premier Colin Barnett said a three-kilometre tunnel would be built into Fremantle as part of Roe 9, with construction expected to begin in 2020. The tunnel would run from the Stock and Winterfold Roads intersection in Hilton through to High Street in East Fremantle, and would run beneath homes in Hilton and White Gum Valley. The State Government would commit \$181 million to the \$903 million project, with the remaining 80% provided by the Federal Government.³⁹
- The State Government has announced it will progress a public float of 51% of Western Power, with the proceeds funding investment in schools and TAFE facilities, transport infrastructure, improving the reliability of electricity supplies in country areas and to reduce State debt by about \$8 billion.³⁴
- In September, Bendigo and Adelaide Bank was named as the successful bidder for \$1.35 billion of Keystart’s loan book. The plan to divest up to 40% of the loan book was set out in the May budget as part of the State Government’s asset sales and debt reduction strategy. Keystart is owned by the WA Housing Authority and provides loans to disadvantaged buyers who are unable to meet the deposit requirements of mainstream lenders.³⁰
- Work is underway on Perth’s \$1.96 billion Forrestfield-Airport Link (FAL). FAL will create a vital rail corridor linking Perth’s eastern suburbs to the central business district. FAL is jointly funded by the State Government’s \$1.47 billion and Australian governments \$490 million, 8km of the 8.5km FAL rail line will be underground.³⁴
- The second of three construction contracts for the \$1.12 billion NorthLink WA has been awarded to the Great Northern Connect Team - a joint venture between BGC Contracting Pty Ltd and Laing O’Rourke Australia Construction Pty Ltd. The \$417 million construction contract is for Stage 2 of the project and covers construction of the Central Section of the Swan Valley Bypass between the Reid Highway and Ellenbrook.³²
- \$7.4 million will be spent on improving driver safety and reducing congestion at the notorious crash hot spots, the Marmion Avenue intersections at Hepburn and Whitfords avenue. In the five years to December 2014, there were 249 crashes on Marmion Avenue at the intersections of Whitfords and Hepburn avenues.³²
- 1.9 hectares of land between the Perth and McIver train stations is the proposed site of a \$1.85 billion World Trade Centre after a private sector redevelopment proposal progressed to the Stage Two detailed assessment phase under the State Government’s unsolicited bids policy. The proposal includes the construction of two 36 and 75 level towers, with associated commercial/retail, residential and recreational facilities which will include building above the existing train line. If the project goes ahead, Perth will be connected to 327 other World Trade Centres around the world.³⁴
- The State Government approved the construction of a \$55 million Bus Rapid Transit project to connect the Ellenbrook town centre and Marshall Road. The new rapid bus service is predicted to commence in 2018 with each bus having capacity to transport up to 80 passengers.³²
- In January, the multi-storey car park at Edgewater Station opened. The car park adds more than 560 extra parking bays, taking the total number of bays to 1,454 at the station. On an average weekday, 1,900 passengers board at Edgewater Station.³²
- A high-frequency bus service has been established between Mirrabooka and Curtin University. The 960 bus replaces Routes 885 and 888, and operates an all-stops service between Mirrabooka and Curtin via Alexander Drive, the new Perth Busport and Victoria Park Transfer Station, with

a five-minute frequency between Curtin and ECU Mount Lawley during peak periods.³²

- **The State Government is spending \$330,000 to upgrade bicycle shelters** at nine train stations to create 240 new bike parking spaces on the Mandurah, Armadale, Midland and Fremantle lines. A further 13 upgrades are underway boosting the number of bicycle parking bays at train stations more than 3,100.³²
- The dramatic decline in public transport patronage across the metropolitan area has plummeted to a five-year low. The latest data shows there were about **five million fewer journeys taken on Perth's buses and trains last year**, compared with 2015. Train patronage fell by 2.9 million journeys (or 4.7%) and bus patronage by 2.6 million (3.2%). There were 4,588,810 journeys on Perth trains in December — the lowest in seven years. The biggest falls were on Perth's three heritage train lines, with the Armadale line recording more than one million fewer journeys across the year — an 11.8 per cent fall.³³
- **Countdown timers will be installed at another 23 intersections across Perth**, taking the total number to 40. The timers replace the 'flashing red man' at traffic signals and let pedestrians know exactly how many seconds are left to cross the road.³²
- **Construction has started on a new \$400 million lithium processing plant in Kwinana**. Global demand for lithium is rising due its use in renewable energy storage and electric car batteries. Lithium is also used in the glass and ceramics industry.³²
- **Elizabeth Quay land sales are expected to top \$300 million**, almost double the State Government's initial \$170

million projection, with three offers on the last plot. Any one of the three bids for the 4486sqm Lot 4 on the corner of The Esplanade and William Street would take land sales past \$300 million, offsetting the Government's \$440 million investment.³³

- Subject to development approval, **construction of the new Elizabeth Quay's next premier hotel, residential and commercial buildings is expected to start in late 2017**. The design includes two towers comprising about 300 residential and 170 short-stay apartments, a hotel and a range of dining and retail options. The developers CA & Associates is a collaboration between AAIG Pty Ltd led by Victor Goh and the Fini Group.³²
- **Two Perth City Link lots next to the Perth Arena have been sold to Far East Consortium International Ltd to build a 250-room Dorsett Hotel and 350 apartments**. The \$219 million development is the second Perth project for the Hong Kong company who have started work on The Ritz-Carlton hotel and apartments at Elizabeth Quay.³²
- **Not-for-profit association Historic Heart of Perth has received \$250,000 from the State Government to beautify and revitalise the east end of the Perth central business district**. The association, chaired by Western Australian of the Year Adrian Fini OAM, CitWA, aims to improve the vibrancy of the eastern CBD through landscaping, public art and improved lighting. The overall project budget is \$2.1 million.³⁴
- As of January, a **new code of conduct for Western Australia's building and construction industry** was introduced to prevent

anti-competitive behaviour, improve workplace safety and to ensure subcontractors are paid on time. The code will apply to major State building and construction contracts worth more than \$10 million and would be rolled out to all other contracts when provisions could be drafted and included in the tendering process.³²

- In February, the Commonwealth and Western Australian Governments signed a **bilateral agreement on a nationally consistent but State-run National Disability Insurance Scheme (NDIS)**. The NDIS transition begins on 1 July 2017.³²
- In January, **new regulations for the sale, supply and manufacture of medicines and poisons came into effect**, reducing business compliance costs and promoting the safe dispensing of controlled drugs. The reforms bring Western Australia into line with other States and Territories, reducing duplication and making it easier for national operators to comply with the rules. The new legislation also establishes the legal framework for the transfer of information about the prescribing and dispensing of controlled drugs such as morphine and dexamphetamine, through the use of real-time reporting systems.³²
- Changes to the Development Assessment Panel system came into effect on February 1, 2017. As a result of the changes **more advance notice would be given for DAP meetings and decisions more clearly communicated** to the public. Figures indicate that nearly 1,150 DAP applications with an

approximate value of \$32 billion have been received since 2011.³²

- Planning Minister Donna Faragher has refused an attempt by the City of South Perth to limit building heights, but those wanting height bonuses will have to cap residential car parking to limit traffic problems. Developers will also have to include not only the traffic impact of their own proposals, but the cumulative impact of all the development in the area, in traffic impact studies. The City did win its attempt to reintroduce street setbacks of two to four metres to make room for street trees.³⁹
- Planning Minister Donna Faragher refused the Town of Cambridge's Amendment 31 to the town's planning scheme. The amendment was proposed to meet the government's infill and housing diversity strategy. As part of the approval process, a number of modifications had been made to the amendment. The Minister has requested that the town formulates a planning approach, that responded to the need to create opportunities to provide infill and housing diversity within its jurisdiction.³²
- Aged care provider Rosewood has responded to growing demand for its services by booking \$105 million in developments for its West Perth and Leederville facilities. The group's West Perth facility grew from 52 aged care beds to 152, while Leederville will receive an extra 120 beds.³⁷
- Health provider, St John of God Health Care has secured its future in Midland with the purchase of a development site within the historic

Workshops precinct. The \$10.6 million land sale provided a three-hectare site for future development of a private hospital.³²

- The Salvation Army will receive an additional \$250,000 a year for the next three years from the State Government to open 25 additional beds in its The Beacon facility in Northbridge. The shelter provides accommodation for homeless men, women and couples.³⁴
- Tertiary education will be available in the eastern suburbs for the first time after the State Government secured a project development agreement with Curtin University.
- The new university will house Western Australia's newest medical campus, along with nursing, physiotherapy, pharmacy, engineering and business students at the Midland Workshops. Under the agreement, \$22 million and land will be reserved near the new St John of God Midland Public Hospital for the university.³²
- Changes to legislation mean that Curtin, Murdoch and Edith Cowan universities can now use their land for commercial purposes, something The University of Western Australia has been doing for more than a century.³²
- An additional 79 schools have become Independent Public Schools (IPS). From 2017, Western Australia will have 524 Independent Public Schools. More than 83% of public students are in Independent Public Schools in 2017.³⁴
- Almost two years after it was unveiled, the \$100 million Forrest Chase redevelopment, involving significant upgrades of the Myer centre and above-ground city walkways, has leapt the final hurdle, putting its extensive

development out to tender.³⁷

- The State Government has signed an Agreement for Lease for 17,200 sqm with Sirona Capital, underpinning the development of more than 20,000sqm of new office space in Fremantle. More than 1,500 public servants from the Housing Authority, the Department of Corrective Services and the Department of Transport would move to the newly constructed premises in the second quarter of 2020.³⁴
- A new land release in Murdoch is set to deliver up to 400 residences, 33,000sqm of commercial office space and more than 80 short-stay apartments, as part of an initiative to create a health and education sector in the community, adjacent to Murdoch University and the Fiona Stanley Hospital.³²
- Finbar will test the strength of demand in the Perth apartment market with plans to transform the former Golden Egg Farms warehouse site in Palmyra into a new residential development. The company has secured development approval from the Metro Central Joint Development Assessment Panel for a new \$108 million apartment development on the site. Finbar plans to build 258 apartments in two stages on the 26,642sqm site.³³
- The \$42 million East Green infill housing development in Greenwood, will provide 140 affordable new homes for a range of residents, including young buyers wanting to own their first home and downsizers. The State Government provided the land and has partnered with Frasers Property Group to finance and deliver the project. Construction is expected to be completed by mid-2020.³²
- Georgiou Group has been awarded a \$51 million contract for Scarborough's beachfront transformation. The project includes a new surf club facility, improved promenades and

beach access, and a children's playground, skate park and other recreation facilities surrounding the new Sunset Hill.³²

- The new **\$8.5 million City of Perth Surf Life Saving Club in City Beach opened in June**. The Town of Cambridge provided \$4.85 million, the City of Perth Surf Life Saving Club invested \$1.75 million and \$950,000 each came from Lotterywest and the Department of Sport and Recreation.³²
- In 2021, **Scitech will move from its current West Perth premises to the Perth Cultural Centre** at a space completely reimagined as a modern, digitally driven, state-of-the-art centre for science education.³⁴
- The State Government's \$10 million Recycled Construction Products Program aims to improve Western Australia's use of recycled construction and demolition materials, and reduce the amount of waste sent to landfill. Under the program, **\$8 million is allocated to metropolitan local councils as a financial incentive to use recycled construction and demolition products in their operations**. A further \$2 million is available through an open, competitive process to private sector entities, metropolitan local councils and State Government entities that use recycled construction and demolition products.³²
- Western Australians will receive a **10 cent refund on recyclable cans and bottles** under a scheme planned to be introduced by the State Government in 2018. After years of resisting calls for a container deposit scheme, the Barnett Government said it planned to use recycling depots and reverse vending machines to deliver the refunds, with 10 cents added to the initial cost of the drinks.³⁰

- In November, Fremantle's West End became the biggest single place to be included in the State Register of Heritage Places. **The West End listing covered almost 200,000sqm and featured 250 buildings**, many embodying the gold boom era when Fremantle was a thriving port town.³²
- In November, the State Government announced a suite of legislative changes set to reinforce Western Australia's tough stance on tobacco control. **WA will become the first State in Australia to make it illegal for employees under the age of 18 to sell tobacco products in retail outlets**. Other changes include banning the sale of fruit and confectionery-flavoured and split-pack cigarettes; stopping tobacco sales at events such as music festivals and other public events; preventing the inclusion of tobacco purchases in shopping reward schemes; requiring the display of graphic health warnings beside price signage for tobacco products; a ban on specialist tobacco retailers displaying tobacco products, and a streamlining of tobacco control administration.³²
- New Commonwealth legislation making **medicinal cannabis a controlled prescription drug** came into effect on November 1, 2016. While the changes opened the door for medicinal cannabis to be used as a treatment in certain circumstances, the changes did not legalise the recreational use of cannabis. Only a pharmacist will be able to dispense medicinal cannabis.³²
- **Changes removing trading restrictions** for petrol stations, Rottnest Island and short-term markets came into effect on December

14. The distinction between the types of petrol stations has now been removed so that the type of goods that may be sold, now applies equally to all stations. Shops on Rottnest Island will be able to trade at any time to better cater for the needs of tourists. Stallholders at short-term markets that are usually set up and dismantled in one day, will no longer have to apply each time for a certificate to trade outside normal hours.³²

- The State Government announced changes to liquor regulations which **allow smaller Western Australian wineries to sell their wine online without a physical storefront**. Further red tape reforms meant Western Australian wine producers could sell and supply their product at farmers' markets held anywhere, not just in agricultural regions and not just by producer's associations as the regulations previously stipulated. Another change to the regulations will see the amount of wine that can be provided to each customer at a farmers' market increased from 2.5 litres to nine litres.³²
- German retail giant **Aldi says it will open 14 more stores in Western Australia** in 2017, after opening 19 stores in 2016. The next opening will be in Morley, followed by stores in Cockburn, Lakelands, South Fremantle, Spearwood, Banksia Grove and Secret Harbour.³⁷
- **Western Australia's potato industry was deregulated** ending a 70-year restriction on market competition and consumer choice at the end of 2016. The deregulation involved winding up the Potato Marketing Corporation of Western Australia and the delivery of a \$14

million grower adjustment package including a \$2 million industry development plan made possible through Royalties for Regions funding.³²

- **Retail trading hours for the Labour Day (March 6) and Easter Monday (April 17) public holidays will be extended** by four hours, with major retailers being able to open from 8am to 6pm. The approved extension is a change from the standard 11am-5pm trading times for general retail shops on Sundays and public holidays.³²
- Labor has **scrapped its long-held policy opposition to the growth of genetically modified crops** in Western Australia. The party had previously promised to reinstate a ban on the growth of GM crops.³⁰
- In November, **Guildford Grammar, one of Western Australia's oldest private boys' schools will be fully co-educational** by 2020. The school will integrate girls into the senior school from 2018, with full co-education and boarding two years later. Within weeks of the announcement the Principal said it has experienced an "unprecedented" surge in enrollments, despite parents speaking out about the school's decision to become a co-educational high school.^{30,39}
- In December the State Government **changed the eligibility requirements for Keystart, lifting the income threshold by \$20,000**, while the first homeowners grant was lifted from \$10,000 to \$15,000 for 12 months.³⁷
- **Non-stop flights between Perth and London will start in March 2018** delivering a predicted visitor spending windfall to Western

Australia of up to \$36 million a year when the Qantas Boeing 787-9 Dreamliner started the long-haul route. In helping to secure a deal between the airline and Perth Airport Pty Ltd, the State Government has committed \$14 million for capital works to accommodate infrastructure requirements for Commonwealth border services at domestic terminal T3.³⁴

Lifestyle

- Two major travel 'must see' lists with global influence have named Perth as the place to be this year. **Travel + Leisure has included Perth in its 50 Best Places to Travel in 2017**. Singled out as examples were Odyssey at City Beach, Reveley and Isle of Voyage at Elizabeth Quay, and the Waiting Room, the cocktail bar in the new and luxurious six-star Crown Towers hotel. **Lonely Planet has included the Pinky's Eco Retreat and Beach Club on Rottnest Island as number eight** on its Top 35 New Travel Openings in 2017.³⁴
- The **Hopman Cup will remain in Perth for at least the next five years**. The agreement with the International Tennis Federation and Tennis Australia means the Hopman Cup will be played at Perth Arena through to 2022. A total of 103,167 fans visited Perth Arena for the 29th annual staging of the event with a further 6,000 attending 17-time Grand Slam champion Roger Federer's first open practice session.^{34, 35, 36}
- One of the biggest rivalries in world sport is coming to Perth Stadium in 2019 when **Western Australia hosts its first ever Bledisloe Cup match with a game between the Qantas Wallabies and New Zealand's All Blacks**. It will be the only time the All Blacks and the Wallabies play on Australian soil in 2019 in the lead up to the Rugby World Cup.³²
- **Perth will be a Rugby League World Cup host city** for the first time when sporting powerhouses England and France, along with two other European qualifiers, descend on nib Stadium for a double-header on November 12. The Rugby League World Cup will be jointly hosted by Australia and New Zealand this year.³²
- English Premier League team **Chelsea will play Perth Glory at Perth Stadium** in late July or early August 2018. The international friendly is expected to attract 15,000 interstate and international visitors generating about \$15 million for the WA tourism industry.³⁴
- Night-time events held at **Perth Stadium will be illuminated through the biggest sports lighting system in the world**. The unparalleled lighting system included 15,000 LED lights and was already used in stadia around the world, but on a smaller scale.³⁴
- On January 14 tough new hoon laws came into force. Under the changes **a court could order permanent vehicle confiscation on a first offence** if a motorist did any of the following: committed a hoon offence in an active school zone; travelled 90kmh or more above the speed limit; committed a hoon offence in a 50kmh or less zone (suburban street) which could result in harm or distress to a person or resulted in property damage, including the road.³²
- In a first for the State,

the Government has contracted three alcohol interlock suppliers which will install, monitor and maintain the devices. The scheme would capture first time offenders convicted of driving under the influence of alcohol (blood alcohol content of or above 0.15) and repeat drink drivers who have been convicted of two or more drink driving offences (blood alcohol content of or above 0.05 or 0.02 for P-plates) within a five-year period. The devices would be fitted to vehicles once drivers had been granted an interlock restricted driver's licence and would remain in place until drivers had demonstrated a minimum of six months of alcohol-free driving.³²

- In December, the first significant machinery swung into action on the site of Western Australia's new museum development, with subsurface investigations underway ahead of the major construction phase. The environmental and geotechnical testing is important for the planned 1,000 square metre touring exhibition gallery that will be located at basement level, about 10 metres underground. The \$428.3 million project includes construction and design of the new museum, heritage building restoration, \$17.6 million in upgrades to the Welshpool Collections and Research Centre, exhibition and content design and production, and public art.³²
- The Western Australian Museum and the Art Gallery of Western Australia, in conjunction with Heath Ledger's family, will present a world-first exhibition celebrating the life and work of the Perth-born actor. The exhibit will

showcase the extraordinary talent of Ledger as an actor, his aspirations as a director and provide a window into his early life growing up in Perth. The Heath Ledger exhibition will be free to the public at the art gallery from October 2017 to January 2018.³²

- In October, the State Government launched **Strategic Directions 2016-2031, outlining a vision for a strong and vibrant arts base** - for WA to be the best place to live, work and play thanks to the contribution of its arts, culture and creative industries. The roadmap aims for eight per cent of West Australians to be working in the arts, cultural and creative industries, through a unified approach from Government, the community and private enterprise.³²
- Respected businessman, philanthropist and supporter of the arts **Sam Walsh AO succeeded the Hon Nicholas Hasluck AM QC as chairman of the Art Gallery of Western Australia board in January**. Mr Walsh was CEO of Rio Tinto from 2013-16 and has served as a director of Rio Tinto, Seven West Media, the Committee for Perth, and the WA and Australian Chambers of Commerce and Industry.³²
- **Walkers and cyclists will find it easier to use the Yaberoo Budjara Heritage Trail** between Joondalup and Yanchep, with a new limestone surface to making it safer and more accessible. The 28km Yaberoo Budjara Heritage Trail begins in Neil Hawkins Park on the shores of Lake Joondalup and runs through Yellagonga Regional Park, Neerabup National Park and on to Yanchep National Park.³²
- In November, **the historic Sunset Heritage Precinct in Dalkeith opened to the**

public for the first time in more than 20 years. With spectacular views of the Swan River, the Sunset Heritage Precinct spans 7.9 hectares and is one of Western Australia's biggest and most intact heritage sites. While the community will have access to outdoor areas at Sunset, most of the heritage buildings require significant conservation and remain fenced off.³⁴

- **Grassroots sport in the metropolitan area will benefit from \$8.4 million in funding** from the State Government for projects including installing floodlights, synthetic turf and upgraded facilities.³²
- **A proposed open-range zoo in Western Australia** would provide an "essential piece of conservation infrastructure" and allow Perth zoo to build on its internationally renowned captive breeding programs. The 700ha zoo is proposed for a nature reserve at Lower Chittering, next to the Avon Valley national park, and would be managed as a second site of the Perth zoo. It was announced as the likely site in November, however, the estimated cost of the zoo has doubled in the intervening three months, from \$50m-\$100m in November to \$100m-\$200m. No money has been allocated in the State budget.³⁸
- **A West Perth property at 31 Malcolm Street that was home to Edith Cowan, the first woman member of an Australian parliament, has been listed on the State Heritage Register**. The house provided Edith Cowan with a central base during the most important period of her work in welfare, education and social justice from 1911 to 1919. Edith Cowan was elected to the WA Legislative Assembly in 1921 for the seat of

West Perth, following legislation passed in 1920 to allow women to enter parliament.³²

- Research has shown that **homebuyers are prepared to pay more for energy efficient design**. The research by the Curtin University Sustainability Policy Institute showed sustainability was now ranked as the fourth biggest driver for dwelling choice in Perth, with homebuyers willing to pay extra for future savings.³⁷
- **A \$300,000 anti-shark barrier has been installed at Quinns Rocks**. In what is believed to be a first in Australia, Global Marine Enclosures used a helicopter to install the almost two-dozen concrete weights and anchors that will fix the enclosure to the sea floor. Each block weighed almost two tonnes. The Quinns Beach enclosure is the fifth barrier funded by the State Government.⁴²
- **The Rio Tinto Naturescape Kings Park facility closed in February to allow a \$3 million expansion** which is being funded by the mining company. The playground will reopen in 2018, with the new features to include a bigger creek, rock pool, a nearly seven-metre-high aerial walkway, a hidden tunnel, more climbing and balancing features and a new cubby zone.³⁷

Knowledge and innovation

- In January the CSIRO announced that the **Square Kilometre Array Pathfinder (ASKAP) telescope has finished its testing phase and will be fully operational within the next 18 months**. Located about 350 kilometres

northeast of Geraldton, the telescope is made up of 36 identical 12-metre wide dish antennas, with a third of them currently operational. The ASKAP telescope will investigate about 600,000 galaxies, hundreds of times more closely than current radio telescopes allow, in a bid to gain a better understanding of how galaxies have formed and evolved. With the operational antennas, ASKAP is currently churning out about 5.2 terabytes of data per second. Once all 36 of the ASKAP telescopes working, it will produce 72 trillion bytes per second of raw information.³⁰

- In an Australian first, an on-road trial of a fully electric driverless shuttle bus commenced on Perth roads in August. **The RAC's Intellibus followed a 25-minute trial route over three weeks initially between Sir James Mitchell Park and the Old Mill in South Perth**. On the scale of automation, the vehicle is considered level four, which means it can perform all safety-critical driving functions without anyone behind the wheel, but only in a few environments. It can carry 11 passengers and travel at up to 45km per hour. There are several systems in place to avoid an accident including front and rear cameras, GPS technology and autonomous emergency breaks, plus an emergency stop button.³⁰
- A co-funding program with Angel Investors and a commercialisation fund for Western Australia's universities are the big ticket items in the State Government's **\$20 million innovation strategy released in November**. The strategy includes the introduction of innovation vouchers, the creation of an innovation portal and funding to teach entrepreneurship.³⁷
- A report released by Alyka has found that **around a third of small businesses don't invest in digital marketing**, although 51% are planning to spend more in 2107. Most business leaders surveyed considered digital marketing would be more valuable in five years, with 26% currently considering it important today with 52% predicting it will be more worthwhile in the future.³⁷
- ASX listed company Fastbrick Robotics, which has **developed a prototype of a truck mounted, robotic bricklaying machine** was the overall winner of the 2016 WA Innovator of the Year. The company picked up a prize of \$75,000.³⁷
- WA police have been equipped with **a state-of-the-art 3D camera which captures and replicates precise vehicle crash scenes**, allowing roads to reopen quickly, reducing congestion. The 3D camera and software equipment was being used by Major Crash investigators to capture and analyse all aspects of crashes. The camera uses laser technology to scan a crash scene capturing physical aspects such as skid marks, road markings and fluid traces to fully document the scene and recreate it on a computer.³²
- The Clever Buoy shark detection and notification system was trialled for three months at City Beach. Built by Perth-based company, Shark Mitigation Systems, **Clever Buoy utilises sonar technology and specialised shark identification software**. Solar-powered surface buoys provide power and communication functionality, so that detection information can be transmitted to lifesavers on the beach during patrol hours.³²

FACTSheet

- Surf brand **Rusty will sell surfboards featuring patterns designed to deter sharks** as part of a licensing deal with the Nedlands based, ASX-listed Shark Mitigation Systems. The SMS designs, which have been developed in collaboration with researchers from The University of Western Australia, aim to hide surfboards in the water using disruptive colouration, presenting the board as an unpalatable or potentially dangerous food option to sharks.³³
- Western Australian company **Ocean Grown Abalone is poised to export their unique, high-quality product to the world** after developing an innovative, world-first artificial reef to grow the seafood delicacy. The company has established an abalone farm in Flinders Bay, near Augusta on the State's South West coast, using concrete structures on the sea bed to grow hatchery.²⁹
- A sophisticated boat stabiliser system developed in the South-West town of Dunsborough has potential to improve boating safety across the world. The Nauti-Craft Pty Ltd focuses on the design and development of **hydraulic suspension system technology for multi-hulled vessels**, which allows vessels to react rapidly to changing ocean conditions.³²
- Perth regenerative medicine company Orthocell will develop its **Ortho-ATI stem-cell approach for the regeneration of degenerate tendons and ligaments** with DePuy Synthes Products — an arm of Johnson & Johnson family — in a collaborative study at The University of Western Australia. The trial is designed to find a non-surgical approach to treat chronic treatment resistant tendon injuries, and will be led by prominent UWA orthopaedic surgeon professor Allan Wang.³³
- **Cecil Andrews Senior High School will become the first school in the State to trial the STEM-focused Pathways in Technology (P-Tech) pilot program**, run by the Skilling Australia Foundation. The P-Tech pilot empowers businesses to contribute to the learning and career development of their future workforce. Datacom, Deloitte, Civmec and Austal have already lined up for collaborative projects with Cecil Andrews.³⁷
- University student completion data, released by the Federal Government, has revealed the **university dropout rate is worsening** with around one in three students failing to complete their studies within six years of enrolment. Murdoch University was the 5th worst in the Australia with 49.6% of students not completing their degree, Edith Cowan University was ranked 10th worst with 55.4% and The University of Western Australia was ranked 9th best at 74.5%.⁴¹
- **A Perth geoscientist has been awarded the 2016 Prime Minister's Prize for Excellence in Science** for getting students out of classrooms and into the field. Suzy Urbaniak, a former geoscientist with Newcrest Mining, has been recognised for her skills-based Centre of Resources Excellence (CoRE) teaching program at Kent Street Senior High School.³⁰
- **Bombora Wave Power has completed an independent review of its 60 megawatt mWave farm feasibility study.** The review confirmed the potential cost for electricity from Bombora's planned wave farm was below Ocean Energy Europe's wave energy cost productions.³⁷
- **WA households and businesses are installing solar panels at a record rate, with installations up 335 last year,** driven by rising power prices and the falling cost of the technology, new research has found. The data, compiled by solar industry consultancy SunWiz, also revealed ten of the nation's top 20 solar-adopting suburbs were in WA, with Wanneroo, Mandurah and Armadale leading the way.³⁰
- **JUGGLR has been accepted into the bootstrap track of FbStart,** Facebook's program to help mobile start-ups succeed. As part of the program the JUGGLR app, referred to as the 'marketplace for mums,' will receive \$40,000 in free tools and services from Facebook and more than 30 partners, including Amazon, UserTesting, Dropbox and MailChimp.³⁷
- East Perth based C4D Intel has partnered with Swiss aerial technology company Flyability to bring the company's **first collision-tolerant drone to the Australasian market.** C4D Intel will be the sole supplier of the Elios unmanned vehicle in Australia.
- Up to 80 scientists will study crop genetics, fungicide resistance, agronomy and farming systems, among other things, at the **new \$43 million Centre for Crop and Disease Management at Curtin University.** The national research centre is co-supported by the University and the Grain Research and Development Corporation.³⁷
- Genetically modified fruit flies imported from the United Kingdom have shown promise in **eradicating**

the Mediterranean fruit fly, a damaging horticultural pest that costs Western Australian producers millions of dollars each year. The Department of Agriculture and Food Western Australia (DAFWA) teamed up with UK technology company Oxitec to conduct trials of the genetically modified Medfly last year. Their method works a bit like sterilisation, with a self-limiting gene inserted into male fruit flies that prevents female offspring from reaching adulthood.³⁰

- Local not-for-profit group Ausum Initiatives has teamed with Kulbaradi, a partly owned and managed Aboriginal office supply company to deliver an intensive entrepreneur program for young Aboriginal men and women. The 10-day program will include 16 Aboriginal participants aged 18-24, a demographic bracket that reflects the highest unemployment rate for Aboriginal and Torres Strait Islanders. The program features sessions on writing a business plan, marketing and sales, pricing and financial analysis and tips on pitching and presenting, delivered by industry professionals.³⁷
- Technology developed by an Applecross business has the potential to change the way local councils supply their water needs. Urban Stormwater Technologies has invested almost \$3 million in the developing a filter to clean water at selected locations as it flows into the drainage system, the underground pipes that dispose of hundreds of gigalitres of rain annually. The capacity to reuse that water could help local governments wanting to facilitate population growth.³⁷

References:

- ¹ ABS 5220.0 State Accounts and 5204.0 National Accounts; WA 2016-17 Budget; and Australian 2016-17 Budget
- ² Source: ABS 5220.0 State Accounts; 5206.0 Quarterly National Accounts; and 5302.0 Balance of Payments; and WA 2016-17 Budget
- ³ ABS 5220.0 State Accounts
- ⁴ ABS 3101.0 Australian Demographic Statistics
- ⁵ ABS 6202.0 Monthly Labour Force
- ⁶ ABS 6291.0.55.003 Quarterly Labour Force
- ⁷ Reserve Bank of Australia, Statistical Tables
- ⁸ ABS 5220.0 State Accounts; 5206.0 Quarterly National Accounts; and 5625.0 Private New Capital Expenditure
- ⁹ WA Department of Mines and Petroleum, Resource Data Files
- ¹⁰ WA Department of Mines and Petroleum, Resource Data Files
- ¹¹ ABS 7501.0 Value of Principal Agricultural Commodities Produced and 7503.0 Value of Agricultural Commodities Produced
- ¹² ABS 5368.0 International Trade in Goods and Services; 5220.0 State Accounts; and 5206.0 Quarterly National Accounts
- ¹³ ABS 5368.0 International Trade in Goods and Services
- ¹⁴ ABS and Department of Agriculture and Food Western Australia
- ¹⁵ ABS 5368.0.55.003 International Trade in Services by State.
- ¹⁶ World Bank, Commodity Markets, Monthly Price Data; and CEIC, China Premium Database
- ¹⁷ United Nations Conference on Trade and Development, The Iron Ore Market 2015; and WA Department of Mines and Petroleum, Resource Data Files
- ¹⁸ ABS 5368.0 International Trade in Goods and Services
- ¹⁹ WA Department of Mines and Petroleum, Resource Data Files
- ²⁰ WA Department of Mines and Petroleum, Resource Data Files; World Bank Commodity Markets, Monthly Price Data; and WA 2015-16 Annual Report on State Finances
- ²¹ World Bank, Commodity Markets Monthly Price Data
- ²² International Group of Liquefied Natural Gas Importers, The LNG Market 2015; and WA Department of State Development Estimates²³ EnergyQuest Quarterly; and WA Department of Mines and Petroleum.
- ²⁴ WA Department of Mines and Petroleum, Resource Data Files
- ²⁵ WA Department of Mines and Petroleum, Resource Data Files; World Bank Commodity Markets, Monthly Price Data; WA 2015-16 Annual Report on State Finances; and WA Department of State Development Estimates
- ²⁶ WA Department of Mines and Petroleum, Resource Data Files
- ²⁷ WA Department of Mines and Petroleum, Resource Data Files
- ²⁸ WA Department of Mines and Petroleum, Resource Data Files
- ²⁹ Prospect Magazine, December 2016
- ³⁰ ABC Online
- ³¹ Construction Training Fund – Construction Industry Snapshot Western Australia January 2017
- ³² Ministerial media statement
- ³³ The West Australian
- ³⁴ Premier's media statement
- ³⁵ sbs.com.au
- ³⁶ hopmancup.com
- ³⁷ Business News
- ³⁸ theguardian.com
- ³⁹ WA Today
- ⁴⁰ The Australian
- ⁴¹ news.com.au
- ⁴² Perth Now

FACTSheet

Acknowledgments

We acknowledge the assistance of the Department of State Development in compiling this FACTSheet.

Copyright

This paper is the copyright of The University of Western Australia and the Committee for Perth. While we encourage its use, it should be referenced as:

2017 Key Facts About Perth & Western Australia, FACTSheet No. 10, The University of Western Australia and Committee for Perth, Perth.

Contacts

For further information on the FACTBase project or our FACTSheets contact Marion Fulker, CEO, Committee for Perth (08) 9481 5699 or enquiries@committeeforperth.com.au

The Committee for Perth is a member funded organisation and we acknowledge our Foundation partners:



A complete list of current members is available at www.committeeforperth.com.au