



**Australian Government**

---

**Chief Scientist**

**DR ALAN FINKEL AO**

**2016 Sydney University Business Breakfast**

***Planned for Success***

**Thursday 21 April 2016**

**Sydney Nanoscience Hub  
University of Sydney  
SYDNEY**

Early in my term as Chief Scientist I told an investor forum in Sydney that I was in the business of finding success stories.

It's a little unusual to be doing that.

Most people I know are in the business of spotting what's *wrong* in Australia!

However, I sincerely believe that as individuals, as institutions, and as a society, we make more progress by emulating what works than by lamenting what fails.

The audience that day was looking for *unicorns* – the American name for startups worth a billion dollars or more.

The Canadians call their billion dollar startups “narwhals” – a narwhal being a kind of whale with a tusk; a one-tonne Canadian unicorn of the sea.

We haven't got an equivalent Australian term – nor anything that I know of that resembles a horse with a horn.

Still, I promised the audience that I would get to work on coining our ‘Australian unicorn’ word. I said it was going to be useful.

As it turns out, it's already in demand.

Look at the run of companies in recent months reaching that billion dollar valuation!

- Aconex: An Australian company that is the world's biggest software provider for the construction sector. Aconex is today valued at \$1.2 billion.
- WiseTech: An Australian company developing software for freight and logistics industries, now servicing 150,000 users and operating in 115 countries. It became our newest billion dollar company when its stock rose 16 per cent on its April 11 ASX debut.
- Atlassian: Another Australian company, making software for software engineers and project managers, with customers including 85 of the Fortune 100. Atlassian listed on NASDAQ two months ago. Today, it's valued at \$4.7 billion US.

And then look at the smaller Australian companies beating on the world's door with big ambitions!

- TRITIUM: based in Queensland, making fast-charging stations for electric cars. Charge your battery at home – and you'll wait up to 20 hours. At a Tritium fast charge station you're done in an hour. And you'll find them in Germany, Austria, Switzerland, New Zealand... and now coast to coast in the United States.
- USCOM: developing and supplying the heart monitoring systems for the International Space Station, not to mention a growing share of China's ever increasing number of hospitals.

- And what about PROSPA: a Sydney based financial technologies startup, and Australia's fastest growing technology company last year.

At first I thought: how lucky am I?

Then I realised that I wasn't the beneficiary of a run of luck. *I was seeing the pattern of a changing Australia.*

Australians are looking for the global opportunities, building smart solutions and making them available at *scale*.

Mark that word: *scale*.

In business, it is the way you have impact. It's what you pursue, and why wouldn't you pursue *scale*?

It takes just about the same effort to develop a high-tech product for a *large-scale global* market as it does for a *small-scale local* market.

So pursue the former!

It's great to see Australians doing exactly that.

Universities are critical

If you look at my sample stories, you'll see that they took different paths.

But there *is* a shared gold thread that runs through every one.

That's the critical role of an Australian university.

- Sometimes, it's the place where extraordinary people meet – as was the case for the two students who founded Atlassian.
- Sometimes, it's the place where high-quality graduates are prepared – which is why companies like Aconex choose to maintain their headquarters in Australia.
- Sometimes, it's the place where early stage research is developed to the point of translation – as was the case for Uscom, whose founder spent 15 years in university research and clinical work.

Ladies and gentlemen, the heavy lifting in the knowledge economy is done *on campus*.

Now the campus I know best is Monash University.

So I can share with you that when it comes to pharmaceutical sciences, the global rankings look like this:

Harvard University, Cambridge, Oxford, then MONASH in fourth position.

Why, because for many years now the research faculty have worked closely with large multinational pharmaceutical companies.

But I'm on Sydney's turf. And yes, I'll say it – the new nanoscience hub is so good, even a Melbournian can't miss it.

Of course its fame has spread much further than the Yarra. Just last week, I read in the Financial Review about the University of Sydney's spin-off company Gelion, attracting \$11 million from UK-based investors.

And I read that article in the *front* of the newspaper – not the higher education lift-out at the back.

How often does *that* happen?

So the headline was exciting. And the content of the article was fascinating.

Gelion is developing rechargeable zinc-bromide batteries with nanostructured gels.

The technology was developed by Professor Thomas Maschmeyer, Director of the new nanotech hub that we are celebrated this morning.

Why back zinc-bromide batteries over the big competitor in energy storage, lithium ion?

Zinc metal is 39 times cheaper than lithium.

And zinc bromide batteries can be cycled from 0 to 100 per cent, day after day after day, long after lithium batteries would have to be replaced.

As a lifetime investment – it soon adds up.

This, in a technology field that might be the biggest one yet.

If we want to power our cars, offices, homes, factories, and supercomputers by renewables, we need batteries. Lots of them.

So ladies and gentlemen – if you're chasing scale, make batteries.

### Conclusion

But I've said enough to prove I'm no Pollyanna.

I recognize, as you do, that success can be planned.

Bring together the best of the best and the probability of success is high.

The Australian Institute for Nanoscale Science and Technology has been planned for success.

It brings together the best researchers, incredible research facilities and committed industry partners, to target the technology of the future, nanoscale science that can be put to use in a wide variety of applications.

The potential is real and the task today is to tap it. So my challenge to you is simply this.

Look at the great examples. Think about how researchers and businesses have made themselves into world-class players.

And find yourself a win-win-win.

A win for the university, a win for business, a win for Australia.

In the meantime, I'll keep working on a word for 'Australian unicorn'.

*You* can give me another opportunity to use it.

THANK YOU.