

Australian Science : Can we emerge from the Heart of Darkness?

Australian Science has been lost in the wilderness for the past few years. It has looked into the abyss over the past 12 months, but this year's budget could mark a turning point.

Last year's budget contracted spending on R&D significantly such that Government R&D expenditure as a percentage of GDP has dropped to its lowest level in 25 years. To make matters worse, the only three positive measures announced in last year's budget, the Medical Research Future Fund, the ARC Future Fellowship scheme, and the National Cooperative Research Infrastructure Scheme, were all held hostage in the Government's negotiations with the Senate over its Medicare and higher education reform packages. Only the infrastructure money was set free, and that with a considerable fight.

Last year's cuts to the Australian Research Council, CSIRO, NICTA, CRCs, ... has put the science community into a despairing mood, but probably not as much as the Abbott government's treatment of climate change. While officially acknowledging climate change as an issue it wishes to tackle, the Abbott government has consistently undertaken actions that are seen by the scientific community as undermining Australian and World efforts to restrict the extent of climate change. Because the sector sees climate change as a defining issue of our time, the perceived passive-aggressive hostility of the government towards climate change has led the sector to take a glass half-empty approach to science policy. Let me instead go forth with a glass half-full interpretation.

Last week's budget didn't raise the government's R&D investment over the coming year, but it didn't make things worse. And there are some positive signs for things to come.

The government has committed to endowing the Medical Research Future Fund. This will start paying significant dividends over the coming years. A

half-round of Future Fellowships has been announced post-budget, indicating this program still has a future, and the National Cooperative Research Infrastructure Scheme has been given another year's life, albeit at the expense of research spending in Universities.

Infrastructure investment needs a long term approach, and while a one year extension is far from ideal, in the words of the government, a one year extension will, "allow the completion of the research infrastructure review due to report to Government in mid-2015. The review will provide a solid base for Government to plan for future national scale research infrastructure to support priority areas of research of national significance." The government has also supported the development of a whole-of-government STEM strategy by the Chief Scientist that will inform future spending. I am prepared to wait another year in expectation of policies reflecting these reviews.

Its not just the government sending signals. Opposition leader Bill Shorten's budget reply speech was largely aimed at science, technology and education. He made extensive reference to several of the Chief Scientist's reports, proposed a number of initiatives, and provided a vision for Australia to up its R&D spend to 3% of GDP from the current 2% level.

To reach such a level doesn't just require an increase in government investment, business will need to be thoroughly engaged, as two-thirds of R&D expenditure typically comes from industry. However, if the Government follows the Chief Scientist's STEM strategy, it should be possible to sensibly invest this much in R&D, with the nation getting a huge dividend in return.

Talk is cheap, and it remains to be seen if either the government or the opposition will have the fortitude to invest in the nation's future when it comes time to fund their election promises next year.

Higher education, where a large fraction of the nation's R&D is undertaken, remains a mess. The government has kept full deregulation on the table, with the opposition seemingly wed to the status quo. The current quagmire in the

Senate is almost guaranteed to ensure that no reform will happen in the near future. Maybe this isn't such a bad thing given the current thinking. A key issue for the sector, that research is not currently fully funded by government (and instead is heavily cross-subsidized by student fees), is not being addressed by any side of politics. Quite the opposite – both the Gillard and Abbott governments have stripped money from the program which had been promised to help meet the Universities' costs of research.

But scientists of Australia should cheer up. Yes, we want the government to respect the scientific consensus and proactively engage with Climate Change, and we want them sort out the funding of research within the higher education sector. But for the first time in living memory science is centre stage within Australian politics. Science needs more funding to secure the economic future of our country, but for science to be successful long-term, it needs to be supported by a substantive government policy with bi-partisan support to break the 'stop-go' destructive approach of the past. Science is no longer being ignored, and these key elements requisite for a productive science future are finally emerging from the heart of darkness we call Parliament House.