



THE UNIVERSITY OF
SYDNEY



Pearcey
FOUNDATION

The Past and Future of Australian Innovations in Information and Communication Technology (ICT)

Oral History Interview

26

Alex Zelinsky

Interviewed by:

Sebastian Boell, Peter Thorne, Kai Riemer

Interviewed on:

Friday 06 August 2021

Project Summary

This interview is part of a series of oral history interviews undertaken by the Pearcey Foundation and the University of Sydney as part of the project 'The Past and Future of Australian Innovations in Information and Communication Technology (ICT)'. The series interviewed recipients admitted into the Pearcey Hall of Fame from 2003 to 2020. The hall of fame recognizes outstanding life-time contribution to ICT in Australia in business, research and government. Each oral history captures a short biography of individuals who made an outstanding contribution to ICT in Australia. They also collect insights on aspects that had a lasting effect on ICT innovations in Australia, positive as well as negative from approximately the 1960s to the 2010s. Interviews lasted about 60-90 minutes and were conducted by Sebastian Boell, Graeme Philipson, Peter Thorne, Kai Riemer, Sandra Peter and Belinda Wang. The complete set of interviews in this series is archived by the Pearcey Foundation.

Key Points Covered in this Oral History

1. Industry leadership and developing talent: The innovation system of Australia lacks experienced technology CEOs, which hinders inventions from being commercialised. One way the education sector can address this talent gap is to have real entrepreneurs working with and teaching students about the mechanics of innovation and starting a business. This should include business planning and marketing. A good example is the Fishburners.
2. Government support: Investment and support from government can help to de-risk emerging ventures and innovation. As a start-up, the company Seeing Machines received support from the ACT government and Austrade. Support for businesses at this stage of R&D and commercialisation has changed in recent years. For example, government merged NICTA with CSIRO, which hindered innovation within the IT industry.
3. University contributions: Universities can contribute to the innovation system by helping ventures to scale up and diversify through innovation. Universities can also train students with "life ready" skills to ensure they are prepared with interpersonal collaboration capabilities.
4. Risk appetite: Australia has long held a "pioneer" culture, with capabilities to conquer hard and tough problems to innovate; they however, timid when pursuing their ideas commercially. Australian entrepreneurs have historically not been ambitious enough to dominate the global market. They seek to "pioneer" with a balance of "being comfortable" in their life, which means they are not always inclined to pursue risky ventures that can sometimes characterise innovation and start up enterprises.

Note: Pearcey Foundation can only archive the interview summary for future historians, not a full transcript.

Biography

Alex Zelinsky AO

Vice-Chancellor and President of The University of Newcastle

Founder Seeing Machines

Pearcey Medal in 2013

Pearcey Hall of Fame in 2013



Computer scientist, Entrepreneur, Robotist

Professor Alex Zelinsky AO is the Vice-Chancellor and President of the University of Newcastle, Australia, a position he has held since November 2018.

Prior to the appointment as Vice-Chancellor and President at the University of Newcastle, Professor Zelinsky was Chief Defence Scientist of Australia and a member of the Leadership Team in the Department of Defence. As Chief Executive of DSTO he led the research and development efforts for delivering scientific outcomes that have had significant value and impact for the national defence and security of Australia. Professor Zelinsky is an internationally recognised scientist who has made substantive technical contributions in addition to providing leadership to the high technology community.

Prior to joining DST in 2012, Professor Zelinsky was a senior executive of CSIRO focused on delivering research outcomes to address Australian national challenges - particularly in ICT, energy, health, agriculture, mining and environment sectors. Professor Zelinsky is well connected with the research, higher education, business and government communities both nationally and internationally across a wide variety of industries. He has a track record of successfully leveraging his connections in CSIRO for Australia's national benefit.

Prior to joining CSIRO in 2004 Professor Zelinsky was a Professor of Systems Engineering at the Australian National University. Professor Zelinsky is known for his pioneering work in developing novel technologies for human-machine interaction. This work has been internationally recognised as a key breakthrough technology by academia, industry and the wider community. He has maximised the potential benefits of his work to Australia by founding a company to commercialise the new technology. The company Seeing Machines is publicly listed on the London Stock Exchange and is recognised as the world leader in its field.

Professor Zelinsky has demonstrated the ability to solve challenging problems, develop and lead teams, foster talent and handle significant change management. He communicates effectively with key stakeholders, including academia, industry and government.

Interview: Comments and Themes Explored

Date of interview: Friday 06 August 2021

Industry leadership and developing talent

It is now common to see entrepreneurial leaders working in industry (e.g., Google, Silicon Valley), and often overseas, rather than in the Australia higher education sector. Further, Australia has not yet established an IT innovation industry in the same way other nations have. This is a missed opportunity as there is so much talent in Australia, which is developed locally and lost to markets overseas. There has been an improvement in capabilities in the technology sector, and an increase in competition for talent. As such, there is a need for more STEM graduates. Graduates should be aiming to have combined business and STEM expertise to successfully strike out on their own. These ‘life-ready’ and entrepreneurial skills will help them take business risks if they aim to work for themselves rather than big business.

Australian markets and risk appetite

While slowly improving, the Australian venture capital market is still immature. It can be difficult to secure investment for emerging businesses in Australia, with many start-ups instead seeking investment in the US and UK. Start-up ecosystems, like Fishburners and Atlassian, are very successful and more are needed. Australians have a pioneering spirit – we do things that are hard, against all odds, on our own. However, we are often not ambitious enough to compete and succeed on the global market. Our entrepreneurs are often satisfied with enough success to enjoy the spoils. There are, however, some high-net worth individuals in Australia who are willing to invest back into technologies.

Government support

A spin-out from the Australian National University, Seeing Machines, received investment from the ACT government to support its development as an emerging company in the early 2000s. It was a bureaucratic process for small companies at the time, until some improvement in the public sector. The NSW Government has made progress but needs more programs for start-ups. An R&D ecosystem would help lead research to commercialisation. Australia needs more permanent R&D companies with long-term funding, such as Cochlear, that are commercially orientated and continually modernising.

University contributions

To improve research translation into saleable products, entrepreneurship should be taught (using a hands-on approach) within all faculties at university. This will teach researchers to be their own CEOs, to understand how the market works and how to do business planning. Technology is going into all sectors now – MedTech, FinTech, EdTech – with a growth in applications of information technology. Universities should help with scale-up by using a partnership model. This will help companies scale-up, and therefore companies will be able to hire more graduates.