

Submission
**2016 National Research Infrastructure Roadmap Capability Issues
Paper**

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Please see attached for a copy of the Australian Business Dean's Council (ABDC) submission. The response highlights ABDC's key recommendations, mainly relating to:

- Question 1: Other capability areas that should be considered
- Question 14: Alternate financing models supporting investment in research infrastructure

However ABDC has also commented on elements broader than what has been included in the Issues Paper.

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About ABDC

The Australian Business Deans Council (ABDC) is the authoritative and collective voice of all university business faculties and schools in Australia. Our member business schools graduate one-third of Australia's university students – more than 100,000 graduates each year.¹ Australian business schools graduate three-fifths of international university students in Australia,² who contribute significantly to the largest export service industry in Australia.³

Our mission is to advance and promote excellence in business education and research through engagement across Australian universities, industry, government and the community.

ABDC Recommendations

- National research priorities should include '*An Economically Prosperous Australia*'
- Australia's infrastructure capability should include business and economics research. Failure to recognise its importance will ultimately limit the potential for Australia to translate world-class science into commercial successes
- Consistent with the government's desire for greater university-industry convergence, the roadmap should recognise the commercial potential of research infrastructure as a relevant (but by no means first order) consideration
- Shared services infrastructure – whether data collection and curating, computing power or research support (e-research) – should be seen as equally valuable as infrastructure facilities.

ABDC's Position

ABDC welcomes the opportunity to provide input into the National Research Infrastructure Roadmap via its response to the National Research Infrastructure Capability Issues Paper. ABDC recognises that the Roadmap and, therefore, the Issues Paper predominantly reflect 'big science', but we are concerned by the narrow definition of 'infrastructure capability'. The definition reflects existing national research priorities yet this largely excludes business and economics research, despite the significant number of Australian business schools with very high international rankings for their research.

ABDC commends the Federal Government's commitment to a careful and transparent process for significant investment in research capability. However, the ABDC is concerned by the lack of recognition of the significant research infrastructure investment that underlies much of business and economics research – like 'big data' from financial markets – and is vital to translating world-class science outcomes into significant commercial successes.

ABDC strongly recommends that '*An Economically Prosperous Australia*' should be a national research priority. Without such prosperity it will be difficult to achieve the objectives of the current national research priorities.

While we are pleased to see (8.3.3) recognition of the potential value of a national network for social and behavioral science innovation, this is not the same as underlying research infrastructure that could be shared. E-research infrastructure (10.1.1) is also recognised and should, like behavioral science, include business and economics researchers as potential users.

High performance computing (10.3.1) underlies much of the research in, for example, finance and economics (especially econometrics) and ABDC also suggests that representatives from these sectors should be part of any expert group that is developing suggested infrastructure plans. Australia after all has an extremely successful financial services sector, which is our largest economic sector. Indeed in 2010, the Australian Bureau of Statistics estimated that the financial services contributed almost twice as much to GDP as the

¹ Calculated from Department of Education and Training, '*Management & Commerce Completion Count*', *Higher Education Statistics (uCube)* plus Economics data provided on request, 2014.

² Department of Education and Training, 2014.

³ Department of Foreign Affairs and Trade (DFAT), '*Australia's top 25 exports, goods and services, 2013-14.*' In 2013-14 education-related travel services were Australia's fourth largest export at \$15.7 issues billion and included secondary, VET, ELICOS and pathways.

healthcare sector. Financial markets are truly 'big data'. Data and computing requirements are critical to the successful capture, curating, access provision and interrogation support stages – the entire research process – as research moves from understanding not only trade-to-trade information but to understanding more about underlying demand and supply (i.e. bid and ask schedules).

There are already examples of shared infrastructure in the financial markets that serve as excellent models for the kind of shared e-research infrastructure that we are advocating. The Securities Industry Research Centre of Asia Pacific (SIRCA – see sirca.org) is a good example. At SIRCA approximately 40 Australian and New Zealand universities are contributing to shared research infrastructure, which includes support for data access and analysis as well as capture and curating stages. SIRCA also highlights the potential importance of co-investment as a factor in rationing scarce resources – a consideration that warrants further investigation yet is currently excluded from the Issues Paper. The Federal Government has prioritised closer university-industry collaboration, which makes possible private sector investment in critical research infrastructure a particularly relevant discussion. The long-standing relationship between SIRCA and Thomson-Reuters is a good example of how important national research infrastructure can be supported through commercial application and interest.

For the most part, the Issues Paper appears premised on infrastructure as 'facilities'. However, ABDC suggests that infrastructure in the form of 'shared services' is equally valuable. While some might perceive such arrangements as cost-shifting, they are, in fact, cost efficiencies. The use of a single service provider for critical research data and support is likely to be far more efficient than individual institutions (or even individual researchers and research teams) duplicating each other's efforts. If there is to be greater recognition of the potential value of shared services and shared computing support, we would urge the Department to also recognise the critical role that business and economics researchers can play in utilising such infrastructure.

Infrastructure in the form of shared services – whether data collection and curating, computing power or research support (e-research) – is critical to achieving world-class business and economics research. We recommend that this area be considered separately, with an explicit call for expressions of interest in gaining significant government investment (subject to clear and transparent decision rules).

Summary

In summary, ABDC recommends that the National Research Infrastructure Roadmap be broadened to explicitly include substantive areas of business research and economic activity that are excluded from the current National Research Priorities. We also recommend that the potential interest in research infrastructure outside the Academy should be considered in the allocation of scarce resources.

Finally, ABDC urges the Federal Government to recognise shared services, alongside facilities or large items of equipment, as critically important research infrastructure.

ABDC welcomes the opportunity to offer our assistance and to be involved in further consultation on the National Research Infrastructure Capability consultation as well as the development of the National Research Infrastructure Roadmap.

Submitted by:

Professor Ian Palmer

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Australian Business Deans Council

(and Pro-Vice Chancellor (Business), RMIT University)

ABDC Members

Australian Capital Territory

- Australian National University, College of Business and Economics
- University of Canberra, Faculty of Business, Government and Law

New South Wales

- Charles Sturt University, Faculty of Business
- Macquarie University, Macquarie Graduate School of Management
- Macquarie University, Faculty of Business and Economics
- The University of New South Wales, UNSW Business School
- The University of Newcastle, Faculty of Business and Law
- The University of Notre Dame, School of Business, Sydney
- The University of Sydney, Business School
- University of New England, School of Business
- University of Technology Sydney, UTS Business School
- University of Western Sydney, School of Business
- University of Wollongong, Faculty of Business

Northern Territory

- Charles Darwin University, Faculty of Law, Education, Business and Arts

Queensland

- Bond University, Faculty of Business
- Central Queensland University, School of Business and Law
- Griffith University, Griffith Business School
- James Cook University, College of Business, Law and Governance
- Queensland University of Technology, QUT Business School
- Southern Cross University, Business School
- The University of Queensland, Faculty of Business, Economics and Law
- University of Southern Queensland, Faculty of Business, Education, Law and Arts
- University of the Sunshine Coast, Business School, Faculty of Arts and Business

South Australia

- Flinders University, Flinders Business School
- The University of Adelaide, Faculty for the Professions
- University of South Australia, UniSA Business School

Tasmania

- University of Tasmania, Faculty of Business

Victoria

- Australian Catholic University, Faculty of Law and Business
- Deakin University, Faculty of Business and Law
- Federation University Australia, Federation Business School
- La Trobe University, La Trobe Business School
- The University of Melbourne, Faculty of Business and Economics
- Monash University, Faculty of Business and Economics
- RMIT University, College of Business
- Swinburne University of Technology, Faculty of Business and Enterprise
- Victoria University, College of Business

Western Australia

- Curtin University, Curtin Business School
- Edith Cowan University, Faculty of Business and Law
- Murdoch University, School of Management & Governance
- The University of Western Australia, Business School

Australian Business Schools – The Facts

Australian business schools graduate one-third of Australia's university students.⁴

Australian business schools graduate three-fifths of international university students in Australia.⁵

Australian business school students contribute an estimated \$5.3 billion in export earnings to the Australian economy per annum⁶ – equal to Australia's eleventh largest export.⁷

One-in-five of Australian business schools are ranked in the top two percent of universities worldwide for economics and business.⁸

***Two-thirds of Australia's top 50 CEOs have a business qualification.⁹
Australian business school MBA graduates earn the second highest average salary world-wide at US\$115,600.¹⁰***

⁴ Department of Education and Training, 2014 - 32 per cent of all university completions in 2014 were from a management, commerce or economics discipline.

⁵ Department of Education and Training, 2014 - 57 per cent of all university completions by overseas students in 2014 were from a management, commerce or economics discipline. This figure equals enrolment figures for management and commerce in offshore Australian campuses - Australian Education International – 'Research Snapshot: Transnational education in the higher education sector', Oct 2014.

⁶ Calculated from Department of Education and Training, 'Management and Commerce International Student Load Count (EFTSL)', Higher Education Statistics Data Cube (uCube) plus Economics EFTSL data provided on request 2013 and 'Australia's International Education Industry - Analysis of Strategic Trends,' February 2013, by Boston Consulting Group (BCG), p. 14, Each international higher education student contributes an average USD44,000 to the Australian economy (fees plus living costs). Exchange rate accessed from xe.com on 29 August 2013.

⁷ Department of Foreign Affairs and Trade (DFAT), 'Australia's Trade in Goods & Services, Australia's top 25 exports, goods and services, 2013-14'. In 2013-14 education-related travel services were Australia's fourth largest export at \$15.7 billion and included secondary, VET, ELICOS and pathways.

⁸ Academic Ranking of World Universities (ARWU), 2014. One-in-five Australian business schools are listed in the top 200 (or two percent) of universities worldwide in economics and business. In the US News Best Global Universities Ranking 2014, Australian business schools represent seven out of the top 100 universities for economics and business. Quaquarelli Symonds in their 2015 top 50 'QS World University Rankings', Australian business schools account for six in Accounting and Finance, five in Economics and Econometrics and six in business & management studies.

⁹ Suncorp Bank, 'Power Index', August 2012. Survey of the CEOs of the 50 largest ASX-listed companies. 64 per cent have a business qualification; 40 per cent have an undergraduate business degree and 25 per cent hold an MBA

¹⁰ QS Intelligence Unit, QS TopMBA.com Jobs & Salary Trends Report 2014/15, p.44.