

<div>[Redacted]</div>	
<div>[Redacted]</div>	<div>[Redacted]</div>

Part B: Submission

You may choose to send a document, a video, a voice recording or picture as your submission. *Please contact the Human Rights and Technology Project Team to send a file larger than 20 MB, such as an Auslan submission.*

This section includes a series of questions developed by the Commission that you may respond to. You do not need to answer every question.

Consultation questions

1. What should be the main goals of government regulation in the area of artificial intelligence?

The regulation of AI should strive to find the optimal balance between promoting innovation and ensuring the safety and security of all Australians. However, this need not be a zero-sum game; the overall goal should be to encourage (socially) responsible or beneficial AI, as opposed to AI that benefits a very select few at the expense of others. Perhaps ironically, I believe the regulators of AI will themselves need to leverage AI technologies to be able to perform their duties in such a rapidly changing area.

In order to achieve this high-level goal, a more specific goal will need to ensure the diversity of representation and voices/perspectives (gender, ethnicity/culture, ability etc) in this area. Indeed, diversity will be required to realise the full benefits of AI to our multicultural society. For example, based on [my research](#) on the First Australian design paradigm, Indigenous Australians could inform the design of AI that promote more meaningful connections between each other and the natural environment. People will naturally form relationships and attachments to AI entities, and we need to ensure these relationships and attachments aren't damaged as the systems that support them undergo changes (such as upgrades)

Furthermore, it should support efforts to address the social and ethical challenges associated with AI, such as those outlined in the [latest Nuffield/CFI report](#), entitled: *Ethical and societal implications of algorithms, data, and artificial intelligence: a roadmap for research*.

The regulation of AI will also need to be tailored to the specific needs of each sector, as per the first recommendation in the [AI Now 2018 Report](#) "to regulate AI by expanding the

powers of sector-specific agencies to oversee, audit, and monitor these technologies by domain". However, there is still value in a coordinating role across all sectors, to ensure each the regulators from each sector are leveraging the insights and learnings from others.

Similarly, when it comes to the regulation and governance of data specifically, I largely agree with approach advocated by Nesta (UK) on [The new ecosystem of trust](#).

Aside from 'responsible' and 'beneficial', another adjective used to describe a more desirable future with AI is 'democratic', as per the following quote:

"This shift toward "[democratic A.I.](#)" has three main principles: that all society will be impacted by A.I. and therefore its creators have a responsibility to build open, fair, and explainable A.I. services; that A.I. should be used for social benefit and not just for private profit; and that because A.I. learns from vast quantities of data, the citizens who create that data — about their shopping habits, health records, or transport needs — have a right to say and understand how it is used."¹

2. Considering how artificial intelligence is currently regulated and influenced in Australia:

(a) What existing bodies play an important role in this area?

Here is a non-exhaustive list of existing bodies in Australia:

- Existing sector specific regulators, such as the ACCC
- Unions
- CSIRO
- [3Ai \(ANU\)](#) and possibly also [I2S \(Integration & Implementation Sciences\) at ANU](#) (research impact more generally)
- [Gradient Institute \(USyd\)](#)
- [Australian Institute for Machine Learning \(Adelaide\)](#)
- [ACS](#)
- [Engineers Australia](#)
- [Australia Council](#)

Here is a non-exhaustive list of existing bodies internationally:

- [ISO](#)
- [IEEE](#)
- [WEF](#)
- [The Stanford Institute for Human-Centered Artificial Intelligence \(Stanford\)](#)
- [Leverhulme Centre for the Future of Intelligence](#) (CFI)

¹ <https://medium.com/s/story/what-would-more-democratic-a-i-look-like-ea729f5f7b0a>

- [Future of Life](#)
- [Machine Intelligence Research Institute \(MIRI\)](#)
- [Partnership on AI](#)
- [Centre for the Study of Existential Risk \(CSER\) \(Cambridge\)](#)
- [Future of Humanity Institute \(Oxford\)](#)
- [AI Now](#)
- The specific ethical/responsible AI initiatives that large enterprises are working on, including Google (especially DeepMind), Microsoft, Amazon, Accenture, PwC, etc...

Finally, the RegTech industry (both within Australia and internationally) will need to be consulted and engaged, as regulators of AI will themselves need to leverage AI technologies to be able to perform their duties in such a rapidly changing area.

(b) What are the gaps in the current regulatory system?

I believe there the existing regulatory system need to adopt a (complex) systems approach to the regulation of AI, that better captures and reflects the ways these technologies are going to transform society (for example, autonomous vehicles will impact far more than just the automotive industry). There will need to be a fundamentally deeper engagement with academia and other institutions working explicitly in this space, and the RegTech industry/community more generally to find ways to leverage AI and other technologies to help regulate it. The existing regulatory system also appears to be under-funded, reactive and lacking the capabilities required to meaningfully regulate AI.

3. Would there be significant economic and/or social value for Australia in a Responsible Innovation Organisation?

The economic benefits associated with an increase in trust that a well-functioning RIO should provide are well documented (e.g. [see this WEF article](#)).

However, more generally, there is a need to [broaden and open up](#) our existing measure of economic and social value, which are typically very narrow (e.g. income focused). For example, “In February 2008, the President of the French Republic, Nicholas Sarkozy, unsatisfied with the present state of statistical information about the economy and the society” commissioned a panel of leading economists and social scientists to “identify the limits of GDP as an indicator of economic performance and social progress, including the problems with its measurement; to consider what additional information might be required for the production of more relevant indicators of social progress; to assess the feasibility of

alternative measurement tools, and to discuss how to present the statistical information in an appropriate way.”²

More recently, the OECD published a follow-up report entitled: “Beyond GDP: Measuring What Counts for Economic and Social Performance”³.

Although more work on the specific indicators and metrics for well-being/quality of life and their sustainability is needed, the overall trajectory should inform the discussions around the social value of the RIO.

The work of the [STEPS Centre](#) and the [Oxford Poverty and Human Development Initiative \(OPHI\)](#) may also inform such discussions (e.g. see this report on [Measuring Multidimensional Poverty: Insights from Around the World](#)).

4. Under what circumstances would a Responsible Innovation Organisation add value to your organisation directly?

Although this is an individual submission, I work for PwC Australia, and the (expected) goals of the RIO align nicely with the purpose of PwC – to build trust in society and solve important problems. Therefore, I see the RIO adding value to PwC by helping us understand how we can leverage and apply AI to help build trust and to solve important problems.

5. How should the business case for a Responsible Innovation Organisation be measured?

Ultimately, the RIO will be responsible for fostering a culture of responsible innovation in the field of AI. The following quotes from innovation scholar Bettina von Stamm⁴ may inform this work:

"In short, we need an approach to innovation where a sense of responsibility goes with the excitement of possibility. And this means that we have to develop an understanding of innovation that is somewhat different from our perspectives of it today." (p. 48)

"Innovation is key to our future, but we must shift from ‘innovation for growth’ to ‘innovation for wellbeing’. Sustainability must be the driving force at the outset, not a tick in the box. For this to happen, we need a broader understanding of innovation, one that goes beyond R&D and technology, and individuals need to have the courage

² <https://ec.europa.eu/eurostat/documents/118025/118123/Fitoussi+Commission+report>

³ <http://www.oecd.org/publications/beyond-gdp-9789264307292-en.htm>

⁴ Von Stamm, B. (2012). The Future of Innovation. *Innovation Quarterly*.

to lead the way. Each and every one of us has to take responsibility for creating a sustainable, worthwhile future through innovation." (p. 49)

More specifically, the value of the RIO as discussed in question 3 can be used to justify the required investment. However, the counter-factual should also be considered – i.e. what are the risks should Australia not invest in the creation of a RIO?

For example, the disproportional influence of multinational organisations such as the GAFA (Google, Amazon, Facebook, and Apple) and the (AI) algorithms they employ has been widely reported and criticised⁵. Does the ACCC currently have sufficient capabilities and powers to deal with their influence, and if so, for how long?

6. If Australia had a Responsible Innovation Organisation:

(a) What should be its overarching vision and core aims?

Vision: a future in which all Australians can confidently and prudently trust that AI is being used responsibly to the benefit of everyone without prejudice or discrimination, and in accordance with our values and fundamental human rights.

See the answer to question 1 regarding the aims.

(b) What powers and functions should it have?

Those necessary to support and achieve the goals.

(c) How should it be structured?

The structure of the RIO should be approached from a (complex) systems perspective - i.e. there will be an ecosystem of participants from different organisations/groups, and we need to find a way to manage them, possibly similar to the approach advocated by Nesta in [The new ecosystem of trust](#).

(d) What internal and external expertise should it have at its disposal?

⁵ <https://www.cbinsights.com/research/google-amazon-facebook-apple-hiring-techlash/>

Those required to support and achieve the goals.

(e) How should it interact with other bodies with similar responsibilities?

As part of adopting a (complex) systems approach to the structure of the RIO, the interfaces between the various bodies need to be defined at the appropriate levels.

(f) How should its activities be resourced? Would it be jointly funded by government and industry? How would its independence be secured?

Independence needs to be a core principle - e.g. it's fine for the RIO be partially funded by industry or other groups (so they can show they support a worthy cause), but they should have no more influence outside the defined and accepted processes.

(g) How should it be evaluated and monitored? How should it report its activities?

Given the central role of the RIO in providing trust, it will need to be fully open and transparent in its decisions and actions. However, it will need to find a way to do so without compromising the ability of the organisation to function effectively and achieve its goals. In other words, the target operating model of the organisation will need to be designed in such a way as to facilitate both effectiveness and transparency. The RIO can look to other organisations that have a high degree of transparency for guidance, such as the UNDP.⁶

⁶ <https://www.undp.org/content/undp/en/home/news-centre/news/2018/UNDP-again-ranked-as-one-of-worlds-most-transparent-development-aid-organisations.html>