# At Work in Australia.



imagination at work

### See the difference two letters are making

### Every day, all around Australia, we're at work helping our customers take on the toughest challenges.

GE works on things that matter. Great people and advanced technologies working together in energy, water, health, transportation and finance.

We put our imagination to work developing solutions to help move, power, cure and build Australia in unique ways and surprising places.

### History at work.

GE has been part of the Australian landscape since the 1890s.

We provided the infrastructure for Brisbane's tramway and installed the electric motors that still power Sydney's Pyrmont Bridge.

## Moving people, planes, mountains.





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### **Jet Engines**

We help airlines fly Australia with cleaner, quieter, leaner flights.

### **Performance-based** Navigation technology

We help air traffic controllers operate more efficiently to save time, fuel and the planet.

When you travel in Australia, chances are you're travelling a long way.

Every day, 70% of domestic flights within Australia are powered by GE engines. We help Qantas, Virgin Australia and Jetstar transport their customers safely and efficiently over thousands of kilometres. We power the country's largest independent regional airline, REX, connecting people from 35 metropolitan and regional centres across Australia.

Internationally, we also make it possible for Qantas to fly further and faster by powering Australia's longest flight from Sydney to Dallas with a flying time of 15 hours and 25 minutes.

Soon we'll be powering the country's most environmentally friendly commercial passenger aircraft – the Qantas Dreamliner – with the revolutionary GEnx jet engine that will use 15% less fuel, produce 20% less CO2 and create 50% less noise than its predecessor.



Powering flights to all states and capitals.

Australia's Sydney to Melbourne air route is one of the world's busiest, handling more than ten million passenger flights per year. With flight paths like this becoming busier and actual flying times growing due to inefficiencies, the challenges for air traffic control are significant.

GE's Performance-based Navigation technology introduces intelligent navigation to our skies. Trials conducted in Brisbane, with Qantas, Airservices Australia and the Australian regulator CASA, resulted in:

### **475,826**

fewer litres of fuel consumed

### 𝔄 1,100

less tonnes CO2 produced

### **28,646**

air kilometres saved, as well as 70 airborne hours

Following this success, 15 Australian airports including Sydney, Melbourne and Canberra have now adopted this technology.



## 70% of domestic flights are powered by GE jet engines.

Street,

Mining leaders like Rio Tinto rely on GE locomotives to haul iron ore from Western Australia's Pilbara region to port. In fact, GE is one of the leading providers of locomotives and rail signalling systems in the Pilbara.



### **Rail Operations**

In the Pilbara, we're moving Australia's booming industries with advanced locomotives.

Some of Australia's most valuable industries are located in some of Australia's most remote places and rely heavily on rail transport. As a world leader in locomotive design and innovation, we're helping these companies move resources from mine to port more efficiently than ever.

The GE Evolution Series locomotive is the most advanced heavy haul locomotive ever built with 5% more fuel efficiency and 40% fewer emissions than its predecessor. While the trains run, our advanced train monitoring systems help customers perform remote 'health checks' for greater safety and productivity, saving them time and money.

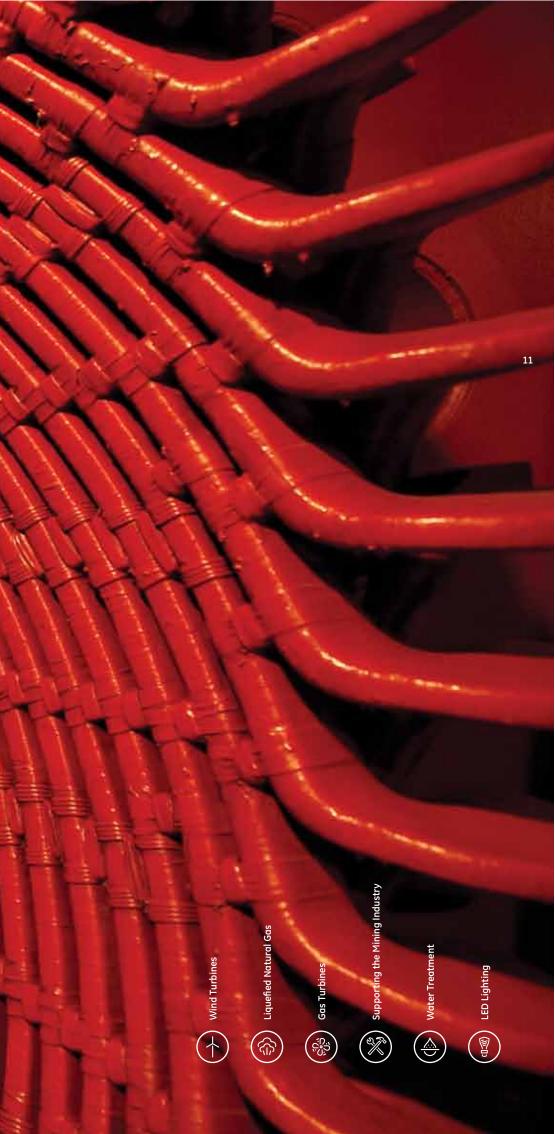
Together with longstanding partner UGL Limited, we've supplied nearly 600 locomotives across Australia.



The Pilbara WA

## Powering homes, businesses, tomorrow.

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### Generating enough power for 50,000 Australian households for a year.



### Wind Turbines

In Mumbida WA, we're helping Verve Energy harness the wind to power the equivalent of 50,000 Australian homes annually.

GE is focused on renewable energy, which delivers cleaner power with lower emissions – a challenge particularly relevant in Australia where the CO2 emissions per capita are among the highest in the world.

We're currently helping joint venture partners Verve Energy and Energy Infrastructure Trust build a 55 megawatt wind farm in Western Australia, near Geraldton. The farm will be powered by GE's 2.5 MW wind turbines, recognised as leaders in high-energy yield and reliability.

It's good news given that the Australian Government has committed to 20% of electricity coming from renewable sources such as solar and wind by 2020, making the most of Australia's abundant natural resources.





### **Liquefied Natural Gas**

In the gas fields of Australia, we're providing our customers with advanced technologies for one of our fastest growing fuel exports: LNG.

### **Gas Turbines**

In Australia's most remote places, we're providing the turbines that bring industries and communities to life.

- given its natural abundance,
   Liquefied Natural Gas (LNG) offers
   a massive export opportunity for
   Australia. In fact, it's predicted that by
   2020, Australia may overtake Qatar as
   the world's leading producer of LNG.
  - GE works on every major LNG project in Australia, helping to safely and efficiently extract, liquefy and prepare LNG for transportation.
  - Chevron has put GE's extensive experience in LNG technologies to work in the Gorgon Project, one of the world's largest natural gas developments. This long term, ambitious project demonstrates significant advancement in engineering and sets a new benchmark for the LNG industry worldwide.

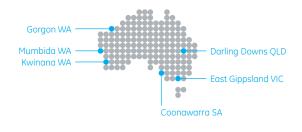
Australia's major electricity networks only reach so far, yet Australian industry is hard at work everywhere.

GE's gas turbine technology opens up possibilities for Australian businesses and communities, bringing power solutions to where they're needed.

Our LM6000 gas turbine uses technology derived from GE's innovation in jet engines to power the Pilbara, the goldfields of Darwin, and the electricity networks of East Gippsland and Coonawarra.

Origin Energy relies on GE Frame 9E gas turbines to power Australia's largest combined cycle gas-fired power station in Darling Downs QLD. The station produces less than half of the greenhouse gas emissions of a typical coal-fired power station and supplies enough energy to power more than 400,000 homes each day.

The latest in gas turbine technology is at the heart of Verve Energy's Kwinana Power Station. The GE LMS100 intercooled gas turbines combine unparalleled efficiency, 10-minute start times and proven high reliability, making it perfect for the South West Interconnected network.







### Supporting the Mining Industry

In mines across the country, we're helping our customers meet the challenges and opportunities of Australia's mining boom.

Mining in Australia is a tough business. Generating close to half our export earnings, the environmental and logistical challenges facing companies in this sector are significant.

GE provides end-to-end solutions, including reliable power generation, water management and intelligent technologies to increase productivity and performance of equipment.

Customers including Rio Tinto and Fortescue Metals Group rely on GE to make the most of their power, water and transportation requirements – and help improve their bottom line.

Mining across WA



Keeping our mining industry booming in WA.

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### Water Treatment

In Townsville and Cairns, we provide water technology to help protect the Great Barrier Reef.

Tropical North Queensland is an important region for farming and tourism and is home to one of the world's natural wonders.

Waste water from agriculture and growing populations has increased the level of nitrogen and phosphate in effluent which, when discharged, impacts local marine life. To combat this, Townsville and Cairns Councils have implemented ZeeWeed, GE's advanced ultrafiltration technology.

ZeeWeed is a membrane ultrafiltration system that radically improves water quality, purifying up to 80 Olympic swimming pools worth of waste water per day before it reaches the Reef.

In Sydney, we're helping greenkeepers water all year round, barely wasting a drop.

Maintaining world class golf courses is serious business, especially in a country susceptible to water shortages.

Every day, millions of litres of water are used to maintain thousands of square metres of turf, with much of it wasted, never to be used again. Sydney's Gordon, Turramurra and Pennant Hills golf clubs are using GE's ZeeWeed technology to recover and reuse 98% of once wasted water. Collectively, that's 1.2 million litres a day helping to keep greens green.





We're helping to purify up to 190m litres of waste water per day before it reaches the Reef. That'senough to fill 80 Olympic swimming pools!

City of Sydney council is now implementing GE's LED solutions by replacing nearly 6,500 outdoor lights.





### LED Lighting

In the City of Sydney, we're lighting up the CBD with super-efficient LED.

In 1879 GE's founder, Thomas Edison, invented the first practical incandescent light bulb.

130 years later, the company he founded is still leading the way with a new generation of LED technology, creating another lighting revolution.

With no filament to burn out and no mercury, these lights maximise energy and minimise running and environmental costs. Which is why the City of Sydney Council has selected GE LED solutions to replace nearly 6,500 street, park and plaza lights, in what will be one of Australia's largest outdoor LED lighting installations.

The lights will save the City of Sydney nearly \$800,000 per year in electricity and maintenance costs. Public lighting accounts for onethird of the City of Sydney's annual electricity use and 30 per cent of its greenhouse gas emissions. The new LED lights will slash these emissions - equivalent to 2,861 tonnes or taking 940 cars off the road.



## Curing bere, there, everywhere.





### Healthcare

Across the country our healthcare solutions are helping doctors and clinicians prescribe the best treatment to save lives.

### **PET/CT Scanning**

In hospitals across Australia, our high definition imaging tools help doctors more accurately diagnose cancer.

22 GE is one of the country's leading providers of medical technologies and services to frontline clinics and hospitals.

> We are helping Australia's healthcare profession shape a new age of patient care with the broadest range of medical technologies including CT, MRI, Digital Mammography, PET/CT, ultrasound and patient monitoring devices.

We take health seriously. GE is committing \$1 billion globally in dedicated cancer-related research and development over the next five years, helping health professionals make more accurate diagnoses and provide better treatment through faster, more effective technologies. An estimated 106,000 new cases of cancer are diagnosed in Australia each year†, causing a significant economic cost burden in our communities.

Early detection is the key to fighting this disease.

Ten years ago GE pioneered the world's first high definition PET/CT Scanner, which helps doctors and clinicians spot cancer tumours in early stages. Today, these scanners are at work across Australia.

By combining two medical imaging technologies, it produces incredible high-definition images. GE's exclusive motion-free approach helps doctors detect even the smallest tumours that could otherwise be blurred and overlooked.

† Australian Government National Health and Medical Research Council



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### Portable Scanning

We give healthcare practitioners the ability to see more with high quality imaging technology in the palm of their hand.

Access to better technologies means better diagnoses. Just as stethoscopes allow doctors to hear more clearly, Vscan helps them to see inside the human body for a more accurate assessment.

It's about making better clinical decisions faster.

The size of a smart phone, Vscan is a portable, pocket-size visualisation tool that puts ultrasound technology in the palm of a doctor's hand. It allows medical staff to evaluate patients in a wide range of clinical environments, such as ambulances, and provide a quicker diagnosis and faster treatment.







### Digital Mammography

In the fight against cancer, we provide tools to create clearer images for clinicians to detect breast cancer earlier.

### CT Scanning

At the Women's and Children's Hospital in Adelaide, we're helping doctors see better with higher quality images and lower radiation doses.

One in nine Australian women will be affected by breast cancer, but early detection and accurate diagnosis can increase the chance of successful treatment.

SenoBright is the result of ten years of research and development. This pioneering technology produces pictures from two energy spectrums to create contrasting images in a single breast examination, leading to a more accurate diagnosis. It's at work in hospitals across Australia, including Macquarie Medical Imaging in Sydney's Macquarie University Hospital.

This is just part of our commitment to improve treatment and find a cure for cancer. In 2011, we committed to a further \$100 million investment into breast cancer research globally.

The GE Discovery CT750 HD is the world's first high-definition CT - Computed Tomography system - combining high quality imaging delivered in seconds, with lower radiation.

Children are always on the move but if a doctor needs a CT scan to see what's going on inside, keeping them still is serious business. To make the CT experience friendlier for kids, Adelaide's Women's and Children's Hospital decorated their scanner with a colourful mural of balloons and clouds.



## Building wealth, skills, the future.





### Finance

In homes, businesses, shops and factories all around the country, we're backing Australia.

### Mid-Market

In the Mid-Market, we're getting behind the businesses that are building Australia's future.

### GE understands business.

We are the only company still in business today that was originally listed on the Dow Jones Industrial Average in 1896.

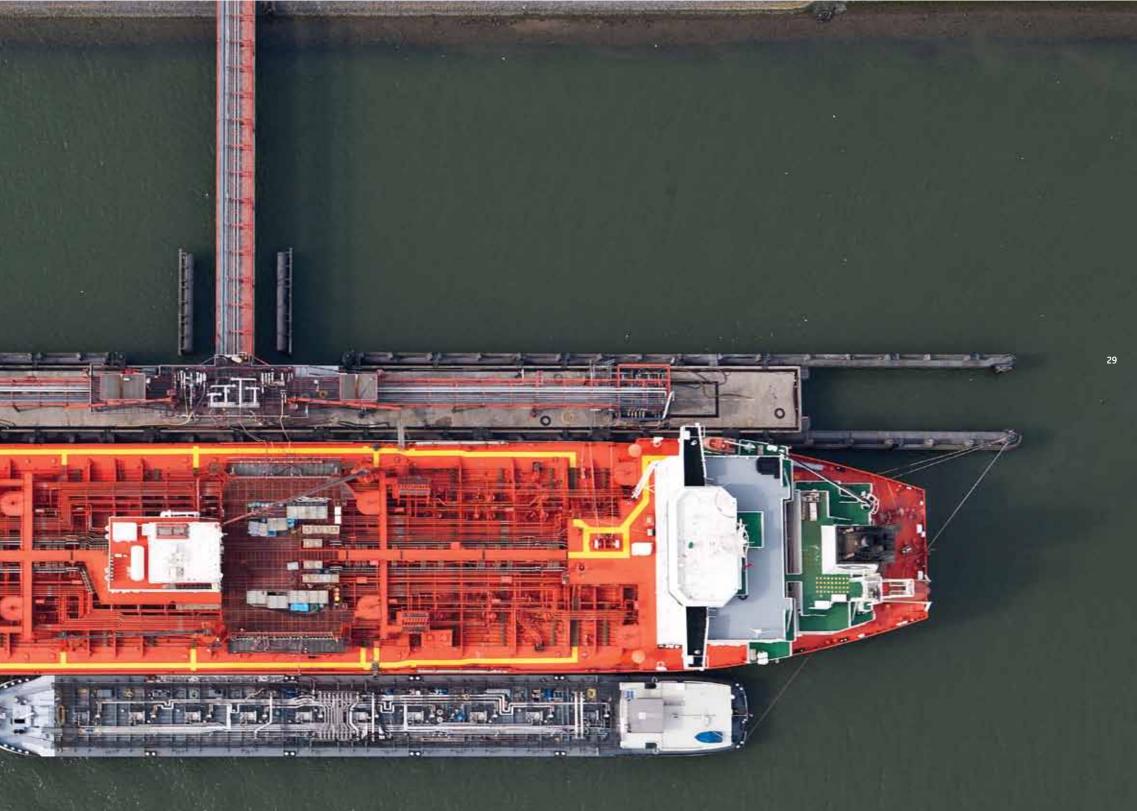
But while we're big, it's our intimate understanding of different types of businesses that really counts. And since we design and build everything from software and jet engines to health equipment and locomotives, diversity is no stranger to us.

GE Capital supports commercial businesses with critical equipment inventory and asset financing to help their business thrive.

We have over 3.2 million customers and partner with more than 10,000 leading Australian retailers including Myer, Coles, and Harvey Norman to provide customised retail finance solutions for their customers.

Our research into Mid-Market businesses revealed they contributed over \$424 billion to Australia's economy in 2010. More importantly, they employed 33% of the Australian workforce, or 3.2 million jobs.

Defined as companies that have revenues between \$10 and \$250 million and constitute 35% of all industry, they're a major foundation stone of Australian economic prosperity. We're proud to support 7,500 of the 27,000 Mid-Market businesses currently operating in Australia.



We're helping the Mid-Market grow.

GE Capital has been helping this country prosper and has over 3.2 million customers.

The CSIRO partnership will help Australian science make a global impact and, hopefully, lead to breakthroughs in how we move, power, cure and build the planet.



### Service and Maintenance Centre

In Jandakot Western Australia, GE has developed the largest state-of-the-art service and maintenance centre dedicated to the oil and gas industry.

The oil and gas industry is a major contributor to the Australian economy.

As part of our commitment to help this growth industry thrive, GE has developed the largest multi-purpose facility of its kind in Australia.

The complex includes workshops to service and commission products

and technology locally. It also has the ability to develop our employees' skills in-house. Our customers can rely on us to help solve their challenges locally, meaning better productivity and performance for them.



### Research and Development - GE's Partnership with CSIRO

We're partnering with Australia's greatest minds at CSIRO to solve tough challenges.

GE is working on cleaner energy and affordable healthcare in Australia, and so is the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

That's what makes our strategic alliance so natural.

Together, we're making a 5-year, \$20 million investment into collaborative research to uncover and deliver technologies that will impact people's lives. This partnership will help Australian science make a global impact and, hopefully, lead to breakthroughs in how we move, power, cure and build the planet.



Our 110 year journey has taken us the length and breadth of this land with one aim in mind:

To help Australia work better.

Find out more

ge.com.au imaginationatwork.com.au



imagination at work