What’s Collaborative Infrastructure Ever Done for You? – Twenty-Five Years of Network Effect applied to Research and Teaching

Australia’s geographical remoteness and small, dispersed population has always challenged the Australian higher education and research sector’s ability to collaborate or compete with the rest of the world. But in early 1990 the rollout of the Australian Academic and Research Network (AARNet) put every Australian university onto the Internet innovation roller-coaster that was to disrupt every industry and transform every aspect of every Australian’s life in ways that could never have been imagined a quarter of a century ago.

By working cooperatively, Australia’s universities, with occasional timely Commonwealth support, were not only able to establish networking capabilities that have levelled the international research and higher education playing field, they were able to sustain and continually enhance these capabilities for the next two and half decades. This collective investment provides enormous benefits to all Australian institutions across all of their core business functions – research, teaching & learning and administration. Moreover, it also allows individual institutions to differentiate themselves through investments in specific programs and collaborations.

This presentation will provide a summary of the impact collaborative networking infrastructure and the Network Effect has had, and continues to have, on universities, education and research. It will highlight some of the underpinning characteristics that have enabled networking in the sector to be both able to rapidly adapt and change itself, as well as being a powerful business-change agent.

Specific examples will be used to describe a range of different mechanisms for enabling more sustainable information and communications technology (ICT) platforms and solutions, that link to improved outcomes in each of the three business functions noted above. These
include

- A partnership for international connectivity, based on the aggregation of institutional demand, aggregation across business functions, long term investment,
- Cooperative planning, as exemplified by the National Research Networking (NRN) project which provided a clear path forward for Commonwealth (NCRIS) funding with benefits across business functions,
- Long term planning for Big Science, specifically the SKA, with a view to securing future research investment, and
- Peering with providers (GOOG, MSFT, etc) that enabled new consumption models for ICT services.

The talk will explore whether cooperative approaches to infrastructure are still viable in the face of seemingly accelerating change by exploring some possible future scenarios with a specific focus on the role of sector-specific shared-service providers such as AARNet, AAF, eResearch service projects and providers, other joint initiatives and the commercial market.

The focus here will be on how institutions chose to address their business challenges to remain sustainable entities in the research sector, the higher education sector or both, into the next century.

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