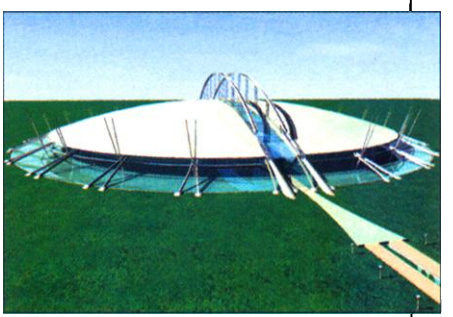
Australia: Investing in Innovation

Something unusual is happening in Australia: Science and technology have become buzzwords for politicians and journalists. Dependent for too long solely on mining its rich natural resources, the "lucky country" is at last taking seriously the call to become a "clever country." With its sights now fixed on innovation and new knowledge-based industries, the federal government is introducing policy changes to boost public and private investment in science and technology. Australia's five states are vying to be the prime science hub of the nation, as evidenced by their recent battle to secure Australia's first synchrotron; the state of Victoria eventually came up trumps by deciding to go it alone, without help from the federal government, and the A$157 million facility will soon start being built at Monash University in Melbourne.

Change began in 1990, when the federal government brokered a marriage between academia (universities, medical research institutes, and the Commonwealth Scientific and Industrial Research Organization) and industry, creating Cooperative Research Centres (CRCs) to enhance early commercial development of discoveries. Since then, government and industry together have invested around A$3.2 billion, and research organizations have contributed another A$4.4 billion as direct and in-kind support. Most important, the CRCs have trained a new breed of young scientists, with experience in intellectual property protection and a realistic approach to commercialization.



The 1999 strategic review of health and medical research (commissioned by the federal health minister, Michael Wooldridge, and led by Peter Wills, a businessman) provided a compelling blueprint for change. By persuasively arguing that strong basic science is essential to drive the biotechnology industry, Wooldridge and Wills secured a doubling in federal expenditure for basic biomedical research over 5 years, an increase of A$614 million. The stick tied to the carrot is that this increase in funding will not continue after 2004–2005 unless specified outcomes, particularly enhanced intellectual property protection and commercialization, are met.

The Wills Report was a wake-up call to politicians and the business community. In 2000, both the National Innovation Summit and the Science Capability Review, led by Chief Scientist Robin Batterham, called for major new investment and cultural change. In response, earlier this year Prime Minister John Howard announced "Backing Australia's Ability," which pledges A$2.9 billion over 5 years to stimulate science and new knowledge-based industries. As well as enhancing previous policies, such as tax incentives for industry R&D investment, the package will double funding for the Australian Research Council (which supports all nonmedical university research) and provide competitive funds to fill the gap between discovery and the investor-ready stage. In addition, encouraged by the success of the Australian Genome Research Facility, A$155 million has been allocated to develop national facilities for expensive platform technologies.

With a population of less than 20 million, Australia is very aware of the need to attract international investment and partnerships. The premiers of Victoria and Queensland are both strongly supporting biotechnology development in their states and led delegations to Bio2001 in San Diego, California, in June. From the international perspective, the high quality and cost-effectiveness of science in Australia should be a significant incentive for locating R&D development there. However, for Australia to retain its scientific excellence, salary reform will be essential to limit brain drain and attract the next generation of scientists.

With a federal election due later this year and the Australian dollar at an all-time low, around U.S. 50 cents, fostering science and technology will remain high on the political agenda. Indeed, the major opposition party, the Australian Labor Party, argues that too little has been invested too late by the conservative government. Would-be prime minister Kim Beazley has staked his leadership on Labor's "Knowledge Nation," a sweeping 10-year plan that would double Australia's current investment in R&D, particularly in information and communications technology, environmental management, biotechnology, and health services. Budget details, however, remain under wraps until closer to the election, and Beazley has been quick to reassure conservatives of a cautious implementation timetable. As ambitious young Democrat leader Natasha Stott-Despoja remarked, this sounds suspiciously like a cop-out. If Australia is serious about securing its future as a knowledge-led nation, it must move boldly and quickly. Not to do so, warns former Labor Member of Parliament Barry Jones, architect of Knowledge Nation, will be "to opt for stagnation and declining quality of life."

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