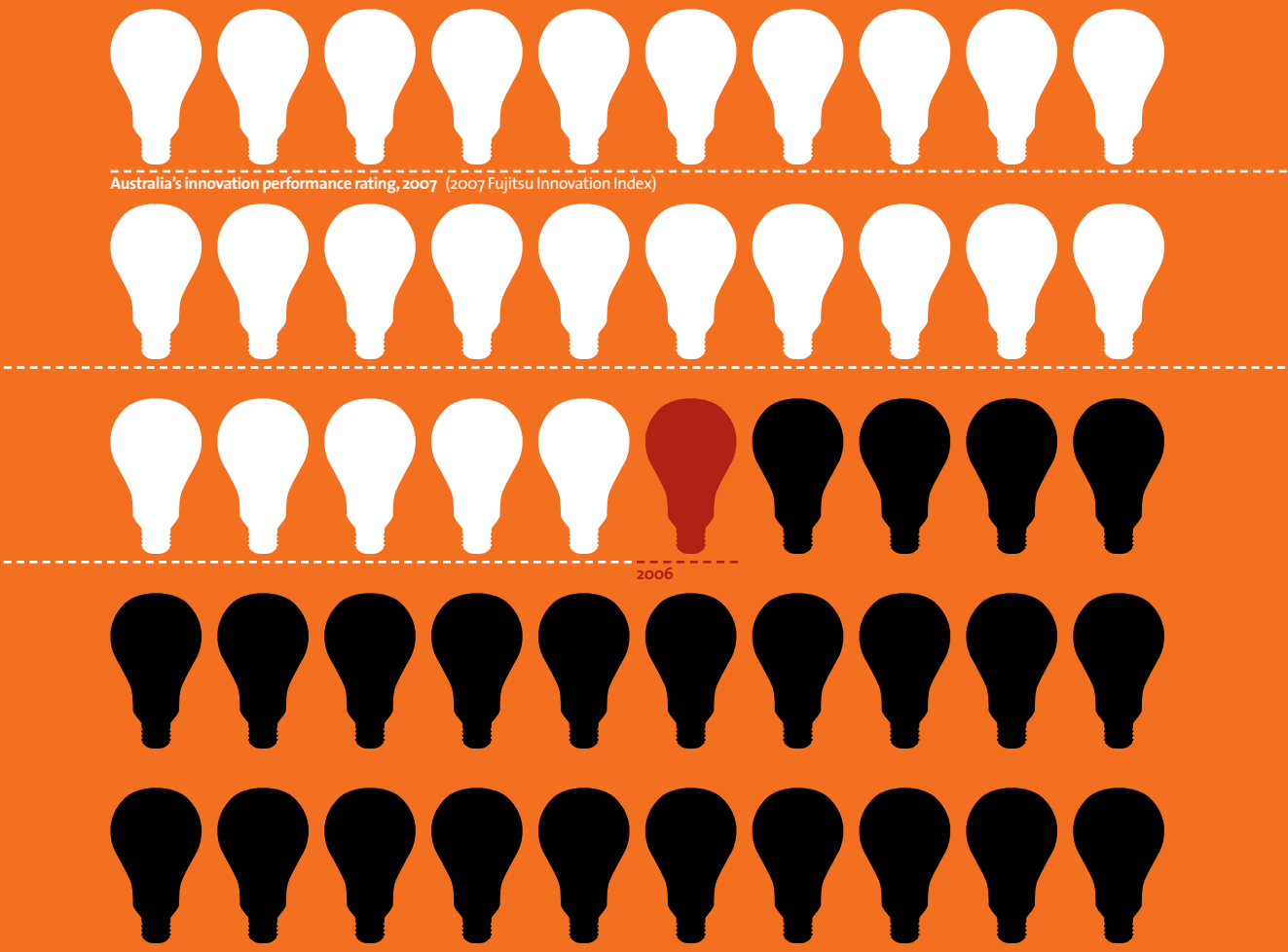
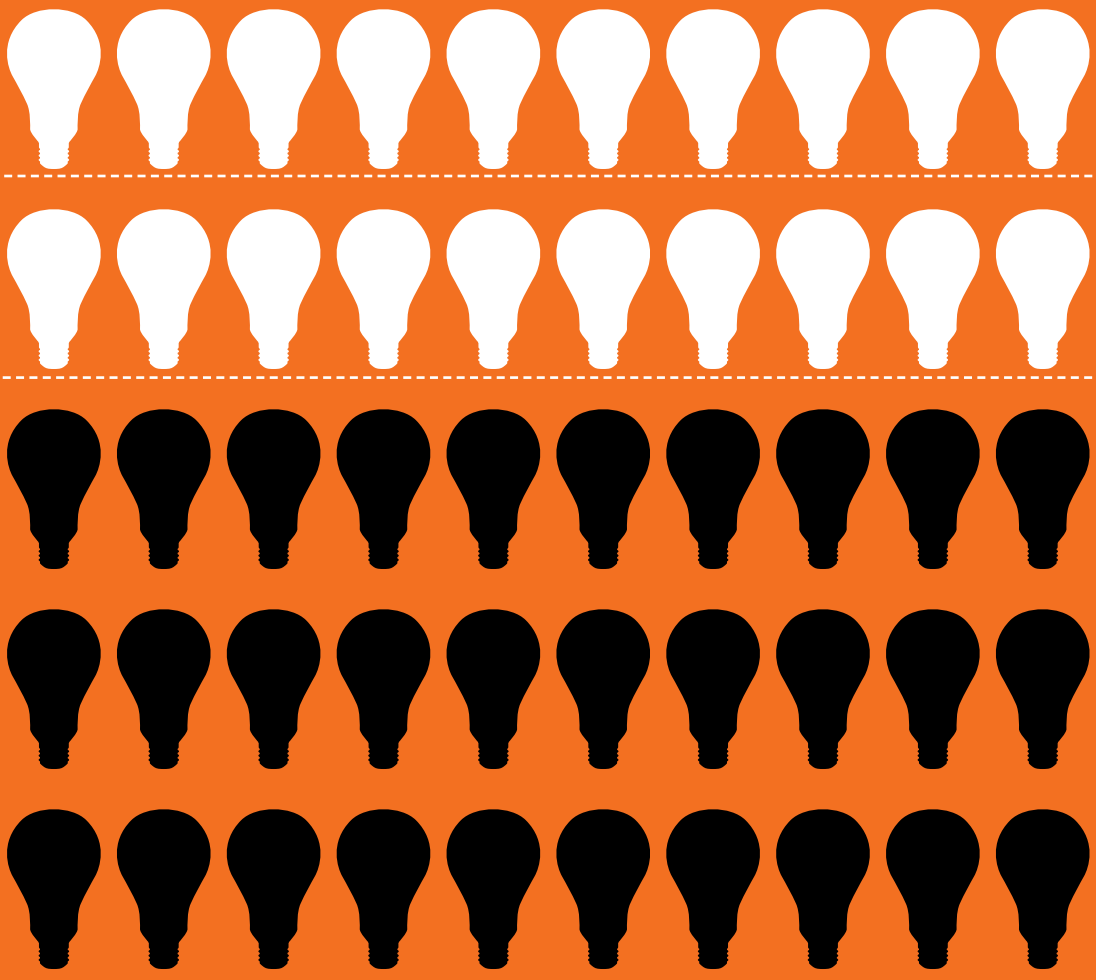


The business of brainpower

Australia has lots of innovation drivers and entrepreneurs, but lack of money and dedication coupled with short-termism are factors that let us down in the innovation rankings, reports *Brad Howarth*.



What do Australia, Cyprus, the Czech Republic, Estonia and Italy have in common? All rated 'moderate' or 'trailers' – well behind the innovative leaders – in the *2007 European Innovation Scoreboard* report published in February 2008 by European Commission research body, InnoMetrics.

If Australians spent as much time practising innovation as we did discussing it, we might well be one of the most innovative nations on earth.

But often that discussion laments that Australia does not rate as highly as many believe we should on international scales of innovation. The common question is, 'What can be done to improve the situation?'

If research and development is taken as an indicator of innovation, in Australia only 1.76 per cent of gross domestic product (GDP) is committed to this activity each year – half a percentage point behind the average for OECD countries.

Global innovators, according to the InnoMetrics report, remain the Scandinavian countries – Denmark, Sweden and Finland- while 'followers' include Austria and Belgium.

Among the 'moderate' group – ranked on the lowest peg of the scoreboard and also known as the 'trailers' – Australia showed relatively strong performance in innovation drivers and entrepreneurship, but we were let down by our performance in knowledge creation and intellectual property.

A lack of dedicated personnel, insufficient budgets and short-term thinking in Australian organisations were at the core of our poor innovation ranking, according to the *2007 Fujitsu Innovation Index* and despite innovation spending growing by 37 per cent in 2007, innovation performance fell from a rating of 46/100 to 45/100 for that year.

"It clearly isn't something you can throw money at and see a return," says Tom Dissing, the principal of Fujitsu Consulting. "It's really about being clever about how you spend your money."

While Australia scored well in the area of 'incremental innovation' that sustains business, our rating

on radical innovation was poor. So too was our rating on external collaboration.

"But the indications from our research is that innovation has a very positive impact on business outcomes, that range from employee and customer satisfaction, productivity, and revenue and profit," says Dissing. But before we labour too much more over our global ranking, it may be worthwhile discovering what exactly innovation is? Because more than being just a question of semantics, the answer(s) to this question impacts significantly on the development of innovation policy in Australia.

"For decades the government thought innovation was all about invention," says Tom McKaskill, author and former Professor of Entrepreneurship at the Australian Graduate School of Entrepreneurship at Swinburne University of Technology. "And they stuffed huge amounts of money into medical and scientific research on the basis that it would produce outcomes, and that wasn't the case."

Now the focus is swinging to the commercialisation of knowledge and its contribution to the economy. That means getting research out of the universities – and that means recognising the role of entrepreneurship in innovation.

"The entrepreneur's skill is taking something to market and creating new business in marketplaces.

"It is not a question of where we fit relative to a dominant market player like the US, the EU or China. It is more a question of what are the sorts of targets that make best sense in terms of maximising Australia's position. We might be an advanced economy but we are always going to be a small economy in global terms." Terry Cutler

More often than not, that is a very different skill," McKaskill says.

If there are solutions for rebalancing Australia's innovation equation, Terry Cutler may be the first to find them. An industry consultant and director of the CSIRO, Cutler is the head of the Rudd Government's Innovation Taskforce, and is responsible for conducting a wide ranging review into Australia's innovation framework.

Cutler's goal is to develop a long-term agenda, looking well into the next decade, to align and organise

INNOVATION CULTURE

What really drives innovation?

This year almost one quarter (22 per cent) of organisations believe that the key driver of innovation performance is an innovation 'culture'. More than half (34 per cent) of our Index respondents said the chief method they would use to encourage staff to embrace an innovative culture is to establish open communication to boost and facilitate staff feedback. This method was used by most (66 per cent) of the innovation 'Leaders' and 'Progressives' (the go-getting, open and ever-modernising companies) compared with 45 per cent of 'Laggards' (the more conservative, change-resistant organisations).

Establishing an innovation culture is so much more than just open communication and a 'suggestion box' in the canteen. Our research shows that the largest innovation performance gap between Leaders/Progressives and Laggards is companies' ability and willingness not just to ask for ideas but to capture them and identify those with the greatest likelihood of success. This innovation 'quality control' is best performed when a formal innovation governance framework is established to enable a structured process for 'picking winners'.

Innovation can be viewed as a continuum from Incremental Innovation (small steps forward with low risk and a high chance of success), to Radical Innovation (great leaps in the advancement of a product, service or technology). While organisations in Australia and New Zealand do well (6.6 out of 10) on Incremental Innovation, we need to lift our game when pursuing Radical Innovation, where the average performance was only 4.9 out of 10.

Source: Fujitsu Innovation Index Report 2007

initiatives relating to the public and private sector throughout Australia. While the field of study includes the role of innovation in industrial productivity and competitiveness, it holds an equally important agenda around innovation in public service delivery, especially in sectors such as health and education. The taskforce is also addressing how innovation can be mobilised around the major challenges that face Australia, such as climate change and the aging population.

The final challenge is that of harmonisation, with Cutler's goal the creation of "a clear articulation of national innovation priorities which really act as priority setting formulations, rather than just motherhood statements".

"It is not a question of where we fit relative to a dominant market player like the US, the EU or China. It is more a question of what are the sorts of targets that make best sense in terms of maximising Australia's position," Cutler says. "We might be an advanced economy but we are always going to be a small economy in global terms."

Cutler says one place to look is the distinctive aspects of Australia's situation and capability that give rise to globally competitive opportunities.

"They arise either from our natural environment or endowments, or positions in key areas like resources and agriculture, where we have built significant global market shares or the imperative to develop unique solutions," he says. "Some of the best examples have been around our areas of traditional strength – mining is a classic one, with the use of science and technology to drive that industry in terms of exploration, extraction processing and all the associated services."

GROWING INNOVATORS

Existing innovation policy has resulted in the creation of numerous organisations tasked with fostering and delivering innovation. Melbourne-based iNNOVIC for instance was created 21 years ago in conjunction with several universities to provide assistance in the development and commercialisation of innovative ideas.

iNNOVIC director Roger La Salle (who took his first invention, a zinc die-cut wood working tool called Pro Cut Mitre, to the market when he was 18 years old) says iNNOVIC works at the early stage of business development, providing services ranging from low-cost consulting through to networking functions.

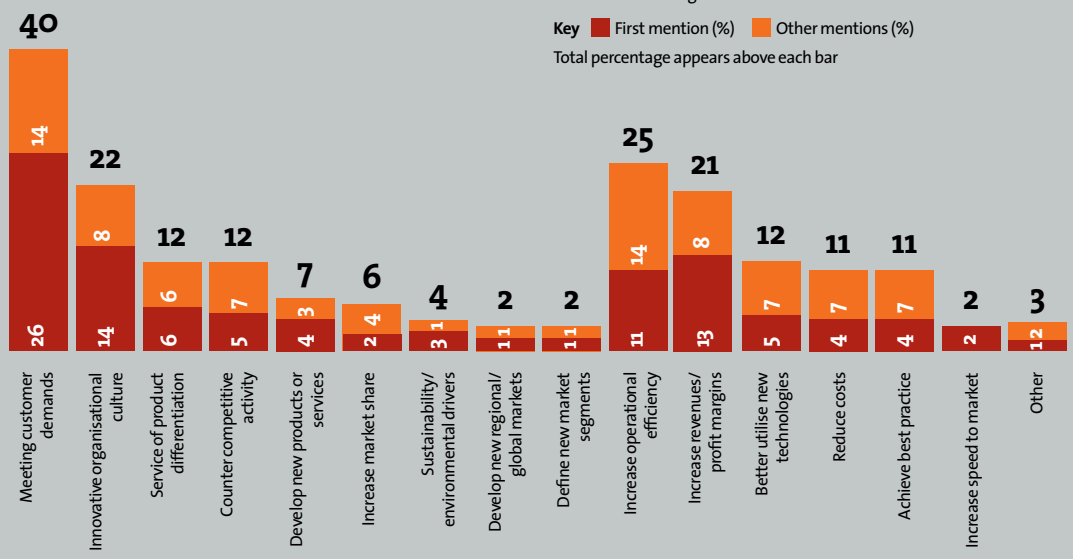
But he says that while there is plenty of support at the start-up stage, many innovative companies falter as they mature, and government assistance becomes scare.

"We don't reward success, we punish it with taxes," La Salle says. "I would like to see us have some programs that actually reward success."

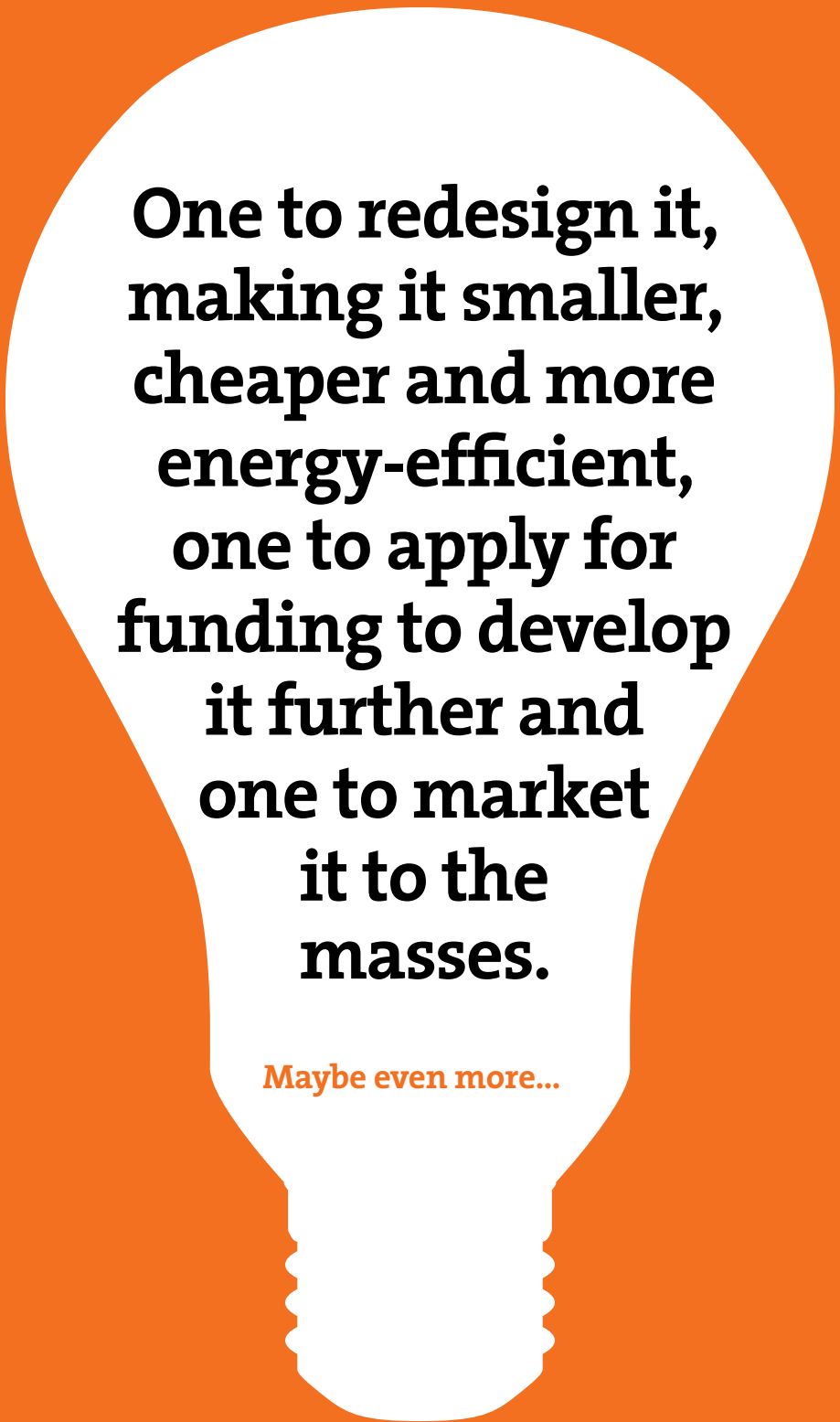
Drivers of innovation

Source: Fujitsu Innovation Index Report 2007

The main drivers of innovation for organisations in Australia and New Zealand were 'meeting demand' and 'increasing operational efficiency'. Together these two drivers constitute 65% of the first and second mentions by the survey respondents. The chart below shows the drivers of innovation for organisations in Australia and New Zealand.



So... how many innovators *does* it take to change a lightbulb?



Another such group is the Australian Institute for Commercialisation (AIC) in Queensland, a part government-funded services organisation that helps business, research organisations and governments convert their ideas into outcomes.

Chief Executive Officer Rowan Gilmore says the AIC also works in the early stage of the commercialisation of innovation, helping to translate intellectual property into applications that have value in the marketplace.

Gilmore says that while many attempts at commercialisation focus on pushing innovation out into commercial entities, the AIC prefers to start on the demand side, by working with businesses that have an unmet need, then finding an innovation supplier.

The AIC also works with organisations to unlock the inherent innovation within their systems. One example is Queensland Health, where Gilmore says there are thousands of pieces of software written by different hospitals and research institutes. The value is in the business process that the software supports and the knowledge of the business process.

"We embed people within the Department to help identify IP and to consider whether there is a market for it, and then we run through the normal government processes to ask for industry partners who would be interested in taking that IP to market," Gilmore says. "They can then take the product to other governments around the world.

"We've done that with about 60 projects in the ICT [Information and Communication Technologies] space already, and we are working now in non-ICT projects like mine safety for a coal mine."

Another project in WA is looking to streamline various innovation initiatives into a one-stop shop. The WA Innovation Centre is stringing together programs from different agencies and innovations to create numerous pilot programs.

The General Manager for Tech Parks and Innovation Services at the WA Department of Industry and Resources, Roy Chapman, says the goal is to move away from just providing financial assistance grants, by shifting the focus to education and training that links through to business development programs.

"There is a huge gap in the WA market between a person with an idea, and the commercial realities," Chapman says.

The Centre is now developing an incubator program which Chapman says will provide access to a range of development programs rather than just providing cheap rent. The overall goal is the development of a larger number of technology-based organisations in the Perth area, along with an upswing in external investment.

In addition to centres such as that in WA and the AIC, other state governments have also fostered innovation by pooling groups of common interest. This approach, known as 'clustering', is perhaps best demonstrated in California's Silicon Valley where a large number of entrepreneurial IT companies have gathered around Stanford University.

Gilmore points to the Australian wine industry as a strong local example of clustering, where the ecological necessity of growing wine in certain regions has led to a natural environment for collaboration.

"You've got shared technological innovation and the wine makers are a convivial bunch, so they network well," Gilmore says. "You've got world-best practice in things like yeast and in fermentation techniques."

Another cluster has emerged in Queensland in aviation, based around the presence of the US company, Boeing, and the RAAF base at Amberley.

Whether these various initiatives will shift Australia's rankings in the innovation leagues tables remains to be seen. But as McKaskill points out, Australia clearly is not suffering.

"We've got one of the most robust economies in the world," he says. "Now if you go to an economy like Israel, that doesn't have the natural resources that we have, you'd have to argue that the only way that country is going to generate increasing wealth for its people over time is innovation.

"Are we suffering because we're not registering enough patents? I don't think the Australian population would argue that, so maybe we have found a different way of raising wealth and it doesn't have to be the same as everyone else."

Ultimately McKaskill says different countries will take the path that is best suited to them.

"We shouldn't pretend to be the same as the United States or England, we've got to find our own way to be innovative and where we can get a competitive edge."

Brad Howarth is a freelance journalist who writes about innovation, entrepreneurship and marketing for publications including *BusinessWeek*, *The Sydney Morning Herald*, *The Australian Financial Review*'s *Boss Magazine* and *Australian Anthill*.