'Universities and the Human Spectrum', speech by Professor Ian Jacobs, President and Vice-Chancellor UNSW Sydney, at TEDx UNSW event, NIDA, Sydney, 13 August 2016

Thank you everyone for inviting me along today to launch this first-ever TEDx UNSW event - hopefully the first of many more to come. It's a brilliant idea: bringing people together as a community to inspire and to inform, to develop new and innovative ideas, and to share all that through technology with the world. It sounds very much like what universities are about, or *should* be about, in 2016. It's certainly what we're about at UNSW.

Higher education all over the world is going through radical transformation, and UNSW is no exception. The 2025 Strategy we're rolling out over the next few years aspires to place UNSW in the world's top 50 universities. That's a big challenge with so many global players competing, but I have no doubt we'll get there, given our rich pool of talent. We have around 6000 staff and more than 50,000 students. To put that in perspective, that's roughly the size of the fulltime Australian Defence Force - army, navy *and* air force - so it's an immense intellectual *and* human asset.

Our strategic priorities are three-fold: first, to achieve academic excellence in both research and teaching, and delivering both on a very large scale. Second, to open a wider door to social engagement, so that everything we do will have social impact. And third, achieving *global* impact, so that we're improving not only Australian lives but the lives of people everywhere. For me, those three aims - academic excellence, social engagement and global impact - are really the hallmarks of a great, forward-looking, 21st century university…

The word itself - 'university' - comes from the Latin phrase *universitas magistrorum et scholarium*, which translates as 'a community of teachers and scholars'. That was the idea behind the first European universities - in Bologna back in 1088, in Paris in 1150, at Oxford in 1167 - and it's still what drives most of us here today: the idea of coming together to learn and explore, to understand the world around us, and to share our knowledge and the experience of what it is to be human - to be part of 'the human spectrum', to change things for the better.

Right from the start, a central ethos of 'the university' was the idea of academic freedom. That mattered a lot when state and religious institutions held enormous power over knowledge, over what could and couldn't be said, and I think we'd all agree it matters just as much a thousand years later. I'm sure many of you know the story of Galileo the famous astronomer who had to cave in to the Church's view of what constituted the universe, in order to save his skin. When Bertolt Brecht wrote his stage play *Life of Galileo*, he described Galileo as a man who proceeded 'by leaps and bounds of doubt'. Galileo questioned everything, including his own views, and pushed out the boundaries of knowledge, and paid

a heavy price for it. Many others paid a heavy price, often their own life, to sustain this freedom to explore new ideas - and it's a legacy all of us at UNSW are privileged to embrace.

Those earliest universities were built around ancient texts and languages, and the study of what today we call the humanities, but progressively they moved into the more technical areas - medicine, astronomy, mathematics, physics and chemistry - and today's modern university is typically a blend of all these things. UNSW began in 1949 as very much a technical university, and our strengths today include cutting edges sciences and engineering, but we always need to be asking ourselves, 'to what end?' Where does what we do sit on the human spectrum? More than ever, the role of the university is not only to produce top graduates who are technically proficient, whether in robotics or business or French, but who understand how that acquired knowledge can be used to become better people, and to help create a better world.

And a large part of that outcome can be seen and measured in our approach to the way we put our advanced knowledge to use. Social entrepreneurialism is my own passion, and I'd like to tell you now a little about my experience there.

I was the first person in my family to go to university. I trained in medicine at Cambridge and University College London and became a cancer surgeon, but one with a decided entrepreneurial streak. I was drawn to innovation. As a trainee doctor in the 1980s I had ideas about ways to detect ovarian cancer early by screening, and without realizing it, I set up my first start-up, a charity called the Eve Appeal, to raise funds for cancer research.

Of course they weren't called start-ups back then - but I wrote to the Footsie 100 companies in the U.K. pitching my idea, and in three weeks I'd raised 30-thousand pounds, a lot of money then. You might call it an early example of crowd funding. The quest had begun.

With my colleagues, I developed and patented the Risk of Ovarian Cancer Algorithm (ROCA) and by 1999 we had the results of a small randomised trial that showed a survival benefit, having picked up other financial support along the way. From that rather audacious beginning the Eve Appeal grew into a major charity for women's cancers in the U.K. which attracted an extraordinary £30 million worth of funding from Britain's major public medical research funds and large cancer charities to run in 2000 the world's largest randomised trial ever for ovarian cancer, involving over 200,000 women, and one of the largest ever undertaken for any diseases.

That first start-up led to many others: a private medical practice; creating an institute for Women's Health; establishing a Biomedical Research Centre; setting up an Academic health Science Centre; initiating a development venture in Africa, the Uganda Women's Health Initiative; creating a major partnership initiative linking universities and hospitals in the north of England; and founding a start-up company called Abcodia to commercialise the cancer screening test that emerged from my research program.

So I like to think of myself as a serial social entrepreneur. I'm still drawn to the excitement of innovation and to the challenges of entrepreneurship, from the initial concept and securing start funding into the growth phase, plus all the frustrations of dealing with large organisations when yours is still small, the angst of losing control, of dilution of second and third round funding, and - above all - the thrill of building something worthwhile that can change lives.

Which is also what brought me here, to Sydney and UNSW, to what might seem perhaps a more conventional role as Vice chancellor of a major university - but that disguises what is still in many ways a very entrepreneurial job. Here we're working every day to build our capacity for innovation - and that means thinking outside the box, because universities are vast and often cumbersome machines with necessarily large bureaucracies. Every day as the CEO you have to fight 'what is' and get through to 'what could be', then figure out how that can translate into real benefits for the world. You have to think: 'People. People, people.' I'm passionate about how to make things happen, how to get things moving along that human spectrum...

If I've learned one thing, it's that we cannot do it alone. The world is increasingly complex, and the interplay of forces becomes greater every year. That's a massive challenge for humanity, but also it's an opportunity, because people like yourselves are inspired to come together to find fresh solutions. In that sense, the *uni*versity is increasingly a hub of *di*versity - of not only depth but also breadth, with the strong sense of inclusion of people and ideas that you're building on here.

So - let a thousand ideas bloom, let a thousand voices be heard. Today you're taking an important step in making the world a better place. I'm sure TEDx UNSW will go on to be a global success - and I'll certainly be watching with great enthusiasm to see how it evolves, and where you take it from here.

Thank you, all of you - I declare the event open. Good luck!