AUSTRALIAN HUMAN RIGHTS COMMISSION SUBMISSION NO 112

1. What types of technology raise human rights concerns? Which human rights are particularly implicated?

Human Right issues in relation to future network Technologies has the same challenges and concerns that exist today. Technology used to maintain, support, resource performance management, optimised traffic paths, security of data, content management and peripheral hardware / software access management. Some examples of possible Human impact of this type of technology:

- Impact of the number of people being employed or enhance people's skills sets to do more complex work.
- Is there protection built into the products to only provide access to authorised persons. Such as security monitoring Video technology who has access?
- Does the technology assist the organisation improving productivity, reducing costs and increases revenue?

Peripheral hardware / software which connects to the network is the other area of Human Impact. This is a wide and varied area. Some technology already has been mentioning in the issue paper. Some of the examples below AI will make it easier for people to abuse or improve decision making.

- Countries using network technology to control population information and communication.
- Using data contained on the network for harmful financial gains. Such as Spamming emails, intercepting financial transactions and holding stored data as ransom.
- Denial of access to an organisation network resulting in monetary loss.
- Applications influencing individuals preferred reading content and search results based upon prior behaviour. Such as only showing articles of similar topics re-enforcing bias behaviour.
- Social media technology not managing anti-social behaviour impacting social norms. Cyber Bulling is as one example.
- Technology operantly recording audio and storing the audio for AI research or improvements without the user's knowledge.
- Self-driving cars which communicate with the environment via wireless. The security being breached transmitting false information causing accidents on the roads.
- Developing technology which restricts a specific group of the population from accessing or using the technology. In other words, providing a social gap between specific society demographics. Simple example is technology design where PWD cannot access or poor individuals cannot afford the technology.
- Virtual Reality Technology is one area is an unknown of the actual impact and benefits to society. Will this technology improve people's

skills, knowledge, abilities or will the technology disrupt social norms as some Science fiction books predict?
    - digital addiction with games and other online interactive content where the individual doesn't look after their health or socialise in the community.
- Data transfer of data from point A to B. some countries monitor the network data for country cyber-security stated reasons or Criminal individuals or organisations intercepting data for unlawful reasons.
- Consumers and customers of organisations do they have control, ownership and full visibility of their data? Thus, if a consumer leaves an organisation or wishes to transfer to another organisation which provides similar services. Are there protocols or regulations to support the consumer or organisation to achieve this? Caveat to this point is proprietary data which is specifically created by the vendor in maintaining or business decisions to maintain relationships with the consumer or customer.
- Technology used to build future technology currently introduces two types of barriers:
    - PWD where they cannot develop products using the development environment to create new technologies. The user interface commonly is either not accessible or very difficult to use depending on the persons disability. Impact to employment occurs.
    - The direction of this type of technology is going to provide the ability of anyone to create new technology in the future with no to very little programming knowledge. Thus there is a potential the gap between accessible technology and in-accessible could grow if the platforms used to create the new technology do not include accessibility as part of the development environment. Current development environments do not have a good track record with ensuring accessibility is a part of the development environment. As they are the tools and foundation / framework required to create the end product. The lack of accessibility built into the environment create in-accessible products.
- Self-service kiosks and similar technology already introduce barriers to specific disabilities and other demographics such as the elderly. Either the technology is not accessible or two difficult to use.

1. Noting that groups within the Australian community can experience new technology differently, what are the key issues regarding new technologies for these groups of people (such as children and young people; older people; women and girls; LGBTI people; people of culturally and linguistically diverse backgrounds; Aboriginal and Torres Strait Islander peoples)?

DCA undertook a research into how AI would impact the community. Based upon their research, the only two groups which will have a major impact in the workforce is Aboriginal and Torres Strait Islanders, and the disable.

For the general population Other possible key areas are:

- Education on how to manage data; your privacy; Managing Anti-social content; securing your content; skills with isolating fact from fiction
- Apps providing the content in multiple languages and simplified text when required;
- multiple user interfaces to support different means of accessing content of the technology.
- standardised terms and conditions which users do not read or understand;
- Individuals having stronger control over their data stored on the network by other organisations;
- Consumer protection on purchasing products from international vendors.
- Costs of products, education in how to use the new technology or how the technology works.

3. How should Australian law protect human rights in the development, use and application of new technologies? In particular:

    a) What gaps, if any, are there in this area of Australian law?

Private, NGO and Public sectors in the technology area follow established regulations and laws. The bigger question is do the laws cover open source and individuals who develop new technology for no commercial gain. The technology is developed and released on the internet for anyone use. Technology developed in other countries which do not have any commercial identity within Australia. Do the laws effectively protect consumers and organisations from unlawful or bad business practises?

    b) What can we learn about the need for regulating new technologies, and the options for doing so, from international human rights law and the experiences of other countries?

In the USA section 508 and 21st century Communication Act rely on technology companies to self-certify their products. If you look at the progress over the last 20 years. The overall progress has not improved greatly with ensuring technology fulfils the aim of the laws. Companies will be reactive as a whole with a small number being proactive. Even the proactive companies are targeting very specific products. Thus a balance between self-certification and formal certification is required.

    c) What principles should guide regulation in this area?

Principle base is nice on the service. They need to be linked to non-commercial standards which provided the required framework to achieve the principles. For example the banking industry are using principles based approach in relation to accessibility and moving away from proscriptive standards. In the principles they are using internationally recognised accessibility standards. This balance provides the guidance to the banking industry in specific areas. As new standards are developed,

they can be easily introduce or updated in the principles to ensure they stay up-to-date.

4. In addition to legislation, how should the Australian Government, the private sector and others protect and promote human rights in the development of new technology?

Establishing Ethics and best practise frameworks for AI technology at an international level. Possible establishing a certification process for private, NGO and public sectors in relation to AI best practises. A certification mark on the product could be displayed indicating the product fulfils the Ethics standards.

5. How well are human rights protected and promoted in AI-informed decision making? What are some practical examples of how AI-informed decision making can protect or threaten human rights?

AI could impact decision making in many forms. Such as only giving you the same purchase options, providing you with similar travel destinations, similar news articles, declining insurance or loans based upon your location, false positive detection of medical conditions, financial situation, Etc. the dataset is key and how the person processes the information. That is, do they only use the AI technology or follow-up with other checks. As data is based upon historical information and will have bias information contained within. Care needs to be taken in relation what is BIAS information as this differs from Culture, organisation and country.

This is a top of mind thought and not sure if I will explain correctly. The original data which is collected by any organisation, does it have true relevance to the information collection process or the organisation could use it in other ways such as marketing or research. A simple example: If you apply for insurance on your car or home. The application form requests for your country of origin. How does this question have any relationship to the application? How is the organisation going to use the information? Thus historical information which has been collected in the past generates bias and unnecessary information which will effect decision making.

6. How should Australian law protect human rights in respect of AI-informed decision making? In particular:

   a) What should be the overarching objectives of regulation in this area?

The overarching regulation should be:

1. a balance between not placing a burden on private sector and maintaining and protecting the social norms of Australia.
2. Aligning with policies and regulations from the UN.

3. Where required, aligning with other countries regulations if they do not impact the first point.

b) What principles should be applied to achieve these objectives?

Australian Private, NGO and public sector need to be actively involved with organisations which are looking into the Ethics of AI. Principle is based upon an international Ethics framework approach. This ensures laws and regulations are harmonised globally and relevant for Australia. By having Harmonised regulations and Laws, permits private and public sector to be more innovative, manage costs and encourages competitive price points for services and goods.

c) Are there any gaps in how Australian law deals with this area? If so, what are they?
d) What can we learn from how other countries are seeking to protect human rights in this area?

7. In addition to legislation, how should Australia protect human rights in AI-informed decision making? What role, if any, is there for:

a) An organisation that takes a central role in promoting responsible innovation in AI-informed decision making?

Already established in different parts of the world are organisations such as the IEEE and partners of AI of Ethics. Universities are researching into the area of Ethics as well. Thus, a global body for Ethics and development in AI needs to be established. This body must be vendor neutral like the RFC, ITU, W3C, ETC. Ideally the body will have different organisations from the private, NGO and Government sectors to develop recognised best practise in AI. Providing an International recognition award like ISO methodology which is currently used within private, NGO and public sectors.

The open source and individual developers building their own AI technology which do not follow the developed best practises. Can this be governed or regulated, or should it? Personally I feel the open source community must be regulated as they frequently do not consider specific human rights. For example, if a product is created which is not accessible. The common response from the open source community is for you to fix it yourself.

b) Self-regulatory or co-regulatory approaches?

You need a balance between Self-regulated and regulated approaches:

- Private sector prefer self-regulated as the ownership lies on the organisation following the relevant regulations and standards. Private sectors feel this reduces costs and places ownership on them.

- The Public sector needs to enforce the regulation or framework. Simply doing an audit is not enough. Actually validating the products being release fulfil the regulation is required. As private companies are more concern with the profit line. Thus leaving them to self-regulation will encourage some organisation play the risk game of lets wait until we are caught. Refer to the banking industry as an example.

c) A 'regulation by design' approach?

- Establishing a tax deduction plus a mark and/or awards for private, NGO and public sector for best design following best practise with User Experience (UX) Design and AI Design. The human interaction of the AI is equally as important as the AI technology itself.
- If organisations introduce technology which does not follow the regulations, then high penalties, restriction from importing or selling or even jail terms should be considered. The fines should be a percentage base of the companies national or international gross profit if they abuse human rights or the relevant framework.
- Adopting an international best practise to AI designs is a must. As technology is global and the framework should be design with this in mind.

8. What opportunities and challenges currently exist for people with disability accessing technology?

Accessing technology for People with Disabilities (PWD) varies depending on the type of disability and the severity. Greater the severity of the disability more challenges could arise in using the technology. thus, there is not even one stop solution for disable people. Rather the user interface (UI) needs to be correctly designing to support all users in turn providing an inclusive designed product.

As stated in the paper, Accessibility focus is on the human interaction of the technology. Regardless of the AI or technology, this must be the focus of the product manager, UX designer and developer of the product. AI is just a mechanism of analysing data to provide a result. Generalised technology examples benefiting or places challenges in front of PWD:

- Researchers from different universities have undertaken AI research and have developed software to dynamically simplify the user interface to improve the user experience of software. The research benefits people with learning, cognitive, visual impairments and mobility disabilities (Guardian 2011 and Technology Networks, May 2018).
- Level Access an USA based Accessibility Audit company is researching into AI technology to develop Accessibility Audit tools to reduce the testing cycle. Depending on the data being used and how the AI is programmed. Bias results could be introduced depending on how the vendor perceives how a different disable people might use the web technology. On the other hand, this type of technology could greatly help the web sites level of accessibility.

- Household technology which are programmable and are not IoT base is one area where specific disabilities are coming across major barriers. This is partly due to no regulations to provide guidance to the private sector in developing an accessible solution or the product not being developed in Australia. Such as touch screen washing machines, microwaves, stove tops, TV's, air conditioners, ETC. IoT is assisting in this area. The challenge is affordability of the IoT enabled technology and if the IoT app is accessible. The caveat to IoT is assuming all disable people have the technology that the app works on or can use the technology which supports the IoT App.
- Services and goods used in commercial environments like Automatic check-outs, automatic ticket machines, Information Kiosks, FPos, Airline entertainment equipment, Facial recognition technology used for passports, ETC have major barriers to specific disability groups. The automatic Check-out and ticket machines are not accessible to someone who is blind or someone in a wheel chair if accessing the technology interface is not at the right height. The Passport Facial technology and similar products are not accessible for someone who does not have real eyes or has a facial deformity.
- A comment in relation to the statement on "touchscreen technology for persons who are blind or have a vision impairment" not being accessible from the 2017 parliamentary committee report. The statement is not 100% true. The Apple iPad, iPhone and iWatch is an excellent examples of accessible touch screen technology. The key in making Touch Screen Technology accessible:
    - assistive technology must support the Accessibility Framework.
    - accessible framework must provide the required bridge between the apps and assistive technology.
    - The app must fully support the accessibility framework.
    - Ideally the user interface should be the same across platforms. This isn't the case due to company IP.

In accessible touch screen technology is due to:

- No accessible Framework or Assistive Technology built into the Touch Screen Technology.
- The vendor does not utilise the accessibility framework. Thus, the assistive technology cannot provide the PWD with the required information.
- Industry standards places restrictions on the organisation preventing full accessibility. The Bank PCI is an example of restrictions placed on specific bank technology used by their customers. Thus, they must develop creative solutions to get around these restrictions.
- No industry standards or regulations providing guidance to the private and government sectors on making the technology accessible.
- The end-user being afraid of the new technology. thus not spending the time to learn the new technology.

- business technology used by employee's. If the technology is correctly design using the same principles for Inclusive Design or accessibility. full potential of PWD employees can be discovered. This is not currently the case and there are some real major barriers here for PWD. The issue paper highlights the type of tools.

As there are many benefits for technology for the disable, some of the potential risks of exclusion include:

- Interoperability – currently systems with AI interaction systems tend to be closed with proprietary standards and APIs, making it harder for customized assistive technologies to provide access for people with disability
- Accessibility Support – devices, sensors, and other IoT objects need to ensure accessibility on the data and protocol level to allow IoT applications to provide accessible interfaces and associated AI services.
- Identification and Configuration – of accessibility features need to be available transparently and consistently through platform APIs, as they are commonly available on operating systems.
- Privacy – AI devices systems may expose information that is more sensitive to people with disability and may also need to address privacy concerns more specifically.
- Security and Safety – also security and safety concerns may be higher for people with disability, particularly in areas of healthcare, governmental and commerce where highly sensitive interactions occur.

AI is going to be imbedded into a huge range of technology in the future. Thus more standards are required to support these technology at the early stages not towards the later stage of adoption. the

Accessibility experts, vendors, policy-makers and regulators, and advocates must not take the view that accessibility is separate from the general discussion and that the disability community will deal with all the relevant issues. The approach must be fully inclusive and be a part of any product creation, policy or regulation discussion. This will ensure technology is accessible by the whole community which is not the case today.

9. What should be the Australian Government's strategy in promoting accessible technology for people with disability? In particular:

a) What, if any, changes to Australian law are needed to ensure new technology is accessible?

- As a signatory to the UNCRPD, Australia has some policies in this area but there is no specific disability-based legislation designed to cater for the needs of technology for PWD. Disability Discrimination Act (DDA) Advisory Notes revision. 4.1 (2014) (Australian Human Rights Commission, 2014) that Section 24 of the Disability Discrimination Act of 1992 can apply if there is a digital access issues. However, it is the complainant that must demonstrate this to be the case and that the content in question fails compliance to the WCAG 2.0 standard. The complainant approach illustrates a reactive approach in making technology accessible for the PWD. Additionally, technology such as the web is classified as soft law compared to the Education, Employment and Building Standards which are referenced in the DDA. Thus, a review must be undertaken for the DDA to include technology standards such as AI to make the social change required for a more inclusive

society. Equally the current areas which are classified as hard law require review to ensure they are robust enough to handle future improvements in the area of AI. The penalties currently handed out for DDA is not strong enough and needs to be greatly increased to provide the incentive for organisation to do the right thing. For the last 25 years, the actual social change which the DDA should have done from my view hasn't really occurred. Unemployment has not changed for 20 years, education still has serious issues with the disable, building code is being ignore, huge range of technology isn't accessible.

- The telecommunication Act also requires to be updated to support newer and future technologies improvements to support PWD requirements. Suggestion is to harmonise or brought in align with other country telecommunication similar acts like the USA 21st Century Communications and Video Accessibility Act (CVAA) and the relevant laws in the UK. AI and future technology is heavily dependent upon Telecommunication Technology advancements. It is important the regulations encourage healthy innovation from the private sector to support Australia's PWD and aging communities.
- Any regulations, Ethic Frameworks or best development standards must ensure accessibility and the needs of the disable are included. As there are other laws such as ACCC (consumer Laws) which do not consider the rights of the disable in accessibility. the intent is to provide a social change and provide guidance to private, NGO and Public sectors to create innovative technology which is fully inclusive.

b) What, if any, policy and other changes are needed in Australia to promote accessibility for new technology?

- The AS EN 301-549 (Accessibility requirements suitable for public procurement of ICT products and services) is an excellent initiative which the Federal Government has adopted. This is the first step in bringing Australia in align with what the USA Government is doing with the section 508. Utilisation of the Voluntary Product Accessibility Template (VPAT) 2.1 is encouraged to be used in this process. AS it is harmonising with existing industry practises.
- Education of Accessibility is one area that needs to be improved in accessibility. This must be done at all levels of the education sector from Schools, Universities, Private colleges, TAFE, ETC. The education of Accessible user experience is currently not adopted in majority of courses focusing upon technology design. Accessibility education should be incorporated in any course which deals with decision making in relation to goods or services. Such as product management, marketing, content creation, policy making, ETC. This is one step towards making a more inclusive design goods and services to support the market place.
- Australian Accessibility recognised certification. In Australia there is no nationally recognised certification in Accessibility. Thus, any person can claim to be an accessibility expert. The International Association for Accessibility Profession is one organisation which is trying to achieve this goal which Australia could align with.

- Developing recognition programs for companies who develop accessible technology and internal programs to support accessibility within the organisation. This should align with other PWD initiatives as they co-exist with each other.
- Accessibility certification applied to products and cannot be sold until they are accessible. The compliance must be based upon Australian Accessibility standards. This concept is similar to electrical, wireless and other electronics. These products cannot be sold in the country until they comply to the regulations. A means of protecting PWD rights.

10. How can the private sector be encouraged or incentivised to develop and use accessible and inclusive technology, for example, using universal design?

- The USA is one model where the establishment of the section 508 has developed a mechanism of encouraging private sector to include accessibility into their products if they wish to sell products to the USA Federal government and funded organisations like Universities. Other countries like Canada are following the similar approach. Of course this has draw backs as the focus is only on business technology. the concept could be applied to all technology.
- Adoption of an Accessibility Brand logo for technologies. If this was undertaken the private sector needs to see the added value of creating an inclusive (accessible) design product.
- Providing tax or grant incentives for businesses to make their web sites, apps and products accessible. If not accessible, then higher tax are paid.