Draft Terms of Reference (ToR)

Artificial Intelligence – Challenges and Opportunities
Topic 1: healthcare delivery

Possible future topics: education; productivity and future of work

"The benefits for human society are likely to be immense. AI doctors could provide far better and cheaper healthcare for billions of people, particularly for those who currently receive no healthcare at all. Thanks to learning algorithms and biometric sensors, a poor villager in an undeveloped country might come to enjoy far better healthcare via her smartphone than the richest person in the world gets today from the most advanced urban hospital"

Yuval Harari, 21 Lessons for the 21st Century, 2018

Background

Artificial Intelligence (AI) will have far-reaching and long fore-shadowed impacts on our lives which are starting to be realised at pace. This project will tackle the implications of this rapidly evolving technology with a focus on the opportunities it creates to satisfy unmet needs, in the context of the challenges it poses. We will do this in a series of projects focussing on specific domains, starting with healthcare. AI can assist humans to complete tasks or replace the need for human participation altogether by doing tasks far more efficiently and effectively. The impacts are unlikely to be felt evenly. For example, some have argued that more roles currently undertaken by doctors will be disrupted by AI than those undertaken by nurses.

The list of areas within healthcare that are likely to be enhanced or disrupted by AI include: data collection, use and management; individual access to and analysis of biometric data (e.g. from smart watches); imaging and diagnostics; visual and hearing aids; research, teaching and training; all of which raise complex ethical and legal issues. We propose to take an opportunities focus, mindful of the challenges in areas such as the workforce and medical ethics.

Draft Proposed Scope [to be finalised at first expert panel meeting]

The scope for the project will be finalised in conjunction with an expert panel, drawn from a growing pool of experts and stakeholders in New Zealand, with international connectivity. In the first instance we propose to do some work that will be relevant to a wide range of sectors, with three objectives:

1. Produce a snapshot of how emerging issues are being managed within existing or new regulatory frameworks across jurisdictions; this will be continually updated as the project evolves.
2. Produce a snapshot of activity across government and connect with key stakeholders to understand where our expert panel can add value.
3. Building on what we learn in 2 above, scope a series of future topics where AI is impacting our lives and creating opportunities, for consideration post-election.

Secondly, we will focus on the opportunities and challenges at the intersection of artificial intelligence and healthcare delivery, with two objectives:

4. Complete a scan of expertise in New Zealand, to include researchers, businesses and stakeholders with expertise across disciplines (e.g. computer science, pattern recognition, philosophy, psychology, medical imaging, healthcare innovation and IT, science and society, data oversight and data sovereignty issues, particularly for Māori, and ethics).

5. Do a deep dive into the opportunities afforded and challenges posed in the healthcare domain, delivering a short report ahead of the election which includes recommendations for government. Some consideration of how current systems and enablers may need to adapt to maximise the benefits of these new technologies will be included, in collaboration with the Manatū Hauora|Ministry of Health (via CSA Dr Ian Town) and MBIE. The demarcation between AI-assisted healthcare and "regular healthcare" is not clear cut and it will be important to understand where existing regulatory frameworks can and can't operate, before complicating the landscape with new regulatory frameworks.

Out of scope

- Macroeconomic implications of AI

Process

- Draft Terms of Reference agreed with Prime Minister [this document].
- Call for nominations of the expert panel and wider reference group sought from our key institutional contact lists and wider networks. The panel shortlisting will actively seek to support a diverse and balanced panel.
- Expert panel and wider reference group assembled to guide the Office of the Prime Minister's Chief Science Advisor in delivering the objectives.
- The membership of the panel and wider reference group will be public and processes open.
- Wide stakeholder engagement will be included with an open reference group process.
- The website will be developed as the project progresses to enable information to stay current. It will link to trusted resources and topics of current interest (e.g. explainer videos on ChatGPT).
- The healthcare report will be delivered to the Prime Minister and later made public on the PMCSA website.

Draft timeline of activities

Call for nominations via key institutional contacts list, early discussions with officials – *April 2023*
Scope drafted and approved – *May 2023*
Website initiated – *June 2023*
International policy snapshot drafted – *June 2023*
Panel established – *June 2023*
Research and engagement on AI in healthcare delivery, with monthly updates to PM – *June – August*
Delivery of short report to PM – *September 2023*

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