

A person is silhouetted against a bright light at the end of a long, narrow tunnel. The tunnel is filled with thousands of red cables that curve and bend, creating a complex, maze-like structure. The person is standing on a narrow path, possibly a walkway or a set of rails, and appears to be working or inspecting the cables. The overall atmosphere is one of industrial scale and complexity.

GE Innovation Barometer

A perspective from business
executives on the state of
innovation in Australia

2013 Edition



GE imagination at work

**89% of Australian business leaders
say innovation is a strategic
priority for their business**

**80% of respondents say their business
has been increasingly fostering innovation
through collaboration**

**Over 92% of respondents believe
that small and mid-market companies can
be as innovative as large companies**

**Nearly half - 45% - of Australian businesses
say that mining data inside and outside
the company is a strategic priority**

**89% say the Australian financial
environment should be more
open to venture capital**

**83% of respondents say attracting and
retaining talent was the most
important factor in being able
to innovate successfully**



Australia jumps ahead in global innovation rankings but must work to convert its strengths into outcomes

Innovation is core to everything we do at GE.

As the world continues to change at a rapid pace, innovation has become more and more crucial for companies and economies to stay ahead and remain globally competitive.

I am pleased to introduce the third annual GE Innovation Barometer report, an independent research conducted by Strategy One. This report looks at how Australian business leaders view the state of innovation, how the rest of the world perceives Australia as an innovation leader and what will drive the future of innovation for our country.

This year, we spoke with 3,100 senior business leaders across 25 countries, including 100 business leaders in Australia.

One of the key findings I found quite fascinating is that Australia has improved its global innovation ranking from 16th place in 2012 to 13th place in 2013, out of 25 countries.

Indeed, we are on the path of building an innovation system among the world's top 10, but moving further ahead in global rankings will not be easy.

What we learn from this research is that we need to invest in skills in the right places, have higher levels of collaboration and, greater access to public and private funding to boost innovation.

It will take leadership from all - government, business, research institutions and individuals - to make it happen.

As Australia secures its place in the Asian Century, more than ever, this is the time where we need to invest, change, innovate - to build a stronger and more capable nation.

I hope you enjoy reading this report and that it gives you insights on how to improve the innovation capability in your business.

A handwritten signature in black ink, appearing to read 'Sargent', with a stylized flourish at the end.

Steve Sargent
President & CEO
GE Australia & New Zealand

Australia is seen as a strong market for innovation and has moved ahead in the global rankings

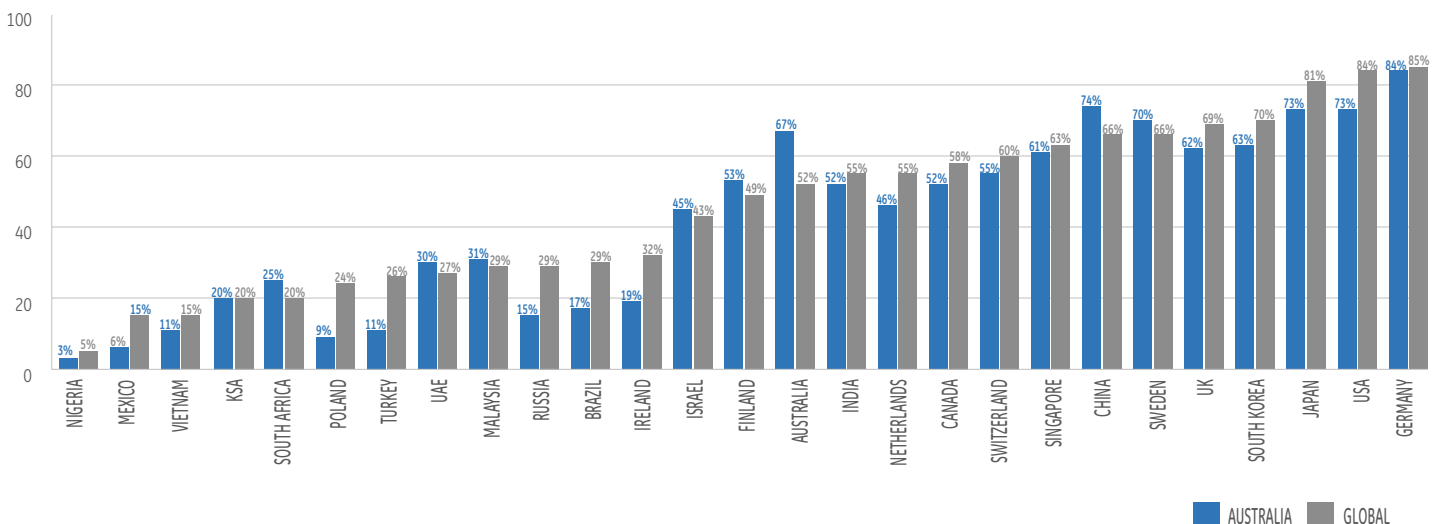


Australia has improved its global ranking as an innovation-conducive market from 16th place in 2012 to 13th place in 2013 (out of 25 markets surveyed). The country ranks ahead of a number of growth markets like Russia & Brazil as an innovative economy, but still lags behind established innovation leaders like the USA, Germany, Japan & South Korea.

Overall, Australia's innovation framework is perceived as strongly "innovation-conducive" by 52% of business executives from the 25 markets surveyed. When evaluating their own market, 67% of Australian business executives reported that their country has a strong innovation-conducive environment overall - indicating that Australia's perception of its innovation capacity slightly exceeds global perceptions.

Figure 1. For each of the following markets, how far would you say that they have developed an innovation-conducive environment?

Percentage of respondents that evaluate a market's Innovation environment positively by giving it a grade between 7 and 10/10 points. [Global perception vs. perception measured among Australian respondents only].



Australia ranks highly on a number of the key indicators of a leading innovation market

- Strong education framework, particularly in math & sciences
- High levels of collaboration between business and universities
- High quality of research institutions
- Ethical behaviour of firms
- Society places a high value on innovation: 86% of respondents agree that society is supportive of innovation and that there is an appetite for innovation among young generations.

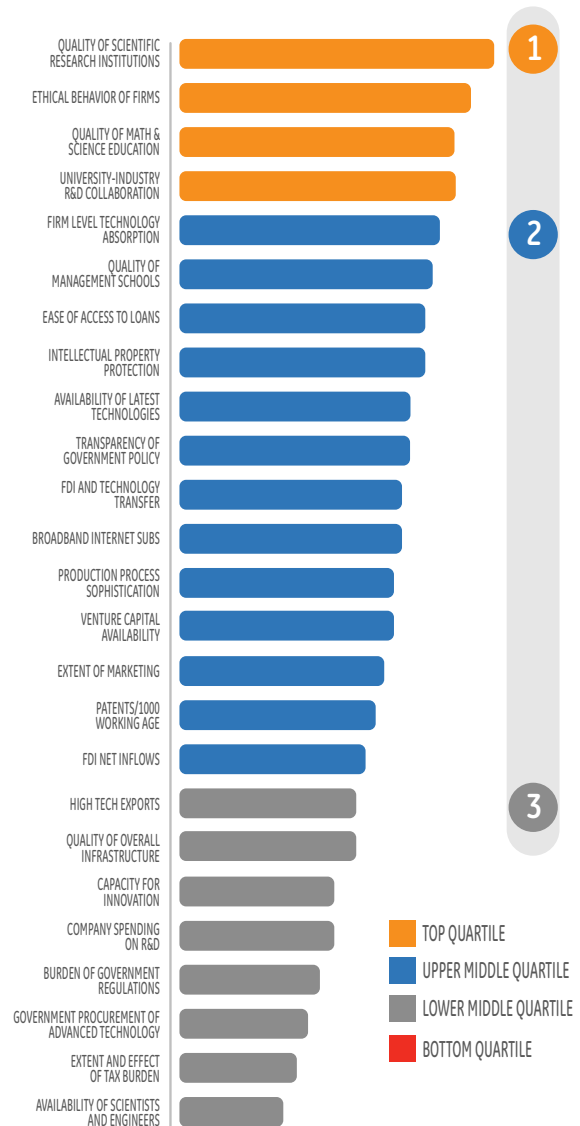
However, in a number of areas Australia ranks below the global average. There is an opportunity for Australian business and government to adopt practices and behaviours to improve the country's overall standing in these areas.

- Shortage of scientists and engineers
- Company spending on R&D
- Taxation policies and incentives for R&D and training

The quality of Australia's research and educational institutions is a key point of strength for Australia's innovation environment. These institutions are helping to drive technological development, and through collaboration with the business community, research and educational institutions have more opportunities to bring their innovations to market.

Australia's high ranking in corporate ethical behaviour is also helping to foster an innovation-conducive environment. Corporate ethics plays greatly into partnerships, a key finding in this year's Innovation Barometer. With firms looking to fill their talent and capability gaps by teaming with other firms, the knowledge that partners conduct business ethically allows for greater collaboration.

Figure 2. GE Innovation Scorecard: an analysis of Australia's innovation framework



"At Rio Tinto, innovation means finding new and better ways of doing our work in a responsible and considered way. It's about creating an enabling environment to support our people to do things more safely and to look for fresh ways to ensure our business' continued success in an ever changing world."

FIONA NICHOLLS, VICE PRESIDENT, EXTERNAL RELATIONS, RIO TINTO ENERGY

However, Australia's skills shortage, especially in the sciences and engineering, is a significant barrier to innovation and collaboration. Although the quality of Australia's educational institutions and, particularly its math and science education ranks highly, the availability of scientists and engineers in the country is notably lower than the global average. This inability to convert a high-quality education into a population of scientists & engineers indicates a growing need to encourage the next generation to understand the opportunities associated with a career in the sciences.

As part of this year's Global Innovation Barometer, GE's Global Market Intelligence team created a scoring model – the Innovation Scorecard – to rank 50 countries on certain factors inherent to their specific government, business and educational environments that impact the level of innovation within each country. Countries are then placed into one of an upper, lower, or two middle quartiles for each pillar and for an overall score. The countries that fall into the top quartile are considered leaders in laying out the kind of environment necessary to promote innovation. **Australia ranks in the second quartile of countries.** For more information on the Innovation Scorecard ranking and findings, please visit <http://www.ge.com/sites/default/files/Scorecard.pdf>



Australian businesses are advancing their capacity for innovation through collaboration

The Innovation Barometer results show that the overwhelming majority of Australian business leaders highly value innovation and its ability to improve business performance.

- 89% of Australian business leaders **say innovation is a strategic priority** for their business
- 68% of Australian respondents say their business will focus future innovations on **improving existing products and services**
- Australian business leaders strongly believe (66%) **companies need to challenge generally accepted practices** to drive innovation - 12 points higher than the global average.

Australian businesses are focused on improving existing models and technologies to boost productivity and enhance performance, rather than creating entirely new innovations. This strategic interest in pursuing “*incremental*” innovation will likely lead to an increase in business collaboration as companies work together to benefit from shared practices, technologies and processes. Moreover, leaders and managers will increasingly leverage data & insights to achieve incremental innovation and drive better business performance.

However, the report found that businesses believe that being a “*more innovative company*” is not a simple ambition. The report results showed that Australian business leaders are risk-averse and struggle with responding to an ever-changing global environment.

“Innovation is the driving force for any society and business. It is all about finding means to bring something new to the end-user; deliver high value products and solutions; stay ahead of the competition. Innovation should be the DNA of all processes across all sectors – it is always a priority for us.”

LANDRY FEVRE, GENERAL MANAGER MEDIA, COMMERCIAL STRATEGY, NATIONAL BROADBAND NETWORK

The business leaders surveyed strongly agreed that partnerships and collaboration are crucial to delivering innovative outcomes. Importantly, the respondents overwhelmingly agreed (92%) that small and mid-market businesses have the capacity to be as innovative as large companies. Collaboration between companies of all sizes is likely to increase as businesses seek to find compatibility and innovative solutions from new sources.

- 80% of respondents said their business has been increasingly fostering innovation through collaborations
- 67% say it’s easy for Australian companies to partner with universities and organisations to advance R&D
- Business leaders derive competitive advantage from collaboration with 92% of respondents agreeing that **innovation success rates are higher through partnerships** compared to “*going about it alone*”.

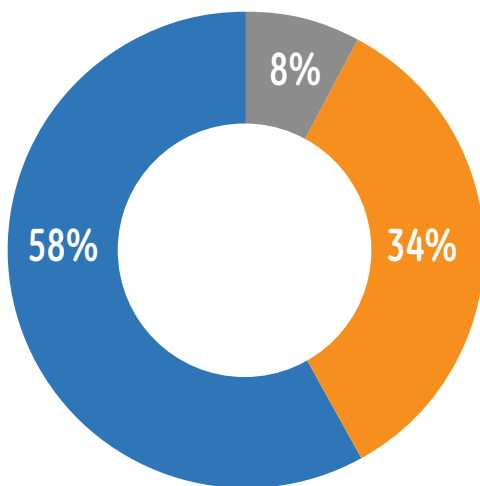
“We recognise that new ideas are more likely to come from individuals who work in an enabling environment. Enabling collaboration and robust relationships with the communities in which we operate is also important. For example, when one of our mines needed an airstrip, rather than just building it at the mine site for the mine’s use only, we engaged with the local community and in the end we built an airport that benefits both the mine and the wider community but at no extra cost. Therefore creating an asset at no extra cost to us that delivers more value to more people.”

FIONA NICHOLLS, VICE PRESIDENT, EXTERNAL RELATIONS, RIO TINTO ENERGY.



Figure 3. More than ever before, SMEs and individuals can be as innovative as large companies

92% of respondents believe that small and mid-market companies can be as innovative as large companies (13 points higher than the global average).



■ SOMEWHAT DISAGREE ■ SOMEWHAT AGREE ■ STRONGLY AGREE

“One of the most important results for Australia, since our landscape is largely made up of SMEs, is the recognition by our own business leaders that SMEs and individuals can be as innovative as large companies. We need to support them in their endeavour.”

PROFESSOR IAN CHUBB, CHIEF SCIENTIST OF AUSTRALIA.

The availability of data is rapidly changing the ability of companies to innovate and develop solutions based on clear insights. “Big data” is revolutionizing the way companies are organised and the way they respond in the market.

- 83% of Australian businesses strongly agree that **understanding customers and anticipating market evolutions is a critical ability for companies to innovate successfully.**
- Nearly half (45%) of Australian businesses said that **mining data inside and outside the company is a strategic priority.**
- Australian businesses are getting ready to tap into the “big data” innovation potential: 41% of respondents said their company is developing the ability to **leverage “big data”** to innovate.

“We have allocated about a quarter of our management resourcing towards customer analytics skill sets which range from PhD level data scientists and behavioural economists through to more traditional business intelligent reporting skills sets. For us it is viewed as a core competitive advantage that we have.”

VAUGHAN CHANDLER, EXECUTIVE MANAGER INSIGHTS & INNOVATION, QANTAS LOYALTY

Access to capital and top talent will be key drivers of Australia's future innovation potential

Access to capital is a significant barrier in Australia to both established businesses looking to expand or change operations as well as new businesses seeking venture capital. The report findings show Australian businesses believe their future capacity for innovation will be determined by the availability of funding to support new projects and ideas. The majority of business leaders say they are concerned about their ability to weed out unpromising innovations at an early stage. Not “*knowing when to quit*” can expose companies to financial risk - which, as the report findings show, is a risk many business leaders are not willing to take.

- **89%** of Australian respondents say the country's financial environment should be more open to venture capital, 12 points higher than the global average and more than half (51%) want to see **simplified processes for companies seeking to access public funding**.
- Furthermore, only a third of respondents agreed that private investors support business innovations – a result 21 points below the global average.
- Nearly half (46%) of Australian leaders think that the speed of commercialisation for new products is inadequate.

Attracting and retaining talent is one of the biggest challenges for Australian companies. In particular, the shortage of scientists and engineers in Australia is a significant barrier to the development of innovative technologies, processes and systems.

- **83%** of Australian business leaders said attracting and retaining talent was the most important factor in being able to innovate successfully, 10 points higher than the global average.

“For a business to be innovative, you need leaders and individuals who are prepared to think differently. At Rio Tinto we encourage diversity of thought but not at the expense of our core value of safety.”

FIONA NICHOLLS, VICE PRESIDENT, EXTERNAL RELATIONS - RIO TINTO ENERGY

- However, Australia faces significant competition for talent – particularly for scientists & engineers. Australia has a below average availability as compared to other global markets for scientists & engineers.

Compared to Canada, Australia has 2,000 less R&D researchers per 1 million people and applies for nearly half as many patents a year (2,400 as compared to Canada's 4,500).

The way forward: creating stronger linkages between education and the business world and working towards a more harmonised intellectual property protection framework will help improve Australia's innovation framework.

“I think much can be done to improve our innovation environment. My consultations with industry recently indicated that the following themes would prove valuable: strengthening business access to publicly funded research expertise, infrastructure and data; encouraging mobility of researchers between academia and business or other enterprises; harmonising IP frameworks; and emphasising the role of STEM education in changing the culture. These could be ideas that change our innovation landscape.”

PROFESSOR IAN CHUBB, CHIEF SCIENTIST OF AUSTRALIA.



About the GE Global Innovation Barometer

A Study Prepared by StrategyOne for GE

The GE Global Innovation Barometer, now in its third year, explores how business leaders around the world view innovation and how those perceptions are influencing business strategies in an increasingly complex and globalized environment. The Barometer is an international opinion survey of senior business executives actively engaged in the management of their firm's innovation strategy. Spanning across 25 countries, it is the largest global survey of business executives dedicated to innovation.

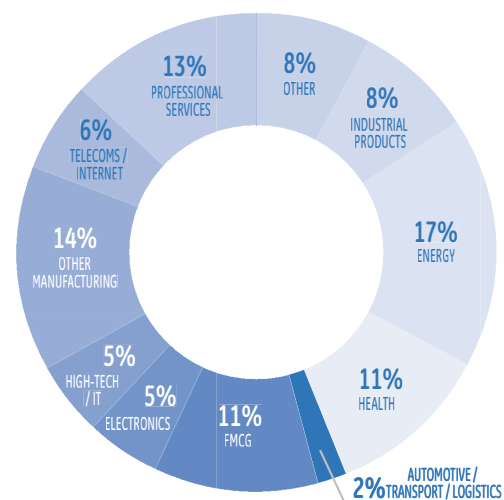
The survey was commissioned by GE and conducted by StrategyOne an independent research and consulting company. This year's Barometer examines what factors business believe to be drivers and deterrents of innovation and analyzes specific strategies and policies that enable innovation and drive growth.

The survey contributes to conversations about how to encourage innovation globally as well as provides insights on the way business executives around the world view their country's innovation framework.

Sample and fieldwork details

- Independent phone survey of 3100 senior business leaders across 25 countries
- 100 business leaders interviewed from Australia
- Conducted between Oct 22 and Dec 5, 2012
- All respondents are directly involved in the innovation strategy or process in their company, 880 C-Level business executives
- Average company size is 1200 employees
- Average age of respondent is 43 years old

Australian respondents by sectors



As part of the innovation barometer survey, StrategyOne also conducted four in-depth interviews with business executives from leading Australian companies who shared their perspective on how innovation is driven within their companies and on what is needed for innovation to continue flourishing in the future:



Fiona Nicholls
Vice President of External Relations, Rio Tinto Energy



Vaughan Chandler,
Executive Manager Insights & Innovation, Qantas Loyalty



Landry Fevre
General Manager Media, Commercial Strategy, National Broadband Network



Professor Ian Chubb
Chief Scientist of Australia



About GE

GE works on things that matter. The best people and the best technologies taking on the toughest challenges. Finding solutions in energy, health and home, transportation and finance. Building, powering, moving and curing the world. Not just imagining. Doing. GE works. For more information, visit the company's website at www.ge.com/au
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About StrategyOne

StrategyOne is a full service strategic research and measurement consultancy firm created in 1999 in New York, with offices in Washington D.C., New York, Chicago, Atlanta, San Francisco, San Mateo, Houston, Seattle, Rochester (NY), London, Paris, Brussels, Dubai and Abu Dhabi.

StrategyOne routinely conduct projects with a global perspective. In Europe, StrategyOne provides companies and organisations with opinion, stakeholder and marketing research, as well as analysis and measurement of communications and public affairs initiatives.

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GE imagination at work