

ASIC Annual Dinner

Keynote Address

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CHAIR,

INNOVATION AND SCIENCE AUSTRALIA

Growth, culture and change: Policy settings necessary to maintain Australian competitiveness

Acknowledgements:

ASIC Chair, Greg Medcraft

Opening

Thank you;

It is a pleasure to have this opportunity to speak at ASIC's signature annual event.

So that we are on the same page, when I speak about innovation tonight, I am not just referring to new knowledge and inventiveness, I am talking about the translation and commercialisation of that newness into world markets. It is very clear that in recent decades Australia has been far more successful with research discoveries than it has been in the commercialisation of new products, processes and services. To some extent this reflects quite rational behaviour by business and consumers in a small domestic market system far away from world markets why not be agile importers and early adopters of other people's new technologies and products? Jack Dorsey, founder of Twitter and Square, just this week remarked, "Australia has adopted new technologies faster than the US, so we're pretty excited about that".

But for so many of our products and services today, the old tyranny of distance has been replaced by an internet and digital connectedness; a breathtaking step change in connectedness to ideas, suppliers and consumers worldwide.

The first iPhone was released on 29 June 2007 and by March 2015 700 million had been sold.

The most recent figures I have seen for Australia claim that 96% of 18-34 year olds use a smart phone; 80% of them checking it as the first thing they do when waking up.

We are now more connected than ever before and this connectivity is fragmenting our supply chains and disrupting business models. In 2000, there were 400 million internet users worldwide; by 2015 that figure was 3.2 billion.

Innovation is often derived from new technologies, like the Cochlear bionic ear, new drugs and vaccines like the first vaccine against cervical cancer, developed by Australian Professor Ian Frazer. Worldwide sales of Gardasil have reached over \$15 billion and this has already provided \$300 million in royalties to University of Queensland, and about the same to the inventors and to CSL.

But innovation can also derive from new business models, for example the asset sharing models, core to the likes of Uber and Airbnb. These innovations can be even more disruptive than new technologies, especially in regulated markets like taxis although my prediction is that driverless technology will disrupt Uber in due course. Or maybe by then Uber will dominate driverless delivery of packages, pizza, groceries and people.

We are living in a time when these rates of change in all forms of innovation have never before been experienced. For most of us in business the opportunities and the competition are now literally 24/7 changing events. So how do we not just cope with this but embrace it?

In December 2015, Prime Minister Turnbull announced his Government's National Innovation and Science Agenda (the NISA) which I believe is a potential game changer in the trajectory of our economy and society. The NISA included 24 separate measures, designed in aggregate to motivate and facilitate an increased participation in and embrace of innovation. These measures are a mix of taxation and other incentives including legislation to reduce certain regulatory and other inhibitions against risk taking, direct co-investment programmes targeting early and later stage development of our home grown medical and other discoveries, changes in the way research in universities will be funded, long term commitments to essential research infrastructure, funding to support greater curriculum emphasis on STEM subjects in our schools and universities, and much more.

Coinciding with the NISA, I accepted the invitation to chair an independent statutory board, called Innovation and Science Australia. Comprised primarily of private sector members, this Board is mandated to assist in the implementation of many of these NISA measures and to provide a whole-of-government advisory role on all science, research, and innovation matters. The Chief Scientist Dr Alan Finkel is Deputy Chair and the board reports through the Minister of Industry, Innovation and Science to a new Innovation and Science Committee of Cabinet chaired by the Prime Minister. The board also has a range of supervisory, monitoring, evaluation, advisory and decision making responsibilities for several existing government programmes administered by the Department of Industry, Innovation and Science. These programmes include the \$3 billion R&D Tax Incentives, the 33 CRC's,

Entrepreneurs Programme, the ESVCLP and VCLP funds and the soon to be launched Biomedical Translation Fund - a \$co-investment venture fund of at least \$500 million.

Innovation and Science Australia has also been tasked by Cabinet with developing/recommending a long term strategic plan for the nation's science and innovation. This will be a 15 year plan and is an important and big challenge about which I will make a few comments later, if time permits.

In the immediate future, I believe there are 6 key challenges to innovation we need to address:

1. Lack of active collaboration for commercial outcomes - among universities, research institutes, business entities, government and venture capitalists.
2. Access to risk capital funding
3. Access to business and entrepreneurship skills
4. Access to international markets
5. Insufficient investment and interest in stem curricula in our schools, vet colleges and universities.
6. A risk averse culture that often results in the fear of failure trumping the excitement of gain.

I propose to talk about just two of these tonight, namely collaboration and culture.

COLLABORATION

Australia performs strongly on international measures of research excellence, an important driver of innovation. A recent *Scientific American* article ranked Australia 12th out of the world's best 40 countries for science. Even better, the World Economic Forum ranked Australia 1st on its list of the world's most creative countries in 2015!

But where are we in terms of translating our new knowledge and ideas into actual market outcomes? How good is our collaboration between academia and business?

The latest OECD table puts Australia last out of 26 OECD countries that report on collaboration between business and public research institutions on innovation.

How can that be? There is no doubt that our alarming collaboration ranking is a direct contributor to our poor performance at commercialising our discoveries.

There are of course wonderful examples of successful Australian research and business collaborations – the Nucleus heart pacemaker, Professor Graeme Clark and Cochlear's bionic ear, CSIRO and Radiata's Wi-fi, Resmed's sleep apnoea product with University of Sydney's Colin Sullivan, University of Melbourne and venture capitalist backed spin offs

Hatchtech and Fibrotech, and University of Queensland with Gardasil and Spinifex, to name just a few.

But it seems we can count them on one hand so to speak, not in their hundreds each year. The good news is that we can – and will – dramatically improve on this performance.

So what are some things we can do to accelerate collaboration to achieve both research excellence AND commercialisation excellence? These are not mutually exclusive pursuits but frankly until we change the way research funding is provided to our Universities nothing much will change.

Dr Ian Watt's recent review has recommended a reweighting in block research grants to require industry engagement in both the Research Support and Research Training programmes. Dr Watt's design embraces two funding drivers – the traditional peer reviewed competitive grants income plus a new businesses and other user income. This is bold and innovative and is already sending powerful signals to Vice-Chancellors on down.

But it is a two way street and not only do researchers need to reach **out** to business but business needs to reach **in** the universities and research organisations.

The Australian Government spends about \$3 billion a year on the R&D Tax Incentives for business. The Government has tasked me, as Chair of ISA, Chief Scientist Dr Alan Finkel and Head of Treasury, John Fraser ("fondly code named as the 3F's) to jointly review the R&D Tax Incentive. As part of this review, we want to understand whether the programme is too complex, and possibly over reliant on costly professional advisors; the degree to which additional R&D is encouraged; that is additional to what would otherwise be spent anyway, the difference between the effect the incentive has on small businesses and its effect on big businesses; and if the programme could be recalibrated to include a greater emphasis on rewarding collaboration, to incentivise/motivate business to work with and seek solutions from Publicly Funded Research Organisations. It is interesting to note, the French research tax credit scheme provides a premium tax offset credit for business R&D spent with PFRO's and this appears to have worked with France now ranked No 3 in the OECD collaboration tables.

So hopefully new research funding rules and better focused R&D tax incentives should generate significant behavioural change with respect to collaboration between academia and business.

ON CULTURE

Challenge No 6, the fear of failure does seem to pervade and intimidate risk taking in too many of our boardrooms. Last week's AFR business summit surfaced some very interesting truths in this regard.

Richard Goyder of Wesfarmers and Alison Watkins from Coca-Cola separately reported recent pressures from their investors not to invest overseas. Richard made his comment in the context of Wesfarmer's recent UK acquisition of Britain's Homebase hardware chain; and Alison Watkin's comment reflects her experience with investor's negative view about her company's expansion in Indonesia. She says "short term returns were being prioritised over growth" – a warning echoed by Catherine Livingstone. One has to wonder whether our franking credits regime also encourages near term cash dividends to trump longer term investment in innovation?

Those of us operating in the private markets probably have it a lot easier. My day job in VC and PE has for decades been about trying to pick winners and avoid losers. And when you get the winners you encourage them to reinvest all their earnings, not waste them on dividends. And when you are in the losers, you help them in an urgent search for reinvention or otherwise realise the failure and stop flogging a dead horse.

All a lot easier if your investors are measuring returns over 5 to 10 year periods, and if you are not in the daily glare of stock market prices and analysts of short- termist performance.

Last week there was also the telling message from GE's Vice Chair John Rice about the terminal career risk awaiting any senior executive who dares to embark on a major innovation investment that does not deliver.

This all helps explain why we find a risk averse culture in the boardrooms of many publicly listed companies, compared to that found amongst entrepreneurs and their venture capital backers in the start-ups and early stage enterprise eco-systems. The sort of corporate venturing adopted by companies such as GE may be one solution to this intimidation GE has over 100 different VC style minority equity investments in a broad portfolio of new technology development enterprises. None of these involve "betting the GE farm" but do provide windows on multiple innovations likely to enhance or disrupt core GE products (especially in their focus on the internet of things). These also provide the opportunity for seasoned GE executives to see and learn from the entrepreneurial styles and processes utilised in these agile and "fearless of failure" enterprises.

We are starting to see this sort of experimentation by the banks here in the fintech space, with accelerator and VC engagement like H2, Stone & Chalk, Fishburners, Blue Chilli and others. Perhaps we need a lot more of this? And full marks to ASIC's leadership in the creation of its Innovation Online Hub, assisting entrepreneurs to understand and navigate regulatory issues facing Fintechs as they develop new technologies and solutions.

The NISA is dealing with factors traditionally holding back risk taking including:

- Reducing the penalties for directors of unwitting insolvencies, with provisions to protect material contracts and safe harbours for directors initiating third party restructuring;

- Improving rules in employee share equity schemes; and
- Increasing taxation incentives for angel investors.

Of course ASIC is likely to have an on-going and tricky balancing role to play, on the one hand encouraging free and efficient markets while on the other maintaining regulation that fairly promotes investor and customer confidence. We need clever controls but not handbrakes on fintechs, on peer to peer lending, crowd source funding, robo financial advisors, and on electronic filing, in lieu of hard copy disclosures.

And let me say I am a big fan of Ian Harper's recent bold recommendations for competition policy reform, including his effects test in the use of market power. Why? Because competition drives innovation which drives productivity growth which drives a more prosperous Australia.

In conclusion, let me say I believe over the next few years we will see major shifts, not marginal ones, in collaboration for and the culture of innovation. We will achieve considerably greater commercialisation of our inventiveness and we will fashion a culture that celebrates success, tolerates failure and encourages those who give it a go.

The only fear that should preside is the fear of never making any difference.

Thank you.