

The CSIRO and University Interactions with Industry

One of Australia's best Science Ministers, Barry Jones, laments that he was not a member of the Hawke government cabinet ("What is to be Done"). Likewise, the science and education portfolios are not fixtures in the Morrison cabinet. For too long governments and their treasurers have seen science and education as cost centres.

- 1. To ensure Australia benefits most from research, the science and education portfolios will be an integral part of TNL ministry and cabinet.**

Our research institutions should not be hampered by "efficiency dividends", external earnings or be pressured to 'export' education which they have been forced to rely upon to fund research.

- 2. CSIRO and universities will be properly funded by TNL, eliminating research institutes' 'efficiency dividends', dependence on income from 'education exports' and /or external earnings targets. A return to rigour.**

Other OECD countries such as US, Britain, Germany and France are much more successful at commercialising their research outcomes. Scientists in these countries publish fewer research papers than our scientists but they hold many more patent per capita. We need to adopt different incentives and career advancement criteria.

- 3. To facilitate the commercialisation of Australian research, TNL is proposing to modify our research sector, especially career advancement, to place more emphasis on patents and other means of exploiting our hard-earned IP.**
- 4. CSIRO and universities should have incentives to patent outcomes and commercialise with access to training and/or support as needed. TNL will adopt monetary awards for industry engagement and commercial success.**

CSIRO project overheads results in a lack of resources. The bloated bureaucracy is constantly detracting from CSIRO's main goals. Rather than top-down direction and micromanagement of research directions, the organisation should only recruit as research leaders top scientists from around the world, who are given sufficient resources to carry out world class research, including basic research, but with incentives to develop strategic applied research areas.

- 5. TNL will encourage CSIRO and universities to return to leaner structures that focus more on their primary purposes.**

CSIRO and universities should have teams (parallel with researchers) specifically focussed on commercial potential and rewards, ideally starting at research planning stage. These structures will not be established organically but scientists/business experts will do this with incentives/rewards. Once the possibility is realised it will become an expectation with concomitant benefits to Australia as a whole.

- 6. CSIRO and universities should enable and encourage technology transfer by offering incentives to not only scientific staff but also staff with expertise in business (legal, copyright, intellectual property and partnership development).**

As lamented by Melanie Davern in *'The Conversation'* (28 June, 2021) “National change is needed to create a pipeline of research commercialisation. More research and development tax incentives won't drive this change.... Trials of a research impact framework have stalled since 2018.” Often breakthroughs made in university laboratories fail to be taken up by industry (i.e. become victims of what is known as the “valley of death”) because university researchers are also enmeshed in teaching schedules. There is a role in these situation for CSIRO to collaborate to keep ideas alive long enough to cross the “valley of death”. A coherent framework for research impact and technological transfer should be developed and implemented.

- 7. TNL will develop and implement a coherent framework between CSIRO, universities and industry to bridge the “valley of death”. Industry will be encouraged to participate meaningfully in extant programs such as Innovation Connections and Main Sequence.**
- 8. Further, TNL will encourage investments to support the development of new technologies and measures to forge strategic partnership with Australia's international counterparts.**

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