

**'Torch Gala Dinner Speech', address by Professor Ian Jacobs, President and Vice-Chancellor, UNSW Sydney, Leighton Hall, 16 August 2016**

Good evening ladies and gentlemen, and welcome to UNSW Australia. Tonight we're gathered for a very special celebration of innovation and partnership that links China to Australia, and offers us a shared platform for the future.

Before going on, I would like to acknowledge the Bedegal people - the Traditional Custodians of this land. I would also like to pay my respects to the Elders both past and present and extend that respect to other Aboriginal and Torres Strait Islanders who are here tonight.

Let me start by welcoming our distinguished guests - from the New South Wales government, the Honorable Anthony Roberts MP, Minister for Industry, Resources and Energy; His Excellency Gu Xiaojie, the Consul-General of the People's Republic; the Director-General of the Torch High Technology Industry Development Centre in China, Mr Zhang Zhihong; Jiang Wenhong, Vice-Mayor of Shijiazhuang City; and our many UNSW Torch industry partners. Greetings are extended also to the UNSW leadership team, our university staff, students and alumni, and to good friends of the university. Thank you all for coming to help us mark this occasion, a true milestone in the long history of UNSW's ties with China and in the wider Australia-China bilateral relationship.

In April this year I had the thrill of being in the Great Hall of the People in Beijing. I was honoured to join Australian Prime Minister Malcolm Turnbull, Chinese Premier Li Keqiang and Director-General Zhang in a grand signing ceremony - to bring to this campus a major advance in Australia's research and development landscape - the first-ever Torch science and technology park to be established outside China, where Chinese companies and Australian researchers working together will help build a better future.

Seven months *before* that ceremony, I was in China - but without fanfare or ceremony. I'd flown from Sydney with a team from UNSW on my first visit as President and Vice Chancellor at UNSW, to discuss our extensive educational links to China - over 7,000 Chinese students at UNSW - and to explore research collaborations with Chinese companies. We knew about the China Torch Program - but the scale of what they were doing and had achieved surprised us. Since its inception by China's Ministry of Science and Technology in 1988, Torch has created a network of almost 150 tech zones and science parks across China, fuelling the innovation needs of tens of thousands companies that in turn generate more than seven-percent of China's entire GDP - and close to 16-percent of its national exports. It was easy to admire the way the Torch effort worked and had been built so rapidly - clearly there were lessons to learn.

When I saw what Torch was doing to rapidly advance China's innovation agenda I saw the potential for an important collaboration for UNSW. A core objective in our 2025 Strategy is to 'establish a ground-breaking and internationally connected UNSW Innovation Precinct'. So with that in mind it seemed worthwhile exploring whether Torch would consider establishing an R&D park outside China, say, in Australia? And more specifically, in Sydney? And then - more specifically still, on the campus of UNSW? Why not? Even as I suggested it I had visions of miles of bureaucratic red tape and long discussions and, at the end, a very

polite no thank you. I then had the pleasure of meeting the Director-General of Torch, Zhang Zhihong. Along with his colleagues he listened to the suggestion - and then Mr Zhang also said, 'Why not? Let's do it.'

This is where I would like to pay a special tribute to Director-General Zhang. His vision for China's new normal is one that is fundamentally connected to a new era of innovation in China's vast science and technology system. Mr Zhang recognises that this will come through utilising the China Torch Program's near 30 years of history as the engine room to bring this change to fruition. Most importantly for UNSW, he recognises that for this change to have momentum and for Beijing to be an internationally competitive science and technology power, China's innovation future must be globally connected. This is one of the reasons I am so excited about the partnership with Torch and I pay special tribute to the Director-General's leadership.

After my interactions with Mr Zhang I understood then that China was no longer content to be the world's manufacturing sub-contractor, but fully intended to be the world's great technological innovator. And here we are, barely one year later, with substantial research contracts coming down the line in Phase One of our partnership. Contracts have been signed with eight Chinese companies to deliver more than A\$20 million of direct research funding to UNSW and an additional A\$10 million associated with establishing an offshore commercialisation joint venture entity. Among the biggest of these deals are with Hangzhou Cables to develop new technology using graphene in power cable manufacturing; A\$5 million from six companies to form a consortium to support advanced photovoltaic research and an incubator based at UNSW's world-leading Solar Industrial Research Facility; and up to A\$3.6 million from the Fuzhou-based company DNXC to develop de-fogging glass technology for use in automotive manufacturing.

As is obvious, this is not research that will end up in a dusty drawer in the patent office; this is cutting-edge, real world science and engineering that will have global impact. And I'm pleased to announce that we're looking at almost another A\$20 million worth of potential research contracts with our Chinese partners here on campus this week. Things are moving rapidly because our Chinese partners can see the potential of how our world-class research outputs can link with their capability to rapidly commercialise them.

All this aligns with China's determination to move from a basic manufacturing economy into much more sophisticated enterprises. National strategic plans such as 'Made in China 2025' call for new industries that focus on ground-breaking science and technology, often incorporating knowledge transfers and expertise from overseas partners such as UNSW. China's latest Five Year Plan sees the country becoming a 'world powerhouse of science and technology innovation' by 2049 - the 100<sup>th</sup> anniversary of the founding of the People's Republic. To get there will require not only an immense national effort by China, but also strong and enduring international collaborations. And that's where we come in.

On Thursday - in the new Hilmer materials science and engineering building - we'll open a \$10-million laboratory that's been funded in partnership with one of our flagship Chinese industry partners. This will form a major part of our Phase One Torch Technology Business Incubator, which when completed will house up to 100 staff. By 2020, in Phase Two, we'll create a new state-of-the-art Torch Innovation Precinct at UNSW - focused on innovation and R&D in energy and environment, advanced materials and biotechnology. This will be a

showcase for Chinese and Australian collaboration and will bring together industry, SMEs, entrepreneurs, investors and policy makers from Australia, China and beyond. All up, by 2025, investment from the Torch initiative in UNSW research is expected to build to well over \$100 million.

But this is not just about UNSW and China, it's very much about *Australia* and China. Deloitte Access Economics forecasts this initiative will return up to A\$1.1 billion to the Australian economy while boosting Sydney's push to become Australia's global innovation hub. It will also represent a significant contribution to the Federal Government's National Innovation and Science Agenda. Add to that the newly enacted China Australia Free Trade Agreement, and China's new focus on Mass Innovation and Mass Entrepreneurship, along with our own far-reaching UNSW 2025 Strategy, and we will have a formidable combination of factors that will help deliver what our countries need, what our universities want, and what the global innovation ecosystem is calling out for.

So my message to potential Australian industry, community and government partners tonight is this: if you're interested in taking innovative ideas to Australia's largest trading partner and the world's largest emerging investor in R&D, come and talk to us. We have unparalleled access to China's innovation system and to some of Australia's best minds working on China - and we want to hear from you. We already operate Australia's largest student start-up program and we have a big China focus. Torch offers us an opportunity to scale up that work, to develop our nation's growing trade ties with China and to deliver major economic benefits to Australia in what is a rapidly changing landscape.

China like Australia is having to weigh up new global realities. It's already investing unprecedented amounts of social, political and economic capital into the research and innovation required to make it a world-leading economy. China's current R&D spend - \$200 billion year - is second only to the US, and China now leads the world in patent applications. Its latest Five Year Plan calls on the nation to become a 'world powerhouse of science and technology innovation' by 2049 - the 100<sup>th</sup> anniversary of the founding of the People's Republic.

As we move further into the 21<sup>st</sup> century, the problems facing humanity become more complex, and the interplay of forces becomes greater every year. That's a massive challenge for the world, but also it's an opportunity as we work collectively to find fresh solutions. The word 'innovation' often sounds like something that happens as quickly and easily as turning on a lightbulb. But the truth as we know is different. As Thomas Edison remarked, 'To have a great idea, you have to have lots of them.' Innovation is complex team work that grows from strong partnerships and vibrant collaborations.

Tonight we're celebrating an agreement that will extend for the next decade and beyond. We've already achieved important things in a short time and I'm sure we'll go on to achieve even greater heights as our collaboration grows. That's all ahead of us - it's exciting, challenging and loaded with opportunities. So on behalf of UNSW - thank you all for coming tonight, and may I suggest we raise our glasses in a toast to the UNSW/Torch partnership.

Long may it prosper! As the Chinese say 'Gan Bay!'

Thank you.