17 October 2022

5-year Productivity Inquiry
Productivity Commission
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Dear Commissioners

Response to 5-year Productivity Inquiry: Australia's data and digital dividend - Interim report no. 2 – August 2022

The Actuaries Institute ('the Institute') welcomes the opportunity to comment on the Interim Report for the 5-year Productivity Inquiry: Australia's data and digital dividend.

The Institute is the peak professional body for actuaries in Australia. Described by some as 'the original data scientists', actuaries are experts in using data, and coupled with their business acumen and expert judgment, create value for consumers, business and the community. Actuaries play a trusted, regulated role in many financial services companies, where actuarial advice helps safeguard the financial assets and welfare of millions of Australians. Actuaries have expanded beyond traditional financial services roles, contributing to the Australian Government's vision to realise the 'digital dividend' discussed in the report. Our recent promotional campaign 'actuaries use data for good'[1] showcases some of the work of actuaries across a range of sectors.

Actuaries are heavily involved in digital innovation and very enthusiastic about the changes this can bring to our economy and the significant benefits on offer. Our professional standards require us to consider the public interest and therefore we seek to consider the ethical and public policy implications of this new digital economy.

Society is faced with the prospect of almost limitless volumes and types of data, readily available, reused and processed at almost zero cost. If the data we need does not exist, we are usually able to collect it. Since we are no longer in a position of scarcity, this requires a mindset shift from users of data. In an era of abundance, rather than seeking ever more data, we need to instead start asking ourselves which new data should be collected? In our excitement over what is now possible, we often forget to ask such a 'big' question. It must be asked, not just by the regulators or Chief Data Ethics Officers, but by all practitioners of data. Just because something is technically possible, this does not mean it ought to be created – we must always be asking 'should we', as well as 'can we', particularly when 'can we' is now so often a yes.

[1] https://actuaries.asn.au/microsites/actuaries-use-data-for-good?

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Many actuaries work with various levels of government and, in doing so, make use of government data. Actuaries understand the inherent productivity gains which could occur if that data could be safely accessed to be more widely used, further detailed in our response to *Information Request 3.2 – creating new data sharing and integration opportunities*. Additionally, the Institute has recently responded to the Digital Technology Taskforce's issues paper discussing the regulation of automated decision making and artificial intelligence, which included our views on the broader topic of digital regulation and published a paper *Big data and the digital economy* for a joint ABS/RBA conference. The content of these, and other recent work, have formed the foundation for our responses to *information requests 3.5 and 3.6*.

Response to information request 3.2 – Creating new data sharing and integration opportunities

Members of the Institute undertake substantive data analytics functions for government departments, helping them understand demographics and assess government programs to inform better decision-making for scarce government funding and resource allocation. This is broader than targeting interventions, and also spans the evaluation of programs and forecasting service use. This type of work, including the increasing use of longitudinal linked data, is important to understand outcomes for people over the life course, a key step to designing policies to reduce disadvantage. The linkage between different sectors is critical to provide a view of social and community outcomes – for example, to measure how an investment in housing generates benefits in improved health outcomes. This section focuses on our views on this type of analysis work, largely commissioned by government departments.

We agree with much of the discussion of government data in section 3.2 of the interim report:

- we agree on the potential for good use of government data (as well as other data collected when delivering government-funded services);
- we recognise the significant progress that has been made on government data sharing, including maturing governance arrangements and platform functionality;
- we agree that data is sensitive, and so requires good protections. Potentially re-identifiable unit record data is generally not suitable for public release; and
- we agree that often important outcomes information is not available on existing government administrative data, and there is the opportunity to improve this, including through better collaboration with government-funded providers.

We recognise the role of linked data as being particularly important to understand outcomes for people over the life course, a key step to designing policies to reduce disadvantage. We support the development of centralised linked data assets (such as Multi-Agency Data Integration Project (MADIP)). We note most State health departments also have routine linkages across health (and other) datasets – indicating that existing infrastructure exists for linkage and sharing of data. The following factors, largely relating to governance, are the most pressing barriers to reduce to enable wider and more frequent use of data.

- There remains a conservative view on access to unit record data. This is tied to the data custodian's primary role as protector of the data, requiring strong proof of public value and data security. Often this means making formal applications designed for academic research projects that have already been commissioned and identified as priorities by government. The project lead time required to complete these formal application processes mean the data may not be used for timely monitoring and evaluation or rapidly

emerging policy issues and decisions. While we acknowledge the need for strong governance, this represents a clear opportunity for that governance to be more efficient and better aligned to the timetable of a proposed data use.

- There remains a gulf between effective State and Commonwealth collaboration on linkage projects in the current environment. This is problematic, as linkages are often important. Knowing a household's income and welfare history (Commonwealth) is important to understand who most needs housing or education support (State). Conversely, a State-based initiative may improve employment, so being able to measure improvements on Commonwealth data is useful. A full picture of healthcare requires seeing visits to the GP (Commonwealth) as well as hospitals (State). Education pathways span childcare (Commonwealth), school (largely State), vocational training (Commonwealth and State) and higher education (Commonwealth). While State agencies can be approved as accredited linkage authorities, our impression is that it is rare for the Commonwealth to provide data to the States. This discourages linkage projects.
- There is significant wastage in linkage work across the country. The same datasets are often linked multiple times for different projects, since an existing linkage is constrained to specific project uses. MADIP represents a step forward, but inefficiencies remain elsewhere. An example of better practice is the Integrated Dataset Infrastructure (IDI) in New Zealand, where most important datasets are routinely linked every quarter and linked data projects can then request the portions required.
- Governance can make release of results more challenging, as typically custodians need to approve that their data has been used appropriately. This can lead to lengthy review and approval processes. We expect that such issues are likely to have affected timely publishing of results for high-profile research projects and may help to explain why some projects appear to experience significant, often unexplained, delays in publication. Again, we stress that we are not opposed to strong governance, but we do suggest that there is an opportunity for that governance to be more efficient, and better aligned to the timetable required by a data use.
- Existing governance rules can create inefficiency. For example, some data collections held by the Australian Institute of Health and Welfare cannot be redistributed (even with original custodian approval) under existing rules.

As a public example of a complex linkage project in the social services domain, the NSW Pathways to Homelessness project[2] combined 19 different services across State and Commonwealth governments to understand the costs associated with homelessness and the factors that indicate elevated risk prior to presenting to homelessness services. In addition to seeking custodian approvals, the project required four different ethics permissions (to reflect custodian's preferred approval mechanisms), and two different linkage agencies (to skirt data Commonwealth-State data transfer issues). The data asset was then shut down after project completion. Actuaries involved in the project estimate over 80% of the project time and effort

[2] https://www.facs.nsw.gov.au/reforms/homelessness/prevention-and-early-intervention/pathways-to-homelessness

was spent on governance. Reducing this burden will enable more projects of this type to be undertaken.

As the interim report makes clear, data sharing is a rapidly evolving space with evolving regulations. We encourage this process to continue to enable complex data analytics using government data to be made more efficient. This will deliver significant value to departments seeking to make data-informed decisions. This applies to all government sectors – not just the health sector. There are large variations in lifetime outcomes and fiscal costs between subgroups of the population across all of government. For examples of this see *Forecasting Future Outcomes 2018*[3].

In our final response to information request 3.2, we observe that government held data is sometimes made available to the public or private sectors under licence, sometimes at significant cost. Both licensing restrictions and costs can be a barrier to the use of datasets and can inhibit productivity gains. While we note some recent positive change (for example, changes to the terms of use of the G-NAF (Geocoded National Address File) to a Creative Commons form), some datasets contain usage restrictions which inhibit innovation (for example, by restricting commercialisation of derived data *products*), or are available at a cost which may be prohibitive, particularly to small businesses. We suggest that wherever possible, datasets held by government that are considered for release due to their value to the broader economy should be made available in a form enabling wide reuse, and either free of charge, or under a fee structure aiming to recover production costs only, appropriately tiered so as not to be restrictive to small businesses.

Overall, we suggest:

- effective sharing of data within government is needed, in addition to consideration of public data and access by other organisations, and any licensing or fees attached to such access;
- governance processes could be streamlined, perhaps under a tiered system;
- consideration given to a regularly produced set of linked datasets, with usage permissions managed centrally, as occurs in New Zealand with the IDI; and
- existing historical data sharing arrangements could be reviewed in light of developments in data sharing and linkage – for example, some data provided to the Australian Institute of Health and Welfare is not currently able to be used further.

Response to information request 3.5 – supporting ethical use of technology and data

While we agree with some aspects of section 3.5 of the report, we have detailed some concerns in this response. This is best illustrated by a comment which we believe to be false: "…the Australian Government is not yet directly regulating ethical issues arising from high-risk

[3] https://apo.org.au/sites/default/files/resource-files/2019-07/apo-nid246396.pdf

uses of technology and data"[4]. As we suggest in our recent submission to the Digital Technology Taskforces Issues paper on artificial intelligence (AI) regulation[5] (a consultation referenced also in your report), there are uncertainties or gaps in regulation in some areas, but this does not mean an absence of regulation entirely. Australia has broad, principles-based regulation in many high-stakes (hence high-risk) areas of the economy, and where these regulations exist, they will typically already apply to AI systems. For example, general laws applying to financial services companies (such as the requirement "to do all things necessary to ensure that the financial services covered by the licence are provided efficiently, honestly and fairly"[6]) do not vanish merely because data, technology or AI is present.

The challenge, then, as we pointed out in our response to the Taskforce, is to understand the nature of any gaps, which we suggest can arise from three causes:

1. A situation where there is no adequate regulation for the context; or
2. A situation where there is some existing regulation for the context, but it is unclear how that regulation applies to a new technology or use of data; or
3. A situation where there is some existing regulation for the context, but it is unclear how that regulation applies to many situations, including but not limited to a new technology or use of data.

We suggest that in the presence of principles-based regulation covering the context in which a high-stakes decision is made, the third cause is most likely. Technology, data or AI systems rarely create genuinely new situations of confusion. More commonly, they reveal areas of existing confusion to us with greater clarity. It would be generally advantageous to clarify the operation of the law in areas of existing uncertainty - not just to assist with responsible use of technology, but to allow society more generally to have confidence that its operations are as required under the law. As we noted in our response to the Digital Technology Taskforce's Issues Paper, any lack of clarity about the operation of regulation can be a barrier to innovation[7], which will naturally create a drag on productivity over the medium term.

We propose that regulators should actively review existing guidance under their jurisdiction and move to issue new or revised guidance to clarify the operations of any regulations which may be unclear. There is no substantial need, in our view, to supplement this with overarching regulations for new technology, such as proposed by the European Union for AI systems which (as we point out in our response to the Digital Technology Taskforces Issues Paper[8]), may create more problems and uncertainties than it solves. Government could issue some centralised guidance on matters to consider for such a review but leave identification of specific reform actions to those agencies already familiar with specific high-stakes sectors of the economy. This leverages our existing knowledge of high-stakes situations requiring regulation and is similar

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[4] Interim Report, page 81
[5] https://actuaries.asn.au/Library/Submissions/2022/Technology.pdf
[6] *Corporations Act (2001)* s912A(1)(a)
[7] https://actuaries.asn.au/Library/Submissions/2022/Technology.pdf - page 3
[8] https://actuaries.asn.au/Library/Submissions/2022/Technology.pdf - page 5

to the intended approach recently announced for the United Kingdom[9]. Principles for such a review may draw on Australia's AI Ethics Framework which is already published[10] and has been piloted by industry[11].

Consideration of the cost/benefit equation of regulation or other activity in this area is a complex task. Actuaries are well placed to assist with such complex evaluations; recent public examples include the Institute's 2022 Green Paper "*Home insurance affordability and socioeconomic equity in a changing climate*" and the 2021 Green Paper "*Aged Care Funding: Assessing the options and implications*".

Response information request 3.6 – Coordinating the policy and regulatory environment

We agree with the general sentiment expressed in section 3.6 of the report. Lack of coordination across disparate regulatory and policy spheres has created some missteps (several of which are mentioned in the report), and greater regulatory and policy coordination is likely to lead to improved medium/long term outcomes, though may come at some short-term cost. This is an opportunity worth exploring further.

It should be noted that lack of coordination is not a problem isolated to digital and technology regulation and policy. For example, and as we noted in our submission to the Human Rights Commission's Technology and Human Rights discussion paper[12], there are now well-understood questions and conflicts between concepts of indirect discrimination, direct discrimination, and ideals of privacy. While this has perhaps become more obvious due to recent discussion of data-driven discrimination, it is not limited to it, nor is it a new problem. We encourage holistic review of such inconsistencies and conflicts, not merely through the lens of data, digital, or technology.

Policies encouraging the greater availability of data are an important area where more co-ordination would be beneficial. Section 3.2 of the Commission's report suggests that the introduction of a Consumer Data Right (CDR) in Australia is likely to lead to gains in productivity – a positive message and encouraging to supporters of this policy. However, there is more to be said: CDR in its current form is in direct conflict with other policy concerns of Government. Insurance access and affordability, for example, is an active area of policy concern, generating numerous reviews and inquiries from regulators and government over recent years and most recently the introduction of a reinsurance pool for northern Australia[13]. As outlined six years ago in our 2016 Green Paper "*The Impact of Big Data on the Future of Insurance*", greater availability of data will make insurance less affordable and potentially unavailable for some people. It exacerbates the existing policy problem of affordability. As outlined in a paper

[9] See: https://www.gov.uk/government/publications/establishing-a-pro-innovation-approach-to-regulating-ai/establishing-a-pro-innovation-approach-to-regulating-ai-policy-statement
[10] https://www.industry.gov.au/data-and-publications/australias-artificial-intelligence-ethics-framework/australias-ai-ethics-principles
[11] https://www.industry.gov.au/data-and-publications/australias-artificial-intelligence-ethics-framework/testing-the-ai-ethics-principles
[12] https://actuaries.asn.au/Library/Submissions/2020/2020AHRC.pdf - pages 2-3
[13] https://treasury.gov.au/review/cyclone-reinsurance-pool-taskforce

at our 2022 All-Actuaries Summit[14] current controls on usage of CDR data will be insufficient to prevent poor outcomes for some people. This appears to be an area where holistic review and consistency of policy goals could be improved such that the benefits of CDR, or open data, can be harnessed and the harms minimised.

As referenced in the Institute's recent response to the Quality of Advice Review, the *Financial System Inquiry* (p.267) thought the Australian Taxation Office (ATO) could collect and provide some of the data necessary to give financial advice. While the ATO has no statutory power to provide data for financial advice, under *Australian Privacy Principle 12* – Access to personal information, an 'entity that holds personal information about an individual' has the obligation 'to give the individual access to that information on request'. Such a request could be channelled through myGov, which could inform people when it was available. It could then be made available (subject to appropriate privacy protection and the necessary release authority from the relevant individual) to providers to interpret, supplement and convert into appropriate personal advice. Bank balances and spending patterns could be collected at the same time using CDR powers. This could further reduce the cost of providing advice as it automates the fact-finding process, may improve the accuracy of the data, and it is also likely to improve accessibility of advice to consumers as it simplifies their experience without the need to separately collect these data.

A further discussion of the implications of the CDR for the Superannuation sector, both as a recipient of customers' information (i.e. as an Accredited Data Recipient) and as being subject to it is provided in the Institute's submission to the Treasury Consultation in September 2021.

Further discussion

We would be pleased to discuss this submission or to provide further information. Please contact our CEO, Elayne Grace, at elayne.grace@actuaries.asn.au if you wish to clarify any aspects of this submission.

Yours sincerely

Annette King
President

[14] Bednarz, Dolman & Weatherall "Insurance Underwriting in an Open Data Era - Opportunities, Challenges and Uncertainties" (2022) https://actuaries.logicaldoc.cloud/download-ticket?ticketId=09c77750-aa90-4ba9-835e-280ae347487b