

A GOLDEN COUNTRY

The gold industry's economic and social contribution to Australia





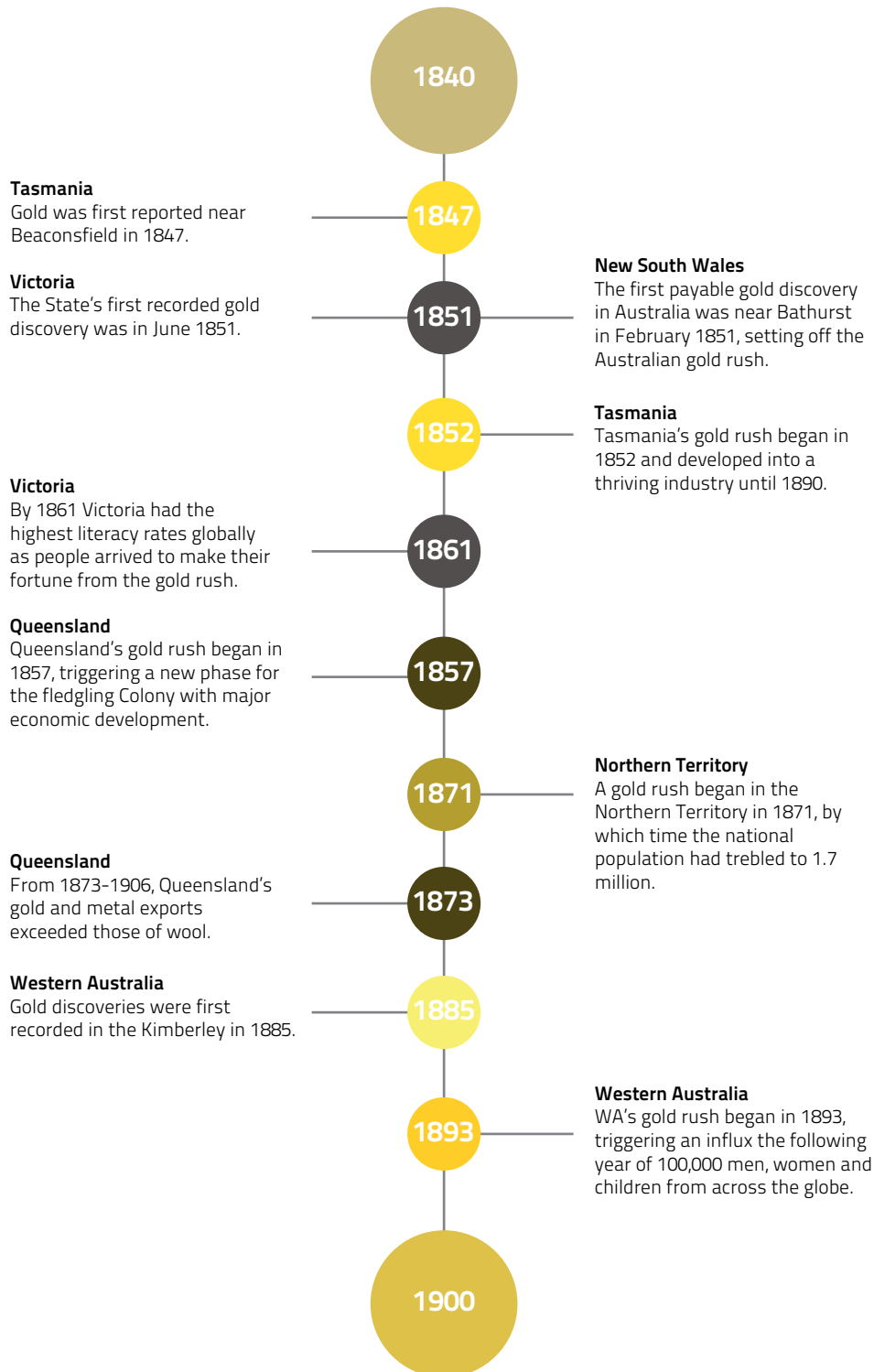
The Gold Industry Group acknowledges and pays respect to the past, present and future Traditional Custodians and Elders of this nation and the continuation of the cultural, spiritual and educational practices of Aboriginal and Torres Strait Islander peoples.

The Gold Industry Group is a member-based, not-for-profit industry body governed by a Board of Directors. It represents gold producers, explorers, prospectors, fabricators and service providers to collectively champion the gold sector and support communities across Australia. The Gold Industry Group leads long-term educational and community initiatives that cultivate an understanding and awareness of gold's value to the social fabric of our communities as well as its significant role in our economy.

This gold fact document was developed by the Gold Industry Group to provide insights into the vast economic and social contribution made by Australia's gold industry.

Australia's gold rushes built the nation

Gold discoveries in the 1850s started a series of rushes that transformed the colonies. During this time, the populations of Victoria and Western Australia grew at a faster rate than the country's entire populace during 1911-2011.



Influencing social change

Gold has been instrumental in shaping Australia's national identity.

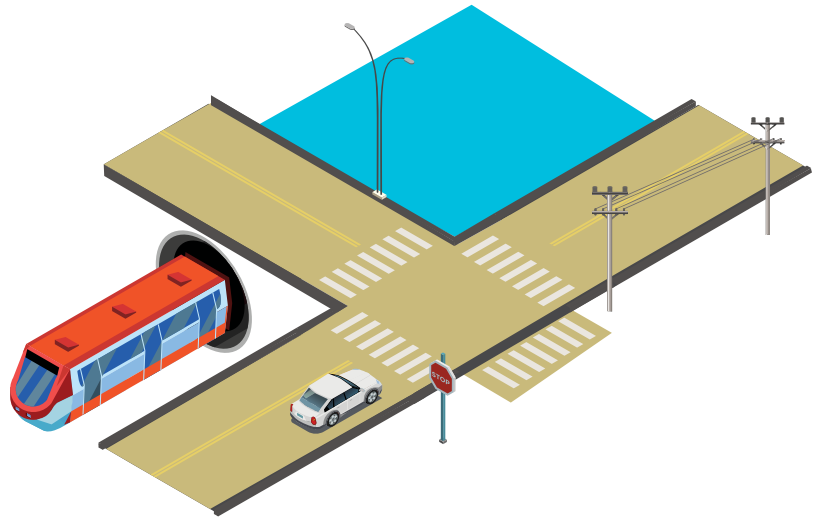
- **Employment:** From 1838, 'Afghan' cameleers and their camels arrived from overseas to assist in early exploration across the country.
- **Mateship:** The concept of 'mateship' or camaraderie developed between the 'diggers' on the goldfields and remains strong across Australian society today.
- **Suffrage:** The Eureka Stockade in 1854 was a victory for gold miners and along with the secret ballot in Victoria, Tasmania and South Australia in 1856, were key steps towards Victoria instituting suffrage for most men in 1857. Most women were allowed to vote in 1908.
- **Migration:** The volume of Chinese immigrants significantly increased with some 12,396 arriving in 1856. In 1861, 38,258 people, or 3.3% of Australia's population, were from China.
- **Reform:** The establishment of an eight-hour working day in 1916 led to Australia having one of the most progressive labour environments in the world at that time as a result of industrial strikes in Victoria.
- **Politics:** Due to the 1880s-1890s gold boom, unionised worker numbers rose to 200,000 across 1,400 unions fighting for fair wages and better working conditions. This resulted in the formation of Labour Leagues in 1891 across New South Wales and South Australia, followed by Queensland in 1893.



Vital infrastructure

The rush for gold led to the development of major rail, road, port and water infrastructure in Australia.

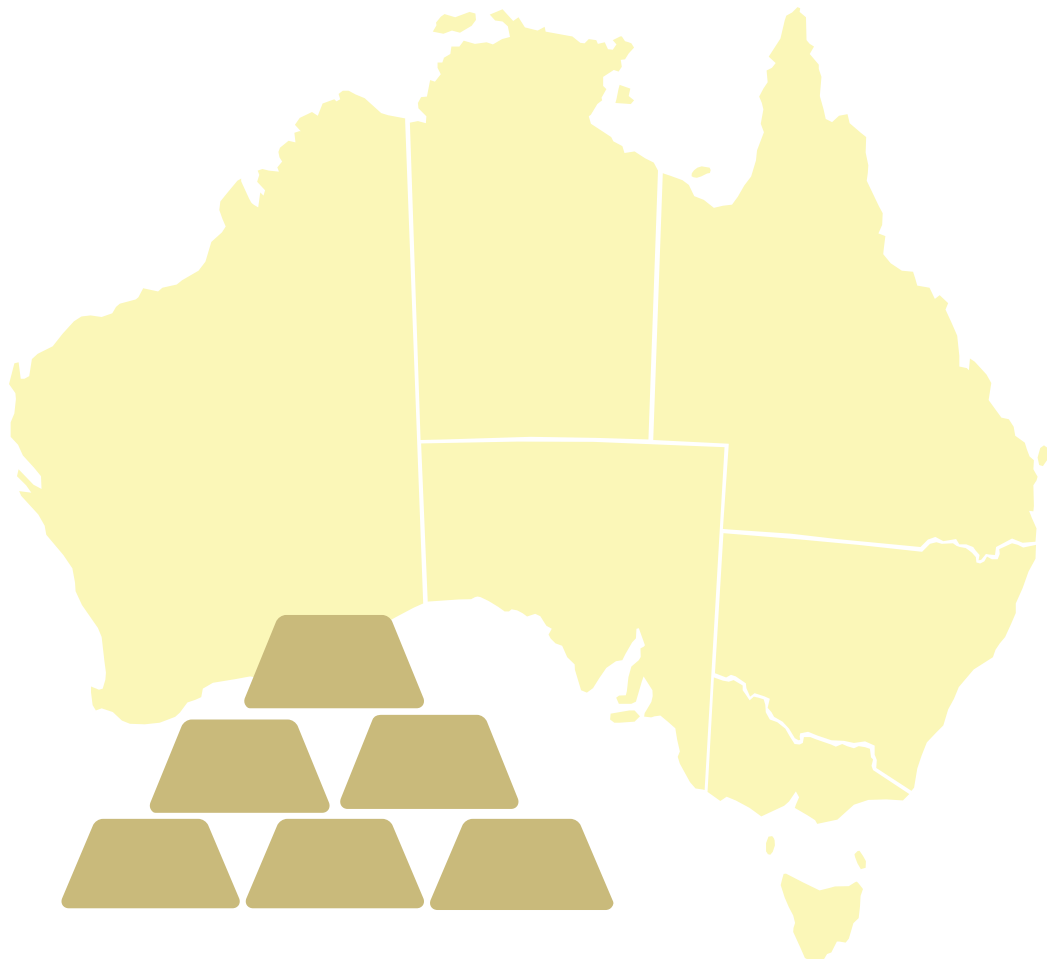
- **Rail Networks** NSW (1850–1880): As people rushed to the goldfields, roads and tracks deteriorated, prompting millions of pounds to be spent on the colony's three main rail lines, the Great Northern, Great Western and Great Southern.
- **Australia's First Train** VIC (1854): Built following the influx of migrants coming for WA gold.
- **Electric Telegraphs** (1854): Victoria's first two lines were laid between Melbourne and Williamstown, and between Melbourne and Adelaide, as the gold rush turned Melbourne into a metropolis. By 1863 more than 3,000 kilometres of telegraph wire had been installed across NSW. A decade later, there were nearly 100 receiving stations and almost 9,000 kilometres of wire.
- **Sydney Royal Mint** NSW (1855): The first overseas branch of London's Royal Mint, which began producing gold sovereigns as early as 1851.
- **The Melbourne Mint** VIC (1872): Established as the country's second official branch of the British Royal Mint in London.
- **Coolgardie-Esperance Highway** WA (1891): Developed to link the Goldfields to Esperance harbour.
- **Goldfields Railway** WA (1894): Built to connect the City of Perth to the State's Eastern Goldfields.
- **McNess Royal Arcade** WA (1897): The first shopping arcade in Perth built by Sir Charles McNess, a tinsmith and ironmonger, who made his wealth by stocking his shop with gold prospecting equipment.
- **Fremantle Port** WA (1897): Established by Charles Yelverton O'Connor, to meet needs arising from the WA gold rush.
- **The Perth Mint** WA (1899): Australia's third branch of Britain's Royal Mint was built in response to gold discoveries in WA.
- **Western Australian School of Mines** (1902): Established at Coolgardie in 1902, but quickly relocated to its current Kalgoorlie location in 1903, due to the discovery of gold and large influx of people into the area.
- **Golden Pipeline** WA (1903): 566km long, built to provide fresh water to the WA Goldfields.
- **London Court** WA (1937): An architectural marvel built by WA gold mining entrepreneur Claude de Bernales, it signified the recovery of Perth's building industry from the 1930s Depression.
- **Royal Australian Mint** ACT (1965): The first to be owned by the Commonwealth and independent from the branches of Britain's Royal Mint.
- **Old Treasury Building** VIC (1862): Considered one of Australia's finest Renaissance Revival buildings, constructed in palazzo form and built from wealth accumulated during the gold rush.



Economic contribution

Australia's gold industry makes a vital contribution to our country's economic prosperity, generating wealth and underpinning global production.

- **Resources:** Australia has the largest known share of gold resources in the world (18%).
- **Mines:** Five of the world's 20 largest gold mines are in Australia.
- **Reserves:** Australia's gold industry has reserves totalling more than 353 million ounces of gold.
- **Economy:** Australia's gold industry contributed \$11.9 billion to the economy in 2019-20.
- **Projects:** There are 76 operating gold projects – with one or more gold mines – in Australia, producing 328 tonnes in 2019-20 and accounting for more than 9% of global gold mine production.
- **Production:** Australia is the second largest gold producer in the world and is expected to overtake China as the world's largest in 2021.
- **Commodity:** Gold is Australia's fourth largest export commodity and is set to become the third largest in 2020-2021, when the value of Australia's gold exports is forecast to reach a record \$31 billion.
- **Exports:** Australia is the world's largest gold exporter, with markets in more than 55 countries.
- **Exploration:** Australia spent \$963.9 million in 2018-19 on gold exploration, of which \$672.8 million (approximately 70%) was spent in WA. Australia's gold exploration expenditure reached a record high of nearly \$1.2 billion in 2019-20, of which \$786 million (approximately 68%) was spent in WA.
- **Royalties:** Australia's gold industry is an important contributor to government revenues and has paid more than \$2.5 billion in royalties over the past decade.
- **Western Australia:** The gold sector is WA's second most valuable mineral commodity and accounted for about 67% of Australia's total gold production in 2019-20 (328 tonnes).



Driving employment

Australia's gold industry is a thriving and far-reaching sector that offers a diverse range of direct and indirect jobs along the entire supply chain.

- **Employer:** Australia's gold industry is the second largest employer in the mining sector.
- **Workers:** In 2019-20, Australia's gold industry directly employed approximately 31,000 people.
- **Jobs:** For each direct job in the gold industry, it is estimated that there are a further 8 indirect jobs, supporting more than 240,000 people and their families.
- **Community:** More than 80,000 Australians live in gold mining towns or regions.
- **Website:** The Gold Industry Group's new Gold Jobs website has attracted more than 50,000 visitors and more than 290 job vacancies in its first five months.
- **Indigenous:** Gold Industry Group members support Indigenous job seekers and workers through a variety of training and employment initiatives.
- **Programs:** Gold Industry Group members provide career opportunities for all Australians through workplace programs such as apprenticeships, traineeships, graduate roles and vacation work, as well as scholarships and mining camps for school students.



Empowering communities

The Gold Industry Group and its members are committed to advancing communities through long-term partnerships and programs across Australia.

- **Netball:** The Gold Industry Group's three-year partnership with Netball WA, West Coast Fever and Shooting Stars, established in 2019, is growing all levels of the sport across the State and generating real benefit in the regions. It is creating new talent pathways, empowering players and changing the lives of Aboriginal and Torres Strait Islander girls.
- **Mental health:** The Gold Industry Group's partnership with not-for-profit mental health charity LIVIN, established in 2017, is empowering Australians to speak up about mental health through the delivery of LIVINWell workshops at member offices, mine sites, schools and the wider community across Australia.
- **Education:** The Gold Industry Group's partnership with Australian Earth Science Education, established in 2020, is bringing Earth and Environmental Science education resources and support to NSW schools. The Gold Industry Group's National Gold Education Program provides teachers and students with access to free, interactive gold demonstrations delivered by trained workers in Australia's gold industry, as well as exclusive Gold Resources Kits and a myriad of classroom learning materials.
- **COVID-19 support:** AngloGold Ashanti Australia, Gold Fields, Gold Road Resources, Newmont, Northern Star Resources, Ramelius Resources, Regis Resources and Saracen Mineral Holdings contributed millions to a COVID-19 Community Support Fund providing support to key WA community organisations: the Royal Flying Doctor Service, Foodbank and Lifeline.
- **Gold Fields'** three-year partnership with Football West is growing soccer through clinics, school visits, coaching and referee courses as well as development and inclusion programs across WA.
- **Gold Fields and Gold Road Resources** donated a one kilogram gold bar to Telethon 2019, with proceeds from the auction supporting a better life for children across WA.
- **Newmont's** Global Community Support Fund is building community health, food security and local economic resilience in Australia through its contributions to community organisations and programs, including Indigenous businesses and projects across WA and the NT.
- **Northern Star Resources** established a COVID-19 relief fund in 2019-2020, assisting communities, local health services and businesses. This included aiding food security, COVID-19 testing in remote regions, and supporting Indigenous communities.
- **Evolution Mining** formed a two-year partnership with the Jonathan Thurston Academy in 2019 to improve access to employment and training opportunities for Indigenous job seekers across Australia.
- **Saracen Mineral Holdings** supports the Western Australian School of Mines and created a Kalgoorlie Community Fund to assist small businesses through the Kalgoorlie-Boulder Chamber of Commerce and Industry in 2019-2020.




- **Kirkland Lake Gold** invested in the City of Greater Bendigo in 2019–2020, for the running and maintenance of food share vehicles to reduce food poverty; sponsorship of more than 100 free or low cost events to bring the community together; and to establish a youth centre, as well as programs and support services.
- **Ramelius Resources'** long-term Mount Magnet Benefit Fund assists community programs and/or infrastructure. The Company also invested in the WA film *The Furnace* in 2019, showcasing the State's 1890s gold rush.
- **St Barbara Limited's** three-year partnership with the Shooting Stars program and Clontarf Foundation is improving the education, discipline, life skills, self-esteem and employment prospects of young Aboriginal and Torres Strait Islanders.
- **Regis Resources** is assisting vital community services through its COVID-19 Community Support Fund and donated to Perth's Harry Perkins Institute of Medical Research and the Starlight Children's Foundation to brighten the lives of sick children.
- **AngloGold Ashanti Australia** is committed to long-term local community initiatives in WA's Goldfields with a focus in education and youth development. In collaboration with Carey Mining and Macmahon Holdings, the Company supports the Get into Mining program for Aboriginal trainees at their Tropicana Gold Mine in WA.
- **IGO's** Corporate Giving program in 2019–2020 provided support for the Ronald McDonald House Charity, Teach Learn Grow education program and Royal Flying Doctors Service. IGO also donated to the bushfire and COVID-19 recovery efforts of the Esperance and Dundas shires.



Boosting tourism

Tourism is important for current and former gold mining regions and cities to preserve our industry's heritage, while allowing visitors to reconnect with the past and understand their present.

- The Gold Industry Group's **Heart of Gold Australia app** showcases gold tourism experiences across the country as well as offering interactive in-app games and has engaged more than 10,000 people. The app features the Group's Kalgoorlie and Perth Heart of Gold Discovery Trails.
- **The Perth Mint**, including its Gold Exhibition and Australian Kangaroo One Tonne Gold Coin, attracts more than 70,000 visitors annually.
- Established in 2018, Go West's **Mine to Mint Tour** from Newmont's Boddington Gold Mine to The Perth Mint is the first of its kind, offering fascinating insights into the gold supply chain.
- The **Old Treasury Building** in Melbourne, hosts the original gold vaults where gold bullion was stored during the early gold rush era, providing visitors today with a unique tour experience.
- The wealth and demand for entertainment created by the Victorian gold rush resulted in the first **Melbourne Cup** being run in 1861. The 18-carat gold 2016 Emirates Melbourne Cup trophy was the first in its history to be crafted entirely from gold sourced and refined in Australia by Evolution Mining and ABC Refinery. 2020 marked the first time the gold came from Victoria, supplied by Kirkland Lake Gold's Fosterville Gold Mine.

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- The **Central Deborah Gold Mine** opened to the public in 1971 and has attracted visitors including H.R.H Prince Charles. By 2011, it became the home of Australia's deepest underground mine tour with nine levels for visitors to experience and is a key tourist destination for the City of Greater Bendigo.
 - In 1972 the Hainault mine was opened to the public, with retired miners conducting underground tours and demonstrations to more than 750,000 visitors for nearly 20 years. In 1991, displays of historical equipment and records were moved to the site of the north shaft and it was reopened in Kalgoorlie as the **Hannans North Tourist Mine**.
 - **Sovereign Hill** joined other world-class attractions and events to draw 3,362,000 visitors to the City of Ballarat in 2019.
 - The **Museum of the Goldfields and Hannans North Tourist Mine** joined other world-class attractions and events to draw 237,000 visitors to the City of Kalgoorlie-Boulder and an overall 1,529,000 visitors to Australia's Golden Outback (WA) in 2019.
 - Once one of the largest gold mines in Australia, **Gwalia's** five-year \$3.3 million conservation of the Sons of Gwalia Limited's Historical Precinct, Museum and Hoover House, timber headframe and the settlement's 22 traditional miners' cottages, represents an important heritage and tourist destination for WA.
 - The **Original Gold Rush Colony** is a re-created 1850s gold rush town and theme park, and award-winning NSW tourism attraction, providing an educational venue that offers historical and cultural insight.

Advancing global society

Gold is vital in today's technologically advanced society, contributing to innovative methods and medical breakthroughs, and playing a part in mankind's preservation of the environment.



Gold wires are the backbone of the Internet, plating the RJ45 plugs of ethernet cables, connecting a device to a modem.



Layers of gold protect astronauts, satellites and space vehicles from radiation and heat.



Gold nanotechnologies offer functional benefits for visual display technologies and have potential for use in advanced data storage such as flash memory devices.



Gold nanoparticles are at the heart of the hundreds of millions of Rapid Diagnostic Tests (RDTs) used globally every year to detect diseases.



A gold based RDT to detect COVID-19 is being developed by leading diagnostics firms.



Researchers at Imperial College London are working on improving HIV/AIDS diagnosis technologies with experimental gold nanoparticle techniques.



Gold-based drugs have been developed and used to treat illnesses such as rheumatoid arthritis.



Gold's low reactivity makes it safe for use in the human body, coating pacemakers and stents.



Gold nanoparticle technology is being developed to specifically attack cancer cells in between radiation treatment and chemotherapy sessions, with clinical trials indicating improved quality of life and decreased risk of damaging healthy cells in the process.



Gold alloys in dentistry are used for fillings, crowns, bridges, and orthodontic appliances, due to the metal being chemically inert, nonallergenic, and malleable.



Gold nanoparticles are being used to improve the efficiency of solar cells, while gold-based materials are showing promise in the search for new, more effective fuel cell catalysts.



Gold nanoparticles are used in environmental solutions, helping to break down groundwater contaminants in industrialised areas around the world.



Australia's national science agency CSIRO has found a new approach to understanding mineralisation, giving exploration companies methods to identify new deposits more quickly and efficiently.



Gold has been a store of wealth for thousands of years and is traded in the form of bullion, coins, bars and certificates. It is a reliable investment during times of hyperinflation, banking crises and economic uncertainty.



Nearly half the world's mined gold is made into jewellery. Gold doesn't react with the skin, and, when combined with other alloys can produce a water green, white, grey, red, and blue.

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