

Australian Technology Network

FIVE UNIVERSITIES: ONE VISION



Curtin University
of Technology



University of
South Australia



RMIT University



University of Technology,
Sydney



Queensland University
of Technology

LEFT IN A HOLDING PATTERN

Research, according to the Oxford Dictionary, is the systematic investigation into, and study of, materials and sources in order to establish facts and new conclusions.

Despite the much talked about research review of later 2003 the Government actually undertook its own 'systematic investigation' into Australia's research needs when framing its science and innovation package, announced last week.

The facts are well and truly established.

Australia has the capacity to deliver an inspired research agenda, but is struggling under a policy framework which has failed to deliver a clear and coherent set of policies about the best way of distributing resources for research among our universities.

Currently we invest 1.53% of GDP on research spending, while the OECD average is 2.1% with many leading nations committing to much higher than 2% over the next few years – the same time frame as our Government's BAA2.

The Prime Minister rightly asserts that Australia is 'a nation that at the moment has researchers that are at the forefront of the world.' He claims his package will build 'on our capacity for innovation and adaptability.'

However the conclusion the Australian Technology Group draws from this package is that we have in fact been placed in a holding pattern when it comes to research funding.

There are gains in key areas, but there are also missed opportunities which will limit the capacity of those gains.

The Government has provided a sound package, which delivers long term funding certainty, albeit at levels which will have no impact on the level of investment against GDP initially, and in fact points to a reduction in the GDP proportion in the longer term.

The Education Ministers' stated priorities in framing this package – quality, collaboration and the commercialisation of research - would indicate a genuine commitment from the government to the national innovation agenda.

The ATN's commercialisation efficiency is particularly strong in relation to start-up companies, invention disclosures and patents issued. For every start-up company it injects \$90 million of research money, a rate more efficient than the US rate of \$100 million.

The ATN also has a significantly higher growth rate in Australian Research Council funding than other universities. Between 2001-2002 our ARC discovery grants increased 71% compared with a sector wide increase of 28%. As well, we perform strongly in ARC Linkage Grants where the focus is on enterprise and community linkages. The allocation of substantial new funding for research and innovation to the ARC was a crucial element in this package and ensures the preservation of our key source of competitive funding.

But in examining the package, there are fundamental areas the ATN believes could and should have been addressed.

The ATN places a high priority on research conducted in practical contexts. This means we have a greater focus on collaborative research with industry and communities.

The key problem in the Australian innovation system is the relative lack of R&D investment by the private sector, for a host of reasons, not the least of which are the current taxation concession framework, and our relatively large proportion of small to medium size enterprises.

One result of that is that the state of our innovation infrastructure has been in decline for some time.

The Government has partly addressed this issue with a \$542 million commitment towards a National Collaborative Research Infrastructure Strategy but it missed an opportunity to address the dangerously low funding levels for university research infrastructure. The ATN's preferred option is a lift in the current rate of the research infrastructure block funding of less than 20 cents in the dollar, to international benchmarks of between 40-50 cents per dollar.

The Government has made much of the commercialisation of intellectual property, but there are a couple of important points to note. Intellectual property very often flows from basic research, which in Australia is primarily done in universities. In failing to address the critical issue of decline in infrastructure funding for universities, it will be difficult for the sector to deliver innovative outcomes in the longer term.

The focus on commercialisation of IP also obscures the fact that universities like the ATN, who work closely with industry partners, are often responsible for improvements in industry processes through their strategic basic research, which lead to hundreds of millions of dollars in productivity gains for their partners. The South Australian based Ian Wark Research Institute estimates, for example, that work for the minerals processing industry, funded through AMIRA, has increased productivity by over \$100 million in the past ten years.

As a network which focuses on collaboration with industry and communities in its research programs, we would have preferred to see more initiatives which provide greater incentives for industry funding of research. A subsidy which rewards collaboration would go a long way towards developing the kind of linkages the government is looking to create.

The research work of ATN universities contributes in a powerful way to the diversity of Australia's national system of innovation.

The research and ideas that emanate from our universities, by both staff and students, continue to be a major source of the new knowledge upon which the innovative economy will be built. Although this package puts in place some key building blocks for the future, its lack of attention to the continued decline of R&D investment in terms of GDP, by both public and private sectors in Australia, means that it is a partial strategy only for dealing with the innovation agenda.

At a time where our future growth as a nation, economically, socially and culturally, will be increasingly dependent on the skilling of our people, it is potentially catastrophic that the numbers in research training has declined in recent years – in part because of restrictive Government funding regimes. Whilst the ATN clearly believes there is also a significant role for industry in this domain it is crucial that Government further addresses this problem soon. It is the Government who must provide the bridges between technology and the community - the interfaces between science and engineering and the skills we all need in the social sciences and humanities. There can be no better way than via the training of our future professionals.

This is a space central to the ATN and one where we urge quick and effective new initiatives from Government and industry.