Australian
Human Rights
Commission

Human Rights
and Technology

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The **Australian Human Rights Commission** is Australia's National Human Rights Institution. It is an independent statutory organisation with responsibility for leading the promotion and protection of human rights in Australia.

Major project partners

Australian Human Rights Commission

1 March 2021

The Hon Christian Porter MP
Attorney-General
Senator the Hon Amanda Stoker
Assistant Minister to the Attorney-General
Parliament House
CANBERRA ACT 2600

Dear Attorney-General and Assistant Minister Stoker,

Human Rights and Technology Final Report 2021

I am pleased to present to you the Australian Human Rights Commission's *Human Rights and Technology Final Report*.

This Report is the culmination of a major project on new and emerging technologies, including artificial intelligence. The Report reflects the Commission's extensive public consultation regarding the impact of new technologies on human rights.

Australians have always been resourceful, and we are living in a time of unprecedented technological transformation. Australia can seize the benefits that new technology offers, while effectively guarding against the risks of harm, especially to our human rights. This Report presents a roadmap to achieve this aim by modernising a number of laws, government policies, education and resourcing.

This project and Report were conducted under section 11 of the *Australian Human Rights Commission Act 1986* (Cth). I look forward to discussing the Report and its recommendations with you.

Yours sincerely,

Edward Santow
Human Rights Commissioner

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Edward Santow

Human Rights Commissioner
Australian Human Rights Commission

1. Commissioner's Foreword

We are living through a time of unprecedented technological growth. It is reshaping our world.

A modern smartphone is millions of times more powerful than the most sophisticated computer that guided the Apollo 11 spacecraft to the moon. It is more powerful even than the best supercomputers of the 1990s, such as IBM's famous Deep Blue.

New technology can improve our lives. Artificial intelligence (AI) is enabling big strides in critical areas such as healthcare and service delivery. Digital communications technology can provide new ways for people with disability and others to connect and participate in community life—something that is more important than ever during the COVID-19 pandemic.

At the same time, there are real and profound threats. Poor technology design can exclude people with disability from work, services and the economy.

The use of AI can also open the door to a range of dystopian threats—from mass surveillance to unaccountable exercise of power by government and corporations. We have seen worrying uses of AI in areas as diverse as social security, policing and home loans. At its worst, the use of AI can result in unfairness or even discrimination based on characteristics such as race, age or gender.

We need to ask a crucial question: *can we harness technology's positive potential to deliver the future we want and need, or will it supercharge society's worst problems?*

The decisions we make now will provide the answer.

Australians want technology that is safe, fair and reliable. With the right settings—in law, policy, education and funding—the Australian Government and the private sector can build a firm foundation of public trust in new technology that is developed and used here.

Australia should pursue innovation that reflects our liberal democratic values. We should approach new and emerging technologies by being consultative, inclusive and accountable, and by embedding robust human rights safeguards. This Final Report sets out a roadmap for achieving this goal.

As Prime Minister Scott Morrison has rightly said, 'the rules that exist in the real world need to exist in the digital world.'[1] The law's protective umbrella should apply to the use of AI just as it does to everything else.

To achieve this, we must modernise our regulatory system to ensure that AI-informed decision making is lawful, transparent, explainable, responsible, and subject to appropriate human oversight, review and intervention.

Some targeted reform is needed, especially in high-risk areas. Stronger laws are needed, for example, to protect the community from misuse of facial recognition and other biometric technology.

But the law cannot be the only answer. This Report contains a series of recommendations that would help industry, researchers, civil society and government achieve the shared goal of human-centred AI—through policy, co-regulation, education and training.

This Report recommends the creation of a new AI Safety Commissioner to help lead Australia's transition to an AI-powered world. This new body would be a key source of expertise on AI, building capacity among regulators, providing guidance to government and the private sector, and providing independent advice to policy makers and Parliament.

As technology becomes essential for all aspects of life—in everything from government services to employment—accessibility is vital. This Report includes recommendations to ensure that noone is left behind as Australia continues its digital transformation.

The Australian Human Rights Commission thanks everyone who participated in our two-stage consultation process: community members, civil society representatives, industry, academia and government. This input has been crucial in identifying problems and solutions.

We also pay tribute to the Commission's major partners in this Project: Australia's Department of Foreign Affairs and Trade; Herbert Smith Freehills; LexisNexis; and the University of Technology Sydney. In addition, we thank the Digital Transformation Agency and the World Economic Forum for their significant support. The Commission also acknowledges the generosity of its Expert Reference Group, who have given invaluable strategic guidance and technical expertise.

The COVID-19 pandemic has accelerated our reliance on new technology—for everything from health care to remaining connected in a time of social distancing. This experience should reinforce the importance of our task: to ensure new technology is safe, reliable and enhances the lives of everyone.

Edward Santow
Human Rights Commissioner

March 2021

2. Executive summary

Now is a critical time. Australia is on a pathway towards becoming a leading digital economy. There is widespread recognition that we should walk this path while upholding human rights and responding to ethical risks.[2] This Final Report aims to help Australia meet this challenge.

Australia should pursue innovation that holds true to our liberal democratic values. This means we should approach new and emerging technologies by being consultative, inclusive and accountable, with robust human rights safeguards.

This Report provides a roadmap for how Australia should protect and promote human rights in a time of unprecedented change in how we develop and use new technologies.

The Australian Human Rights Commission is Australia's national human rights institution. The Commission is independent and impartial. It aims to promote and protect human rights in Australia.

The recommendations in this Report are informed by the Commission's expertise, our research and extensive public consultation with the community, government, industry and academia. All views are the Commission's, and the Commission is responsible for this Report and other Project outputs and statements.

2.1 Context

This era—sometimes referred to as the Fourth Industrial Revolution—brings extraordinary opportunities and risks, including for our human rights. The challenge for government is to show leadership, by creating an environment to enable Australia to seize the opportunities while addressing the risks.

While there are many pressing human rights issues raised by the rise of new technologies,[3] this Project has focused on two areas in particular.

The first is the use of artificial intelligence (AI) in an almost limitless range of decision making—in areas as diverse as government services, recruitment and the criminal justice system. This Report shows how AI can improve decision making through better use of data, and also how it can cause harm. The Commission sets out a suite of recommendations that respond to this two-sided phenomenon.

The second area of focus is how people with disability experience digital communication technologies—such as information and communication technology, the Internet of Things (IoT), virtual reality and augmented reality. Digitisation affects almost every area of life, and so this Report sets out ways to improve accessibility of the goods, services and facilities that use these technologies for the whole community, including people with disability.

The final phase of this Project was conducted during the COVID-19 pandemic. AI can help address this public health emergency, through its use in direct medical research, and also in measures such as contact tracing to help model disease transmission and control. On the other hand, some existing inequalities have intensified and become more urgent. For instance, as we practise social distancing—which increases our reliance on technology for work, accessing services and to stay connected—inaccessible technologies can be even more problematic for people with disability.

International law requires human rights to be upheld in any emergency or time of crisis, with special provisions that enable an appropriate response to public health, public order and other such threats.

2.2 A human rights approach to new technologies

Human rights are set out in international and domestic laws. International human rights law requires nation states to respect, protect and fulfil human rights, and to uphold the principle that 'all human beings are born free and equal in dignity and rights'.[4]

Human rights are *universal*, meaning that they apply to everyone. They are *indivisible*, meaning that all human rights have equal status. They are *interdependent* and *interrelated*, meaning the improvement of one human right can facilitate the advancement of others. Likewise, the deprivation of one right can also negatively affect other human rights.

While there are sometimes complex inter-relationships between different rights, governments must ensure everyone's human rights are protected.[5]

Australia is a signatory to seven core human rights treaties, which include civil and political rights, and economic, social and cultural rights.[6] Australia has voluntarily agreed to comply with human rights standards and to integrate them into domestic law, policy and practice.

A human rights approach builds human rights into all aspects of law, policy development and decision making. Applying this approach to the development and use of new technologies is increasingly common internationally,[7] with a growing number of experts emphasising the importance of human rights law in analysing the social impact of technology.[8]

Some international initiatives use human rights as the primary lens,[9] or one of several lenses,[10] through which to view the development and use of new technologies. Given that the technologies are new, the application of human rights and other laws in this area is also developing.[11]

Some of the Australian and international organisations that support a human rights approach to the development and use of new technologies include:

- United Nations (UN) mechanisms, such as the UN High Commissioner for Human Rights and the Special Rapporteurs on extreme poverty and human rights,[12] privacy and freedom of expression[13] and racial discrimination[14]
- UN Guiding Principles on Business and Human Rights[15]
- multilateral international bodies, such as the Organisation for Economic Cooperation and Development (OECD)[16] and G20[17]
- the Australian Government including Australia's *AI Ethics Principles* and the Discussion Paper for an AI Action Plan for All Australians[18]
- comparable liberal democracies, such as Canada and France[19]
- some leading multinational corporations[20]
- non-government and industry organisations working at the intersection of human rights and new technologies.[21]

The Commission uses the 'PANEL framework' to apply this human rights approach to the development and use of new technologies.[22]

PANEL Principles:

A human rights approach to new technologies

Participation

Ensure participation in decision making of stakeholders affected by new technologies, including the public, affected groups and civil society, experts, and decision makers.

Accountability

This requires effective monitoring of compliance with human rights standards by government and non-state actors, and mechanisms to enforce rights.

Non–discriminatory and equality

Anti-discrimination law principles should be applied to the development and use of new technologies, considering especially the needs of people who are vulnerable.

Empowerment and capacity building

The community needs to understand the impact of new technologies on their lives and have knowledge of, and access to, a review process and/or remedy.

Legality

The law should recognise that human rights are legally enforceable, including in the use of new technology.

In addition to an effective legal regime, with clear and well-enforced legal obligations, there is growing recognition that more attention is needed at the stage of design and development to ensure that human rights are 'baked into' products, services and facilities that use new and emerging technologies.

To this end, the Commission supports 'human rights by design', which is a systematic process for embedding human rights standards and compliance into the design, development and deployment of new technologies. This involves considering, at the point of research and development, the human rights implications of a possible use of new technology, with a view to designing in rights protections.[23]

The objective is to produce tech-powered products, services and facilities that are accessible to people with disability, as well as protecting other human rights. A human rights by design approach is similar to other design-led approaches, such as privacy and safety by design.[24]

2.3 Overview of this Report

The Report is divided into four parts.

Part A: A national strategy on new and emerging technologies

Part A considers Australia's overarching approach to new technologies, and especially the role of the Australian Government's *Digital Australia Strategy*.[25] The Commission commends the Government on its ongoing process to develop this Strategy.

The Commission recommends that the *Digital Australia Strategy* set out a vision for responsible innovation. The Strategy should advance human rights in the development and use of new and emerging technologies. It should contain practical measures focused on: regulation; education, training and capacity building; and funding and investment.

Part B: Artificial intelligence

Part B, comprising Chapters 4-9, considers how AI is changing the way important decisions are made by government and the private sector—with significant implications for how human rights are fulfilled.

As AI disrupts our economic, social and governmental systems, Australian governments are seeking to harness the potential of AI to improve services, products and more. At the same time, there is growing public concern that AI can be used in ways that cause harm.

While some uses of AI do not meaningfully engage people's rights, this Project has focused on 'AI-informed decision making'—that is, the use of AI to make *decisions* that have legal or similarly significant effects on individuals. Such decisions are likely also to engage human rights in a more profound way.

The Commission makes recommendations to ensure human rights are protected where AI is used in decision making. In particular, the Report has concluded that AI-informed decision making should be lawful, transparent, explainable, used responsibly, and subject to appropriate human oversight, review and intervention.

Chapter 4 explores the critical link between effective *accountability* and upholding human rights in the use of AI-informed decision making. The chapter sets out three key principles for accountable use of AI:

- The Australian Government should comply with human rights in its own use of AI, and it should ensure effective human rights safeguards apply to all entities that use AI.

- AI-informed decision-making systems should be tested before they are used in ways that could harm individuals, and those systems should continue to be monitored as they operate.

- An individual affected by an AI-informed decision should be given reasons for the decision, and they should be able to challenge the decision if they consider it to be wrong or unlawful.

These principles are applied in the remaining chapters in Part B.

Chapter 5 focuses on reform to ensure that *government* complies with human rights, and acts accountably, when it uses AI to make administrative decisions. The chapter recommends:

- that the Australian Government be required to undertake a human rights impact assessment before it uses AI to make administrative decisions

- greater transparency in the use of AI by government. In particular, individuals should be notified where government uses AI in administrative decision making, and there should be clearer rules regarding when and how government bodies will provide reasons for AI-informed administrative decisions

- that independent merits review be available for all AI-informed administrative decisions.

Chapter 6 focuses on accountability for AI-informed decisions made by *non-government entities* such as corporations.

While the law on administrative decision making by government is generally more prescriptive, accountability remains vitally important when corporations and other non-government entities use AI to make decisions. The Commission recommends that:

- individuals are notified of the use of AI in this type of decision making

- non-government entities be encouraged and supported to provide reasons or an explanation for their AI-informed decisions

- legislation prohibit the use of 'black box' or opaque AI in decision making by non-government entities

- individuals be given a practical means of appealing to a body that can review AI-informed decisions by non-government entities.

Chapter 7 addresses the role of co- and self-regulation to incentivise better human rights protections in the development and use of AI-informed decision-making systems. The aim is to complement and support legal regulation, and to create better AI-informed decision-making systems that avoid human rights and other problems occurring in the first place.

The measures recommended in this chapter include:

- standards and certification for the use of AI in decision making
- 'regulatory sandboxes' that allow for experimentation and innovation in how AI is used and regulated
- human rights impact assessments, including public consultation at the development stage of AI-informed decision making
- rules for government procurement of AI-informed decision-making tools and systems
- enhancing the role of human oversight and intervention in the monitoring and evaluation of AI-informed decision making.

Chapter 8 explores the problem of 'algorithmic bias', which arises where an AI-informed decision-making tool produces outputs that result in unfairness. Often this is caused by some forms of statistical bias. Algorithmic bias has arisen in AI-informed decision making in the criminal justice system, advertising, recruitment, healthcare, policing and elsewhere.

Algorithmic bias can sometimes have the effect of obscuring and entrenching unfairness or even unlawful discrimination in decision making. This chapter recommends greater guidance for government and non-government bodies in complying with anti-discrimination law in the context of AI-informed decision making.

Finally, **Chapter 9** focuses on the use of facial recognition and other biometric technologies.

There is strong and growing community concern regarding some forms of facial recognition technology, which can be prone to high error rates, especially for certain racial and other groups. Where these biometric technologies are used in high-stakes decision making, such as policing, errors in identification can increase the risk of human rights infringement and broader injustice. Moreover, as the use of biometric technologies increases, there is concern about the impact on individual privacy, including through harmful surveillance.

This chapter recommends law reform to provide stronger, clearer and more targeted human rights protections regarding the development and use of biometric technologies, including facial recognition. Until these protections are in place, the Commission recommends a moratorium on the use of biometric technologies, including facial recognition, in high-risk areas of decision making.

Part C: Supporting effective regulation

Part C recommends the establishment of an AI Safety Commissioner as an independent statutory office to provide technical expertise and capacity building on the development and use of AI.

An AI Safety Commissioner could build public trust in the safe use of AI by:

- providing expert guidance to government agencies and the private sector on how to comply with laws and ethical standards regarding the development and use of AI
- working collaboratively to build the capacity of regulators and the broader 'regulatory ecosystem' to adapt and respond to the rise of AI in their respective areas of responsibility
- monitoring trends in the use of AI in Australia and overseas, providing robust, independent and expert advice to legislators and policy makers with a view to addressing risks and taking opportunities connected to the rise of AI.

Part D: Accessible technology

Part D, comprising Chapters 11-15, makes recommendations to improve the accessibility of goods, services and facilities that use Digital Communication Technologies for people with disability.

Good technology design can enable the participation of people with disability as never before—from the use of real-time live captioning to reliance on smart home assistants. On the other hand, poor design can cause significant harm, reducing the capacity of people with disability to participate in activities that are central to the enjoyment of their human rights, and their ability to live independently.

Chapter 11 explains how the accessibility of new technology, and especially of Digital Communication Technology, is an *enabling right* for people with disability—critical to the enjoyment of a range of other civil, political, economic, social and cultural rights. The remaining chapters in Part D apply this principle to a number of specific contexts.

Chapter 12 considers the functional accessibility of goods, services and facilities that rely on Digital Communication Technology—that is, the ability to *use* these things in practice.

Problems in this area commonly relate to the user interface of tech-enabled products being designed in a way that excludes people with one or more disabilities. Functional accessibility needs to be incorporated in the design of hardware and software, and in any updates or new versions, of goods, services and facilities that use Digital Communication Technologies.

This chapter recommends three key changes to improve functional accessibility:

- the creation of a new Disability Standard, focused on Digital Communication Technology, under the *Disability Discrimination Act 1992* (Cth)
- amending government procurement rules to require accessible goods, services and facilities
- improving private sector use of accessible Digital Communication Technology.

Chapter 13 deals with the accessibility of audio-visual news, information and entertainment content.

The 21st century has seen a massive expansion in the ways such content is delivered. Traditional media, such as broadcast television and radio, have been supplemented by an ever-increasing range of media, including subscription television, video and online platforms.

Accessibility features—especially captioning and audio description—can make this audio-visual content accessible for people with disability, especially people with disabilities affecting their vision or hearing. The Commission considers reform is needed to ensure that traditional and newer media respect the right of people with disability to receive news, information and entertainment content in ways that they can understand.

This chapter recommends reforms to law and policy to facilitate:

- increased audio description and captioning for broadcasting services, as well as video, film and online platforms
- reliable accessible information during emergency and important public announcements
- better monitoring of compliance with accessibility requirements and voluntary targets for the distribution of audio-visual content.

Chapter 14 addresses the experience of people with disability in *obtaining* goods, services and facilities that use Digital Communication Technologies.

Availability can be reduced where people with disability cannot afford, or do not know about, such goods, services and facilities. This problem can be made worse by socio-economic disadvantage, which is more common among people with disability. Exclusion can worsen inequality and disadvantage for people with disability.

This chapter recommends three key measures in this area:

- the provision of accessible information on how goods, services and facilities can be used by people with disability
- more accessible broadband internet by introducing a concessional rate for people with disability
- National Disability Insurance Scheme (NDIS) funding to improve access to Digital Communication Technologies for people with disability.

Chapter 15 addresses the role of design, education and capacity building in promoting accessible Digital Communication Technologies.

The Commission recommends applying a 'human rights by design' approach to Digital Communication Technologies through:

- the Australian Government adopting, promoting and modelling good practice
- incorporating this approach into education and training—especially in the areas of science, technology, engineering and mathematics
- upskilling the existing workforce via ongoing professional development for those involved in designing and developing with Digital Communication Technologies
- practical capacity building and accreditation measures for accessible and inclusive practices.

National strategy for responsible innovation

Supporting good regulation

- Guidance on responsible use of AI
- Capacity building for regulators
- Expert advice for Govt & Parliament

Digital communication technology for people with disability

- Human rights by design
- Addressing discrimination
- Laws, policies and incentives

Accountable AI by private sector

- No 'black box' AI
- Liability for use of AI
- Transparency & explainability

Accountable AI by government

- Right to challenge AI-informed decisions
- Human rights impact assessment
- Transparency & explainability

AI: Addressing critical risks

- Algorithmic bias, discrimination & unfairness
- Biometric surveillance & facial recognition

2.4 Key terminology

(a)   Artificial intelligence

This Report uses the term 'artificial intelligence' (AI) to refer to a cluster of technologies and techniques, which include some forms of automation, machine learning, algorithmic decision making and neural network processing. The OECD Group of Experts describes AI as including a

> machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments. It uses machine and/ or human-based inputs to perceive real and/or virtual environments; abstract such perceptions into models (in an automated manner, eg, with Machine Learning or manually); and use model inference to formulate options for information or action. AI systems are designed to operate with varying levels of autonomy.[26]

The term AI is not a term of art and has been criticised by some experts for being vague or ambiguous. The Commission acknowledges and shares those concerns, but notes there is no ready alternative term that is widely understood. Where practical, this Report refers to the relevant specific technologies or techniques associated with AI, such as algorithms, mathematical formulae, computer code, machine learning, neural networks and automation.

(b)   AI–informed decision making

'AI-informed decision making' includes a decision, or decision-making process, where AI is a material factor in the decision, and where the decision has a legal or similarly significant effect for an individual. The phrase 'legal or similarly significant effect' is used in the European Union's *General Data Protection Regulation* (GDPR).[27]

(c)   Digital Communication Technologies

Part D of this Report focuses on 'Digital Communication Technologies', which refers to technologies associated with information and communication technology (ICT); connected devices and the Internet of Things (IoT); virtual reality (VR); and augmented reality (AR). These technologies are used in goods, services and facilities primarily for communication, and often have a user interface as a means of communicating information (eg, a voice-operated home automation system).

2.5 Project process

The Commission established an Expert Reference Group for this Project.[28] Constituted by a diverse group of leading experts from technology, law, and science and academia, the Expert Reference Group advised the Commission on the Project's strategy, consultation process and recommendations.

Four major partner organisations have supported this Project—the Australian Government Department of Foreign Affairs and Trade; Herbert Smith Freehills; LexisNexis; and the University of Technology Sydney. Project Partners contribute expertise and some financial and in-kind resources.

Public consultation included:

- roundtables with participants from industry, civil society, academia and government
- inviting and receiving written submissions from stakeholders, especially views and input from people who are particularly affected by new technologies
- interviews with experts and key decision makers
- engaging with national review and reform processes on new technologies.

2021 — **Final Report**
38 recommendations to promote human rights in an era of new technologies

2020 — **Technical Paper**
How to address algorithmic bias

2019 — **Discussion Paper**
The Commission's preliminary views

White Paper
What kind of leadership is needed in Australia to promote responsible innovation?

2018 — **Issues Paper**
10 questions about human rights & new technologies

International Conference
Project launch with 450 attendees, international and national expert presenters

Engagement Highlights

291
submissions received

725
consultation participants

84
conference presentations from the Human Rights Commissioner

2149
national survey participants

2.6 Outcomes

The overall effect of this Report will be to foster a deeper understanding of the human rights implications for Australia of new and emerging technologies such as AI. By adopting a human rights approach, our country is well placed to seize the moment: to harness technology in a way that delivers what Australians want and need, not what they fear.

The specific outcomes of this Project include:

- a better understanding of opportunities and threats posed by new and emerging technologies in Australia, especially for our human rights

- addressing the views of stakeholders from industry, government, civil society and academia, as well as leading experts from around the world

- a focus on responsible innovation in the development of Australia's national strategy on new and emerging technologies

- a template for reform that will enhance accountability and human rights protections in AI-informed decision making by government and the private sector

- key ways to support government and the private sector in using AI safely and accountably

- understanding the experience of people with disability in accessing goods, services and facilities that use Digital Communication Technologies

- reform that would assist in enhancing accessibility of Digital Communication Technologies.

How should Australia approach new & emerging technologies?

International human rights law sets out globally-accepted legal principles that uphold the dignity of all people. As a liberal democracy, Australia should place human rights at the centre of its approach to technology, with a view to promoting fairness, equality and accountability in the use and development of all new and emerging technologies.

3. National strategy on new and emerging technologies

3.1 Summary

This chapter addresses the question: *what should be Australia's overarching approach to new and emerging technologies?*

The Department of Prime Minister and Cabinet is currently leading a process, on behalf of the Australian Government, to create the *Digital Australia Strategy*.[29] This presents an excellent opportunity to articulate the key, big-picture elements of how Australia will respond to the rise of new and emerging technologies, such as artificial intelligence (AI).

The Commission urges the Australian Government to embrace technological innovation that holds true to our liberal democratic values. This means putting human rights at the centre of how Australia approaches new and emerging technologies.

The Commission recommends that the *Digital Australia Strategy* promote responsible innovation and human rights through measures including regulation, investment and education. This will help foster a firm foundation of public trust in new and emerging technologies that are used in Australia.

The approach outlined in this chapter provides the foundation for the Commission's recommendations for law and other reform throughout this Report.

3.2 The need for a national strategy

RECOMMENDATION 1: The *Digital Australia Strategy*, which is currently being developed by the Australian Government Department of the Prime Minister and Cabinet, should set Australia's national strategy for new and emerging technologies. The *Digital Australia Strategy* should promote responsible innovation through:

(a) effective regulation—including law, co-regulation and self-regulation—that upholds human rights in the development and use of new technologies

(b) the development of a community-wide action plan on education, training and capacity building regarding the human rights implications of new and emerging technologies

(c) funding and investment for responsible innovation that complies with human rights

(d) practical measures to achieve the Strategy's aims, including through the establishment of an AI Safety Commissioner (see Recommendation 22).

Stakeholders across government, industry, academia and civil society overwhelmingly supported the development of an Australian national strategy on new and emerging technologies.[30]

More than 25 countries and intergovernmental organisations have developed national or regional strategies for AI or new and emerging technologies, with many more in the process of development.[31] The primary purpose of these strategies is to set overarching priorities, with a view to harnessing the economic and social benefits of AI, and addressing the most serious risks.[32]

National strategies generally contain objectives and action areas across a range of domains, including: research, talent and the future of work; private and public sector governance; regulation and ethics; infrastructure, data and foreign policy; and inclusion and stakeholder engagement.[33] By setting clear government policy on funding, regulation and education, such strategies can:

- help the private sector to set its own planning and investment priorities
- guide government use of new technology, including in administrative decision making
- build community trust that protections are in place to address risks or harm
- contribute to the international development of policy guiding the development and use of technologies, and help identify common values and norms across governments.[34]

By way of illustration, the German national strategy on AI, *AI made in Germany*, has three overarching objectives that aim to promote technological innovation and the good of society. Germany seeks to be recognised as a developer and user of excellent AI 'in all parts of society in order to achieve tangible progress in society in the interest of its citizens'.[35] Similarly, the respective AI strategies of Canada and France set out overarching objectives aligned with *responsible innovation* and acknowledge the risk of harms associated with AI.[36]

The German national strategy acknowledges the tension that can arise between effective rights protections and the pursuit of investment and growth, and sets out a range of measures to help guide regulatory reform needed to protect rights, and at the same time fund the development of innovative applications that respect rights.[37]

While not a national strategy as such, the Executive Order on AI issued by the United States President in 2019 sets national priorities regarding research, innovation and commerce in AI in that country. Those priorities include advancing freedom, human rights protection, individual dignity and the rule of law.[38] Similarly, the Global Partnership on AI, of which Australia is a founding member, seeks to

> support the responsible and human-centric development and use of AI in a manner consistent with human rights, fundamental freedoms, and our shared democratic values.[39]

Good national or regional strategies on AI and other new technologies tend to have some common elements:[40]

- they incorporate international human rights standards, including practical steps to ensure protection of rights with accountability and grievance mechanisms
- they promote human rights training and education for designers and developers of new technology
- they include measures for oversight, policy development and monitoring, such as the 'AI Observatory' in *AI made in Germany*[41]
- they have whole-of-government approaches to ensure consistency across agencies and implementation
- they focus on present and future impacts of technologies on society.

As a number of similar nations have recognised, the creation of an overarching national strategy for Australia could be an effective way of responding to the pace of technological development and addressing the risks and benefits. An industry stakeholder submitted:

> governments are moving ahead with such strategies that aim at both creating excellence through economic investment as well as a robust regulatory framework that can set global standards and ensure trust. Australia is well-placed to compete in this evolving global landscape in order to promote innovation, economic growth and prosperity for its citizens.[42]

This also presents an opportunity to put human rights at the fore. A leading North American technology company submitted that national strategies can

> embed a human rights-based approach into industry policy, for instance through the creation of tailored direct spending programs to help ensure that the design and technological foundations of right-respecting AI, such as transparency, explainability and accountability, are firmly established in key sectors.[43]

It is widely argued that a national strategy should be drafted broadly enough to account for rapid and continual development in technologies and how they are used.[44] Stakeholders submitted that this could include:

- existing technologies, because new and emerging applications of existing technologies may engage human rights[45]
- emerging technologies[46]
- the interoperability of technologies, given that 'a technology may be benign, but in tandem with others may represent new risks and opportunities'[47]
- reference to specific technologies that are known to engage human rights, such as drones, which use AI for facial recognition in public and private spheres,[48] or medical and health technologies.[49]

PwC submitted that an Australian national strategy should integrate approaches to technology pioneered by Aboriginal and Torres Strait Islander peoples to ensure that regulation and policy are inclusive.[50]

3.3 *Digital Australia Strategy*: an opportunity for an overarching approach

In addition to the ongoing process to develop the *Digital Australia Strategy*, the Australian Government has a number of processes underway, or completed, that contribute to Australia's strategic approach to new and emerging technologies. These include:

- the *Digital Economy Strategy*, *AI Action Plan*, *AI Ethics Framework* and *AI Technology Roadmap* by the Department of Infrastructure, Science, Energy and Resources (DISER)[51]
- the review of the *Privacy Act 1988* (Cth) by the Attorney-General's Department[52]
- the Digital Transformation Agency's Strategy 2018-2025[53]
- the cyber affairs and critical technology work and strategies of the Department of Foreign Affairs and Trade.[54]

Stakeholders noted the importance of coordination, complementarity and alignment across these initiatives. For example, the Australian Industry Group urged better 'coordination between the various agencies around policy issues that arise from new and emerging technologies'.[55]

The Government has recognised this need through the establishment of the Department of the Prime Minister and Cabinet's Digital Technology Taskforce. This Taskforce is responsible for developing the *Digital Australia Strategy*, which will outline a vision to ensure Australia is a leading digital economy and society by 2030.[56]

In February 2021, following informal consultation, the Taskforce identified five overarching themes for the *Strategy* and invited public feedback.[57] The five themes are:

1. moving more businesses to the digital frontier
2. a digitally capable and inclusive Australia
3. building digital trust
4. digital-first Government
5. lifting sectors through digital technology.

These themes suggest that the *Digital Australia Strategy* is well placed to articulate a broad, national vision—one that also draws together the key existing strands of policy and law related to new and emerging technology in Australia.

The Taskforce has invited comment on the overarching themes and the development of the *Digital Australia Strategy* more generally.[58] A significant number of stakeholders in the Commission's Project identified the importance of consultation with government, industry and civil society in developing a national strategy,[59] especially those who are more likely to experience human rights violations from new technologies.[60]

The Allens Hub for Technology, Law and Innovation at UNSW emphasised the need for expert legal and technical input to develop a national approach:

> Legal and regulatory frameworks will need to be adjusted to resolve uncertainties in the application of existing rules, ensure that rules are not over- or under- inclusive with respect to activities facilitated by new technologies and make changes where existing laws or regulatory approaches are no longer justified, no longer cost-effective, or no longer applicable.[61]

3.4 Elements of an Australian national strategy

An Australian national strategy should include four primary aims:

- to uphold human rights
- to establish Australia's priorities in regulating the development and use of new technologies
- to build a firm foundation of public trust in new technologies
- to develop an Australian plan for education, training and capacity building that responds to the exponential growth in new and emerging technologies.

The Commission recommends that these elements be included in the *Digital Australia Strategy.*

(a) Uphold human rights and promote responsible innovation

Putting human rights at the centre of the *Digital Australia Strategy* would have several benefits.

First, international law requires the Australian Government to take active steps to promote and protect human rights, including in respect of new and emerging technologies. Companies and other non-government bodies also are obliged to respect human rights under the United Nations (UN) Guiding Principles on Business and Human Rights.[62]

Many countries have adopted national AI strategies, but few set out *how* human rights should be promoted, protected and respected in the use of AI.[63] For effective human rights protection, a national strategy must set out a clear, practical framework for action. It should set out specific steps to improve human rights protections, as well as effective oversight and dispute resolution.[64] For example, Germany's national strategy states that the use of AI must adhere to fundamental rights; and requires Germany's federal government to address any gaps in protection.[65]

Secondly, international human rights law applies globally, and so provides a ready-made basis for international cooperation—something that is especially important in respect of new and emerging technologies. Placing human rights at the centre of the *Digital Australia Strategy* would reflect Australia's commitment to be a leading rights-respecting state in this area.

Thirdly, a clear commitment to human rights is a principled basis from which to pursue the opportunities presented by new and emerging technologies. That is, it would enable Australia to advance economic development goals in this area without jeopardising Australians' basic rights.

Finally, a human rights framework allows for the inclusion of ethical approaches to support human rights compliant development and use of technology. Ethical frameworks that uphold human rights can complement enforceable human rights protections, but they cannot replace them.

Stakeholders noted the simultaneous benefits and risks of rapid technological development.[66] A national strategy could address both. For example, the Australian Council of Learned Academies (ACOLA) submitted:

> A national strategy that allows areas of major opportunity to be established while ensuring the range of social, ethical and legal challenges are embraced and held as core values for implementation would help support the safe, responsible and strategic development of emerging technologies.[67]

Striking a balance between the economic opportunities associated with innovation and safeguarding against harm is clearly important,[68] even more so in light of the COVID-19 pandemic. The NSW Bar Association submitted that a national strategy could

> assist with balancing interests to the extent these might come into conflict, such as balancing the paramount need to protect the community's health and safety with not impermissibly infringing upon individuals' rights to privacy, freedom of movement and other rights, and other economic considerations and rights.[69]

Similarly, the Australian Red Cross submitted that new technologies are

> enabling better humanitarian approaches and solutions and enhancing our ability to deploy the right kind of response at the right time to where it is needed most. However, these tools and systems are also introducing a host of potential harms by exposing people and communities to new forms of intrusion, insecurity and inequality.[70]

(b) Establishing Australia's regulatory priorities

Many new technologies are developed and used in ways that engage human rights and warrant an appropriate regulatory response. This, in turn, will depend on what is being regulated.

A particular technology may be used in several different ways, engaging human rights to a greater or lesser extent depending on the specific context.[71] As a general rule, regulation should target the *outcome* of the use of that technology. Few types of technology require regulation targeted specifically at the technology itself.[72]

It is also important to consider what is the most appropriate *type of regulation* in the particular circumstance. For example, self- and co-regulation has some advantages where there is rapid growth and change in an area of technology. Those advantages include the speed of establishment and revision, the incorporation of sector-specific knowledge, and encouragement to stakeholders to understand and accept the regulatory process.[73]

Effective national regulation should contribute to the other key aims of the *Digital Australia Strategy*: to uphold and protect human rights; and instil trust in the public about how new technologies are used in Australia. Three key principles should apply:

1. **Regulation should protect human rights**. As a first principle, all regulation should be guided by Australia's obligations under international law to protect human rights.

2. **The law should be clear and enforceable**. Australian law should set clear rules regarding the design, development and use of new technologies, with a view to promoting human rights and other aims consistent with our liberal democracy. The broader regulatory framework should contain effective remedies and enforcement mechanisms. Australia's lawmakers should fill any gaps necessary to achieve these regulatory aims.

3. **Co-regulation and self-regulation should support human rights compliant, ethical decision making**. The law cannot, and should not, address every social implication of new and emerging technologies. Good co- and self-regulation—through professional codes, design guidelines and impact assessments—can assist in making sound, human rights-compliant decisions.

There was strong support among stakeholders for the view that regulation—involving a smart mix of adaptive and anticipatory law, co- and self-regulation—should uphold human rights through enforceable and clear rules.[74]

Stakeholders noted several benefits to this approach:

- co- and self-regulation can be a useful adjunct to legislation, which tends to take more time to implement, where there is a need to respond to fast-moving technological change[75]

- self-regulation alone does not afford adequate human rights protections generally, nor does it guarantee accountability and the right to a remedy[76]

- different types of technologies require tailored regulatory approaches.[77]

Some stakeholders referred to the importance of a human rights approach,[78] with several reiterating that the most effective way to protect human rights in the development and use of new technology would be through a national bill of rights or charter of human rights.[79]

Concerns about the use of new technologies in the corporate sector have encouraged some companies to be proactive in ensuring their products and services do not cause harm. For example, as discussed in Chapter 9, some major technology companies have set limits on the use of facial recognition for this reason.

Presently, such initiatives are largely driven by individual companies. There would be benefit in the Australian Government building on this momentum—ideally working cooperatively with other states—to foster a more coordinated approach to self- and co-regulation. For instance, the use of self-certification and 'trustmarks', discussed in greater detail in Chapter 7, could signal to consumers what sorts of tech-powered products and services are likely to be designed in ways that protect users' human rights. Similarly, government can use its own procurement rules and processes as a way of encouraging the development and use of human rights respectful technology.

Positive innovation, which delivers economic and broader social benefits, can flourish in environments where there is a clear understanding of how human rights need to be protected and the parameters in which they can operate.[80] Additionally, the public's trust in the design, development and use of new technologies should improve as regulatory parameters are defined and applied.

Stakeholders noted the importance of ensuring that existing law is understood and applied correctly to new technology.[81] Microsoft submitted:

> A multi-faceted regulatory framework is appropriate, involving the application of existing laws as well as 'soft law' co-regulation and self-regulation mechanisms such as international standards, industry best practices and guidelines, and international governance procedures—to ensure the development and use of AI is responsible and aligned with human-centred values.[82]

Some stakeholders noted a tension between regulation and innovation.[83] The Australia Industry Group submitted:

> there should be careful consideration of any new forms of regulation against global best practice approaches and the extent of AI industry overseas. A similar argument could be extended to other new and emerging technologies as well.[84]

The Allens Hub for Technology, Law and Innovation at UNSW submitted that effective regulation should

> focus on ensuring that legal and regulatory frameworks are well-adapted to an evolving socio-technical landscape, curating it in ways that ensure alignment with human rights and other values of importance to Australians.[85]

Some stakeholders noted the challenges to effective national regulation in a global economy, observing that Australia is a net importer of technology, and we need to ensure comparable human rights protections with trading partners.[86] Telstra submitted:

> it would be useful for any proposed Australian approach to be broadly aligned with what is happening in other developed countries, so as to facilitate technology development and allow Australia to take advantage of AI-enabled systems that are supplied on a global scale and thus minimise the cost for users to comply specifically, and potentially additionally, with an Australian framework.[87]

(c) Public trust

Australia's *AI Action Plan* rightly observes that 'to spur broader adoption of AI in ways which contribute to Australia's economic prosperity, security and unique way of life, we need to maintain public trust in AI'.[88] Public trust is essential for Australia to harness the opportunities presented by new and emerging technologies.

Public trust in some new technologies is low, with only one in three respondents to a national survey in 2020 willing to trust AI.[89] Yet Australians have also expressed high levels of support for the use of AI to address social, humanitarian and environmental challenges.[90] This suggests a general recognition of the potential for new technologies, and especially AI, to deliver benefits for the community, but a concern that the current products, services and facilities that use these technologies are inadequate.

Other jurisdictions are also grappling with this issue and see effective regulation, grounded in human rights and the rule of law, as key to building trust. The European Commission states:

> Given the major impact that AI can have on our society and the need to build trust, it is vital that European AI is grounded in our values and fundamental rights such as human dignity and privacy protection.[91]

The United States President's *Executive Order on Promoting the Use of Trustworthy AI in the Federal Government* aims to

> foster public trust and confidence in the use of AI, protect our Nation's values, and ensure that the use of AI remains consistent with all applicable laws, including those related to privacy, civil rights, and civil liberties.[92]

It was clear from the Commission's consultations that enhancing the reliability and safety of new technologies, including by addressing risks of harm, would help build a solid foundation of community trust in the development and use of those technologies.[93] Robust human rights protections are considered essential for that public trust.[94]

The Law Council of Australia submitted that the protection of human rights 'especially [for] vulnerable and disadvantaged groups is critical to building enduring public trust in technology, noting the importance of practical steps for that protection'.[95] The Australian Academy of Science noted that 'building public trust should be about building trustworthy systems'.[96]

Australians see a critical role for government in this area. The majority of participants in a national survey in 2020 expected government oversight of the development and use of AI.[97] Another national survey, commissioned by this Project, found that 74%–78% of respondents would have 'a little more' or 'a lot more' trust in an automated decision if oversight measures such as stronger human rights protections, human checks and limitations on personal information sharing were implemented.[98]

(d) Education, training and capacity building

There is a need for all parts of Australian society—government, industry, civil society and the community at large—to understand how new technologies, including AI, affect their professional and personal lives.

A number of jurisdictions recognise the critical role of education, training and capacity building in managing digital transformation. The European Commission's *Digital Education Action Plan 2021-2027*, for example, prioritises education and training in digital transformation.[99]

The Australian Government has also recognised the importance of such education and training in a number of its official policy statements. For example, the *AI Action Plan* sets out four streams of action to maximise the benefits of AI for all Australians, with one stream being for Australians to 'have the skills and capability to benefit from

and participate in an AI-driven society'. A possible focus action for this stream, currently subject to consultation, is to 'ensure Australians have foundational AI education and skills'.[100]

Stakeholders generally supported the idea of education and training being included in any national strategy in this area, and that this be tailored to the particular skills and knowledge needs of different parts of the Australian community.[101] The Commission did not receive any submissions that opposed this idea.

Stakeholders tended to see AI as the most pressing current area of technological change. Some recognised the importance of education to equip the community at large to respond to the rise of AI in an ever-increasing range of contexts,[102] and better enable people to protect their rights, especially when AI is used in decision making that affects individuals.[103] This, in turn, could contribute to community trust in AI.

Similarly, in June 2020, the NSW Department of Education published an education innovation strategy, which set out the aim to equip students with the necessary skills and knowledge to 'successfully navigate a more complex world', including ensuring students are able 'to understand and navigate the moral and ethical impacts' that AI will have on our lives, 'such as the use of big data in real world decision making'.[104]

In addition, there is a recognised need for targeted workforce education. For example, the *Artificial Intelligence Roadmap*, produced by CSIRO's Data 61, identified the need to build an AI specialist workforce,[105] and the Australian Government established the 'Digital Skills Organisation' in mid-2020 to 'provide an innovative and world-leading approach to training and employing people in digital skills in Australia'.[106]

Several stakeholders made specific suggestions in this area, which included:

- targeting education and training on human rights and ethics towards those professional and other groups, such as data scientists, engineers and so on, who are most directly involved in research and development involving AI and related new and emerging technologies[107]

- the need to involve universities directly in curriculum development[108]

- prioritising capacity building training for workers who use AI and related technology to make decisions that affect people's legal and similarly significant rights[109]

- collaborating across the private and public sectors to ensure cooperation and best practices,[110] and drawing on existing education initiatives in industry, government and internationally[111]

- aligning education with the most relevant areas of regulation.[112]

Accordingly, the Commission considers that the *Digital Australia Strategy* should prioritise education, training and capacity building that addresses this need in three ways.

First, almost everyone in Australia uses tech-powered products and services, and is subject to their use, including in decision making by government and the private sector. However, recent research indicates that people feel ill-equipped to engage in a meaningful way with new technologies such as AI. For example, the majority of survey participants in one poll 'consider themselves to have little knowledge of AI',[113] and another survey revealed that 86% of respondents want to know more about AI.[114]

This reinforces a need for awareness raising and broad upskilling of the Australian community at large, to ensure that people understand how they are affected by these technologies, the risks involved and what steps they can take to benefit from the use of new technologies without suffering harm.

Secondly, at present, there is little targeted training regarding the human rights implications of AI for those who are responsible for developing and using AI. This can contribute to a failure to perceive or address risks of harm. The *Digital Australia Strategy* should also meet this need.

People responsible for designing, developing, using and overseeing the use of new technologies need a deeper, more sophisticated understanding of the technologies themselves and their human rights implications.

Part B of this Report considers the use of AI to make decisions that have legal or similarly significant effects. Education, training and capacity building should be targeted especially towards people who are responsible for developing and using AI-informed decision-making systems, to ensure that those systems operate accurately, fairly and in ways that uphold human rights.

Thirdly, there is a need to build the capacity of regulatory and oversight bodies. As discussed in Part C, they would benefit from a deeper understanding of how best to fulfil their functions in an environment that is increasingly defined by the presence of new technologies like AI. This is not a call for every regulator to be an expert in the science and engineering of AI and other new technologies.

Rather, they do need to understand how these technologies operate and specifically how they affect their work. They also need *access* to technical expertise to support their regulatory activity.

Equipping these regulatory bodies for this new era should involve the following activities:

- targeted education and training for decision makers and leaders in these bodies
- resourcing these bodies to better understand and explain how existing rules apply in the context of new technologies
- encouraging these bodies to promote human rights-compliant behaviour in the sectors in which they operate.

The Commission recommends in Part C the establishment of an AI Safety Commissioner to provide guidance on the development, use and regulation of AI—with a particular focus on regulatory and governance bodies.[115]

To draw these three areas of education and training together, the Commission recommends that the Government develop a comprehensive plan for Australia regarding education and training on new and emerging technologies and human rights, as an action arising under the *Digital Australia Strategy*. This education plan should respond to the differing needs across the Australian community, which can be broadly divided into the following groups.

Group	Objective and outcome	Leadership to develop educational modules
General public	All individuals will need a basic understanding of AI and how it is being used. Training should enable the community to make informed choices about how they interact with organisations that use AI in decision making, and the accountability mechanisms available to ensure that decisions that affect them are lawful and respect their human rights.	Government Schools Civil society Industry bodies with a public education function
Decision makers who rely on AI datapoints	Decision makers who use AI datapoints to make decisions need sufficient knowledge of the reliability of various types of AI datapoints to make good decisions. This is likely to include an expanding group of decision makers, such as judicial officers, insurance brokers and police officers.	Employers of decision makers Professional regulatory and organisational bodies that are involved in professional development
Professionals requiring highly-specialised knowledge	Designers and developers of AI-informed decision-making systems need to be able to predict the likely impact of their work, including how to incorporate human rights in the design process. The accreditation or certification of professionals who design AI should be considered. Regulators, policy makers and those who commission AI-informed decision-making systems need to understand how AI operates and its likely impact on human rights in the context in which systems will be deployed.	Government University curriculum Professional regulatory and organisational bodies Technology companies

3.5 Conclusion: Australia's national strategy

The Commission supports the Australian Government's process to develop the *Digital Australia Strategy*. This can provide the vehicle for Australia to set out its national strategy on the development and use of new and emerging technologies.

The Commission recommends that the Department of the Prime Minister and Cabinet's Digital Technology Taskforce use the *Digital Australia Strategy* to articulate how Australia's various initiatives on AI and other new technologies interconnect, how they complement each other, and ultimately how they contribute to a coherent and positive vision for how Australia will approach new and emerging technologies.

The Commission commends the Department of Prime Minister and Cabinet for providing an opportunity for public input in the development of the *Digital Australia Strategy*. The Commission understands that the *Strategy* is intended to be a 'living document', adapted over time as the technology context continues to evolve.

The Commission thus recommends ongoing consultation with all relevant stakeholders, including industry and civil society. Special effort should be made to obtain the views of people who are likely to be particularly affected by the use of new and emerging technologies.

The *Digital Australia Strategy* should, in principle, cover technologies that are known, emerging, and unforeseen, to ensure human rights protections into the future. A scoping exercise involving technical and legal experts could help establish how some technological fields (eg, health, aviation, biomedical) are treated in the *Strategy* to ensure complementarity with other oversight or regulatory processes.

The Commission concludes that the *Digital Australia Strategy* should include four key objectives:

- to uphold human rights and promote responsible innovation
- to guide effective regulation of the development and use of new technologies
- to build a firm foundation of public trust in new technologies
- to develop an Australian plan for education, training and capacity building to respond to new and emerging technologies.

PART B: ARTIFICIAL INTELLIGENCE

4. Using artificial intelligence to make decisions

4.1 Summary

The use of artificial intelligence (AI) is changing how important decisions are made by government and the private sector. This has significant human rights implications.

Some uses of AI do not meaningfully engage anyone's human, legal or other rights. For example, sophisticated AI is commonly used in computer games, which are developed purely for entertainment.

This Project has focused on the use of AI to make *decisions* that have legal or similarly significant effects on individuals. Such decisions are likely also to engage human rights in a more profound way.

It is difficult to overstate AI's potential, or indeed the impact it is already starting to have. Australian governments are seeking to harness the potential of AI to drive better, more efficient services, products and more.[116] At the same time, there is growing public concern that AI can be used in ways that cause harm.[117]

Over the past two years, the Commission has consulted the community regarding the human rights implications of AI, especially where it is used in decision making that affects people's legal and similarly significant rights.

In Part B of this Final Report, the Commission makes recommendations to ensure human rights are protected where AI is used in decision making—something that requires *accountability*. In particular, the Commission has concluded that AI-informed decision making should be lawful, transparent, explainable, used responsibly, and subject to appropriate human oversight, review and intervention.

This first chapter of Part B explores the critical importance of *accountability* in upholding human rights in AI-informed decision making. It sets out principles to promote and enhance accountability in this area.

The remaining chapters in Part B apply these principles:

- Chapter 5 considers legal accountability in respect of AI-informed administrative decision making—that is, the use of AI by government to make decisions
- Chapter 6 considers legal accountability in respect of AI-informed decision making by corporations and other non-government entities
- Chapter 7 addresses the role of co- and self-regulation to incentivise better human rights protections in the development and use of AI-informed decision-making systems
- Chapter 8 explores the problem of 'algorithmic bias' in AI-informed decision making, and how it can lead to unfairness and discrimination
- Chapter 9 focuses on the use of biometric surveillance, including through facial recognition technology.

Accountable AI: upholding human rights

Critical risks
- Biometric surveillance & facial recognition
- Algorithmic bias: addressing unfairness & discrimination

Promoting accountable AI
- Government procurement
- Human rights by design
- Voluntary standards, certification & regulatory sandboxes

Govt use of AI in administrative decisions
- Explainable AI: preserving a right to reasons
- Mandatory AI notification
- Human review
- Mandatory human rights impact assessment

Private sector use of AI
- Legal liability & court oversight
- Encouraging explainable AI
- Mandatory AI notification
- Encouraging human rights impact assessment

4.2 AI and terminology

The term AI is widely used, especially in popular debate. However, AI does not have a precise, universally-accepted definition,[118] nor does it refer to a single technology.

Most commonly, AI is understood as a cluster or 'constellation' of technologies and techniques,[119] which include some forms of automation, machine learning, algorithmic decision making and neural network processing. The Organisation for Economic Cooperation and Development (OECD) Group of Experts describes AI as including a

> machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments. It uses machine and/or human-based inputs to perceive real and/or virtual environments; abstract such perceptions into models (in an automated manner, eg with Machine Learning or manually); and use model inference to formulate options for information or action. AI systems are designed to operate with varying levels of autonomy.[120]

The Commission acknowledges valid criticism that the term AI can be ambiguous and misleading.[121] Given the term is so widely used, this Report refers to AI but, where practical, it refers to the relevant specific technologies or techniques associated with AI. In a similar way, the United Kingdom's Information Commissioner's Office (UK ICO), for example, uses the umbrella term AI, because it 'has become a mainstream way for organisations to refer to a range of technologies that mimic human thought.'[122]

While the technologies and techniques associated with AI have long histories, their capabilities have advanced with unprecedented speed in recent years. There are several reasons for this, not least the growing availability of large datasets, increased computing power and new programming and data analysis techniques.[123]

This Project has focused primarily on the sorts of AI that exist now and foreseeably—sometimes referred to as 'narrow AI'.[124] It has not specifically considered the implications of speculative new forms of AI that might arise in the future, such as 'artificial general intelligence'.

Some technologies and techniques associated with AI can significantly engage human rights when used in decision making. These include:

- *algorithms*, *mathematical formulae and computer code,* which are 'designed and written by humans, carrying instructions to translate data into conclusions, information or outputs'[125]

- *machine learning and neural networks*, involving a computer program learning to undertake defined tasks using numerous examples in a dataset, detecting patterns in the examples. The computer program then uses those patterns to make inferences, predictions, recommendations or decisions for a new case or situation that was not included in the original data set.[126] This process can be:

  » unsupervised learning, where the system is fed a dataset that has not been classified or categorised, and it identifies clusters or groupings

  » supervised learning, where a system is fed a categorised or classified data set that it uses to learn how to complete a task as instructed, or

  » reinforcement learning, where a system takes action within a set environment and assesses whether that action achieves its goals, and it learns, through this process, which action to take to achieve those goals[127]

- *automation* involving a computational system applying algorithms or other rules to particular fact scenarios in an automatic way. A decision-making system can be wholly automated, in which case it produces decisions without human involvement, or the system can produce inferences, predictions or recommendations, which a human will use to make a final decision.

4.3 AI–informed decision making

(a)   What is AI–informed decision making?

The term 'AI-informed decision making' refers to:

i.   a decision or decision-making process,

ii. that is materially assisted by the use of an AI echnology or technique, and

iii. the decision or decision-making process has a legal, or similarly significant, effect for an individual.

The purpose of this definition is to bring into focus some critical ways in which technology and decision making combine to create human rights and accountability issues that need close attention by policy and law makers.

The Commission does not propose a statutory definition of AI-informed decision making. As a number of stakeholders observed, decisions are generally the proper subject of regulation, not the technology that is used to make those decisions.[128] Consequently, it would be problematic to define or create legal rights and obligations by reference to whether or not a decision involved the use of AI.

'AI–informed decision making' includes a decision, or decision–making process, where AI is a material factor in the decision, and where the decision has a legal or similarly significant effect for an individual.

(i)   A decision or decision–making process

A person's human rights can be affected by a *decision*, or by a *decision-making process*. That is, human rights might be engaged by an outcome, such as the rejection of a bank loan to an individual on the basis of their gender. Human rights may also be engaged by a process, such as the inclusion of race as a relevant weighted factor in an algorithmic tool determining the risk of reoffending. Both elements should be taken into account when seeking to safeguard human rights.

An example of an AI-informed decision-making process is highlighted in Figure 1.

Figure 1: AI–informed decision–making process[129]

Design stage	Deployment stage				Implementation stage

Humans **procure** artificial intelligence systems and define their **intentions**.

Humans **define the input** and **design the algorithm**.

Humans **clean and label the input data**.

In some cases, **humans define the outputs** of artificial intelligence systems.

Artificial intelligence systems **define the model** used and algorithms **learn and adapt independently**.

Humans **decide how to apply and use the outputs**.

(ii)   Materially assisted by the use of AI

There are many ways in which AI may be used in decision making. In some cases, the use of AI will be central to the decision-making process, and the ultimate decision. For others, AI will have only a trivial impact on the decision-making process.

Sometimes it is clear that the use of AI was *material* in making a decision. Where, for example, all key elements of the decision-making process are automated, the use of AI is clearly material.

In other cases, the materiality of AI in the decision-making process can be more difficult to gauge. For example, AI can be used to generate a data point that a *human* decision maker then relies on to make the ultimate decision. While generally this will involve a material use of AI, the specific context is important. If, say, the human decision maker types their decision using a sophisticated word-processing application that was developed using AI, and the application simply records the decision, this use of AI (via the word-processing application) would not be *material* in the relevant sense.

(iii)   Legal or similarly significant effect for an individual

The Commission is primarily concerned about decision making that engages human rights, and so this Final Report focuses on decisions that have a legal or similarly significant effect on an individual.

The phrase 'legal or similarly significant effect' is used in the EU's *General Data Protection Regulation* (GDPR).[130] The UK ICO states that a decision under the GDPR produces 'legal effects' if it affects an individual's legal status or legal rights, such as the ability to access a social security benefit. A decision that has a 'similarly significant effect' has an equivalent impact on an individual's circumstances, behaviour or choices, such as the automatic refusal of an online credit application.[131]

The phrase 'legal or similarly significant effect' is therefore useful in delineating the categories of decision that are likely to engage human rights more broadly.

Box 1: Approaches to defining AI for policy or regulatory purposes

Governments, regulators and others have approached the protection of human rights in the context of AI in different ways. While some authorities overseas have chosen a precise definition of AI, others have adopted a risk- or context-based approach.

Some bodies distinguish between different types of technology. For example:

- The UK Information Commissioner's Office has observed that AI refers to 'various methods for using a non-human system to learn from experience and imitate human intelligent behaviour'. It distinguishes between AI, machine learning, and big data analytics, noting the subtle differences between these terms.[132]

- The *Algorithm Charter for Aotearoa New Zealand* focuses on algorithms, which include analytical tools ranging from decision trees and regression models to more complex systems using machine learning, such as neural networks, to make advanced calculations and predictions.[133]

Some approaches focus on the approximation of human or intelligent thought. For example:

- France's *AI National Strategy* states that AI 'refers to a programme whose ambitious objective is to understand and reproduce human cognition; creating cognitive processes comparable to those found in human beings'.[134]

- Canada's *Directive on Automated Decision-making* defines AI as 'information technology that performs tasks that would ordinarily require biological brainpower to accomplish, such as making sense of spoken language, learning behaviours or solving problems'. An automated decision system is defined as 'technology that assists or replaces the judgment of human decision-makers'.[135]

Other bodies have adopted a contextual approach to focus regulatory objectives. The European Commission's Joint Research Centre, for example, has noted commonalities among the different definitions of AI adopted by government and industry:

- *Perception of the environment*, including the consideration of real-world complexity

- *Information processing*, including collection and interpretation of inputs

- *Decision making (including reasoning and learning)*, such as taking actions and performance of tasks with a certain level of autonomy

- *Achievement of specific goals*, which is the ultimate purpose of AI systems.[136]

Similarly, the work of the Australian National University's 3A Institute on addressing the impact of AI focuses on 'cyber-physical systems', the core features of which

are an ability to automatically sense the environment (drawing from IoT connect datasets or creating new data through sensing technology), to infer something from this data, and to act upon that data in a way that has real and unmediated effect in the world.[137]
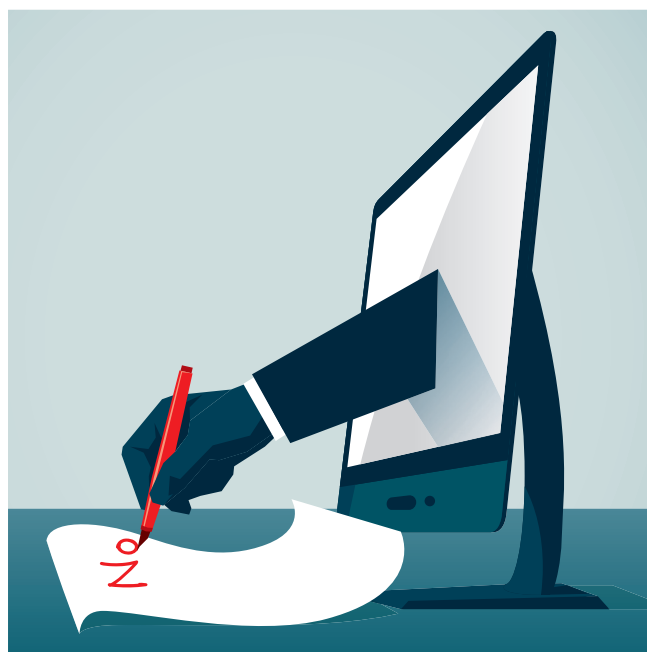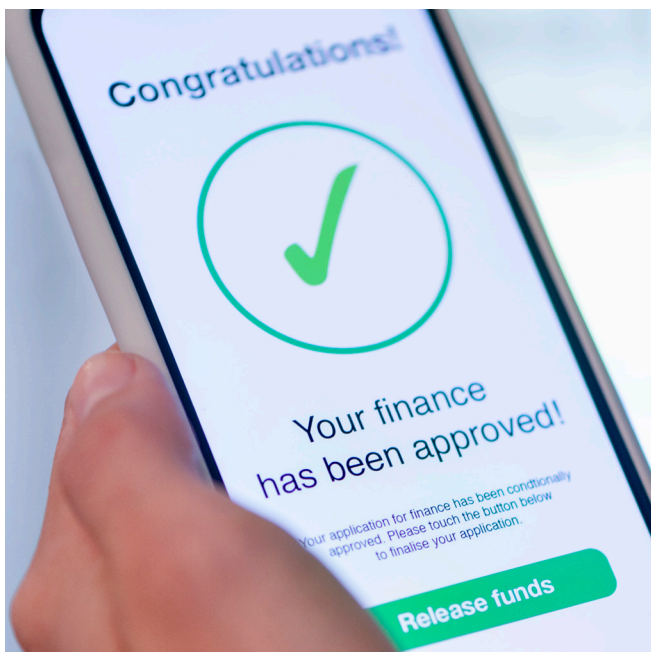
4.4 AI-informed decision making and human rights

AI is increasingly being used in decision making in areas as diverse as criminal justice, advertising, recruitment, healthcare, policing and social services. While the use of AI can protect and promote human rights, such as by identifying and addressing instances of bias or prejudice that can be present in human decision making,[138] the opposite can also be true, with AI also capable of reinforcing or exacerbating biases or prejudices.

Drawing on the Commission's consultations and recent developments in science and law, this section considers some of the ways in which AI-informed decision making engages human rights. This includes both an impact on individual human rights, and how the use of AI is having a broader, systemic impact on groups and society itself.

(a) Impact on human rights

Until recently, public debate about AI and human rights focused almost exclusively on the right to privacy. However, the use of AI can affect a much broader range of civil and political rights, and economic, social and cultural rights.[139]

For example, in June 2020 the United Nations (UN) Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance noted the growing use of digital technologies, including AI, to 'determin[e] everyday outcomes in employment, education, health care and criminal justice, which introduces the risk of systemised discrimination on an unprecedented scale.'[140]

The UN Special Rapporteur on the right to freedom of opinion and expression,[141] and the UN Special Rapporteur on extreme poverty and human rights,[142] have made similar reflections in their respective areas of focus. There is also growing academic and civil society work in this area.[143]

In this section, the Commission considers three areas of government decision making where the use of AI poses particular human rights risks.

(i) Automated government services

Governments in Australia and overseas are increasingly considering or using AI in service delivery. In September 2020, for example, the NSW Government released an AI strategy to guide its expansion of digital government service delivery.[144] However, there remain risks. As a Council of Europe study observed, automation by government can reduce transparency and accountability, and increase the risk of arbitrary decisions.[145]

The use of AI, and especially automation, in delivering government services can engage human rights including the right to social security and an adequate standard of living,[146] the right to non-discrimination and equality,[147] and the right to an effective remedy.[148]

The UN Committee on Economic, Social and Cultural Rights has concluded the right to social security imposes an obligation on governments to ensure that eligibility criteria for social security benefits are 'reasonable, proportionate and transparent'.[149] Further, any 'withdrawal, reduction or suspension' of social security benefits should be circumscribed and 'based on grounds that are reasonable, subject to due process, and provided for in national law'.[150]

Case Study 1:

AI used in social services

Many stakeholders expressed strong views about the human rights implications of automation in the social security area. Particular concern was directed towards an Australian Government program of automated debt recovery in relation to social security payments. Some have called this program 'Robodebt'.[151]

The automated debt recovery system used an algorithm to identify any discrepancies between an individual's declared income to the Australian Taxation Office, and the individual's income reported to Centrelink. Where a discrepancy was identified, this was treated as evidence of undeclared or under-reported income, and a debt notice was automatically generated and sent to the individual.[152]

A parliamentary inquiry concluded that this process resulted in some inaccurate debt notices.[153] As this debt recovery program related to welfare or social security payments, these errors disproportionately affected people who were already disadvantaged or vulnerable.[154] Drawing on its casework experience, Victoria Legal Aid submitted that the scheme was poorly designed, unfair, and undermined public confidence in government decision making.[155]

On 29 May 2020, Services Australia announced all debts raised wholly or partly under the automated debt recovery system would be refunded; a total of $721 million across 470,000 debts would be refunded, affecting 373,000 people.[156]

In November 2020, the Prime Minister announced the Australian Government would pay a further $112 million in compensation payments as part of an agreement to settle a class action lodged in November 2019. The Government also agreed, as part of the settlement, to not pursue the payment of an additional $398 million in debts that had been wrongly raised.[157]

(ii) Risk assessment in criminal justice settings

Data-driven risk assessment tools are used increasingly to predict the likelihood of future criminal behaviour. These tools are starting to be rolled out in a number of countries to assist decision making in the criminal justice system, including decisions regarding sentencing, bail and post-sentence restrictions on people assessed as being likely to commit further crime.

The use of AI in the criminal justice system engages several human rights, including the right to equality and non-discrimination, the right to equality before the law, personal security and liberty, the right to privacy, the right to a fair and public hearing, the right to procedural fairness, and the presumption of innocence.[158]

Where these risk assessment tools use machine learning, there is a significant risk of algorithmic bias, unless this problem has been effectively addressed through the design of the relevant tool.[159] A common problem is that a particular racial or ethnic group may have experienced disproportionate scrutiny by police over a long period of time, which in turn contributes to members of that group being convicted at a disproportionate rate for particular crimes. Where those statistics are used in training data to create risk assessment tools, these tools are likely to 'learn' that members of that group are more likely to commit crime.

Even where this problem is identified, it can be difficult to address, because of a related problem: the risk assessment tool could rely on an apparently unrelated factor, which is, in reality, a close proxy for racial or ethnic origin. For example, it is common for particular areas or postcodes to be populated by people of a similar racial or ethnic background. If a risk assessment tool takes account of postcode, this could have the indirect consequence of considering race or ethnicity.[160] Accordingly, while some risk assessment and policing tools give the appearance of neutrality, they can reinforce discriminatory outcomes at scale.[161]

There remains a live debate among experts about how to address these problems effectively. Yet, in the meantime, governments in Australia and overseas are increasingly using these types of tools.[162]

In Australia, several stakeholders pointed to the disproportionately high number of Aboriginal and Torres Strait Islander peoples subject to the Suspect Target Management Program, an algorithm-based tool that NSW Police uses to identify individuals at risk of committing criminal offences.[163] While revisions have since been made to the Suspect Target Management Program, and it has been the subject of further review, the criticisms of at least the original version of this tool remain relevant.[164]

In 2019, the Chicago Police Department decommissioned a predictive policing tool used to list and rank individuals at risk of committing violent crime.[165] On reviewing the risk models, the City of Chicago Office of Inspector General found that the risk scores were unreliable as they were not updated regularly, and had poor data quality.[166] The Inspector General also found that the tool risked entrenching discriminatory police practices and failed to reduce violence.[167]

As a number of stakeholders observed, there is often little publicly available information regarding how these risk assessment tools operate, and how they are used to make decisions.[168] This can make it difficult, if not impossible, for individuals subject to these tools to challenge decisions about them, which can limit human rights including the rights to liberty and freedom of movement.[169]

In 2015, the New South Wales Civil and Administrative Tribunal accepted a request from a state police force not to release information relating to one of its risk assessment tools.[170] In other cases, legal challenges have led to greater information being provided. In the United States, for example, a legal challenge to the New York Police Department's refusal to provide records regarding the testing of predictive policing technologies led to the disclosure of documents that shed some light on some commercial software and algorithms used for predictive policing.[171]

Some who use these AI-informed risk assessment tools—especially from within the judiciary—have started to question their reliability.[172] Such concerns have prompted calls to halt the use of these types of risk assessment tools in the criminal justice system, at least until effective human rights and accountability mechanisms are in place.

For example, a recent report by the US-based Partnership on AI concluded:

> Using risk assessment tools to make fair decisions about human liberty would require solving deep ethical, technical, and statistical challenges, including ensuring that the tools are designed and built to mitigate bias at both the model and data layers, and that proper protocols are in place to promote transparency and accountability. The tools currently available and under consideration for widespread use suffer from several of these failures.[173]

(iii) Risk assessment and automation in immigration settings

AI has been considered and used for immigration decision making in Australia, the United States, Canada, the United Kingdom and elsewhere. The use of risk assessments, predictive analysis, automated and algorithmic decision-making systems in an immigration context engages a range of human rights, including the rights to equality and non-discrimination, and the rights to life, liberty and security of the person. In some situations, it can also engage citizenship rights and the freedoms of expression, religion, association and movement.

In some jurisdictions, automated decision making is starting to be used to assist in determining an individual's claim for asylum, and can augment or even supplant human discretion. This engages obligations under the UN Refugee Convention.[174]

For example, the Canadian Government has used predictive analysis and automated tools to process immigration or visa applications in a way that engages a range of human rights, including the right to non-discrimination, as well as fundamental rules of procedural fairness.[175] Immigration, Refugees and Citizenship Canada developed a 'predictive analytics' system to automate some evaluation of applications.[176] The government department is using a form of automated system to triage applications into 'simple' and 'complex' streams.[177] Applications classified as 'complex' are then flagged for further human review.[178]

The UK Home Office recently abandoned an algorithmic decision-making tool used to grade entry visa applications. The tool assigned a risk rating to applicants, which then played a major role in the outcome of the application. A result was greater scrutiny, and processing time, for visa applicants from certain countries considered to be 'high risk'.[179] It was argued that biased enforcement and visa statistics reinforced which nationalities were considered suspect.[180] Following a legal challenge by the Joint Council for the Welfare of Immigrants, the Home Office discontinued the use of the Streaming Tool pending a redesign of the process.[181]

In Australia, s 495A of the *Migration Act 1958* (Cth) (the Migration Act) permits the responsible Minister to 'arrange for the use, under the Minister's control, of computer programs' to make a decision, exercise a power or comply with any obligation. The Minister will be taken to have made a decision, exercised a power or complied with an obligation where the relevant action 'was made, exercised, complied with, or done … by the operation of a computer program'.

Section 495A was inserted into the Migration Act in 2001.[182] The Explanatory Memorandum noted that complex decisions requiring discretionary elements, such as visa cancellations, would continue to be made by the Minister or a delegate, and that these types of discretionary decisions 'do not lend themselves to automated assessment'.[183] The Parliamentary Joint Committee on Human Rights, however, has expressed concern that the use of computer programs under the Migration Act may lead to the arbitrary deprivation of individuals' liberty. In considering proposed changes to the Migration Act in 2018, the Committee queried whether an amendment to the Migration Act would result in a computer program exercising ministerial discretion, which may have led to the unlawful and arbitrary deprivation of an individual's liberty.[184]

(b) The impact of AI–informed decision making on society

It is increasingly recognised that there is a distinct risk of collective, or societal, harm from processes that use AI. Many stakeholders highlighted this point.[185] The potential systemic harm ranges from the replication of historical societal inequality through algorithmic decision making, entrenching disadvantage,[186] to the destabilisation of voting in democratic elections.[187]

A number of commentators have expressed concern that the demonstrated capacity of AI to cause harm is disproportionately experienced by people who are already vulnerable and marginalised.[188] The use of machine learning and predictive algorithms, to mine big datasets and make predictions about how a person may act, can have serious consequences, including to deny employment opportunities to certain groups of people, and even to deprive some people of their liberty.[189] The *systemic* impact of the use of AI, particularly automation, in government services has been recognised as a distinct challenge to public and administrative law—laws that protect human rights.[190]

Experts in computer science have repeatedly identified the implications of the 'scored society', where AI-powered decision-making tools 'can narrow people's life opportunities in arbitrary and discriminatory ways', often unseen and undetectable, without any form of oversight.[191] The Rapporteur for the Council of Europe's Expert Committee on Human Rights Dimensions of Automated Data Processing and Different Forms of Artificial Intelligence, Professor Karen Yeung, warns of

> the collective and cumulative impacts of contemporary applications of data-driven technologies which, when undertaken systematically and at scale may, over time, seriously erode and destabilise the social and moral foundations that are necessary for flourishing democratic societies in which individual rights and freedoms can be meaningfully exercised.[192]

The Rapporteur urged a focus on 'our collective responsibility to attend to the socio-technical foundations of moral and democratic freedom' and on the way in which the cumulative impact of these types of technologies could 'fundamentally undermine the "moral and democratic commons" ... without which human rights and fundamental freedoms cannot, in practice, be realised or asserted'.[193]

4.5 A framework for regulation

Stakeholders clearly acknowledged that AI-informed decision making should comply with human rights. There is also strong support in the Australian community for regulatory reform to be pursued, where necessary, to achieve this aim.[194]

The Commission recognises that there are important federal and state government initiatives related to accountable AI-informed decision making that are running alongside this Project. The recommendations in this Final Report are intended to complement that work.

The UN High Commissioner for Human Rights has advocated a 'smart mix' of regulatory measures to protect human rights in the context of new and emerging technologies such as AI.[195] This means considering how to protect human rights most effectively at every important stage of the AI 'lifecycle'—that is, in designing, developing and using AI-informed decision-making systems (see Figure 2, below).

Figure 2: Simplified lifecycle of AI[196]

Business and use-case development
Problem/improvements are defined and use of AI is proposed

Design phase
The business case is turned into design requirements for engineers

Training and test data procurement
Initial data sets are obtained to train and test model

Building
AI application is built

Testing
The system is tested

Deployment
When the AI system goes live

Monitoring
Performance of the system is assessed

AI lifecycle

In the remainder of Part B, the Commission considers how regulation can be most effective at each of the relevant stages of the AI lifecycle.

(a)   Addressing challenges to regulation

Some stakeholders referred to challenges in developing effective regulation to promote accountability in AI-informed decision making.[197]

Industry stakeholders in particular were wary of regulation that may stifle innovation or weaken the digital economy.[198] Some objected to *any* form of regulation in this area; others had more specific concerns that regulation may not be capable of

responding to technical challenges associated with AI.[199]

On the other hand, laws already regulate many forms of government and non-government decision making. Whether AI is used in those decision-making processes should not dilute or displace those laws. The first step should be to apply these existing laws more effectively. As the High Court of England and Wales observed in the first legal challenge to the use of facial recognition technology in 2019:

> The fact that a technology is new does not mean that it is outside the scope of existing regulation, or that it is always necessary to create a bespoke legal framework for it.[200]

The Commission supports growing Australia's digital economy. However, that objective does not justify opposing any or all regulation in this area. Laws to promote accountability and to protect human rights already exist in Australia and internationally. In developing and using new forms of technology, we must ensure that those most basic laws continue to be observed.

While laws already govern many forms of decision making, especially by government, some reform is needed to ensure that human rights are upheld in the use of AI-informed decision making.[201]

(b) Applying a human rights approach

This Project has used the human rights framework to understand some of the policy and legal challenges posed by AI-informed decision making, and to frame an appropriate response.

Stakeholders generally supported this approach.[202] Some argued that a human rights approach can guard against the risks posed by AI-informed decision making, such as the 'potential to lose sight of the fundamental dignity of human beings' when people are treated as 'data points rather than individuals'.[203]

This message is also reflected in recent opinion poll research. In July 2020, the Commission engaged Essential Media to undertake polling on trust in the use of AI to make decisions. Over three quarters of people surveyed said that they would have more trust in an automated government decision if there were stronger oversight measures, such as a clear right of appeal, human checks, limitations on personal information sharing within and outside government, and stronger laws to protect human rights.[204]

When the Australian Government makes an automated decision that affects you:
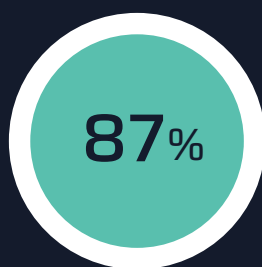
87%
support a right to appeal the decision
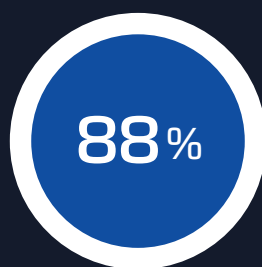
88%
want reasons for the decision
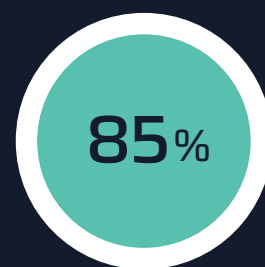
85%
want to know the decision was automated

Source: National survey of 1,058 Australian adults. Essential Research, The Essential Report—Human Rights Commission (29 July 2020).[205]

In the Office of the Australian Information Commissioner's *Australian Community Attitudes to Privacy Survey 2020*, survey participants strongly favoured accountability when AI is used in decision-making processes. 84% of participants strongly agreed that Australians have a right to know that a decision affecting them is made using AI technology; 78% believed that when AI is used to make, or assist in making, decisions, individuals should be informed what factors and personal information any algorithm considered and how these factors were weighted.[206] The survey also found that 82% of Australians consider there should be a right to human review of any decision made using AI, 'even if this costs the organisation money'.[207]

Similarly, the majority of individuals recently surveyed by the Monash Data Futures Institute indicated they 'totally agreed' with the need for industry guidelines and/or new legislation to address possible harms associated with the use of AI, including to 'make sure AI systems are safe, trustworthy, and aligned with human values'.[208] That research also suggested the need for bodies that are trusted in this area to take a more central role in policy and regulation relevant to AI. One of those was the Australian Human Rights Commissioner, and survey respondents identified the Commissioner as one of the most trustworthy figures to manage the development and use of the AI in the best interests of the public.[209]

In this Final Report, the Commission primarily applies international and domestic human rights law.[210] This Report also refers to authoritative guidance, including the UN's Guiding Principles on Business and Human Rights.

International human rights law is almost universally accepted as an authoritative legal standard.[211] Over the last 70 years, it has been remarkably adaptable, providing important guidance in protecting humans from a wide range of harms. As is increasingly recognised internationally,[212] ensuring international human rights law principles are effectively applied to AI-informed decision making presents a strong foundation for any liberal democratic government's response to the rise of AI.

While there might be some gaps in the existing body of international human rights law which need to be filled, it is not apparent that an entirely new human rights framework needs to be developed to address the rise of AI.[213] The Commission cautions against starting a new debate about ideas such as 'fairness' in the use of AI without paying due regard to the existing requirements of international human rights law.[214]

International law requires nation states to provide for an effective remedy where an individual suffers a human rights violation. Effective remedies include judicial and administrative remedies, such as ordering compensation or an apology, and preventive measures that may include changes to law, policy and practice.[215] Effective remedies for human rights breaches fall under the accountability principle, which is central to a human rights approach.[216] A human rights approach also requires effective mechanisms to prevent human rights being violated.[217]

In the following chapters, the Commission seeks to apply three key principles to how the Australian Government and private sector should design, develop and use AI in decision making that affects people's human rights:

- **International human rights should be observed.** The Australian Government should comply with human rights in its own use of AI, and it should also ensure that human rights protections are enforced for all entities that use AI.

- **AI-informed decision making should be used in ways that minimise harm.** AI-informed decision-making systems should be tested before they are used in ways that could harm individuals, and those systems should continue to be monitored as they operate.

- **AI-informed decision making should be accountable in how it is used.** An individual affected by an AI-informed decision should be given reasons for the decision, to enable them to understand the basis of the decision, and they should be able to challenge any decision that they believe to be wrong or unlawful.

There was support among stakeholders for the adoption of these three principles.[218] This approach also draws on work in other jurisdictions that have sought to apply the human rights framework to guide regulatory responses to the use of AI, such as the Council of Europe.[219]

(c) Identifying the correct regulatory object

The human rights impact of AI depends on how it is used. As AI can be used in almost every conceivable form of decision making—banking, social security, criminal justice, employment, to name just a few areas—regulation should be framed by reference to the contexts in which AI is used.

(i) Regulating technologies or outcomes?

One option is to seek to regulate AI itself, by regulating particular technologies and techniques associated with AI. There are some examples of this approach in proposals overseas, such as the draft algorithmic accountability laws highlighted in Box 1.[220]

Generally speaking, the Commission opposes that approach for three main reasons. First, the current and potential use of AI is almost limitless, so it would be very difficult to identify general legal principles that would apply to all scenarios.

Secondly, AI is not a term of art. This makes it difficult, if not impossible, for legislation dealing with AI to be drafted with sufficient precision to give clarity and certainty to those who must follow, apply and enforce it.

Thirdly, people are primarily affected by how technology is used. It can stifle innovation unnecessarily to require that a particular activity (such as making a decision) be undertaken only via a single means, or a single technology, or a single way of applying that technology.

Instead, the focus of regulation should be on *outcomes*. Under this approach, a law might require, for example, that a particular type of decision be procedurally fair and take into account certain matters, but the law would not seek to constrain the decision maker in precisely *how* they must afford procedural fairness nor precisely when, where and how the particular matters must be considered. A further benefit of this approach is that it directs attention towards how current laws, which have long existed to protect human and consumer rights, could be applied more effectively.

However, there are exceptions to this general approach. Some uses of AI pose such a significant risk to human rights that urgent, direct regulation is needed.

Some stakeholders suggested that specific laws might be needed regarding the use of AI in high-risk areas such as refugee status determinations,[221] or autonomous weapons.[222] Chapter 9 considers the use of facial recognition and other types of biometric surveillance technology in contexts such as policing.[223]

(ii) A contextual approach

Regulation must take account of *what decisions* are made using AI. The Allens Hub for Technology, Law and Innovation pointed out that

> what is important is context. This includes both the technological context (for example, the use of machine learning or other data-driven inferencing techniques) and the broader context (such as whether a decision is made in the public or private sector). It is this context that should determine any legal or regulatory response.[224]

In considering this context, a number of factors need to be taken into account. As the AI Now Institute observed, the starting point should be to consider 'the perspective of the individuals and communities who are at the receiving end of these systems'.[225] The 'scope of regulation should be determined based on the nature and impact of the AI system', with a particular focus on decision-making systems that have 'an impact on opportunities, access to resources, preservation of liberties, legal rights, or ongoing safety of individuals, groups or communities'.[226]

Applying this approach to the specific area of facial recognition, a proposed consumer protection law in the US state of Washington would apply to the use of facial recognition in decisions involving

> denial of consequential services or support, such as financial and lending services, housing, insurance, education enrolment, criminal justice, employment opportunities, and health care services.[227]

In other words, regulation should be calibrated to take account of the context and especially the risk of the relevant area of AI-informed decision making.

Box 2: Regulation that considers context and risk

There is broad support in Australia and overseas for regulation targeting high-risk types of AI-informed decision making.

Within the technology industry, some key companies support this approach:

- Microsoft emphasised that a risk-based approach could consider the potential of AI to infringe human rights and ensure a focus on evaluating potential impacts.[228]
- Amazon Web Services argued that high-risk uses of AI should be regulated differently from uses of AI that pose a low risk to human rights.[229]
- Element AI suggested a focus on use of AI that could lead to unlawful discrimination and other threats to individual wellbeing.[230]

Several governments overseas have adopted risk-based approaches, including:

- The European Commission's 2020 *White Paper on AI* proposes a risk-based approach to AI to ensure that any regulatory intervention is proportionate.[231] 'High-risk' applications of AI include those in sectors such as health, security or justice, and where the application of the AI can result in discrimination.[232]
- New Zealand's *Algorithm Charter* includes a commitment 'to take a particular focus on those algorithms that have a high risk of unintended consequences and/or have a significant impact if things do go wrong, particularly for vulnerable communities'.[233] Where an algorithm is employed by a government agency in a way that might significantly affect the 'wellbeing of people', or there is a 'high likelihood many people will suffer an unintended adverse impact', the Charter must be followed.[234] This requires the algorithm to be used transparently, be focused on people, and take into account privacy, ethics and human rights.
- The Canadian *Directive on Automated Decision-Making* seeks to reduce the risk of AI-informed decision-making systems for individuals.[235] It requires government departments to undertake an impact assessment prior to deploying an automated decision-making system.[236] This assessment considers risk factors such as the rights, health or well-being of individuals or communities. Where a system is assessed as having a 'high impact'—decisions that will 'often lead to impacts that are irreversible, and are perpetual'—AI cannot be deployed without specific safeguards, such as 'human intervention points during the decision-making process', with the final decision made by a human.[237]

(d) Promoting accountability

An AI-informed decision is first and foremost *a decision.* It is certainly no less a decision than a conventional decision—that is, a decision where AI is not materially used in the decision-making process.

Accountability involves ensuring that the law is followed in a decision-making process. It includes both a *corrective* function, facilitating a remedy for when someone has been wronged, as well as a *preventive* function, identifying which aspects of a policy or system are working and what needs adjustment.[238]

The Commission has identified five key questions that need to be answered in the affirmative to promote accountability in respect of AI-informed decision making. These do not impose additional requirements on AI-informed decision making, as compared to other decisions. Rather, considering these questions in the development of any new AI-informed decision-making system will help to ensure that accountability can be maintained when the system is used in practice.

In the Commission's consultation process, stakeholders agreed on the central importance of AI-informed decision making being accountable, and on the elements of accountability set out by the Commission.[239] The remaining chapters in Part B seek to promote accountability in the use of AI-informed decision making.

Box 3: How to promote accountability in AI–informed decision making?

The following five questions will help determine whether an AI-informed decision-making system is accountable.

1. *Does the AI-informed decision-making system produce lawful decisions?* Decision making must comply with all laws applicable to the decision making in question. For government decisions in particular, there must usually be an explicit source of legal authority for the decision.

2. *Is the decision making transparent?* There should be transparency about when and how government and other bodies use AI to make decisions.

3. *Can reasons or an explanation be provided for the decisions?* It is always good practice, and it is sometimes required by law, to produce reasons or an explanation for decisions.

4. *Is it clear who is legally responsible for a decision?* While legal liability for decision making is usually clear, there are some situations where this needs to be made explicit, especially in AI-informed decision making.

5. *Is there appropriate human oversight and review?* It is important to include human review to correct for errors and other problems in an AI-informed decision-making process, and for humans to monitor and oversee the use of AI at the system level.

5. Legal accountability for government use of AI

5.1 Summary

This chapter focuses on how the law can ensure that *government* complies with human rights, and acts accountably, where it uses AI to make administrative decisions. It addresses four key elements of accountability.

First, there needs to be a rigorous process of planning and testing before government uses AI to make administrative decisions. In light of leading research on algorithmic and human rights impact assessments, the Commission recommends legislation to require government bodies to undertake a thorough process of planning, testing, monitoring and evaluation in respect of any proposed new AI-informed decision-making system.

Secondly, greater transparency is needed in the use of AI by government. The Commission recommends that government bodies be required to notify any affected individual where AI is materially used in a process to make an administrative decision. In addition, at the systemic level, this chapter urges an independent audit of all current or proposed use of AI-informed decision making by the Government.

Thirdly, individuals affected by administrative decisions generally have a right to reasons for those decisions. Reasons help an affected individual understand the basis of an administrative decision, and to challenge that decision if necessary. The Commission recommends a clarification of the law to ensure that any existing right to reasons continues to apply to AI-informed administrative decisions.

Fourthly, this chapter considers the role of human oversight and review in respect of AI-informed administrative decisions. The Commission recommends that, where merits review is not already available, people should be able to appeal AI-informed administrative decisions to an appropriate independent merits review tribunal.

Merits review
[Rec 8]

Mandatory human
rights impact
assessment
[Rec 2]

Human
oversight,
intervention
& review

Lawful

Legal
accountability
for government
use of AI

Explainable

Transparent

No 'black box' AI
[Rec 5]

Explainable use of AI
[Rec 6]

Guidance on
explainable AI
[Rec 7]

Notification
[Rec 3]

Audit of government
use of AI
[Rec 4]

5.2 Lawfulness

RECOMMENDATION 2: The Australian Government should introduce legislation to require that a human rights impact assessment (HRIA) be undertaken before any department or agency uses an AI-informed decision-making system to make administrative decisions.

An HRIA should include public consultation, focusing on those most likely to be affected. An HRIA should assess whether the proposed AI-informed decision-making system:

(a) complies with Australia's international human rights law obligations

(b) will involve automating any discretionary element of administrative decisions, including by reference to the Commonwealth Ombudsman's *Automated decision-making better practice guide* and other expert guidance

(c) provides for appropriate review of decisions by human decision makers

(d) is authorised and governed by legislation.

A government agency requires legal authority to make a decision. The vast majority of decisions made by government, especially those that affect the rights and interests of people, are known as 'administrative decisions'. Legal accountability for those decisions is governed by administrative law.

Some government decisions are not 'administrative decisions' or, for other reasons, they may fall outside the ordinary administrative law accountability regime. For example, a decision by a government minister to introduce a bill into parliament or to adopt a particular policy generally would not be subject to administrative law accountability.

The legal authority for administrative decision making has two elements:

• the authority, or source of power, to make an administrative decision in a particular area

• any requirements for *how* the decision may be made.

Generally, the law dealing with these issues will apply, regardless of how the relevant administrative decisions are made, or the technology used to make the decisions.

Given the risks associated with AI and especially automation, the Commission considers that careful planning should be undertaken before the Government adopts an AI-informed decision-making system for administrative decisions. Specifically, the Commission recommends that a human rights impact assessment (HRIA) be mandatory before a new AI-informed decision-making system is adopted by a government body to make administrative decisions.

(a) Authority or source of power

Government officials need to be granted legal power or authority before they can make administrative decisions. That source of power, which is usually provided for in legislation, will generally specify:

• the scope of the decision-making power— in other words, the types of administrative decisions that may be made

• who may exercise the power

• any particular conditions or requirements on how the power should be exercised.

For example, legislation may give the Deputy Commissioner of Taxation power to decide whether to grant a taxpayer an extension of time to pay a tax debt. The legislation may allow the Deputy Commissioner of Taxation to delegate that decision-making power to certain office holders in the Australian Tax Office, and the legislation may also specify that a taxpayer should be given a hearing before a decision is made that affects them.

It would be unusual for such legislation to specify the *technology* that may or may not be used in the decision-making process. However, this is starting to change. For example, some legislation authorises the use of 'computer programs' to make certain types of administrative decisions in areas such as tax and migration.[240] Some doubt, however, that such provisions permit the use of fully-automated decisions.[241]

Stakeholders supported the suggestion that the Government should be required to legislate for the use of any AI-informed decision-making system and include adequate human rights protections.[242]

It was noted that some legislation already governs administrative decision making, regardless of the technology used in the decision-making process. Such legislation generally could be applied to AI-informed decision making, with any amendments made as needed.[243]

(b)   AI, automation and the problem of discretion

Government decision makers rarely have complete, unfettered discretion regarding how they make administrative decisions. The decision maker almost always will be required to follow certain processes in making decisions. Those processes are set out in a combination of legislation, the common law and policy documents.

Many of the legal requirements that an administrative decision maker must follow, such as taking into account certain factors and ignoring other factors, may present no particular barrier to the use of AI in decision making. However, some requirements can present difficulties when AI is used in the decision-making process.

Among the various forms of AI, automation is increasingly being used by government to improve the consistency, accuracy and efficiency of administrative decisions.[244] These are legitimate goals. Nevertheless, the use of AI, and especially automation, in government decision making can present challenges for human rights and administrative law—especially where a decision involves the exercise of discretion.

The Parliamentary Joint Committee on Human Rights suggested that laws allowing for 'computer programs' to make administrative decisions could disproportionately affect human rights where the decision involves an element of discretion.[245] This has been echoed by a number of expert commentators and civil society bodies.[246]

Similarly, the Hon Justice Melissa Perry has observed that discretion in administrative decision making can involve 'complex and subtle questions' that may be 'beyond the capacity of an automated system to determine'. She warned:

> It is not difficult to envisage that the efficiencies which automated systems can achieve, and the increasing demand for such efficiencies, may overwhelm an appreciation of the value of achieving substantive justice for the individual. In turn this may have the consequence that rules-based laws and regulations are too readily substituted for discretions in order to facilitate the making of automated decisions in place of decisions by humans.[247]

On the other hand, the Hon Robert French AC has observed that AI-informed decision-making systems can exercise 'a kind of discretionary function', such as a machine learning system that predicts or determines outcomes by the application of an algorithm.[248]

In guidance to government agencies issued in 2019, the Commonwealth Ombudsman urged caution about some aspects of automation in administrative decision making:

> It is possible for an automated system to make decisions by using pre-programmed decision-making criteria without the use of human judgement at the point of decision. The authority for making such decisions will only be beyond doubt if specifically enabled by legislation.[249]

The Ombudsman advised that automating a part of a government decision-making process will not be suitable where it would:

- contravene administrative law requirements of 'legality, fairness, rationality and transparency'
- contravene privacy, data security or other legal requirements (including human rights obligations)
- compromise accuracy in decision making, or
- 'significantly undermine public confidence in government administration'.[250]

Some overseas jurisdictions have established specific safeguards for the use of automation in decision making. For example, the GDPR prevents individuals, with some exceptions, from being subjected to a decision 'based solely on automated processing, including profiling' where that decision produces a legal or similarly significant effect.[251] The UK ICO's guidance on the GDPR states that to be considered 'solely automated there must be no human involvement in the decision-making process'.[252]

Other jurisdictions have established risk assessment frameworks to avoid the harmful use of automation. For example, the Canadian Government *Directive on Automated Decision-Making* requires a public algorithmic impact assessment to indicate whether the proposed use of automation will have a low, moderate, high or very high impact on individuals, including their human rights.[253]

There are more onerous requirements for high-risk activities. For instance, where the decision in question is assessed to have a high or very high risk, it will be necessary to provide for 'specific human intervention points during the decision-making process; and the final decision must be made by a human'.[254] A similar risk assessment process has more recently been proposed for the European Union.[255]

In the course of the Commission's consultation, some stakeholders expressed concern about the use of automation in at least some forms of administrative decision making. This included situations where the risk to human rights is particularly high, such as in the use of autonomous weapons, or where the exercise of discretion is necessary.[256]

(c) Benefit to the community and consultation

Introducing legislation to enable AI to be used in a particular area of administrative decision making does not necessarily make it *desirable* to use AI, even where the legislation includes safeguards. The Commission also consulted on mechanisms to require the Government to assess whether, in the particular situation, the use of AI is likely to lead to better—more reliable, more efficient, safer—administrative decisions than existing or alternative ways of making those decisions.

Some stakeholders thought a cost-benefit analysis could be helpful in determining whether the use of AI would be appropriate.[257] However, most stakeholders instead favoured a more explicit and targeted human rights assessment.[258] The Commission agrees with this view.

There was strong support for community consultation in any such assessment process, with stakeholders noting that this could help to build public trust and transparency.[259] Several referred to learning from past experience, including the so-called 'Robodebt' process for automated recovery of social security debts, as evidence of the need for public consultation, both with vulnerable consumers and with those charged with deploying AI-informed decision making.[260]

Stakeholders considered that public consultation should take place before and during the early stages of implementation. In particular, there was support for using human rights by design principles,[261] and processes such as algorithmic impact assessments or HRIAs.[262]

HRIAs are increasingly used in the context of AI, including algorithmic and automated decision making. Some initiatives have arisen from the private sector;[263] others from government[264] or non-government organisations.[265] For example, the Australian Government's *AI Ethics Principles*, refer to AI systems respecting human rights, throughout the AI lifecycle, including the careful consideration of risk.[266]

A smaller number of stakeholders considered public consultation to be impractical or unnecessary, pointing to problems of cost and time.[267]

(d)   Conclusion: need for mandatory human rights impact assessments

The Commission recommends the Government be required to undertake an HRIA before adopting a new AI-informed decision-making system to make administrative decisions.

This approach aligns with the advice of expert authorities, such as the Council of Europe's Commissioner of Human Rights, who recently recommended a legal framework for HRIAs that are directed towards AI-powered systems 'acquired, developed and/or deployed' by public authorities.[268]

While administrative decisions are generally made by government agencies, there is an increasing trend for decisions to be made by government business enterprises and non-government entities. The Commission considers that an HRIA should be required for the use of AI in all administrative decisions made by or on behalf of government.

The Commission recommends that an HRIA in this area include at least four key elements.

First, the assessment should take a risk-based approach, drawing on experience elsewhere. For example, in one of the first challenges under human rights law of its kind, a Dutch court found the use of an automated risk assessment tool to prevent and detect welfare fraud breached the right to family and private life under the European Convention on Human Rights.[269]

In evidence submitted to those court proceedings, the UN Special Rapporteur on extreme poverty and human rights noted the rapid expansion of digitisation of the welfare state and, in this particular case, observed that the tool was predominantly used in areas with high concentration of poorer and vulnerable groups.[270]

The Special Rapporteur identified specific concerns with this tool, for instance the absence of procedural safeguards regarding its use and a lack of transparency, including government denial of access to information about the risk model, such as the algorithm it used, the precise indicators and input data the model used, and the exact output it produced.[271] The Special Rapporteur made the general conclusion that 'digital tools are being mobilised to target disproportionately those groups that are already more vulnerable and less able to protect their social rights'.[272]

The Australian Government should rigorously assess the risks associated with using AI, and especially automation, in any administrative decision-making process. Particular attention should be directed towards expert guidance, especially the Commonwealth Ombudsman's *Automated decision-making better practice guide*.

Secondly, the Government should consult the public on the proposed new system for making decisions. When it comes to AI-informed decision making, the importance of consultation with the public, particularly those who are most likely to be affected, has been widely recognised.

The Australian Government's *AI Ethics Principles* contemplate consultation with stakeholders to ensure AI systems are 'inclusive and accessible' and do not unfairly discriminate.[273] Similarly, the Council of Europe Human Rights Commissioner has recommended public consultation at various stages of the deployment of an AI system, and at a minimum during the procurement and HRIA stages.[274] The NSW Government has also noted that co-designed AI services will build public trust:

> Community consultation and collaboration on service design is essential. Communities have the right to influence government decision-making where those decisions, and the data on which they are based, will have an impact on them.[275]

Thirdly, the Government should form a considered view about the human rights impact of the proposed use of AI, and especially automation, in the specific area of administrative decision making, and proceed only if there is sufficient confidence that the system would not breach human rights. This proposed assessment could draw from the strengths of analogous processes, such as privacy impact assessments under Australian privacy law.[276] Similarly, modern slavery legislation requires human rights due diligence and risk assessment processes to be conducted.[277]

Fourthly, where the Government decides to proceed with an AI-informed decision-making system for administrative decisions, the HRIA should ensure there is legislation that regulates this process, including any safeguards necessary to protect human rights.

Finally, a related question is: *How should an HRIA be undertaken?* Some types of HRIA are already part of Australian law and practice. These are a part of Australian parliamentary processes;[278] privacy impact assessments under privacy legislation;[279] and as part of human rights due diligence under modern slavery legislation.[280]

When an Australian Government department or agency undertakes an HRIA, often it would be practical to do so as part of the same process that is followed in preparing a 'statement of compatibility' under pt 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011* (Cth).[281] The proposed AI Safety Commissioner (see Part C) could provide guidance for government on this issue.

5.3 Transparency

> **RECOMMENDATION 3:** The Australian Government should introduce legislation to require that any affected individual is notified where artificial intelligence is materially used in making an administrative decision. That notification should include information regarding how an affected individual can challenge the decision.

> **RECOMMENDATION 4:** The Australian Government should commission an audit of all current or proposed use of AI-informed decision making by or on behalf of Government agencies. The AI Safety Commissioner (see Recommendation 22), or another suitable expert body, should conduct this audit.

The Commission uses the term 'transparency' to refer to people being made aware when AI is used in decision making that affects them. Transparency about how the government is making decisions, including through the use of AI, can help individuals protect their basic rights and is central to the principle of open government.[282]

The Australian Council of Learned Academies (ACOLA), in its detailed report on the effective and ethical development of AI, highlighted the importance of transparency and explainability:

> To establish public confidence, it will be necessary to provide the public with an explanation and introduction to AI throughout the initial adoption stage.[283]

Similarly, the Australian Government's *AI Ethics Principles* include a 'transparency and explainability' principle to promote 'responsible disclosure' so that people know when they are being significantly affected by the use of AI.[284]

The Commission makes two key recommendations to improve the transparency of government use of AI. First, the Government should be required to notify any affected individual where AI is materially used in a process to make an administrative decision. Secondly, there should be an independent audit of all current or proposed use of AI-informed decision making by the Government, to ensure the quality and safety of such systems.

(a) Notification of the use of AI

The Discussion Paper suggested a new notification requirement: that an affected individual be informed where AI is materially used in a decision that has a legal, or similarly significant, effect on the individual's rights.[285] There was general support for this proposal.[286]

Stakeholders noted that a lack of transparency about the use and operation of AI-informed decision-making systems can make it difficult for individuals to enforce their rights. This restricts the ability of an individual to challenge a decision and therefore goes against fundamental values of administrative law. Transparency regarding the use of AI in decision making can also build public trust, and address historical breaches of that trust.[287]

Some considered that simply notifying affected individuals that AI has been used in a decision-making process may be insufficient. It was suggested that notification should be accompanied by additional information—such as how to challenge the decision or seek a remedy, or more specific detail regarding how the decision-making process relied on AI.[288] Notification that does little to inform individuals in a meaningful way, or is simply 'default information', may just cause 'notice fatigue'.[289]

Other stakeholders raised cost concerns. There could be a high number of notifications as AI is used more and more in decision making. While acknowledging the cost, others considered that this should not deter a notification requirement,[290] with some pointing to existing notification requirements in other important areas of government decision making, such as in some forms of healthcare.[291] Exceptions are sometimes used to avoid the risk that the notification requirement could pose a burden that is disproportionate to the benefit for those notified.

(b) An audit of government use of AI

The Commission's consultation suggested a more general need for better information about how the Australian Government uses AI in decision making. The Discussion Paper proposed a comprehensive audit of how AI is being used in government decision making, and the existing protections to ensure that such AI-informed decision making upholds human rights.

There was support for this proposal.[292] A comprehensive audit was seen as beneficial in promoting transparency of government use of AI, which in turn could build trust and enable citizen participation in the evolution of the government's technology agenda.[293]

Others observed that such an audit would be a major undertaking and argued that the focus should instead be on building capacity across government to understand and address the risks of AI-informed decision making.[294] Some stakeholders argued that while an audit may be important, it is just as important to continue monitoring the use of an AI system following implementation. Information from ongoing monitoring should be regularly made public.[295]

(c) Conclusion: steps to improve transparency

Individuals should be made aware when they are the subject of AI-informed decision making, especially when that decision was made by government.

Throughout the Project, stakeholders strongly favoured transparency regarding the use of AI in administrative decisions. It is important that individuals know when the use of AI is material in the making of decisions affecting them.

There is evidence of emerging public expectations in this area. In polling undertaken for the Commission in 2020, 85% of survey participants indicated it was very important, or somewhat important, to be informed that a computer program has made an automated decision affecting them.[296]

It is also important to ease the burden on individuals who may seek to challenge an AI-informed decision affecting them. Accordingly, individuals should be equipped not only with knowledge regarding the use of AI-informed decision making, but also with avenues to obtain further information about that process, including whether there are any rights to challenge or appeal the decision that has been made.

Transparency in this area would also be improved by presenting a clear picture of how the Government currently uses AI to make decisions. To this end, the Commission recommends an audit of all current or proposed use of AI-informed decision making by government.

Australian governments are seeking to increase the use of AI in delivering government services, including as a way of advancing Australia's economic recovery from the COVID-19 pandemic.[297] The Australian Government's *AI Action Plan* notes:

> AI will … provide opportunities for governments. Government policy will be improved by better risk assessment and forecasting. Routine administrative tasks could be automated with more complex service delivery handled by people. This will reduce administrative costs for government and regulatory burden for businesses, while providing opportunities for more personalised service delivery.[298]

However, little is publicly known about how AI is currently used by government. There is also little public knowledge about how government assesses risks associated with AI, or the steps taken to address those risks.

More transparency has begun to emerge in other democracies. The New Zealand Government, for example, released an *Algorithm Assessment Report* in 2018, detailing the use of algorithmic decision-making by government departments.[299] A similar exercise has recently been undertaken in the United Kingdom.[300] In other jurisdictions, civil society organisations have attempted to comprehensively map the use of AI, in circumstances where government disclosure has been inadequate.[301]

The Commission recommends that the Australian Government appoint the AI Safety Commissioner (see Recommendation 22), or another suitable expert body, to conduct an audit of all current or proposed use of AI-informed decision making. The audit should be made public, and include information about what AI-powered decision-making tools are being used. It should also include information on any testing, monitoring and evaluation of such tools, including steps taken under relevant law and policy, such as the use of procurement rules and Privacy Impact Assessments.

5.4 Explainability or a right to reasons

RECOMMENDATION 5: The Australian Government should not make administrative decisions, including through the use of automation or artificial intelligence, if the decision maker cannot generate reasons or a technical explanation for an affected person.

RECOMMENDATION 6: The Australian Government should make clear that, where a person has a legal entitlement to reasons for a decision, this entitlement exists regardless of how the decision is made. To this end, relevant legislation including s 25D of the *Acts Interpretation Act 1901* (Cth) should be amended to provide that:

(a) for the avoidance of doubt, the term 'decision' includes decisions made using automation and other forms of artificial intelligence

(b) where a person has a right to reasons the person is entitled also to a technical explanation of the decision, in a form that could be assessed and validated by a person with relevant technical expertise

(c) the decision maker must provide this technical explanation to the person within a reasonable time following any valid request.

RECOMMENDATION 7: The Australian Government should engage a suitable expert body, such as the AI Safety Commissioner (see Recommendation 22), to develop guidance for government and non-government bodies on how to generate reasons, including a technical explanation, for AI-informed decisions.

Australian law generally, but not always, requires administrative decision makers to provide reasons for their decisions.

However, it can be difficult to generate reasons or an explanation for the outputs—including inferences, recommendations and decisions—produced by AI-informed decision-making systems. Indeed, the use of AI can obscure the rationale or reasons for a decision, which in turn can frustrate a legal right to reasons.[302] This problem is often referred to as 'opaque' or 'black box' AI.

The concept of 'explainability' has arisen as a solution to this problem. The UK ICO explores some of the different ways of explaining AI decisions, and important contextual factors that must be considered.[303]

There is growing awareness of the importance of explainable AI in underpinning accountability. The OECD Guiding Principles on AI, for example, include commitments to 'transparency and responsible disclosure regarding AI systems' and to guaranteeing the provision of 'meaningful information, appropriate to the context, and consistent with the state of art'. This information should enable an affected person to 'understand the outcome' and to challenge that outcome 'based on plain and easy-to-understand information on the factors, and the logic that served as the basis for the prediction, recommendation or decision'.[304]

The Australian Government's *AI Ethics Principles* includes a requirement of explainability, which is intended to provide 'reasonable justifications for AI systems outcomes', including 'information that helps people understand outcomes, like key factors used in decision making'.[305]

Similarly, the IEEE has acknowledged the need 'to characterise what ... algorithms or systems are going to do via transparent and traceable standards', which may include:

> preferential adoption of effective design methodologies for building 'explainable AI' (XAI) systems that can provide justifying reasons or other reliable 'explanatory' data illuminating the cognitive processes leading to, and/or salient bases for, their conclusions.[306]

In the Commission's view, AI-informed administrative decisions should be treated like other administrative decisions in terms of a person's right to reasons. While there may be a case for requiring *greater* transparency for AI-informed decision making by government, at the very least where the right to reasons exists in Australian law, it should not be diluted or undermined simply because AI was used in the process of making an administrative decision.

This section contains three recommendations to apply that principle:

1. The Government should not be permitted to use black box or opaque AI in administrative decision making, if the result is that the relevant authority cannot generate reasons for their decisions.

2. The Government should introduce legislation to clarify that any existing entitlement to reasons for a decision should apply to AI-informed decisions, and that a technical explanation for such decisions should be available on request.

3. The Government should provide guidance on how to generate reasons for AI-informed decisions.

(a)   Applying the existing right to reasons

For some administrative decisions, a right to reasons is provided by legislation.[307] For example, the *Administrative Appeals Tribunal Act 1975* (Cth) (AAT Act) provides that a person may obtain reasons for most decisions to which the Act applies.[308] The *Administrative Decisions (Judicial Review) Act 1997* (Cth) provides that reasons may be obtained for a broad range of other Commonwealth administrative decisions.[309]

In addition, freedom of information laws provide a right to obtain access to information that may help to understand the basis of an administrative decision, subject to exemptions.[310] Regulators and courts can also require the production of information or specific documents in relation to complaints and disputes within their respective jurisdictions.[311]

Some laws apply the right to reasons specifically to AI-informed decision making. The United States *Fair Credit Reporting Act* (1970), for example, attaches specific duties to consumer reporting agencies, which require notification of 'adverse action' to a person regarding why they have been denied credit. This, in turn, requires an explanation of why that conclusion has been reached, including where an automated algorithmic process has been relied upon to make that decision.[312]

While the GDPR has been said to include, or perhaps support, a right to an explanation,[313] recent analysis from the European Parliament suggests the GDPR does not conclusively provide for an explanation for AI-informed decisions, and recommended further work be undertaken in this regard.[314]

Stakeholders considered explainability, or the right to reasons, to be critical in ensuring that AI-informed decision making is accountable.[315] Where existing law already includes a right to reasons for an administrative decision, stakeholders generally supported the application of that right to the more specific context of AI-informed decision making.

Some stakeholders urged further reform. Some supported a legislated right to an explanation for all AI-informed decisions;[316] others stated that the right to an explanation should not be founded in legislation.[317]

Stakeholders suggested that any explanation should be tailored to the context of the decision, based on an understanding of why the explanation is being provided, and sufficient detail to enable the decision to be challenged.[318] It was suggested that government agencies should be guided in how to give reasons for AI-informed decisions.[319] It was also suggested that some exemptions to the requirement to provide reasons might be appropriate, such as where the balance of public interest militated against providing reasons, or in respect of certain types of AI-informed decision.[320]

(b) Legal restrictions on opaque decisions?

Where a decision is described as black box or opaque, a person cannot determine the reasons or basis for the decision. Given the problems associated with such decision making, and the potential for AI-informed decision-making systems to produce decisions without reasons or an explanation, the Discussion Paper put forward options for how Australian law might restrict such decision making.

The Commission proposed a prohibition on AI-informed decision making that cannot produce 'reasonable explanations for its decisions'.[321] This proposal elicited both strong support,[322] and opposition.[323]

Several stakeholders sought clarification regarding the 'reasonable' explanation requirement and sought more guidance on when the requirement might apply, noting that what would be considered reasonable would vary between contexts and applications.[324]

Stakeholders also expressed serious concern that imposing a reasonable explanation requirement could inhibit innovation.[325] Others pointed to the economic and social cost of requiring reasons to be provided.[326] Finally, a small number of stakeholders recommended the Commission consider exemptions to the proposal.[327]

Question B in the Discussion Paper also asked whether Australian law should impose a rebuttable presumption that an AI-informed decision is unlawful if the person responsible for the decision does not provide a reasonable explanation.

Some stakeholders supported such a rebuttable presumption as an important human rights safeguard in the context of AI-informed decision making.[328]

Others were opposed, or offered qualified support, subject to amendments and further clarification.[329] Concerns included that imposing such a presumption could violate the rule of technological neutrality,[330] and others considered it to be a disproportionate regulatory imposition that would inhibit innovation.[331]

(c) Content of reasons or an explanation

Where a right to reasons exists, s 25D of the *Acts Interpretation Act 1901* (Cth) (Acts Interpretation Act) provides further requirements about what must be included in those reasons. Section 25D states:

> Where an Act requires a tribunal, body or person making a decision to give written reasons for the decision, whether the expression "reasons", "grounds" or any other expression is used, the instrument giving the reasons shall also set out the findings on material questions of fact and refer to the evidence or other material on which those findings were based.

It is important to consider whether this provision is adequate to deal with the rise of AI-informed administrative decisions.

(i) Non–technical reasons or explanation

Generally, reasons or an explanation, such as that provided for in s 25D of the Acts Interpretation Act, are sufficient to promote accountability.[332]

Stakeholders emphasised the importance of an affected individual knowing *why* a decision was made (ie, being given reasons or an explanation) in ensuring accountability and human rights.[333] This accords with international jurisprudence and commentary.

The UN Committee on the Elimination of Racial Discrimination, for example, recently drew the link between black box or opaque AI and an inability to challenge unlawful decision making:

> Given the opacity of algorithmic analytics and decision-making, in particular when employing artificial intelligence methods, discriminatory outcomes of algorithmic profiling can often be less obvious and more difficult to detect than those of human decisions and thus more difficult to contest.[334]

Stakeholders submitted that affected individuals need enough information about the decision to enable them to exercise a right of review.[335] Some stakeholders warned that simply providing the technical basis for an AI-informed decision may do little to assist individuals to understand or challenge it.[336]

Several stakeholders also noted that the context of the decision would dictate what—and how much—information would be necessary to provide in reasons.[337] Some stakeholders were also wary of the burden that simply providing a non-technical explanation of an AI-informed decision would place on individuals, particularly if there are no additional structural changes to governance, such as enforcing human-centric design of AI-informed decision-making systems.[338]

(ii) A requirement for a technical explanation?

At least in some situations, a simple lay-person's explanation or reasons may be inadequate for AI-informed decision making. To this end, the European Commission's Independent High-Level Expert Group refers to the importance of having

> the ability to explain both the technical processes of an AI system and the related human decisions … . Technical explainability requires that the decisions made by an AI system can be understood and traced by human beings.[339]

Some stakeholders supported reform to provide better access to technical information about an AI-informed decision-making system.[340] It was suggested that the following elements could be included within a technical explanation:

- the training and validity of the data set, and transparency regarding the data selection, and any methods used to test or screen the data set for biases[341]
- system level information, including reference to collective outcomes (rather than focusing only on the individual outcome), as well as reasons, or the business logic, for choosing the particular AI decision-making tool[342]
- detail regarding how the AI is being used by the decision maker, and detail of the algorithmic model or software being deployed.[343]

Some existing laws that support a right to reasons may require reform to ensure that all relevant technical information related to an AI-informed decision is supplied or able to be obtained.[344]

Other stakeholders opposed reform, or supported only limited reform, regarding access to a technical explanation of AI-informed decisions.[345] It was noted that 'technical information' could potentially include proprietary, confidential or personal information.[346] This could be complicated also because what will be relevant information will differ from one AI-powered system to another.[347]

Alternatives to a legal obligation for a technical explanation were suggested. For example, disclosure statements setting out non-technical information or an overview of the decision-making tool could be provided, neither of which need to disclose sensitive details of its operation.[348] An independent professional review of an AI-informed decision-making system could be provided, to avoid widespread disclosure of the relevant technical information.[349]

(d) Conclusion: the need for administrative decisions to be explainable

A failure to provide reasons for an administrative decision can make it difficult, or even impossible, to know whether the decision was fair, reasonable, accurate or even lawful. This can result in an unaccountable exercise of government power, and can be an affront to the rule of law.[350]

By contrast, reasons for an administrative decision:

- allow the affected individual to understand why the decision was made, putting them in a position to decide whether the decision involved an unwarranted finding of fact, or an error of law, that is worth challenging[351]

- assist a court in determining whether a reviewable error of law has occurred[352]

- promote real consideration of the issues, increasing 'public confidence in, and the legitimacy of, the administrative process'.[353]

Where the use of AI causes an administrative decision to be more opaque, by obscuring the reasons for which the decision was made, this is a barrier to achieving these desirable outcomes. The Commission has concluded that where a right to reasons exists in Australian law, it should not be diluted or undermined simply because AI was used in the process of making an administrative decision.

Numerous polls have shown the public expect AI to be used accountably.[354] Reasons for AI-informed decisions can thus help build public trust in government use of AI.

(i) Reasons for AI–informed administrative decisions

There is a statutory right to reasons for some forms of administrative decision, including under s 28 of the AAT Act. In some circumstances, policy and other official government advice urges government agencies to provide a statement of reasons even if they are not legally required to do so. The Commonwealth Ombudsman can also recommend a government agency remedy its omission of reasons, or give better reasons, in relation to action it has taken.[355]

The Commission acknowledges that it is difficult or even impossible to generate reasons to explain the operation of at least some forms of AI. As ACOLA observed, for AI that engages in unsupervised learning, 'it is, in principle, impossible to assess outputs for accuracy or reliability'.[356]

However, that technical difficulty does not justify a failure to comply with basic principles of government accountability. The benefits of such opaque forms of AI-informed decision making should never be assumed to outweigh the risks of harm. Governments should be able to explain how they arrive at decisions. Therefore, the Commission opposes the use by government of AI-informed decision-making systems that cannot generate reasons, or a technical explanation, for the resultant decisions.

The need for action is pressing—something illustrated by the Government's automated debt recovery scheme, which came to be known as 'Robodebt'. In reviewing this scheme, the Commonwealth Ombudsman urged the Department of Human Services to 'improve the clarity' of the letters sent to individuals notifying them of a claimed debt, and to give such people 'better information so they understand the information and can properly respond to it'.[357] In a national survey in 2020, 88% of respondents considered it very important or somewhat important to be given reasons or an explanation

for an automated decision made about them by the Australian Government.[358]

The Commission has concluded that reform is needed to make clear that the use of AI in an administrative decision-making process does not negate any entitlement to reasons for that decision. This could be achieved by amending the Acts Interpretation Act to provide, for the avoidance of doubt, that a legal entitlement to reasons applies regardless of how a decision is made, including where automation or AI is used in the decision-making process.

A similar amendment could be made also to existing legislation that creates a right to reasons, such as s 28 of the AAT Act. Ultimately, in considering reform in this area, government should focus on the nature of the decision and its impact on individual rights, rather than the technology used to make the decision.

(ii) Content of reasons

Section 25D of the Acts Interpretation Act sets out minimum requirements for the *content* of reasons, where a legal requirement to provide reasons already exists. In essence, this is a requirement for a lay explanation of the decision.

In most situations, this would satisfy the needs of a person affected by the decision. However, sometimes it will be necessary to verify whether the reasons provided accurately reflect the real reasons a decision was made.

The Commission recommends that, where requested, the relevant government agency should be required to produce a *technical explanation* of an AI-informed decision, in a form that can be assessed and validated by a person with relevant technical expertise.

This reform should be implemented by amending s 25D of the Acts Interpretation Act. Consistent amendment of other relevant legislation that provides legal entitlements to reasons for an administrative decision, including s 28 of the AAT Act, also may be desirable.

Many of the techniques used to explain why AI systems produce particular outputs are not readily understood by people without relevant technical expertise. To enable lay people—as well as regulators and adjudicative bodies such as courts—to understand why some decisions are made, it will be necessary for experts to assist in interpreting the outputs of some AI tools. In practice, it has been suggested that the government could make neutral experts available to assist affected individuals in understanding such technical information.[359]

A good example of such a technical explanation was ordered by the Federal Court in a recent case. In order to determine a narrow question of consumer law, the primary judge relied on the expert evidence of four computer scientists. The experts gave evidence on the content and computation of data to explain how an online vendor's algorithm provided recommendations to consumers.[360]

There are many different approaches to providing technical explanations of AI-informed decisions.[361] Current research focuses on model explanation (explanation using a transparent and fully interpretable model capturing the logic of the opaque system); model inspection (explanation to understand specific properties of an opaque model or its predictions); or outcome explanation (explaining the outcome of an opaque model in a specific instance).[362]

An explanation may consist of a number of different factors, such as the original datatset; how the system was trained on that data set; any risk mitigation strategies adopted; the factors, or combination of factors, used to determine an outcome or prediction; any evaluation or monitoring of individual or system outcomes; and any testing, or post-deployment evaluation, carried out in relation to the model.[363]

While the Commission does not prescribe what a technical explanation should consist of, guidance from an independent expert body, such as the AI Safety Commissioner recommended in Part C, would be helpful in this area.
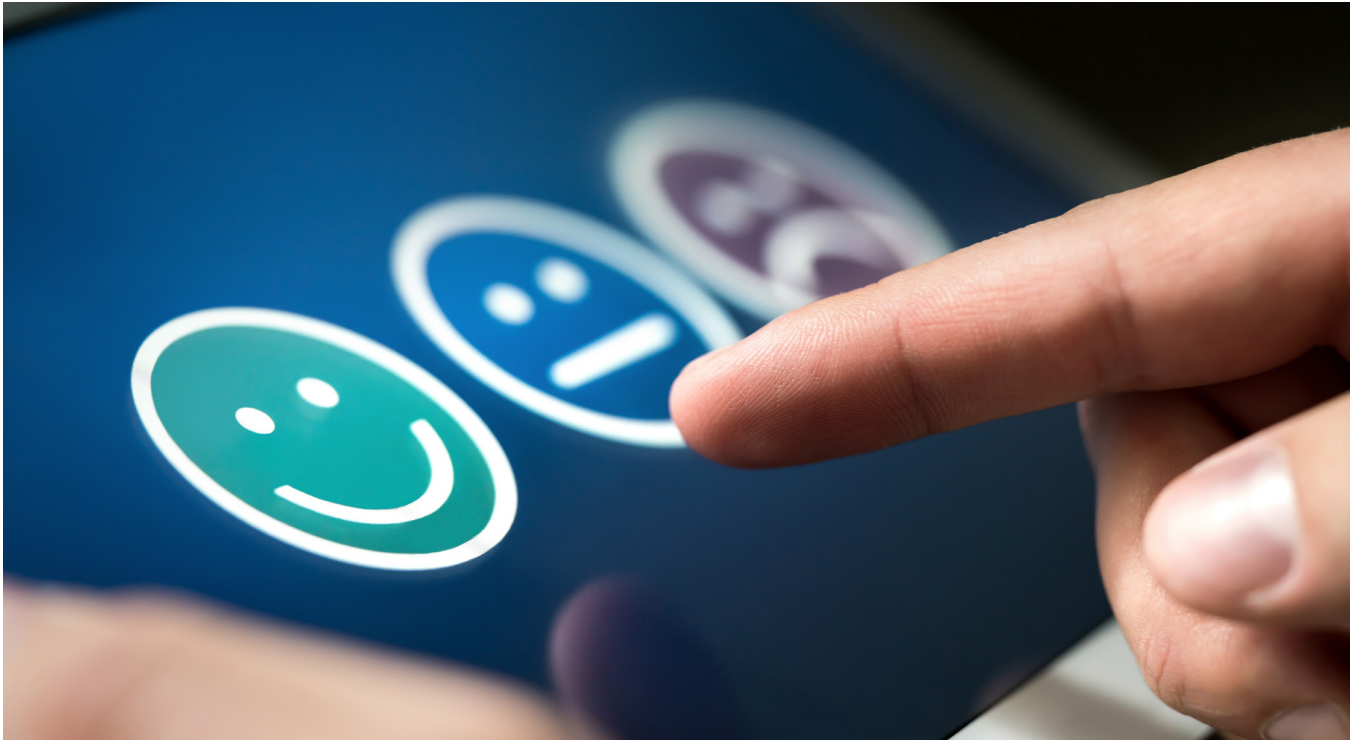
5.5 Human oversight, intervention and review

RECOMMENDATION 8: The Australian Government should introduce legislation to create or ensure a right to merits review, generally before an independent tribunal such as the Administrative Appeals Tribunal, for any AI-informed administrative decision.

While AI, including automation, can bring genuine benefits in administrative decision making, it can also undermine accountability. Australian law generally requires an affected individual to be able to review administrative decisions that affect them.[364] Almost nine out of ten respondents surveyed in a national 2020 poll considered it important to be able to appeal a government decision that they do not like or think might be unlawful.[365]

There are generally three main forms of review open to an affected individual who wishes to challenge an administrative decision:

- *internal review*—where the body (usually a government agency) responsible for making the administrative decision undertakes its own review. Generally, the review is carried out by another decision maker, who is at least as senior as the original decision maker. Internal review can be made available either by policy or law.

- *external merits review*—where an external body, usually an independent tribunal, reviews the original administrative decision. Typically, in external merits review, the tribunal 'stands in the shoes' of the original decision maker and can remake that decision in any way they see fit, exercising all of the relevant powers, duties and discretions vested in the original decision maker. External merits review is common, but not universal, and is available only where it is expressly provided for in law.

- *judicial review*—where a court considers the lawfulness of the process by which the administrative decision was made. If that process is found to be unlawful, the court generally will order that the decision be remade in accordance with the law. Section 75(v) of the Australian Constitution provides that decisions of Commonwealth officers must always be subject to judicial review, and this constitutional protection is supplemented by several pieces of primary legislation.

In addition, many forms of administrative decision can be subject to oversight by bodies such as the Commonwealth Ombudsman and the Commission itself. While those bodies generally cannot require a decision to be changed, in many situations they can recommend changes to the administrative decision in question.

There can be difficulties posed by AI-informed administrative decisions in each of these forms of review and oversight. This section considers those challenges, and recommends reform to ensure that AI-informed administrative decisions can be reviewed by an independent merits review tribunal.

(a) Internal review and the 'human–in–the–loop'

It is relatively rare for an administrative decision-making process to be wholly automated, with no human involvement at all. Instead, human oversight and intervention in such a process—commonly referred to as a 'human-in-the-loop'—can identify and address problems that may arise through automation. The importance of human oversight and intervention is discussed more generally in Chapter 7.

Some other jurisdictions provide expressly for internal human review of automated decisions. In the UK, where a significant decision is made solely via automation, an affected individual can request the data controller to reconsider the decision, or make a new decision that is not based solely on automated processing.[366] These laws are understood to apply to many administrative decisions, as well as decisions made by private sector data controllers, such as banks or insurance companies.

Difficult questions can arise in assigning the appropriate role of a human-in-the-loop. How do we ensure that any human intervention in the decision-making process leads to objectively better, more accurate decisions? How do we combat the risk that the human-in-the-loop gives no more than the illusion of human involvement in a decision-making process that is, in reality, automated? For instance, it has been observed that if the particular human-in-the-loop lacks the relevant technical and other knowledge to understand the decision, they will be ill-equipped to remedy any problems with the original decision.[367]

Throughout the Commission's consultation, stakeholders have emphasised the importance of the role played by humans in overseeing, monitoring and intervening in AI-informed decision making.[368] While there were differing views about the most effective role for humans in AI-informed decision-making processes, there was a higher level of agreement that human intervention can occur most usefully through the creation of review and appeal rights, to a human, for AI-informed decisions.[369]

(b)   External merits review

The Discussion Paper asked whether reform was needed regarding human review of AI-informed decision making. Stakeholders expressed a range of views on this question.

Some stakeholders specifically supported a clear right to merits review of administrative decisions, including where the decision making is wholly automated,[370] and particularly in respect of decisions that may affect an individual's human rights.[371] It was also observed that the review process should enable lessons to be learnt to improve the AI-informed decision-making system under review.[372]

Other stakeholders opposed reform in this area. In particular, it was observed that, in some situations, human intervention can increase, rather than decrease, the risk of error.[373]

(c)   Judicial review

The Australian Constitution contains a minimum guarantee of judicial review for administrative decision making. This is supplemented by legislation and the common law.

The *Administrative Decisions (Judicial Review) Act 1977* (Cth) (ADJR Act) is the primary statutory source of judicial review for Australian Government decisions. The ADJR Act sets out the grounds on which judicial review may be sought, including that an administrative decision was in breach of the rules of natural justice or procedural fairness, or that the decision maker failed to take account of relevant considerations that they were bound to take into account or took irrelevant considerations into account.[374] Where a decision is unlawful, a court exercising judicial review can provide remedies, including by quashing or setting aside a decision or requiring a new decision to be made.[375]

In addition, judicial review schemes are provided for in other statutes, and regulate review of decisions made under specific legislation—for example, in the areas of migration and taxation.

AI-informed administrative decision making raises some complex issues in relation to the availability of judicial review. Some wholly opaque administrative decisions might even be unconstitutional if the manner by which these decisions are made frustrates a court, established under Chapter III of the Australian Constitution, from exercising its judicial review function.[376]

Another difficulty relates to when automated processes will result in a reviewable administrative decision being made. This question was considered in 2018 by the Full Court of the Federal Court of Australia in the *Pintarich* case, which related to a disputed tax debt. The taxpayer received extensive material from the Australian Tax Office (ATO), including a letter that a human decision maker at the ATO generated using a computer program. The letter included information that was less favourable to the taxpayer than some other ATO communications, regarding the taxpayer's tax debt. The Court decided, by majority, that the letter was not a reviewable 'decision' under the ADJR Act.[377]

The majority judges found that in order for there to be a decision, 'there needs to be both a mental process of reaching a conclusion and an objective manifestation of that conclusion'.[378] In dissent, Kerr J found that applying this computation process still involved a reviewable decision:

> What was once inconceivable, that a complex decision might be made without any requirement of human mental processes is, for better or worse, rapidly becoming unexceptional. ... The legal conception of what constitutes a decision cannot be static; it must comprehend that technology has altered how decisions are in fact made and that aspects of, or the entirety of, decision making, can occur independently of human mental input.[379]

The broader significance and implications of *Pintarich* as a precedent are yet to emerge. On one view, the Court simply reinforced an important principle: that legally valid decisions can be made only by people holding actual legal authority to make them.

On another view, some unfairness could arise from the general scenario raised by this case. That is, if a government agency communicates with a person using an automated process, and the person takes action in reliance on that communication, but the agency subsequently makes a binding decision that is at odds with its earlier automated communication, should the person not be able to rely on the original communication—regardless of whether, as a technical question of law, the automated communication was an administrative decision?

The Full Federal Court's decision in *Pintarich* does not purport to resolve such larger questions. However, this case suggests that the use of AI in administrative decision making can affect its legal status, altering how, and even whether, certain government decision making can be reviewed.

(d)   Conclusion: a right to independent merits review

Australian law generally requires an affected individual to be able to review administrative decisions that affect them.[380] Almost nine out of ten respondents surveyed in a national 2020 poll considered it very important or somewhat important to be able to appeal a government decision that they do not agree with or think might be unlawful.[381]

The GDPR contemplates internal and external review for automated decision making, providing for rights of review and natural justice. Article 22 recognises the right of an individual 'not to be subject to a decision based solely on automated processing, including profiling', and provides for the individual to obtain 'human intervention' whereby the individual can express their view and contest the decision.

Similarly, in Canada, human review must be available for certain forms of automated decision making by government, where the decisions are deemed to be 'high risk' by reference to the impact of the decision on factors including the rights, health, and economic interests of individuals or communities.[382]

In the Commission's view, reform in Australia is needed to ensure similar rights of review are available for people affected by AI-informed administrative decisions.

(i)   Internal review and the human–in–the–loop

It is good practice to include a human in an AI-informed decision-making process that deals with legal and other similarly significant rights. One or more humans—with appropriate expertise and experience—can be well placed to:

- identify errors in the operation of the system

- exercise discretion

- assess the overall fairness of a decision before it is finalised, and consider whether it complies with human rights.

Difficult questions can arise in ensuring that a human-in-the loop is well placed to improve the quality of an otherwise automated decision-making process. However, there is a growing body of research that provides useful advice on this issue. Much of this research focuses on designing systems that incorporate user experience from the earliest stages. For example, 'human-centred' design promotes a 'deep understanding of the people, contexts and environments' connected with AI-informed decision-making systems, to ensure they are designed in a way that enables people to assess the system's trustworthiness.[383]

The most appropriate approach is usually to integrate the best, most reliable features of AI and human decision making. Recent research undertaken by the European Parliament regarding the impact of the GDPR concluded:

> In many cases, the best solution consists in integrating human and automated judgements, by enabling the affected individuals to request a human review of an automated decision as well as by favouring transparency and developing methods and technologies that enable human experts to analyse and review automated decision-making.[384]

Consistently with Recommendation 2, the Commission considers that where the Australian Government is contemplating the creation of an AI-informed decision-making system, it should provide rights to internal review by a human.

(ii) External merits review

A critical safeguard for administrative decision making generally is the ability for people affected by such decisions to access external merits review. External merits review is especially important in respect of AI-informed administrative decisions.

The Commonwealth Ombudsman has concluded that people 'must be provided with an opportunity to dispute an administrative decision made by or with the assistance of an automated system'. The Ombudsman advised:

> Many administrative decisions are subject to a legislative review process. In other cases, the agency should offer an option for internal review by a staff member as a part of a commitment to fair and reasonable decision-making. External avenues of review should also be provided to customers such as the option to make a complaint to the Ombudsman or taking a matter to a tribunal or court.[385]

External merits review is typically performed in Australia by independent tribunals, such as the Administrative Appeals Tribunal at the federal level. Tribunals review administrative decisions, standing in the shoes of the original decision maker.[386]

Many forms of administrative decision, especially those that affect individuals' legal or similar rights, are already subject to external merits review. The Commission concludes that external merits review before an independent tribunal generally should be available for AI-informed administrative decisions. This would change the existing law only in respect of administrative decisions that are made using AI, and not already subject to external merits review by a tribunal.

As with administrative decision making more broadly, the Commission acknowledges that there may be exceptions where external merits review by a tribunal is inappropriate. Such exceptions, when they apply to automated administrative decisions, should be rare and only where there is a demonstrated need for automation in the decision-making process and an overwhelming public interest against external merits review (such as national security). Where such exceptions exist, the Government should consider providing for alternative forms of merits review, such as via the Ombudsman.

(iii) Judicial review

Judicial review of administrative decision making is fundamental to any liberal democracy that upholds the rule of law. In Australia, it is protected by our Constitution.

Generally, the use of automation and other forms of AI does not threaten the right to judicial review. However, as discussed earlier in this chapter, concerns have been raised about the implications for access to judicial review of 'opaque' administrative decisions and automated government processes, such as computer-generated communications. In particular, the Full Federal Court's decision in *Pintarich* should put us on notice that reform in this area may be necessary in future, to protect access to judicial review.

6. Legal accountability for private sector use of AI

6.1 Summary

Chapter 5 considered accountability for AI-informed decision making by government. This chapter addresses the need for accountability in AI-informed decisions made *by corporations and other non-government entities*.

Everyone has a responsibility to respect human rights. Countries, such as Australia, must ensure there is a regulatory framework that effectively upholds human rights,[387] with individuals able to access a remedy if their rights have been infringed.[388] This can include administrative and judicial mechanisms to address human rights violations.[389]

This chapter recommends several ways to promote greater accountability in AI-informed decision making by the private sector. In particular, people affected by such decisions should be:

- made aware of the decision, and the use of AI in the decision-making process
- provided with reasons or an explanation for the decision
- able to appeal to a body that can review the decision and correct it, if necessary.

Research on
explainable AI
[**Rec 12**]

Legal rights
to reasons
[**Rec 13**]

Guidance for Human
Rights Impact
Assessments
[**Rec 9**]

Explainability

Testing &
monitoring of AI

Private
sector use of
AI in decision
making

Liability

Transparency

Presumption the
person responsible
for use of AI is liable
for decision
[**Rec 11**]

Notification
for use of AI
[**Rec 10**]

AI-informed decision
with a legal or similarly
significant effect

Notification that AI
has been used in
decision

Reasons provided for
the decision

Right to merits
review

6.2 Lawfulness

> **RECOMMENDATION 9:** The Australian Government's *AI Ethics Principles* should be used to encourage corporations and other non-government bodies to undertake a human rights impact assessment before using an AI-informed decision-making system. The Government should engage the AI Safety Commissioner (Recommendation 22) to issue guidance for the private sector on how to undertake human rights impact assessments.

In any system of legal accountability, the first question to ask is: *What are the legal rules that must be followed?*

While some of the obligations that apply to administrative decisions made by government differ from decisions made by non-government entities,[390] there is a common core of legal requirements that apply to almost all decision making. For example, as explored in Chapter 8, it is unlawful for anyone to make a decision that discriminates on the basis of an individual's race, sex, age or other protected attribute. There are very few exceptions to this rule. Beyond this common core, the legal rules that apply to decision making by non-government entities are generally less onerous or prescriptive than for government decision making.

The Commission urges that the private sector exercise caution in its use of AI-informed decision making, to avoid acting unlawfully or otherwise causing harm to individuals. This section of the chapter recommends practical measures for the Government to support the private sector to undertake human rights impact assessments (HRIAs), prior to using AI-informed decision-making systems.

(a) What legal rules apply to non–government decision making?

In addition to the common core of legal obligations that apply to all forms of decision making, there are two significant ways in which the law can impose obligations on the decision making of non-government entities.

First, a non-government entity, which is exercising a power or duty of the state, will often be required to comply with certain accountability requirements. For example:

- Government business enterprises are creatures of government, but have corporate structures and usually fall outside the general administrative law accountability regime. Their decision making tends to be regulated by dedicated legislation, supplemented by laws that apply to all corporations. For example, the powers, duties and functions of Australia Post are set out in the *Australian Postal Corporation Act 1989* (Cth), with that legislation also setting out specific requirements for how certain decisions are made, as well as additional accountability requirements including an obligation to report to Parliament.

- Some non-government entities enter into contracts to carry out functions on behalf of government, including in sensitive areas such as aged care, hospitals, prisons and other detention facilities. It is common for an alternative accountability regime to be maintained through the contract between the government and the service provider, as well as any applicable legislation.

- While Australia does not have a federal human rights act or constitutional bill of rights, the respective human rights statutes in the Australian Capital Territory, Victoria and Queensland each provides that, where a non-government body is performing a public function on behalf of the government, the non-government body must comply with relevant human rights.[391]

Secondly, the law sometimes contains obligations for particular areas of non-government decision making. By way of illustration, the *Corporations Act 2001* (Cth) requires company directors and other senior executives to exercise their powers and duties, including in the way they make decisions, with care and diligence.[392] For example, in making business judgments, company directors must:

- make the judgment in good faith and for a proper purpose

- not have a material personal interest in the subject matter of the judgment

- inform themselves about the subject matter of the judgment to the extent they reasonably believe to be appropriate

- rationally believe that the judgment is in the best interests of the corporation.[393]

The use of AI can make it more difficult to determine whether corporations have complied with their legal obligations. A recent comparative study found that corporate law in Australia and the United Kingdom does not 'appropriately cater for the use of AI by directors', and it has been suggested that 'whether the use of AI will exacerbate liability issues ultimately depends on the fashion in which courts will interpret the wording of statutory provisions relating to directors' duties'.[394]

(b) Conclusion: importance of human rights impact assessments

As a general principle, the use of AI in decision making should not change the legal rules that must be followed.

There are two important qualifications to this general principle. First, where the use of AI materially changes the character of the decision-making process, it may be necessary to apply new or additional rules to that process. For instance, conventional decision making may enable the consideration of a limited range of factors. However, AI can sometimes enable new factors to be considered, through techniques such as big data analysis. In this situation, law and policy makers may need to consider whether to permit those new factors to be considered.

Secondly, the use of AI can sometimes affect—positively or negatively—the reliability of a decision-making process. For example, in some areas of precision medicine, AI-powered diagnostic devices can be more accurate than conventional methods. In other areas of decision making, such as with some types of facial recognition, the use of AI can result in decisions that are less accurate than alternative methods.[395] In either situation, the relative accuracy of using AI may necessitate new legal rules regarding its use in those specific areas.

Outside of those scenarios, non-government bodies should exercise caution in their use of AI in decision making that affects people's legal or similarly significant rights. The Commission strongly encourages the private sector to follow human rights by design principles, as outlined in Chapter 7, whenever considering, developing or using an AI-informed decision-making system.

In particular, companies should be encouraged to undertake human rights impact assessments. As explored in greater detail in Chapter 7, these assessments can help businesses and other non-government entities identify and address human rights and related risks associated with the use of AI in decision making.

The Commission recommends that the Australian Government encourage the private sector to undertake HRIAs. One way of doing this would be through the Government's AI Ethics Framework, which includes voluntary *AI Ethics Principles* that 'can inform the design, development and implementation of AI systems'.[396] As the Government has noted, this framework is still being further developed, and the Government intends to flesh out some of its high-level guidance through more detailed advice.[397]

The Commission recommends engaging the AI Safety Commissioner (see Part C) to issue guidance on how to undertake a human rights impact assessment in this context. While the Commission has not identified a compelling case for HRIAs being compulsory for non-government bodies that engage in AI-informed decision making, that question should be considered further if necessary.

Finally, there is a long-term trend that favours delivering government services and functions via government business enterprises, corporations and other non-government bodies. Thus, it is important that accountability not be diminished or lost when this results in those non-government bodies engaging in AI-informed decision making on behalf of the Australian Government.

In Chapter 5, the Commission recommends an audit of all current or proposed use of AI-informed decision making by or on behalf of government. That audit (see Recommendation 4) should specifically include government business enterprises and non-government bodies that engage in decision making on behalf of the Australian Government.

6.3 Transparency

> **RECOMMENDATION 10:** The Australian Government should introduce legislation to require that any affected individual is notified when a corporation or other legal person materially uses AI in a decision-making process that affects the legal, or similarly significant, rights of the individual.

The Commission uses the term 'transparency' to refer to people being made aware when AI is used in decision making that affects them.

In Chapter 5, the Commission concluded that where the government engages in AI-informed decision making, it should do so transparently. In particular, the Commission recommended that the government notify any affected person where AI is materially used in making an administrative decision.

The Commission considers this requirement should apply also to AI-informed decisions made by non-government entities. Knowing that a company uses AI to make decisions can be useful for people in deciding whether, or how, to engage with that company.

(a) Notification of the use of AI

The Discussion Paper proposed a legal requirement to notify an affected individual where AI is materially used in a decision that has a legal or similarly significant effect on the individual's rights.[398] Several stakeholders supported applying such a notification requirement to corporations and other non-government entities.[399]

Notification can be an important aspect of accountability in certain contexts, especially where human rights are engaged, and it was observed that notification requirements already exist in other contexts—for example, under Australian privacy legislation.[400]

Some stakeholders were wary of a notification requirement being imposed on business, particularly given the potential compliance costs involved.[401] It was submitted that exceptions may be required, with clarification sought regarding when the notification requirement would be triggered.[402] Essentially, there was concern that notification only be required where the use of AI could have a significant effect on an individual, such as affecting their human rights.

(b)   Conclusion: AI notification requirement

Like government, the private sector also should be required to notify the public of the use of AI in decision making that has a legal, or similarly significant, effect on people's rights. Such a requirement would help build public trust regarding the use of AI in ways that engage human rights.

A notification requirement would also be a way of applying a key element of the Australian Government's *AI Ethics Principles*, which provide for transparent and responsible disclosure 'to ensure people know when they are being significantly impacted by an AI system, and can find out when an AI system is engaging with them'.[403] Research shows a clear public expectation that there be greater transparency in the use of AI by both the public and private sectors.[404]

The Commission's recommendation is supported by human rights law. The UN Guiding Principles on Business and Human Rights require clear communication from businesses about how their operations may impact on the human rights of individuals with whom they may come into contact.[405] The UN Special Rapporteur on freedom of expression has also concluded that the private sector should 'make explicit where and how AI technologies and automated techniques are used on their platforms, services and applications'.[406]

Similar notification requirements are being considered in other jurisdictions. The Council of Europe Commissioner for Human Rights, for example, has called for governments to ensure that, when AI is used in ways that meaningfully affect human rights, this should 'be made public in clear and accessible terms'.[407] A draft law being considered by the New York City Council would require a company using an AI-assisted employment tool to assess and hire candidates for a job to disclose to candidates when such software is being used.[408]

The Commission acknowledges concerns raised by stakeholders about the potential breadth of the notification requirement, but considers that applying the requirement only to the material use of AI in decisions that have a legal, or similarly significant, effect constitutes a sufficient limitation. Where practical, this notification should take place before and after a decision is made.

A notification requirement, such as that recommended here, would be similar to other obligations on business. For example, a similar burden applies to credit providers which have notification obligations under recent responsible lending laws. These are intended to equip potential customers with adequate information to enable them to make personal decisions regarding credit services offered to them.[409]

6.4 Liability

> **RECOMMENDATION 11:** The Australian Government should introduce legislation that provides a rebuttable presumption that, where a corporation or other legal person is responsible for making a decision, that legal person is legally liable for the decision regardless of how it is made, including where the decision is automated or is made using artificial intelligence.

Any system of accountability relies on clear lines of responsibility, and especially legal liability, for the consequences of decision making.

In human rights law, it is important to be able to identify who is liable for a wrongful decision, so that an affected individual may pursue a remedy. This suggests that states, such as Australia, are obliged to ensure clear legal rules regarding liability for the use of AI-informed decision making.[410]

The question of legal liability is usually, but not always, straightforward. As a general rule, whoever is responsible for making a decision is responsible also for any errors or other problems that arise in the decision-making process. Where this person has relied on a third party in the process of decision making, and the third party caused the error to take place, the first person remains liable for the error. It may be that the first person can seek redress from the third party, but that complexity should not be a barrier to an individual affected by the error seeking redress. That is, the affected individual should be able to seek redress, in the ordinary course of events, from the first person, not the third party.

As with other forms of decision, usually the question of liability will be straightforward for AI-informed decision making. However, some complexities can arise—either where an AI-informed decision-making system operates largely autonomously, or where numerous parties are involved in designing, developing and using the system.

Consequently, the Commission recommends the creation of a rebuttable presumption that legal liability for any harm that may arise from an AI-informed decision should be apportioned primarily to the legal person that is responsible for making the AI-informed decision itself. As this is no more than a presumption, this provision would anticipate exceptional situations where liability should be apportioned differently.

The Commission considers such reform would more clearly apply the long-standing principle that underlies Australia's law on legal liability.

(a) Options for reform

The challenges posed by AI-informed decision making to traditional concepts of liability were raised from the earliest stages of the Project consultation.[411] The Discussion Paper proposed reform to create a rebuttable presumption that the legal person who deploys an AI-informed decision-making system is legally liable for the use of the system.[412]

Several stakeholders supported the proposed new rebuttable presumption. They argued that legal liability for the use of an AI decision-making system is vital in achieving accountability, noting such a presumption would support transparency in decision making and would help to prevent harm.[413]

Other stakeholders opposed the Discussion Paper's proposal.[414] They argued that legislation is unnecessary, given existing law regarding liability, such as tort law and rules governing corporate disclosure.[415]

Whether for or against the proposal, stakeholders sought clarity that any such presumption be limited to entities that use, or have primary responsibility for the operation of, an AI-informed decision-making system.[416] Some stakeholders made clear that if a person is involved in developing an AI-informed decision-making tool, this should not necessarily result in that person being liable for how the tool is eventually used, especially if problems relate specifically to the *deployment* of the tool in ways that the developer of the tool could not reasonably have anticipated or addressed in advance.

In short, if liability is to be shared among multiple parties, there should still be fair apportionment based on the level of responsibility for any errors or problems.[417]

(b) Conclusion: clarifying the law on liability

There are extensive bodies of law on determining and apportioning legal liability for decisions that affect legal and similarly significant rights and interests. Those existing laws are likely to resolve most liability questions that arise in respect of AI-informed decision making.

Laws covering areas such as product liability and consumer safety, negligence or discrimination are technology neutral, and apportion liability across different actors who bear legal responsibility for the outcome of the decision. For example, in the financial services sector, personal and organisational liability are expressly dealt with in legislation.[418]

However, this existing body of law is not comprehensive. Consequently, the Commission has concluded that there would be benefit in reform that addresses any situations of ambiguity regarding liability for AI-informed decision making.

The Commission recommends reform that makes clear that ordinary liability principles generally should apply to AI-informed decision making. That is, there should be a rebuttable presumption that legal liability for any harm that may arise from an AI-informed decision should be apportioned primarily to the legal person that is responsible for making the AI-informed decision itself.

There will be situations where this is inappropriate, so this should be no more than a general rule, or rebuttable presumption, which could be displaced if there are strong legal reasons for doing so. Legislation that makes this clear, along with guidance about how to apply this legal rule in a range of practical scenarios, is likely to assist in resolving many of the difficulties regarding liability in this context.

6.5 Explainable AI and the right to a remedy

RECOMMENDATION 12: Centres of expertise, including the newly established Australian Research Council Centre of Excellence for Automated Decision-Making and Society, should prioritise research on the 'explainability' of AI-informed decision making.

RECOMMENDATION 13: The Australian Government should introduce legislation to provide that where a court, or regulatory, oversight or dispute resolution body, has power to order the production of information or other material from a corporation or other legal person:

(a) for the avoidance of doubt, the person must comply with this order even where the person uses a form of technology, such as artificial intelligence, that makes it difficult to comply with the order

(b) if the person fails to comply with the order because of the technology the person uses, the body may draw an adverse inference about the decision-making process or other related matters.

As discussed in Chapter 5, the problem of 'opaque' or 'black box' AI arises where the use of AI obscures the rationale or reasons for a decision. This can frustrate any legal right to reasons, which can in turn make it difficult or impossible to challenge the merits or lawfulness of the decision itself. In human rights terms, this can deny a person's right to a remedy.

Australian law generally entitles a person affected by an *administrative* decision to reasons for the decision. However, it is only in exceptional situations that a person would be legally entitled to reasons for a decision made by a *non-government entity*. Nevertheless, opaque or black box AI can be a significant problem wherever it arises—in government and the private sector.

This section of the chapter addresses this issue in two ways.

First, it is good practice to provide reasons for decisions that affect a person's legal or similarly significant rights, regardless of the status of the decision maker and even where there is no legal requirement to provide reasons. The Commission recommends further research on explainable AI, and expert guidance from government on how to provide reasons for AI-informed decisions.

Secondly, the Australian Government should introduce legislation to address the problem of black box AI and ensure that people are able to access a remedy for unlawful AI-informed decisions by the private sector. In particular, the Commission recommends legislation be introduced to make clear that where a court or other regulatory body orders a person (eg, a corporation) to produce material, this order cannot be refused simply because of the form of technology, such as AI, that the person uses in its decision-making and other processes.

(a) A statutory right to reasons?

In some exceptional situations, a non-government entity may be legally required to provide reasons for certain categories of decisions. For example, a telecommunications provider must provide a consumer with reasons where it decides to restrict supply of, or access to, a telecommunications service.[419] In addition, in some industries or sectors it may be considered good practice to provide reasons for certain decisions.

Beyond these situations, the Discussion Paper raised the possibility of creating a new statutory right to reasons for AI-informed decisions made by non-government entities.[420] This would be a significant reform, involving a major departure from the current position that, generally speaking, decisions by non-government bodies do not carry a legal entitlement to reasons.

There was opposition to such a reform on three principal grounds.[421] The first was technical: some AI-informed decision-making systems were said to be too complex or sophisticated to generate a useful explanation.[422] Even if this problem could be overcome, there was concern that doing so would be unreasonably costly, both financially and due to the time it would take for an organisation to generate an explanation, an issue particularly relevant to small and medium-sized enterprises.[423]

The second objection was that a right to reasons could cause unintended consequences. For instance, this could breach privacy law by revealing personal information used in the decision-making process,[424] which in extreme cases could be exploited by third parties for criminal or other improper purposes.[425] Giving reasons could also reveal commercially sensitive information related to companies' decision-making processes.[426]

The third objection was that a new general right to reasons would be a disproportionate response to the problem of black box AI. For example, it was suggested that where there was a demonstrated need for a right to reasons for a *specific* type of decision, reform could be targeted to that need.[427]

On the other hand, some stakeholders expressed support for a more general right to reasons— essentially as a way of addressing the power imbalance experienced by people who are negatively affected by AI-informed decisions made by corporations.[428] While the technical, commercial and other problems referred to above were acknowledged, practical solutions were also suggested. For example, limited disclosure of reasons for a decision could be made if an explanation risks exposing information that is sensitive for commercial, privacy or other reasons.[429]

If law reform were not pursued, it was noted that guidance could be helpful in advising the private sector on how to provide reasons for AI-informed decisions.[430]

(b) Legal restrictions on opaque decisions?

When it comes to the explainability of AI-informed decision making, the Commission distinguishes between two related, but different, concepts:

- an obligation to provide reasons, which involves an active process of explaining the basis or rationale of a decision

- an obligation not to engage in opaque decision making, which means that the decision and the method by which it was made would be incapable of being scrutinised to discern key aspects of how and why it was made.

The Discussion Paper flagged the possibility of reform to address the second of these concepts.

Some stakeholders supported this general idea, on the basis that this was an important protection against unaccountable human rights infringements.[431] One stakeholder argued that such an obligation would not go far enough, in that it would not be equivalent to a right to reasons.[432]

Other stakeholders opposed, or offered only qualified support, for the creation of this sort of obligation.[433] Several stakeholders questioned the legal policy basis for rendering private decisions unlawful, or for imposing a higher threshold on private sector decisions when reasons are required for so few categories of decision.[434] Some considered creating an obligation not to engage in opaque decision making would violate the rule of technological neutrality,[435] and that this would be a disproportionate response that would inhibit innovation.[436]

(c) Research on explainable AI

'Explainable AI' is an emerging field of research, with experts and others in Australia and overseas calling for more work to be done in this area.[437]

The Commission acknowledges that there are significant challenges in designing and developing AI-informed decision-making systems that can yield reasons or explanations for the decisions that they produce. For this reason, the Discussion Paper called for research in this area to be prioritised.[438]

There was strong support for this proposal.[439] Stakeholders made some suggestions for how it could be implemented. For example, it should take account of existing research in this area, with a suggestion that grants not be limited to centres of expertise, and that funding be allocated to prioritise interdisciplinary research programs, so that legal and scientific objectives can be pursued holistically.[440]

(d) Conclusion: supporting explainable AI and the right to a remedy

A human rights approach requires access to an effective remedy where an individual's human rights have been breached.

(i) Non–government decision making

Unlike administrative decisions made by government, there are limited circumstances where an affected individual may be legally entitled to reasons for a decision by a private sector body.

There are some exceptions. For example, in some situations a telecommunications provider must explain a decision to a consumer, such as where a restriction is placed on supply of or access to a telecommunications service at the time of the application, a supplier must explain to the consumer the general nature of the reasons for the restriction at the time of application.[441]

Some stakeholders suggested, rightly in the Commission's view, that there may be a case for further exceptions. That is, there may be other non-government decision making where reform is warranted to create a legal entitlement to reasons.[442]

Where a non-government entity is legally required to provide reasons for a decision, this rule should apply regardless of how the decision is made, including where AI (especially automation) is used in the decision-making process. As a corollary, if there is currently no legal obligation to provide reasons, the use of AI in the decision-making process does not necessarily mean that a new obligation to provide reasons should be created. There are genuine commercial and technical obstacles to providing an explanation for AI-informed decisions.

The Commission applies the same general approach to administrative decisions in Chapter 5. There are thus two situations that require close attention, when it comes to the explainability of AI-informed decision making by non-government bodies.

The first is where a company or industry is already subject to a requirement to provide reasons for particular types of decision—either because this requirement is imposed by law or it applies via

a voluntary or similar code.[443] Such arrangements should continue to apply to AI-informed decision making.

The second situation relates to regulation, oversight and dispute resolution. Regulators, tribunals, courts and others commonly have powers to obtain information from non-government entities to fulfil their functions in this area. These powers to obtain information are often used in order to shed light on how or why a decision was made. Several regulators—including the Australian Competition and Consumer Commission (ACCC),[444] the Australian Securities and Investments Commission (ASIC)[445] and the Office of the Australian Information Commissioner (OAIC)[446]— have compulsory information-gathering powers, with penalties for non-compliance.

Such powers can involve the compulsory production of material to a regulator or dispute resolution body, or they can involve the provision of material by one party in a dispute to one or more other parties. For example, courts regularly supervise discovery and related processes in litigation, whereby one party is required to provide information relating to the dispute to another party.

Regulatory, oversight and dispute resolution bodies, including courts, rely on these powers to obtain the evidentiary material they need to fulfil their statutory, and sometimes constitutional, functions—namely to determine the true state of affairs in a given scenario and, ultimately, to uphold the law. However, the advent of opaque or black box AI means that those powers and functions could be frustrated where non-government entities, which are subject to the jurisdiction of these regulatory, oversight and dispute resolution bodies, opt to make decisions in a way that is incapable of providing the information those bodies need.

These bodies often focus their attention especially on areas of decision making that have serious human rights implications, such as consumer protection, workplace relations and access to services. For these reasons, there is a strong public interest in making clear that opaque or black box AI is unacceptable in decision making that affects people's legal and other similarly significant rights.

The Commission thus recommends that the Australian Government introduce legislation to preserve the vital functions and powers of regulatory, oversight and dispute resolution bodies, including courts. Specifically, the Government should make clear that where such a body orders a person (eg, a corporation) to produce material, this order cannot be refused simply because of the form of technology, such as AI, that the person uses in its decision-making and other processes.

Moreover, if the person fails to comply with the order because of the technology the person chooses to use, the body should be able to draw an appropriate adverse inference about the decision-making process and other related matters. In regulatory, oversight or dispute resolution processes, such a negative inference makes it more likely that the body will ultimately find against the person that has failed to comply with the order to produce material.

(ii)   Research into explainable AI

There is a trend towards building an explanation function into AI-informed decision making systems, including on the part of leading software companies.[447] Nevertheless, building an explanation into an AI-informed decision-making process can be technically difficult and expensive.

In the United States and elsewhere, there has been an increase in funding for research that aims to ensure AI-informed decision making can be explained.[448] Following the establishment of the Australian Research Council Centre of Excellence for Automated Decision-Making and Society in October 2019, Australia now has a similar opportunity. This Centre aims to formulate world-leading policy and practice and inform public debate, and to create the knowledge and strategies necessary for responsible and ethical automated decision-making.[449]

The Centre has already conducted collaborative research in these areas. The Commission supports that approach to research in this area, where multi-disciplinary collaboration can bring together different professional and academic perspectives.

7. Encouraging better AI–informed decision making

7.1 Summary

This chapter considers a range of government policy, co- and self-regulatory measures. These measures are important because, while formal regulation through legislation is important, it cannot be the sole means of promoting human rights and accountability in the use of AI-informed decision making.

The recommendations in this chapter are largely *preventative*, in the sense that they are designed to prevent problems, and especially human rights violations, from occurring.[450]

The measures recommended by the Commission include:

- *standards* and *certification*, typically considered at the design stage of AI-informed decision-making systems
- *regulatory sandboxes* and *human rights impact assessments*, including public consultation at the development stage
- rules for *government procurement* of AI decision-making systems, at the deployment stage
- the role of *human oversight and intervention* in the monitoring and evaluation stage.

Human rights
by design
[Rec 14]

Certification &
standards
[Rec 15]

Human rights
impact
assessments
[Rec 16]

Guidance on
human review,
oversight &
monitoring
[Rec 17]

Monitoring &
evaluation

Human rights
compliant
design

Designing
human rights
into AI-informed
decision
making

Use of AI

Training,
testing &
building

Human rights
approach to
government
procurement
[Rec 16]

Regulatory
sandboxes
[Rec 14]

7.2 The role of co–regulation and self–regulation

Co- and self-regulation—sometimes known as 'soft law'—commonly include measures such as codes of practice, guidelines, directives, industry or sector rules, protocols and other guidance.[451]

Self-regulation refers to when an organisation or a group of similar organisations

> voluntarily develops, administers and enforces its own solution to address a particular issue, and where no formal oversight by the regulator is mandated. Self-regulatory schemes are characterised by the lack of a legal backstop to act as the guarantor of enforcement.[452]

Numerous examples of self-regulatory measures have emerged from the tech sector in recent years. As discussed further below, 'AI ethical frameworks' are a particularly common form of self-regulation in this area.

Co-regulation generally refers to a process of collaboration—usually where an industry, sector or company works with government—in

> developing, administering and enforcing a solution, with arrangements accompanied by a legislative backstop. Co-regulation can mean that an industry or professional body develops the regulatory arrangements, such as a code of practice or rating schemes, in consultation with government. While the industry may administer its own arrangements, the government provides legislative backing to enable the arrangements to be enforced.[453]

Several Australian Government regulators have expertise in co-regulation. The Australian Communications and Media Authority (ACMA) has identified the optimal conditions for the development of co-regulation, including environmental factors, such as the competitiveness of the market where co-regulation is being developed, and regulatory factors, such as stakeholder participation in the development of the scheme and cooperation with the regulator.[454] The ACMA is currently overseeing the development of a voluntary code to address the issue of misinformation across digital platforms, as recommended by the ACCC's Digital Platforms Inquiry final report.[455]

A common benefit associated with self- and co-regulation is that they can be more flexible or adaptable to a changing environment, as compared with more conventional regulation via legislation. Stakeholders observed that this is particularly important in the context of AI, which is developing rapidly, and so such forms of regulation can set rules while also supporting innovation and the development of the digital economy.[456] On the other hand, the majority of stakeholders considered self-regulation should not be the sole means of protecting human rights in this area, and argued instead for self- and co-regulation to be an addition—rather than replacement—for stronger regulatory measures in law.[457]

7.3 AI ethical frameworks

In recent years, it has become common to refer to risks of human harm, associated with the development and use of AI, as *ethical* issues. For example, risks that AI might be used in ways that breach the right to privacy or equality are frequently referred to as ethical risks, even though they often have important legal implications.

A large number of self-regulatory initiatives—framed around ethical risks associated with AI—have been developed in response. Governments, private sector organisations and representative bodies, as well as civil society, have all developed ethical policies and principles that aim to guide the development and use of AI. This Final Report refers to such initiatives collectively as 'AI ethical frameworks'.

As explored in this section of the chapter, there are real questions about the effectiveness of many existing AI ethical frameworks in achieving their purpose—to guide companies, researchers and others involved in developing and using AI, to avoid harm.

To be effective in achieving its legitimate aims, the Commission considers that any AI ethical framework should:

1. not be treated as a substitute for the law. Rather, it should supplement, complement and reinforce the law

2. be consistent with international human rights law

3. be framed in a way that provides useful, practical guidance, especially for those who develop and use AI.

(a) The rise of AI and ethics

Ethical principles or rules tend to be self-regulatory. They guide the person responsible for a decision to make better decisions. Generally, ethics are not legally binding, although in some highly-regulated professions or industries such as medicine or law, they can be codified into a set of rules that are legally enforced.

Some AI ethical frameworks apply exclusively to AI, and others to a narrower or broader range of technologies and techniques. They can also apply broadly to all uses of AI, or they can be directed towards a particular area, such as the use of AI in healthcare.

Generally, an AI ethical framework is premised on an understanding of the particular risks of human harm that arise in a particular field of operation. Different AI ethical frameworks adopt different approaches in understanding risks of harm.[458] Sometimes that understanding draws on bodies of law, such as human or consumer rights;[459] sometimes it draws on areas of developed research or thinking, such as consequentionalist or teleological ethics; sometimes the understanding is more idiosyncratic, in the sense that it reflects the views and experience of the people who created the AI ethical framework in question.

AI ethical frameworks generally offer guidance and so are not legally binding. While it is possible for a legislature to incorporate an ethical framework into legislation, this has been rarely done in respect of ethics and AI.

In Australia, the most prominent AI ethical framework is the Australian Government's *AI Ethics Principles* (see Box 4).[460] There are also a range of industry-led AI ethical framework initiatives, such as Microsoft's *AI Principles*.[461]

The value of AI ethical frameworks lies in the extent to which they assist in identifying and addressing risks to humans in respect of AI-informed decision making. The Discussion Paper observed that, while AI ethical frameworks were a relatively new phenomenon, independent assessments of existing frameworks tended to cast down on their value and effectiveness.[462] As a result, the Commission sought stakeholder feedback on the place of AI ethical frameworks, and proposed a more detailed independent inquiry into these frameworks.

Box 4: Australian Government *AI Ethics Principles* [463]

In November 2019, the Australian Government released the *AI Ethics Principles*, which aim to 'foster public trust and enable adoption and development of AI'.[464] The Principles are:

- **Human, social and environmental wellbeing:** Throughout their lifecycle, AI systems should benefit individuals, society and the environment.
- **Human-centred values:** Throughout their lifecycle, AI systems should respect human rights, diversity, and the autonomy of individuals.
- **Fairness:** Throughout their lifecycle, AI systems should be inclusive and accessible, and should not involve or result in unfair discrimination against individuals, communities or groups.
- **Privacy protection and security:** Throughout their lifecycle, AI systems should respect and uphold privacy rights and data protection, and ensure the security of data.
- **Reliability and safety:** Throughout their lifecycle, AI systems should reliably operate in accordance with their intended purpose.
- **Transparency and explainability:** There should be transparency and responsible disclosure to ensure people know when they are being significantly impacted by an AI system, and can find out when an AI system is engaging with them.
- **Contestability:** When an AI system significantly impacts a person, community, group or environment, there should be a timely process to allow people to challenge the use or output of the AI system.
- **Accountability:** Those responsible for the different phases of the AI system lifecycle should be identifiable and accountable for the outcomes of the AI systems, and human oversight of AI systems should be enabled.

The Commission has received mixed feedback on the value and effectiveness of AI ethical frameworks to minimise harm to humans.

Some stakeholders saw benefit in at least some forms of AI ethical framework, especially where the framework is grounded in human rights law, or it can allow regulation that is faster to adapt than ordinary legislation tends to be.[465] However, many more stakeholders expressed strong scepticism about the effectiveness of existing AI ethical frameworks, especially those adopted by private companies.[466]

The most common concerns regarding existing AI ethical frameworks related to:

- the idea that AI ethical frameworks could serve as an *alternative* to binding laws that protect human rights and other important interests
- the lack of generally agreed normative content to provide the foundation of AI ethical frameworks
- the fact that a focus on ethics was inherently more vague and subjective than focusing on applying existing international and domestic human rights law.[467]

Several stakeholders did not support an independent inquiry into AI ethical frameworks. There was concern that this would distract from the more pressing task of applying binding laws to the use and development of AI, especially in decision making that affects people's legal or similarly significant rights.[468] Stakeholders also suggested drawing on existing work, here and overseas, assessing the effectiveness of AI ethical frameworks.[469]

Other stakeholders did see utility in such an inquiry.[470] They saw an inquiry as a chance to consolidate and harmonise the various initiatives in this area with a view to providing greater clarity and certainty of expectations.[471] This problem was particularly acute for multi-national corporations, which might be subject to a very large number of AI ethical frameworks.[472]

(b) Conclusion: AI ethical frameworks and regulation

The Commission acknowledges that AI ethical frameworks *could* play a valuable role in promoting human rights and accountability in respect of AI-informed decision making. However, many AI ethical frameworks have had limited positive impact in protecting human rights and addressing broader harms.

Recent research and evaluation suggest that some terms commonly used in AI ethical frameworks are vague or subject to differing interpretations. Too often, there is a wide gap between the principles espoused in AI ethical frameworks and how AI-powered products and services are actually developed and used. This can contribute to irresponsible and damaging use of AI.[473] Several experts have rejected self-regulatory ethical frameworks as a sufficient tool to protect human rights in the context of AI-informed decision making, advocating instead for more robust, enforceable accountability mechanisms, including those set out in law.[474]

The value of an AI ethical framework is primarily as a tool of self- or co-regulation, to assist those who develop and use AI to identify and address risks to people, especially in the context of AI-informed decision making. To achieve this goal, the following general principles should be applied.

First, an AI ethical framework should not be a substitute for the law. Rather, as in all other areas of activity, AI-informed decision making should be governed primarily by *law*. The starting point should be to apply our current laws more effectively in respect of AI-informed decision making, and to identify gaps in the law that require reform.

The legitimate role of an AI ethical framework is to supplement, complement and reinforce the law, by filling gaps where detailed legal regulation is inappropriate and by providing ethical guidance where the law does not, and should not, articulate a clear rule to follow.

The presence of an AI ethical framework cannot justify a government agency or company acting unaccountably, leaving affected individuals with no way of challenging an AI-informed decision or enforcing their rights.

Secondly, AI ethical frameworks should be consistent with international human rights law. Human rights law sets out agreed norms, as well as an extensive body of jurisprudence demonstrating how those norms should be applied in concrete situations. By contrast, current ethical frameworks have no equivalent agreed normative foundation.[475]

The importance of working from an agreed normative starting point is especially important given that many leading tech companies operate across multiple jurisdictions. A human rights approach rests on 'a level of geopolitical recognition and status under international law that no newly emergent ethical framework can match'.[476] As the UN High Commissioner for Human Rights observed in 2019, there is no need to 'start from scratch' in this area, given the strength of human rights to address the challenges posed by new and emerging technologies.[477]

Thirdly, an AI ethical framework should be practically useful, especially for those who develop and use AI. A legitimate criticism of many existing AI ethical frameworks is that they tend to be framed at a high level of abstraction or generality. For example, the principle 'do no harm' is common in such frameworks, but its precise meaning in the context of developing and using AI is not widely understood or agreed.

Such vague principles do not provide the level of specificity that an engineer, data scientist or someone else intimately involved in creating an AI-informed decision-making tool would need to ensure it is designed, developed and deployed in a way that protects human rights.

In its 2020 review of 47 ethical frameworks from across the world, Harvard University's Berkman Klein Center observed 'a wide and thorny gap between the articulation of these high-level concepts and their actual achievement in the real world'.[478] Similarly, a 2018 study found that expressly instructing software engineering graduate students and professional software developers to consider ACMA's Code of Ethics in their decision-making 'had no observed effect'.[479]

Instead, both the content of an AI ethical framework, and the way that content is communicated to the people who are responsible for applying the framework, need to reflect a real, practical understanding of how AI-powered products and services are developed. Among other things, this involves a broad, collaborative approach in developing AI ethical frameworks. As Gradient Institute has observed:

The people ultimately responsible for an AI system must also be responsible for the ethical principles encoded into it. These are the senior executives and leaders in business and government who currently make strategic decisions about their organisation's activities. The ethical principles that they determine will, as with the decision-making they already do, be informed by a mixture of their organisation's objectives, legal obligations, the will of the citizens or shareholders they represent, wider social norms and, perhaps, their own personal beliefs.[480]

The oversight of AI ethical frameworks, and guidance on applying principles such as those set out immediately above, should be within the remit of the AI Safety Commissioner (Recommendation 22). While recent research on AI ethical frameworks has reduced the need for a comprehensive independent inquiry in this area, it is appropriate for this proposed new body to have the power to review specific AI ethical frameworks from time to time.[481]

7.4 Human rights by design and AI

The Commission supports applying 'human rights by design' to AI. This involves systematically embedding human rights at every stage of the design, development, deployment and ongoing monitoring of products, services and systems that use AI.[482]

Human rights by design is a developing field, and is generally considered to include a number of core elements (see Box 5).

Box 5: Human rights by design approach

The Oxford Handbook of AI Ethics described four central pillars in applying human rights by design to 'AI systems', which includes AI-informed decision-making systems:

- *Design and deliberation:* systems should be designed to comply with international human rights law. The design process should include appropriate mechanisms such as public consultation for AI systems posing a high risk to human rights, which may lead to redesign or the incorporation of mitigation strategies

- *Assessment, testing and evaluation:* regular testing for human rights compliance from formulation of the initial proposal, through to design, development, prototyping and real-world implementation. Ongoing monitoring and periodic review should follow once the AI system has been deployed.

- *Independent oversight, investigation and sanction:* an independent, external, properly resourced and technically competent body should be established to oversee human rights compliance of the AI system, within a legally mandated institutional structure.

- *Traceability, evidence and proof:* AI systems should be designed to secure auditability, such that the system can be subject to a meaningful review and demonstrate ongoing human rights compliance.[483]

As stakeholders observed,[484] human rights by design often builds on and complements similar design-led approaches, especially:

- **Privacy by design**, which aims to ensure privacy is built 'into projects from the design stage onwards', and should be considered 'a fundamental component of effective data protection'. Privacy by design involves 'tak[ing] steps at the outset of a project that minimise risks to an individual's privacy, while also optimising the use of data'.[485]

- **Safety by design**, a set of principles developed by the Australian eSafety Commissioner, which guide companies to use a design process to assess, review and embed user safety into online services, providing an achievable voluntary standard for private industry.[486]

There was strong support among stakeholders for encouraging human rights by design in research and development using AI, with stakeholders seeing benefit in embedding human rights protection at the earliest stages of the AI life cycle.[487] Stakeholders encouraged wide consultation with a range of experts, decision makers and with those who will be impacted by the use of AI in decision making.[488] Human rights by design could also be applied through algorithmic or human rights impact assessments.[489]

There was a recognition that Australia would benefit from a process, led by an expert taskforce, to develop the human rights by design concept further, and make it easier to apply to the development and use of AI in decision making.[490]

The Commission encourages those responsible for designing, developing and overseeing AI-informed decision-making systems to adopt a human rights by design approach from the earliest stages of considering and developing such systems. This approach can help government and non-government bodies to identify and address human rights issues before they result in rights breaches. It can also support and reinforce the legal mechanisms discussed in Chapters 5 and 6.

While human rights by design is still in its relative infancy, it is similar to other design-led approaches that can drive positive results. There are also parallels with approaches like human rights due diligence, which has been used by the private sector to assess the human rights impacts of their operations across the supply chain.[491]

As set out in Recommendation 14 below, the Commission recommends practical steps to embed the principles of human rights design in the development of AI-informed decision making.

7.5 Design standards and certification

Voluntary standards and certification schemes can help to promote human rights and accountability, especially in the design of AI-informed decision-making systems.

Standards set out 'specifications, procedures and guidelines that aim to ensure products, services, and systems are safe, consistent, and reliable'.[492] A standard can apply to particular groups or industries, with some standards operating within a national or sub-national jurisdiction or more broadly across multiple nation states. Standards tend to be voluntary, but like ethical frameworks, standards can be given the force of law, through legislation.

The Commission recommends (see Recommendation 14) that a multi-disciplinary taskforce consider ways to develop and apply voluntary standards and certification schemes for AI.

(a) Experience in Australia and overseas

There is already a substantial body of work regarding global standards for AI. This includes the work of professional bodies, such as the IEEE's guide to 'ethically aligned design' for autonomous and intelligent systems, and international organisations, such as the OECD's *Principles on AI*.[493] The European Commission has also considered how the EU's existing safety and product liability regulatory framework, including product standards, apply to AI, IoT and robotics.[494]

The Australian Government's 2020 *AI Action Plan* states that 'standards will be a key enabler in helping businesses confidently adopt AI solutions'.[495] While the Government has not incorporated any AI standards into Australia law or policy, in 2019, it provided funding to Standards Australia, to consult on the development of standards to AI.[496] The resultant *AI Standards Roadmap* sets out steps to support the development of standards for AI in Australia.[497]

The Government's *AI Ethics Principles* also contains general principles for designing, developing, integrating or using AI.[498]

Stakeholders recognised that voluntary standards offer flexibility in protecting human rights, and they can be developed with the private sector as a co-regulatory measure.[499] Some argued that standards could help promote design of AI-informed decision-making tools that bring human rights to the fore, especially when standards have legal force.[500]

Standards share some common features with voluntary certification or 'trustmark' schemes. These schemes tend not to be legally binding, but they can incentivise compliance, especially by influencing consumer choice. The EU's GDPR, for example, encourages Member States to establish 'data protection certification mechanisms' and 'data protection seals and marks' to demonstrate compliance with the Regulation.[501]

Stakeholders expressed interest in the use of trustmarks to certify products and services using AI as ethically or human rights compliant.[502] Several stakeholders specifically referred to the idea advanced by Australia's then Chief Scientist, Dr Alan Finkel, to establish a 'Turing Stamp'—a proposed voluntary certification scheme for 'ethical AI' that would be independently audited.[503]

The OAIC has supported a certification scheme as a means of ensuring that individuals are provided with information about the privacy credentials of third parties, such as businesses, they interact with.[504]

There was some opposition to the idea of a certification scheme applying to AI generally; rather, certification should be sector specific and proportionate to the risk of identified harms.[505] One stakeholder cautioned against any kind

of certification scheme, noting the difficulty of obtaining a sufficient level of expertise to govern such a scheme, and questioning whether certification would lead to better decision making by the public.[506]

There was support among stakeholders for a multidisciplinary taskforce, informed by public consultation, to advance Australia's approach to standards and certification schemes in the area of AI generally, and AI-informed decision making in particular.[507]

(b) Conclusion

The Commission supports the development of voluntary design standards and certification schemes in respect of AI-informed decision making. Such initiatives can help bring human rights issues to the fore at the early stages of the AI life cycle, and is supported by the UN Guiding Principles on Business and Human Rights.[508]

In its current review of federal privacy law, the Australian Government is considering the 'desirability and feasibility of an independent certification scheme to monitor and demonstrate compliance with Australian privacy laws'.[509] This

is a good idea. However, any such certification scheme should take into account all human rights that are engaged by AI-informed decision making.

In the Commission's view, a multi-disciplinary taskforce (see Recommendation 14) should consider:

- how to develop human rights compliant standards for AI-informed decision making, building on the Australian Government's *AI Action Plan*
- whether these standards, guided by human rights, should be given legislative force
- whether a self- or co-regulatory certification scheme should be established in this area and, if so, how the scheme should operate
- how to ensure standards and certification are integrated into international processes, given recommendations in the Standards Australia *AI Roadmap*, referred to in the Government's *AI Action Plan*.[510]

The taskforce should consult with a range of experts, both here and overseas, across a range of disciplines, including human rights, law and engineering.

7.6 Regulatory sandboxes

> **RECOMMENDATION 14:** The Australian Government should convene a multi-disciplinary taskforce on AI-informed decision making, led by an independent body, such as the AI Safety Commissioner (Recommendation 22). The taskforce should:
>
> (a) promote the use of human rights by design in this area
>
> (b) advise on the development and use of voluntary standards and certification schemes
>
> (c) advise on the development of one or more regulatory sandboxes focused on upholding human rights in the use of AI-informed decision making.
>
> The taskforce should consult widely in the public and private sectors, including with those whose human rights are likely to be significantly affected by AI-informed decision making.

A regulatory sandbox is a controlled environment, created by a regulator, to enable people to test new products, services or practices under the regulator's supervision.

Regulatory sandboxes are especially popular in the context of new and emerging technologies. They aim to facilitate dialogue with policy makers, and enable regulators 'to try out new rules and observe their impact on the technology in an environment where wider damage or danger to the public is limited'.[511] Experience from the operation of the sandbox can be used to inform policy and regulation.[512]

Regulatory sandboxes can provide mutual benefit to both the regulator and participant, including:

- reducing regulatory uncertainty for innovators

- providing an opportunity to discuss, in confidence and candidly, the potential uses of new technologies

- obtaining early warning that a feature of a new product may not be acceptable, allowing that feature to be modified.[513]

On the other hand, some criticise the regulatory sandbox concept because it:

- can create a risk or perception that regulators inappropriately support or favour certain tech start-ups

- may create limited safeguards against harm to individuals

- can inappropriately lower barriers to entry in areas where the actual risk of harm to humans is high.[514]

In the specific context of AI, there can be a tension between the need to be candid with a regulator, and the commercial sensitivity of an opaque algorithm.

Noting this complexity, the Commission sees benefit in trialling regulatory sandboxes for AI-informed decision making, as a way of promoting responsible innovation. This chapter recommends expert advice be commissioned on the use of regulatory sandboxes for AI-informed decision making.

(a) Options for reform

Some see regulatory sandboxes as a way of supporting innovation, while enabling regulators to test new regulatory models. To date, regulatory sandboxes have been deployed mostly in the 'FinTech' area—that is, in respect of technology that enables or supports banking and financial services.

In Australia, ASIC is running an 'enhanced regulatory sandbox' that exempts the provider of an eligible financial product, service or credit activity from relevant licensing requirements for up to 24 months while the entity participates in the sandbox.[515]

Other jurisdictions have begun to establish regulatory sandboxes in areas more closely aligned with human rights, such as the protection of data privacy (see Box 6.)

Box 6: UK Information Commissioner's Office regulatory sandbox

In 2019, the UK's ICO introduced a regulatory sandbox to support organisations developing products and services that 'use personal data in innovative and safe ways and … deliver a potential public benefit'.[516]

In 2020, the ICO published a report on the participation of the National Health Service's NHS Digital, which was developing a central consent mechanism for patients to agree to share their personal data, including with researchers working on a COVID-19 vaccine.[517] The NHS sought advice from the ICO regarding the service, including the project's privacy impact, issues regarding notification and consent, compliance with the GDPR and UK data protection legislation.

The regulatory sandbox process was considered to be of mutual benefit to the ICO as regulator and the NHS. The ICO gained a better understanding of the sharing of patient data and the interaction of privacy and other related laws and policies. The NHS, developing the service under tight timescales, received expert advice that gave it confidence it would respect privacy and related rights and maintain public trust.[518]

A key area of focus for the 2020-21 regulatory sandbox for the ICO is the development of products or services 'that support complex data sharing in the public interest', but where the data sharing may pose a high risk to the public and information rights, involve the processing of personal data, or use novel or innovative techniques.[519]

There was support among stakeholders for the use of regulatory sandboxes to 'bake in' human rights protections in the design and development of emerging technologies.[520]

Stakeholders identified a range of potential benefits of using regulatory sandboxes to protect human rights, including:

- fostering a more open engagement between regulators, government agencies and the private sector, particularly small to medium-sized enterprises[521]
- the potential for early identification of risks or breaches of regulation, which can save costs associated with products and services that are unviable[522]
- the early identification of risks or rule breaches can also be used to improve the regulatory system itself[523]
- the building of public trust in AI that has been subjected to this adapted form of regulation.[524]

Stakeholders encouraged a broad view of what could be tested in a regulatory sandbox, including not only new technology products but also methods of review and evaluation.[525] Stakeholders also pointed to the importance of learning from sandboxes that have already been established, or suggested that human rights be added as a measurement to existing sandboxes.[526]

Stakeholders commented on the parameters of the sandbox, including in relation to:

- *its focus*, such as the testing of an AI-informed decision-making system for algorithmic bias and fairness, measuring compliance of an AI product or service with data access and sharing rules, or the consideration of specific technologies such as facial recognition technology or self-driving vehicles
- *eligibility,* including that it be an opt in, with no incentive offered other than the benefits of co-regulatory collaboration
- *applicable regulation,* including assessing adherence to domestic and international human rights law
- *the overseeing regulator,* including the benefits of collaboration between different regulators with their relevant expertise, and the importance of resourcing the overseeing regulator to ensure a proactive and strong regulatory approach.[527]

Stakeholders also noted the importance, in this context, of protecting commercially-sensitive information and intellectual property.[528]

(b) Conclusion: developing a regulatory sandbox for responsible AI

As AI is relatively new, it can be difficult to predict how it will operate in decision making and more broadly. Yet such prediction is crucial in creating the right regulatory settings. This problem can be exacerbated by a 'move fast and break things' ethos, which is common in the technology industry.[529]

A result can be that AI-powered products and services are sometimes not being rigorously tested before being publicly released.[530] Inadequate testing can cause harm, including to human rights and public trust. High-profile examples include an AI-powered chatbot that made racist statements,[531] and a facial-recognition application that mislabelled some people with dark skin as gorillas.[532]

Anticipatory regulation, however, is inherently difficult in the context of rapidly-evolving technology like AI. As a result, some laws that do not sufficiently address human rights risks, or are so restrictive that they disproportionately limit innovation.

The Commission sees benefit in one or more Australian regulatory sandboxes, focused on assessing the human rights impact of AI-informed decision making. This could help to encourage such uses of AI to be tested more rigorously, and in developing effective regulation.

Overseas experience supports a growing role for regulatory sandboxes to facilitate a co-regulatory approach that is of mutual benefit to the sandbox participant and the regulator. This would also be a way of Australia making good on its commitment to abide by the OECD AI Principles, which calls on governments to

> promote a policy environment that supports an agile transition from the research and development stage to the deployment and operation stage for trustworthy AI systems. To this effect, they should consider using experimentation to provide a controlled environment in which AI systems can be tested, and scaled-up, as appropriate.[533]

To this end, the Commission recommends that an expert taskforce on AI advise on the development of one or more regulatory sandboxes focused on upholding human rights in the use of AI-informed decision making.

7.7 Human rights impact assessments

> **RECOMMENDATION 15:** The Australian Government should appoint an independent body, such as the AI Safety Commissioner (Recommendation 22), to develop a tool to assist private sector bodies undertake human rights impact assessments (HRIAs) in developing AI-informed decision-making systems. The Australian Government should maintain a public register of completed HRIAs.

As discussed in Chapter 5, a human rights impact assessment (HRIA) is a tool to assess how a new product, service, law or policy will engage human rights. It also provides a framework for ensuring adequate rights protections.

HRIAs are increasingly being used by government, the private sector and civil society organisations to measure the risk to human rights posed by their activities, ensure that measures are put in place to address human rights risks, and support the availability of remedies for any human rights infringements.

Drawing on current research and the UN Guiding Principles on Business and Human Rights, the Danish Human Rights Commission recently published a toolkit for businesses seeking to conduct HRIAs, which emphasises:

- using international human rights law as a basis and benchmark for the HRIA

- applying a human rights approach, including principles such as participation, empowerment and transparency

- accountability, recognising the rights owed to individuals and corresponding duties borne by governments, businesses and others.[534]

The Commission recommends that the Government develop an HRIA tool for use in AI-informed decision making.

(a) Options for reform

There was strong support, from the public and private sectors, for the Australian Government to develop an HRIA tool and associated guidance for AI-informed decision making.[535] Some stakeholders also observed that an HRIA will only protect human rights if situated within a strong regulatory framework.[536]

Stakeholders also commented on a number of specific issues regarding HRIAs, including:

- *how the HRIA tool should be developed.* Stakeholders generally submitted that there should be broad community consultation in developing an HRIA tool. Stakeholders also emphasised HRIAs should be developed by an independent body, such as an existing regulator or the AI Safety Commissioner (Recommendation 22), and be embedded with accountability measures.[537]

- *when an HRIA should be undertaken.* Stakeholders were clear that the HRIA should be embedded throughout the AI life cycle, from the design of an AI product through to the monitoring and review of an AI-informed decision-making system in operation.[538] HRIAs should be undertaken by people with sufficient human rights expertise to ensure a meaningful process.[539]

- *mandatory or voluntary.* Some stakeholders supported making HRIAs mandatory, particularly where AI-informed decision making is being contemplated by government.[540] Others observed that HRIAs may still have considerable influence even if not legally required, including where they are encouraged through measures such as government procurement rules.[541]

- *the consequences of a high risk finding.* Stakeholders observed that where an HRIA highlighted a high risk of a human rights breach, especially before the relevant AI-informed decision-making system is in operation, this presents an opportunity to address the *potential* harm before any individual is negatively affected in reality.[542]

- *how the HRIA should be applied to AI-informed decision-making systems developed overseas.* Stakeholders recognised the difficulty in Australia regulating something, including an AI-informed decision-making system, that has been developed overseas.[543] For this reason, there was a desire for Australia to work towards a harmonised approach internationally to undertaking HRIAs.[544] Some stakeholders considered that, in any event, where such a system is to be used in Australia, it should be subject to an Australian HRIA process, and if it is non-compliant it should be prohibited.[545]

(b) Conclusion

The Commission considers that the use of HRIAs would help to identify and address human rights issues at the earliest stage of the design, development and deployment of AI-informed decision-making systems.

The Australian Government's *AI Action Plan* recognises the need to assist corporations and other private sector bodies by ensuring the 'compliance burden of regulation is proportionate and specific to the risks associated with particular AI applications'.[546] Similarly, the Government's *AI Ethics Principles* note the importance of careful consideration of human rights risks.[547]

The Australian Government could make good on this recognition by developing a tool to assist corporations and others to undertake HRIAs in this area. At this point, the Commission does not propose that HRIAs be mandatory for AI-informed decision making by non-government bodies.

The effectiveness of any HRIA relies on it being a well-considered, rigorous process. In developing a tool for HRIAs in this area, it would be sensible to draw on other similar initiatives. These include:

- the Canadian Government's algorithmic impact assessment process, which aims to identify and mitigate risks associated with automated decision making[548]

- the AI Now Institute's algorithmic impact assessment accountability tool for public service use of algorithmic and automated decision making[549]

- Microsoft and Article One's HRIA tool, which can be used to examine human rights risks and opportunities related to AI.[550]

HRIAs are similar to other impact assessments, such as privacy impact assessments,[551] but are more comprehensive in addressing the full range of human rights engaged by AI-informed decision making. HRIAs could also help to provide tangible evidence of a company acting ethically. For instance, where a company completes an HRIA, it could help to show human rights compliance in a government procurement process.

7.8 Government procurement

> **RECOMMENDATION 16:** The Australian Government should adopt a human rights approach to procurement of products and services that use artificial intelligence. The Department of Finance, in consultation with the Digital Transformation Agency and other key decision makers and stakeholders, should amend current procurement law, policy and guidance to require that human rights are protected in the design and development of any AI-informed decision-making tool procured by the Australian Government.

Procurement of goods and services by the Australian Government is regulated by a combination of laws, policies and guidance documents.[552] The 'core rule' underpinning the Australian Government's procurement system is achieving 'value for money'.[553] Certain procurement processes by Government departments and agencies must comply with the Commonwealth Procurement Rules made under the *Public Governance, Performance and Accountability Act 2013* (Cth).[554]

The Digital Transformation Agency (DTA) has a central role in large-scale government procurement of information and communications technology (ICT). The DTA's framework for ICT procurement includes best-practice principles to guide government agencies in sourcing ICT products and services. These principles include 'encouraging competition', and they urge agencies to be 'innovative and iterate often', be 'outcomes focused' and 'minimise cyber-security risks'.[555]

It is increasingly common to use government procurement processes as a lever to influence behaviour to achieve other policy outcomes. For example, Innovation and Science Australia identified government procurement to be a 'strategic lever' to stimulate and promote innovation.[556] Similarly, a UK

parliamentary committee recommended 'targeted procurement to provide a boost to AI development and deployment' and 'to capitalise on AI for the public good'.[557]

The Australian Government, like other governments,[558] has a significant level of committed investment in AI-powered products and services, and so it is natural that it should seek to influence the market positively in this area.[559]

Moreover, the Australian Government generally develops AI-informed decision-making systems in partnership with the private sector. Consequently, it is vital that the Government procures AI-informed decision-making systems that are safe and protect human rights. The Commission recommends the Government review its procurement rules and policies to ensure they reflect a human rights approach in respect of products and services that use AI.

(a) Options for improving government procurement

There was broad support among stakeholders for government agencies to include human rights protections whenever they procure an AI-informed decision-making system.[560] Stakeholders saw procurement rules as an important lever to secure transparent, explainable and accountable use of AI in decision making by government.[561]

Some stakeholders emphasised the often-sensitive nature of government decision making and potential impact on vulnerable people, which heightens the importance of ensuring that AI-informed decision making complies with human rights.[562]

Other stakeholders sought clarification on the meaning of human rights in this context.[563] Given that AI-powered goods and services are often developed overseas, it could be difficult for Australia to impose higher or different standards compared with those adopted in larger markets.[564]

The AI Now Institute suggested that these challenges could be addressed by including waivers regarding trade secrecy or other such commercial barriers to sharing information, referring to its Shadow Report to the New York City Automated

Decision System Task Force.[565] KPMG Australia submitted that a supplier from a high-risk jurisdiction should be required to demonstrate compliance with international human rights standards, rather than compliance only with local law.[566]

(b)   Conclusion

Increasingly, governments are using AI to make decisions that have a momentous impact on the human rights of their citizens, including in relation to housing, health services, employment, social security and criminal justice. Those decisions can disproportionately affect people who are already vulnerable or disadvantaged.

The Australian Government generally works with, and relies on, the private sector to develop AI-informed decision-making systems. It is well recognised, therefore, that government procurement should focus on ensuring these systems are safe and comply with human rights.[567]

The UK Government's Artificial Intelligence Office, for example, published guidelines for AI procurement in 2020. The ten guidelines focus on ensuring the specific risks associated with AI technology are identified and managed early in

the procurement phase, and they recommend explainability and interpretability of algorithms be included as design criteria.[568] The UK Government partnered with the World Economic Forum and industry bodies to produce a procurement toolkit to guide responsible—and human rights compliant—procurement of AI by the public sector (see Box 7).[569]

Civil society organisations have also recognised the potential of government procurement to incentivise the development of human rights compliant AI for use in decision making. Access Now, for example, has recommended open procurement standards be followed by the public sector, including 'publication of the purpose of the system, goals, parameters, and other information to facilitate public understanding', including providing for a period for public consultation, particularly with affected groups.[570]

Similarly, the AI Now Institute has developed detailed questions to support transparent and accountable public sector procurement of AI-informed decision-making systems, such as requiring vendors to provide detailed information regarding training and input data for the AI tool, including plain language descriptions regarding how the system makes determinations.[571]

Box 7: World Economic Forum AI Government Procurement Guidelines

The World Economic Forum has proposed 'actionable procurement guidelines' for government procurement of AI-powered products and services, to 'enable good decision-making that can also be evaluated'.[572] Acknowledging that public procurement has been shown to deliver strategic outcomes in areas such as human rights, it notes that poor procurement decisions in respect of AI 'can limit accountability, undermine social values, entrench the market power of large businesses, decrease public trust and ultimately slow digital transformation in the public sector.'[573]

The toolkit offers guidance on matters such as using AI risk and impact assessments—including HRIAs—to inform the procurement process and ensure mitigation strategies are adopted.[574] Other key considerations include: the availability of technical information and any governance considerations of obtaining relevant data; whether limitations on using personal data may render the end product inappropriate, unreliable or misleading; feedback obtained from a diverse and multidisciplinary team, and requiring tender information to include information about the design team of the AI system.[575]

The Australian Government should adopt a human rights approach to government procurement of important products and services that use AI. This will ensure that the Government continues to meet its human rights obligations through any outsourcing or contracting arrangement. This process should consider:

- amending the DTA's Digital Sourcing Framework for ICT procurement to include a specific reference to human rights protection

- a requirement for any vendor of an AI-informed decision-making system to complete a human rights impact assessment

- guidance to support government decision makers to assess whether an AI-informed decision-making system will support compliance with the legal measures guaranteeing a right to a remedy[576]

- compliance with relevant Australian and international standards.

7.9 Monitoring and evaluation: human oversight and intervention

RECOMMENDATION 17: The Australian Government should engage an expert body, such as the AI Safety Commissioner (Recommendation 22), to issue guidance to the private sector on good practice regarding human review, oversight and monitoring of AI-informed decision-making systems. This body should also advise the Government on ways to incentivise such good practice through the use of voluntary standards, certification schemes and government procurement rules.

There is an important role *for people* in overseeing, monitoring and intervening in AI-informed decision making. Human involvement is especially important to:

- review individual decisions, especially to correct for errors at the individual level

- oversee the operation of an AI-informed decision-making system to ensure the system is operating effectively as a whole.

The Commission recommends that the Australian Government provide guidance for the private sector on good practice for human review of AI-informed decisions. There may be a case for making human review mandatory for the private sector. However, in the first instance, the Commission recommends that the Government focus on methods to *incentivise* human review through the use of voluntary standards, certification and government procurement rules.

(a) Options for review of AI–informed decisions

Adopting an AI-informed decision-making system involves choosing the extent to which *humans* will be involved in the decision-making process. It is extremely rare to adopt a wholly automated or 'unsupervised' system, with no human involvement or oversight.

The level and quality of human involvement in an AI-informed decision-making system will be determined by the answers to questions such as the following:

- To what extent is the decision-making process automated or unsupervised? In other words, is the decision made wholly using AI, or is AI used to provide a recommendation or other information that a *human* can consider in making a decision?

- What kind of human oversight is provided for? Can a human overturn and replace a decision made using AI?

- What information about the operation of AI is provided to the human fulfilling the oversight function? Is the human appropriately qualified to understand this information?

- To what extent do humans monitor the operation of the system as a whole, making any adjustments necessary to improve its operation?

The European Commission's *Ethics Guidelines for Trustworthy AI* summarises three levels of human involvement in an AI-informed decision-making system:

- 'human-in-the-loop', which is the 'capability for human intervention in every decision cycle of the system'- although the Guidelines also acknowledge that 'in many cases [this] is neither possible nor desirable'
- 'human-on-the-loop', where humans are involved in designing the system and monitoring its operation
- 'human-in-command', which is the human 'capability to oversee the overall activity of the AI system (including its broader economic, societal, legal and ethical impact) and the ability to decide when and how to use the system in any particular situation' including deciding not to use AI, establishing levels of human discretion or giving human decision makers the ability to override a decision.[577]

Many stakeholders expressed deep concern about the phenomenon of AI-informed decision making that is wholly unsupervised or has inadequate supervision by humans. They argued that human oversight is essential at all critical points in the design, development, use and monitoring of AI-informed decision making.[578]

There was broad concern—among civil society, government and academic stakeholders—that there is often inadequate human oversight for AI-informed decision making by the private sector, especially given such decisions can significantly affect individuals' human rights.[579]

Some stakeholders saw a right of review by a human decision maker as being the most appropriate way of involving humans in AI-informed decision making.[580] There was also support for oversight of the overall operation of AI-informed decision-making systems, such as by way of audit, to ensure ongoing accountability for the system's outputs.[581]

However, there was opposition to the idea of introducing a general legal requirement on the private sector to adopt a particular form of human oversight for AI-informed decision making. It was observed that human involvement does not necessarily improve the quality of decision making.[582] For example, human involvement can introduce human bias or prejudice.[583] Moreover, for some tasks, AI-powered applications already outperform humans, making it difficult to design oversight in a way that improves the decision-making process.[584]

(b) Conclusion: improving review and oversight of private sector use of AI

(i) Reviewing individual decisions

Where government makes administrative decisions using AI, affected people should be able to seek independent merits review and judicial review.[585]

Where a private sector body makes an AI-informed decision, it is good practice for the body to allow an affected person to have the decision reviewed by a human with appropriate authority, skills and information. The purpose of this review would be to identify and correct any errors that have arisen through the use of AI in the decision-making process.

The Commission acknowledges that providing for such review can be difficult. Often there will be a need for a significant level of technical knowledge regarding the form of AI.[586] Sometimes expertise from outside the organisation that made the decision will be needed.[587]

In view of such challenges, the Commission recommends that the Australian Government provide guidance for the private sector on effective human review of AI-informed decisions. Ideally, this should be developed by the AI Safety Commissioner (Recommendation 22). The Commission also recommends that options be considered for *incentivising* human review through the use of voluntary standards, certification and government procurement rules.

Some overseas jurisdictions have gone further, *requiring* a form of human review—at least for some types of AI-informed decision made by non-government bodies. In particular, Article 22 of the GDPR provides for 'human intervention' to enable an individual affected by an automated decision to express their view and contest the decision.

The Commission does not presently recommend that private sector bodies be *legally required* to make provision for human review. While this view may change, the Commission is not currently convinced that mandating human review by private sector bodies would be desirable. The reasons for this view include:

- A different system of legal accountability applies to decisions made by the private sector, as compared to administrative decisions by or on behalf of government. There is no equivalent to the administrative law system of review for private sector decision making.

- There are other legal protections, which can be adjudicated by courts and tribunals, that apply to private sector decision making. For example, where a company is responsible for an AI-informed decision that involves unlawful discrimination, this can be challenged in courts and tribunals.

- Given the breadth of AI-informed decision making, the almost infinite potential for it to expand further, and the fact that some decisions cannot currently be made more accurately by humans without the assistance of AI, it would be very difficult to legislate a specific form of review that would be suitable for all types of AI-informed decision making.

(ii) System-level oversight

The Government and private sector also should consider the need for human oversight of the operation of AI-informed decision-making systems. The aim of this form of human oversight is to ensure the system is operating effectively as a whole.

The Commission considers that such oversight should occur at all stages of the AI lifecycle: in the design and development of AI-informed decision-making systems; when these systems are being tested in a controlled environment; and at regular intervals after they have begun operating 'in the real world'.

As with human review of individual AI-informed decisions, the Commission recommends that the Australian Government provide guidance in respect of system-wide oversight and monitoring of these systems, and consideration be given to incentivising such activity through standards, certification and government procurement rules.

8. AI, equality and non-discrimination

8.1 Summary

Artificial intelligence can enable good, data-driven decision making. The use of AI can allow large amounts of relevant information to be considered, sifting out anything that is irrelevant to the decision-making process.

However, there is a growing awareness that the use of AI does not always achieve this objective. It can sometimes result in decisions that are unfair or even discriminatory. This problem is often referred to as 'algorithmic bias'.

Unfairness and discrimination can arise in all forms of decision making, not just AI-informed decisions. The problem sometimes stems from conscious, as well as subconscious or unconscious, bias and prejudice. However, the use of AI can have the effect of obscuring and entrenching unfairness or even unlawful discrimination.[588]

This chapter sets out some of the key issues relating to algorithmic bias, and its connection to unlawful discrimination. It recommends greater guidance for government and non-government bodies in complying with anti-discrimination law in the context of AI-informed decision making.

8.2 AI and the risk of discrimination

Under international law, unlawful discrimination occurs when a person is treated less favourably than another person or group because of their race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.[589]

This right has been largely incorporated into Australia's federal, state and territory laws. Federal anti-discrimination laws prohibit discrimination on the basis of protected attributes that include an individual's:

- age
- disability
- race, including colour, national or ethnic origin or immigrant status
- sex, pregnancy, marital or relationship status, family responsibilities or breastfeeding
- sexual orientation, gender identity or intersex status.[590]

Some state and territory laws offer more extensive anti-discrimination protection in their respective jurisdictions, as compared with federal law.[591]

Under federal law, it is unlawful to discriminate against a person on the basis of a protected attribute, in providing or refusing to provide goods, services or facilities.[592] Discrimination can be direct or indirect. 'Direct discrimination' is where a person is treated differently from others. By contrast, 'indirect discrimination' occurs when an unreasonable rule or policy applies to everyone but has the effect of disadvantaging some people because of a personal characteristic they share.

Indirect discrimination can arise where apparently innocuous information is, in reality, a 'proxy' or indicator for a protected attribute. For example, if large numbers of people of the same ethnic origin happen to live in a particular suburb or neighbourhood, the postcode where an individual lives can become a proxy or likely indication of the individual's ethnic origin.[593] If a decision is made by reference to that proxy, and the decision unfairly disadvantages members of that ethnic group, it could lead to indirect discrimination.

(a) Algorithmic bias

While 'algorithmic bias' is not a term of art, it is usually understood to refer to the situation where AI is used to produce outputs that treat one group less favourably than another, without justification. Algorithmic bias can include statistical bias—long familiar to computer scientists, data analysts and statisticians—as well as concepts of fairness, equality and discrimination. It can arise through problems with the data being used by the AI-powered system or tool, or because of problems with the system or tool itself.

The use of AI can assist in identifying and addressing bias or prejudice that can be present in human decision making,[594] but it can also perpetuate or entrench such problems. In a recent review of algorithmic decision making in the recruitment, financial services, policing and local government sectors, the UK Government's Centre for Data Ethics and Innovation concluded:

> New forms of decision-making have surfaced numerous examples where algorithms have entrenched or amplified historic biases; or even created new forms of bias or unfairness. Active steps to anticipate risks and measure outcomes are required to avoid this.[595]

Examples of the problem of algorithmic bias, which in some situations can involve unlawful discrimination, are emerging in decision making in the criminal justice system, advertising, recruitment, healthcare, policing and elsewhere.

Where an algorithm is expressly designed to exclude a particular group, or where it gives extra weight to a protected attribute such as race, age, or gender, it is likely to disadvantage people by reference to those protected attributes. In these situations, discrimination may be easy to identify.

However, unfairness or discrimination also can be difficult to detect and address. Much will depend on the data used to train an AI-informed decision-making system.[596] Some refer to data science's 'garbage in, garbage out' problem, where a 'flawed' data set is used to produce decisions that are unreliable, unfair or discriminatory.

Such flaws can arise, and lead to algorithmic bias, for a variety of reasons. Examples include where the AI-informed decision-making system is designed in a way that:

- gives undue weight to a particular data set
- relies on a data set that is incomplete, out of date or incorrect, or
- uses a data set that is affected by selection bias—that is, where the data set is not representative of a population so may ultimately favour one group over another.[597]

There has been growing attention to the problem that arises where an AI-informed decision-making system is 'trained' on historical data that is affected by prejudice or unlawful discrimination.

For instance, imagine AI is used to make home loan decisions. If the AI-informed decision-making system is trained on many years of human decisions that were prejudiced against female loan applicants—in other words, if the training data contains a historical bias—the system can replicate or even reinforce this bias in its outputs.

This historical bias might be 'hidden' in the training data, in the sense that it is difficult to discern the unfair disadvantage. Yet the AI-informed decision-making system will continue to apply this disadvantage to female loan applicants, even if there is no longer any underlying prejudice or other improper motivation in the design of the system.[598]

An oft-cited example is a recruitment tool that favoured male over female candidates. The algorithm was trained to identify patterns in job applications received by the company over a 10-year period. As most of the job applicants were male, the system 'learned' that male applicants were preferable, and generated recommendations for the future workforce accordingly.[599]

Similarly, profiling individuals through data mining in order to draw inferences about their behaviour carries risks of unfair and discriminatory treatment.[600] This, too, can lead to unlawful discrimination. The UN Committee on the Elimination of Racial Discrimination recently completed a three-year study on the use of AI in a policing context, identifying a greater risk of racial profiling arising from the use of certain AI methods.[601]

8.3 Anti–discrimination law reform or guidance

> **RECOMMENDATION 18:** The Australian Government should resource the Australian Human Rights Commission to produce guidelines for government and non-government bodies on complying with federal anti-discrimination laws in the use of AI-informed decision making.

In principle, it is unlawful to discriminate in AI-informed decision making, just as it is in more conventional decision making. However, novel problems can arise in applying anti-discrimination law to AI-informed decision making.

For example, determining whether an individual has been treated differently based on a protected attribute can be difficult where there is a combination of variables entered into a machine-learning algorithm. If reasons or an explanation are not produced for an AI-informed decision, this can make it even more difficult, if not impossible, to determine whether unlawful discrimination has occurred.

Stakeholders requested the Commission or another expert body issue guidance on avoiding discrimination in AI-informed decision making.[602] Depending on how it is used, AI can either reduce or increase the risk of unfairness and unlawful discrimination. Consequently, this chapter recommends that the Commission be resourced to produce detailed guidance in this area.

The Australian Government's *AI Ethics Principles* state that AI systems 'should not involve or result in unfair discrimination'. The Principles recognise a responsibility on those engaging in AI-informed decisions to take measures that ensure these 'decisions are compliant with anti-discrimination laws'.[603]

Similarly, the Commission endorses the UK Government's Centre for Data, Ethics and Innovation observation that

> the current focus should be on clarifying how existing legislation applies to algorithmic decision-making, ensuring that organisations know how to comply in an algorithmic context, alongside effective enforcement of these laws to algorithmic decision-making... [T]he application of current legislation must be clear and enforced accordingly to ensure bad practice is reduced as much as possible.[604]

The Commission partnered with a number of leading expert organisations to publish a technical paper for Australian businesses on understanding and addressing algorithmic bias in how they design AI-informed decision-making systems (see Box 8).[605]

It is clear, however, that more guidance is needed. In the UK, it was noted that national human rights institutions are well placed to issue this sort of guidance.[606] As Australia's national human rights institution, the Commission is the principal authority on Australia's anti-discrimination laws, and has extensive experience in investigating and conciliating complaints of discrimination and human rights breaches. Under s 11(1)(n) of the *Australian Human Rights Commission Act 1986* (Cth), the Commission has the power to produce guidelines on relevant laws.[607]

To this end, there would be value in the Commission producing detailed guidance on the application of anti-discrimination law to AI-informed decision making for Australian public and private sector bodies. The Australian Government should provide the Commission with the necessary resources to undertake this role.

A number of the recommendations regarding the accountability of AI-informed decision making, set out in Chapters 5 and 6, would help to address the problem of algorithmic bias. In addition, there may be a need for more targeted reform to anti-discrimination law, to address issues such as:

- how reliance on a particular factor, or combination of factors, may act as a proxy for a protected attribute, and how this applies to the legal concepts of direct and indirect discrimination

- whether particular techniques associated with AI, such as predictive machine learning algorithms, could lead to new forms of discrimination through the drawing of connections by reference to a multitude of data points.[608]

There is a growing body of research that is leading to the development of measures that aim to address the problem of algorithmic bias. In assessing the need for reform, it would be useful to consider such measures as:

- 'preprocessing methods', referring to strategies to address problems in the training data that can result in algorithmic bias[609]

- 'in-processing' techniques, involving modifying the learning algorithm

- 'post-processing' methods, involving auditing algorithmic outcomes to identify and resolve discrimination patterns.[610]

Box 8: Technical Paper: Addressing the problem of algorithmic bias

In November 2020, the Commission published a Technical Paper, *Using artificial intelligence to make decisions: Addressing the problem of algorithmic bias*.[611] The Paper was the product of a partnership between the Commission, Gradient Institute, Consumer Policy Research Centre (CPRC), CHOICE and CSIRO's Data61.

Using a synthetic data set, the Technical Paper tests how algorithmic bias can arise, using a hypothetical simulation: an electricity retailer using an AI-powered tool to decide how to offer its products to customers, and on what terms.

The simulation identified five forms of algorithmic bias that may arise due to problems attributed to the data set, the use of AI itself, societal inequality, or a combination of these sources.

The Paper investigates if algorithmic bias would be likely to arise in each scenario, the nature of any bias, and provides guidance regarding how these problems might be addressed. Specifically, it shows how these problems can be addressed by businesses acquiring more appropriate data, pre-processing the data, increasing the model complexity, modifying the AI system and changing the target variable.

The Paper, the first of its kind in Australia, highlights the importance of multidisciplinary, multi-stakeholder cooperation to produce practical guidance for businesses wishing to use AI in a way that is responsible and complies with human rights.

9. Biometric surveillance, facial recognition and privacy

9.1 Summary

Personal information is the 'fuel' that powers AI. It is well recognised that AI poses particular risks to individuals' control of their own personal information and the right to privacy. Seemingly innocuous personal data can be used, especially in an AI-powered system, to gain insights about an individual, including on sensitive matters.[612]

The use of AI in biometric technology, and especially some forms of facial recognition, has prompted growing public and expert concern.[613]

Biometric technology involves using one or more of an individual's physical or biological characteristics to identify that person, or to discern other things about that person. This field is not new: fingerprints, for example, have been used for well over a century to identify people. However, biometric technology has been supercharged by AI, and specifically by new capabilities to analyse large sources of data.

Currently, biometric technology can identify people by reference to their face, eyes, genetic or DNA material, and myriad other physical features. The technology can be used to verify an individual's identity or to identify someone from a larger group. There are also attempts to use the technology to gain other insights about people, such as their mood or personality.

This necessarily affects individual privacy, and can fuel harmful surveillance. In addition, certain biometric technologies are prone to high error rates, especially for particular racial and other groups. Where these biometric technologies are used in high-stakes decision making, like policing, errors in identification can increase the risk of injustice and other human rights infringement.

The specific type of biometric technology being used, and how it is used, will affect the degree of human rights risk. Some, but not all, uses of biometric technology carry significant risks. This Project has focused primarily on high-risk uses of biometric technology, and especially facial recognition, in contexts where the consequences of error can be grave.

As discussed below, the Commission recommends privacy law reform to protect against the most serious harms associated with biometric technology. Australian law should provide stronger, clearer and more targeted human rights protections regarding the development and use of biometric technologies, including facial recognition. Until these protections are in place, the Commission recommends a moratorium on the use of biometric technologies, including facial recognition, in high-risk areas.

9.2 Development and use of biometric technology

Biometric *identification* involves a process of identifying people by reference to their biological information. At least in theory, almost any biometric information could be used to identify individuals—including facial features, fingerprint, gait and even body odour.[614] In scientific terms, those categories are limited only by two criteria: whether the biometric information in question can be accurately measured, and whether this information is truly unique to each individual.

Biometric identification has taken place using fingerprints since the 19th century. Advances in technology, especially in recent decades, have enabled new forms of biometric identification, often on a scale and speed that were previously unachievable. The physical characteristics that can be used to identify people are increasing; and biometric technology is being used in an ever-increasing range of ways and domains.

Biometric identification has become common as an alternative to a password or key, to enable access to products and services. While such uses are largely uncontentious, the potential for other uses is almost limitless. Some uses are more controversial, such as the use of facial recognition in policing and law enforcement.

Biometric identification starts with the collection and storage of biometric data from individuals. Australian privacy law, like that of many other jurisdictions, treats biometric information as personal information. As a general rule, biometric data can be used only for the purpose for which it was originally collected. For example, if a company collects an individual's fingerprint for the purpose of enabling the individual to use their finger to unlock their smartphone, the company would not be permitted to use the individual's fingerprint for an unrelated purpose, such as to build a database of people whose information could then be sold to a third party for marketing purposes.

However, some uses of personal information do not require the consent of the individual, and even where consent is required, this can provide inadequate protection.[615] Where, for example, a company obtains consent from an individual to use their biometric data for a vague or broad range of purposes, this may allow the company to use the data in ways that the individual might not have initially contemplated. The individual might not in fact be comfortable with some of those later uses, and indeed some might be harmful.

The Discussion Paper proposed two reforms that would have a particular impact in this area:

- the creation of a statutory cause of action for serious invasion of privacy
- the introduction of a limited moratorium on the use of facial recognition technology in high-risk decision making, at least until a legal framework has been established to safeguard human rights.[616]

Concern about high-risk forms of facial recognition, and other biometric technologies, has continued to grow—especially in connection with law enforcement, access to government services and surveillance by private companies.[617]

Some governments have passed or proposed laws regulating the use of facial recognition, and some courts have applied human rights and other laws to restrict the use of facial recognition.[618] Some leading companies have also imposed their own constraints on how they will use biometric technology such as facial recognition.[619] Nevertheless, in the past year, there has been continued growth in the development and use of this kind of technology, including to address issues that have arisen in the context of the COVID-19 pandemic.[620]

9.3 Facial recognition technology and human rights

Facial recognition technology is used by governments, corporations and others in Australia and elsewhere.[621] There are two principal forms of facial recognition technology: 'one-to-one' and 'one-to-many'.

One-to-one facial recognition involves a computer checking whether a single headshot photograph matches a different headshot of the same person. It can be used to verify whether an individual is who they claim to be, performing a similar task to a password or key. Many of us use one-to-one facial recognition to unlock smartphones and other electronic devices.

One-to-many facial recognition also seeks to match a single headshot with a different stored headshot of the same individual. The difference, as compared with one-to-one facial recognition, is that the matching headshot is located somewhere in a larger database or store of headshots of other people. Sometimes that database can be vast. Thus, from a technical perspective, identifying someone using one-to-many technology is considerably more difficult, and more prone to error.[622]

While one-to-one facial recognition is often used to determine whether an individual is who they claim to be, one-to-many facial recognition is commonly used to answer a more difficult question: who is this person? This means that one-to-many facial recognition can be put to a wider range of uses and, as discussed below, presents greater human rights risks. Those risks relate both to the consequences of error in AI-informed decision making, as well as broader risks where this form of facial recognition is used to cause harm, or in ways that undermine the right to privacy.

(a) Human rights risks associated with facial recognition

Like most technologies, facial recognition is neither inherently good nor bad.

Some stakeholders emphasised how facial recognition could be used to benefit individuals and the community at large. For example, the technology has been used to detect and prosecute child exploitation, to address human trafficking, to investigate fraud, and to identify missing persons, including after the Australian bushfires in 2019-20.[623]

However, amid a growing recognition of the risks associated with biometric technology in recent decades,[624] most stakeholders focused primarily on how facial recognition could be used to limit human rights. Concern focused on three risks:

- the contribution of facial recognition to the growth in surveillance
- the use of data derived from facial recognition to engage in profiling
- the risk that errors connected to facial recognition disproportionately affect certain groups

In addition, the use of facial recognition in the private sector raises distinct concerns as there may be a lower degree of accountability and fewer legal protections.

(i) Surveillance

Many stakeholders were concerned about the growing risk of widescale or mass surveillance.[625] The inevitable reduction of personal privacy, and the threat of closer scrutiny by police and other government agencies, can inhibit participation in lawful democratic processes such as protests and some meetings.[626] This engages the rights to freedom of association and assembly; freedom of expression and opinion; and, potentially, the right to be free from unlawful and arbitrary arrest.

Some have argued that the widespread use of facial recognition, especially in public places, disproportionately limits these human rights. For example, Access Now stated that public surveillance is 'neither necessary nor proportionate to the goal of public safety or crime prevention, and therefore violate[s] the right to privacy.'[627]

In 2018, the Council of Europe Rapporteur on human rights and AI, Professor Karen Yeung, concluded that the cumulative impact of mass surveillance poses a serious risk to the 'fundamental social conditions' that make protection of individual rights possible. When combined with data-driven technologies, which 'enable fairly innocuous and mundane data to be merged and mined in ways that may reveal highly personal characteristics', these forms of surveillance

> can be very powerful tools in the hands of governmental regimes, whether liberal or repressive, and therefore generate acute threats to the exercise of all human rights and fundamental freedoms.[628]

Lawmakers overseas have expressed concern about the prospect of facial recognition being used to identify and arrest people engaging in lawful protest, such as in the 2020 Black Lives Matter protests across the US.[629]

(ii) Profiling

As personal data becomes more widely collected, stored and analysed, a small piece of personal information—apparently inconsequential on its own—can be combined with other personal information to enable detailed insights about the person in question. This has been dubbed the 'mosaic effect'.[630]

Personal data, derived from increasingly widespread facial recognition tools, can be combined with other data sources. As with a mosaic or puzzle, the aggregated data can then be used to create a more detailed picture: inferences about the individual may be drawn, and these can sometimes be shared with third parties without any meaningful consent from the affected individual.[631] The inclusion of biometric information can allow sensitive personal information to be extracted or inferred, including in relation to the individual's age, race, sex and health.

Such information and inferences can be used in 'profiling'—where intrusive action is taken by reference to people's characteristics. An example of this kind of profiling, which may result in people of a particular racial or ethnic group being disproportionately subjected to police identity and other checks, has emerged in China.[632]

Since November 2017, the UN Committee on the Elimination of Racial Discrimination (CERD) has been consulting widely on this problem. That process culminated in the publication, on 24 November 2020, of a new general recommendation on the *International Convention on the Elimination of All Forms of Racial Discrimination*. General Recommendation 36 observed:

> The increasing use of facial recognition and surveillance technologies to track and control specific demographics raises concerns with respect to many human rights, including the right to privacy, freedom of peaceful assembly and association; freedom of expression and freedom of movement. It is designed to automatically identify individuals based on their facial geometry, potentially profiling people based on grounds of discrimination such as race, colour, national or ethnic origin or gender.[633]

(iii) Errors and the risk of discrimination

Currently, facial recognition technology is generally less accurate when identifying women, or people from minority racial groups, as compared with other people.[634] To this end, CERD recently concluded:

> [I]t has been demonstrated that the accuracy of facial recognition technology may differ depending on colour, ethnicity or gender of the persons assessed, which may lead to discrimination.[635]

The UK Centre for Data Ethics and Innovation recently summarised research on levels of inaccuracy of facial recognition systems used in that country.[636] The Centre concluded that

> the distribution of false positives and incorrect interventions will depend on the demographic make-up of the watch list, as well as that of the people scanned, even where the underlying algorithm has no in-built bias.[637]

Concerns were also raised by stakeholders in relation to reported lower accuracy rates for non-white faces.[638] The Castan Centre for Human Rights Law observed that this means 'certain racial groups will likely face more frequent misidentification and be subject to increased police scrutiny.'[639] Access Now was especially concerned about the impact on Aboriginal and Torres Strait Islander peoples, with these groups being more likely to experience errors, including identification as a suspect, in the prosecution of criminal offences.[640]

Errors in facial recognition can be more likely among groups such as Aboriginal and Torres Strait Islander peoples because the datasets typically used to train facial recognition tools tend to have a very low number of headshots of people from these groups. One way of addressing that problem would be to increase the representation of people from those groups in these training datasets, but that carries its own human rights risks.[641] For example, where people from these groups experience harm from the use of facial recognition, it is understandable that they would be reluctant to participate in the development of these systems.

(iv) Use of facial recognition in the private sector

The use of facial recognition technology is not limited to the police or the public sector more broadly. Increasingly, these tools are being used in workplaces, schools, shopping centres and residential areas to identify members of the public and monitor behaviour.[642] In those settings, there are often fewer accountability and other protections against misuse and harm, and public concern about the use of this technology by private companies remains high.

The OAIC's public polling, for example, provided evidence that most Australians are uncomfortable with the collection by retail stores of customers' biometric information, including via facial scans.[643]

9.4 Regulation of biometric technology

RECOMMENDATION 19: Australia's federal, state and territory governments should introduce legislation that regulates the use of facial recognition and other biometric technology. The legislation should:

(a) expressly protect human rights

(b) apply to the use of this technology in decision making that has a legal, or similarly significant, effect for individuals, or where there is a high risk to human rights, such as in policing and law enforcement

(c) be developed through in-depth consultation with the community, industry and expert bodies such as the Australian Human Rights Commission and the Office of the Australian Information Commissioner.

RECOMMENDATION 20: Until the legislation recommended in Recommendation 19 comes into effect, Australia's federal, state and territory governments should introduce a moratorium on the use of facial recognition and other biometric technology in decision making that has a legal, or similarly significant, effect for individuals, or where there is a high risk to human rights, such as in policing and law enforcement.

There are many positive uses of facial recognition and other biometric identification technology. However, the risks of harm, including to human rights, are real. Regulation should be carefully targeted to address harmful use of biometric technologies.

The risks associated with facial recognition are generally highest where this technology is used in decision making that affects an individual's legal or similarly significant rights. This is most obvious when the technology fails. For example, if an error in the facial recognition tool on a smartphone causes a delay in an individual 'unlocking' their device, generally this would present little more than an annoyance. However, if a person is wrongly accused of a crime on the basis of an error in police use of facial recognition, the risk of harm is far greater.

The primary way of addressing the latter problem is for the law to require all such policing decisions to be made accurately, fairly and without discrimination—regardless of whether they are made using facial recognition. However, where there are concerns about the reliability of the underlying technology—as is the case with one-to-many facial recognition, especially in identifying people with, for example, darker skin—this can suggest a need for further regulation that is directed towards the technology itself.

Many stakeholders similarly urged that the regulatory approach to facial recognition should focus on *risk*.[644]

The Commission recommends that all Australian governments work cooperatively to introduce legislation to regulate the use of facial recognition and other biometric technologies. Until appropriate legislation is in effect, the Commission recommends there be a moratorium on the use of facial recognition and other biometric technology in AI-informed decision making.

This moratorium would not apply to *all* uses of facial and biometric technology. It would apply only to uses of such technology to make decisions that affect legal or similarly significant rights, unless and until legislation is introduced with effective human rights safeguards.

(a) Use of facial recognition technology in policing and law enforcement

Police and law enforcement are increasingly using one-to-many facial recognition to identify criminal suspects, detect crimes, and help find missing persons.

While these objectives are legitimate and can promote community safety, there are significant human rights risks associated with the use of facial recognition for these ends. In particular, error can result in suspects, victims and witnesses being wrongly identified. This can limit human rights including the right to equality or non-discrimination, the rights to equality before the law, personal security and liberty, the right to a fair public hearing and the right to procedural fairness and due process, including the presumption of innocence. More broadly, the overuse of facial recognition by police can disproportionately limit the right to privacy and can contribute to mass surveillance.

There is strong and growing public concern about the use of facial recognition technology in policing and law enforcement and the problems it may cause, including in relation to human rights and privacy.

Courts may increasingly be required to consider issues raised by facial recognition technology. An early landmark case in this area was the *Bridges Case*, considered in Case Study 2.

Case Study 2:

The *Bridges Case*

The Court of Appeal of England and Wales (the Court) considered a challenge to the use of facial recognition technology by South Wales Police in the United Kingdom.[645]

The Police used a facial recognition tool known as the AFR Locate, which extracts biometric data captured in a live feed from a camera, and compared the captured data to headshot photographs on a police watchlist. If a match is detected, the tool alerted a police officer who will then determine whether an intervention is needed.

Edward Bridges, a civil liberties campaigner, was scanned by the facial recognition technology in Cardiff in December 2017 and again while attending a protest in March 2018. Although Mr Bridges was not included on a watchlist, he contended that given his proximity to the cameras, his image would have been recorded by the AFR Locate tool.

Without making a factual finding on this issue, the Court acknowledged 'scientific evidence that facial recognition software can be biased and create a greater risk of false identifications in the case of people from black, Asian and other minority ethnic ("BAME") backgrounds, and also in the case of women'.[646]

The Court found that the use of facial recognition technology can breach human rights to privacy and equality or non-discrimination, and that the Police did not have lawful authority to use this tool. The Court identified two particular problems:

> The first is what was called the 'who question' at the hearing before us [who can be put on a watchlist for surveillance using the AFR Locate tool]. The second is the 'where question' [location of the deployment]. In relation to both of those questions too much discretion is left to individual police officers.[647]

The Court also found that the South Wales Police had failed to fulfil its positive duty to make enquiries regarding the potential discriminatory impact of the AFR Locate tool. Specifically, the Police had 'never sought to satisfy themselves, either directly or by way of independent verification, that the software program in this case does not have an acceptable bias on grounds of race or sex.'[648]

(b) Options for reform

A significant number of stakeholders backed a limited or partial moratorium on the use of facial recognition in high-risk decision making.[649] Many urged that regulation focus on the risk of mass surveillance.[650]

Some urged stronger regulation, including a 'prohibition on unlawful and non-consensual harvesting of biometric data'.[651] Others focused on broadening the technologies to which a moratorium would apply.[652]

Some stakeholders agreed that facial recognition technology poses risks to human rights but queried whether a limited moratorium would have the desired effect given the technology is already in use.[653] Others opposed even a limited moratorium, on the basis that this could cause uncertainty and impede the adoption of facial recognition technology, thereby disadvantaging Australian citizens and industry.[654]

The OAIC, which is the principal Australian Government authority on privacy, highlighted the existing privacy law safeguards that apply to the use of facial recognition, and welcomed further consultation on reform in this area.[655]

(c) International developments

There is a growing movement for strict regulation on the use of facial recognition technology. For example, several state and municipal governments in the US have passed or are considering laws banning or restricting the use of facial recognition, especially in high-risk scenarios.[656] Similarly, in 2020 the German Government halted trials of the use of facial recognition by its police forces.[657]

In France, the relevant government regulator determined that schools were not permitted, under the GDPR, to install facial recognition on school premises in the manner proposed, and it also required the French Government to revise an app, 'Alicem', which uses identity verification for access to 500 public services.[658]

However, in early 2020, the European Commission abandoned an earlier proposal for a moratorium on facial recognition technology. In its final White Paper on Artificial Intelligence, the European Commission stated that the use of AI for remote biometric identification purposes should be limited, and consideration given to the provisions of the GDPR and the European Union (EU) Charter of Fundamental Rights.[659]

In the EU, the revised Schengen Information System can use information from facial recognition and other biometric identification to help facilitate the return of migrants.[660] In addition, the EU's iBorderCtrl project has piloted a prototype of the 'Intelligent Border Control' system which uses a video 'lie detection' technology that has not shown high accuracy.[661] The use of biometric data and certain technology more broadly in migration control has raised concerns about the impact on fundamental rights such as right to seek asylum.[662]

Beyond government policy making, some technology companies have themselves taken important action in this area. In early 2020, Microsoft announced it would end all minority investments in companies that sell facial

recognition technology given the sensitive nature of this technology.[663] IBM also announced it would no longer invest in or supply facial recognition technology or analysis software.[664] Amazon made a similar announcement shortly after, introducing a one-year moratorium on police use of its facial recognition software, Rekognition.[665]

(d) Conclusion: a need for reform

It is generally difficult and undesirable to regulate specific technologies. However, there are exceptions to this general principle.[666]

Governments tend to regulate high-risk activities and technologies more closely. This helps explain the comparatively strict laws that govern fields such as gene technology, aviation, healthcare and the energy industry. In these areas, regulation often applies both to the technology itself and how it is used. From a human rights perspective, the need for more prescriptive regulation will be greater where the use of a specific technology carries greater risks of harm to humans.

It is critical, therefore, to assess the likely human rights impact of any particular use of facial recognition and other biometric technology. This requires answering three critical questions:

- What specific *type* of biometric technology is to be used? For example, one-to-many facial recognition presents a greater risk to individuals' human rights than one-to-one systems.
- In what *context* will the technology be used? In other words, what decisions will this technology be used to make? For instance, the use of one-to-many facial recognition technology in the context of policing or law enforcement presents a greater risk to human rights than the use of this same technology in a payment system at a café.
- What, if any, legal and other *protections* are already in place to address risks of harm?

Existing laws—especially privacy and anti-discrimination legislation—offer some general protections in this area. However, for the following three reasons, the Commission has concluded that those existing protections are inadequate.

First, the Commission is concerned about the high rate of error, especially in the use of one-to-many facial recognition technology. The fact that these errors disproportionately affect people by reference to characteristics like their skin colour, gender and disability suggests that great caution should be exercised before this technology is used to make decisions that affect people's legal and similarly significant rights.

Secondly, in Australia and in many comparable jurisdictions, one-to-many facial recognition has been trialled in a range of high-stakes government and other decision making, including in policing, education and service delivery. Those trials generally have been in live scenarios, where any error resulting in a human rights infringement cannot be easily remedied, if it can be remedied at all.

To date, existing legislation has not proven to be an effective brake on inappropriate use of facial and other biometric technology. Without effective regulation in this area, it seems likely that community trust in the underlying technology will deteriorate. One consequence could be distrust in both beneficial and harmful uses.

Thirdly, the growth in facial recognition and other biometric technology, when coupled with other phenomena such as the growth in closed-circuit television (CCTV) cameras in public places, is contributing to an increased risk of mass surveillance. With limited legal protection against this cumulative impact, there is a real risk that Australians will cede their privacy incrementally, in ways that cannot be undone.

For these reasons, targeted legislation is needed to prevent and address harm associated with the use of facial recognition and other biometric technology. As has been suggested by a number of leading experts, such legislation should prohibit certain uses of this technology, if human rights standards cannot be met.[667]

In 2021, the Council of Europe's Directorate General of Human Rights and Rule of Law issued its *Guidelines on Facial Recognition*.[668] These guidelines identify a number of uses of facial recognition and related technologies, which merit strict legal limitation. It concluded:

The use of facial recognition for the sole purpose of determining a person's skin colour, religious or other beliefs, sex, racial or ethnic origin, age, health condition or social condition should be prohibited unless appropriate safeguards are provided for by law to avoid any risk of discrimination.

Similarly, affect recognition can also be carried out with facial recognition technologies to arguably detect personality traits, inner feelings, mental health or workers' engagement from face images. Linking recognition of affect, for instance, to hiring of staff, access to insurance, education may pose risks of great concern, both at the individual and societal levels and should be prohibited.[669]

The Commission endorses this approach, which focuses especially on risks associated with particular types or uses of facial recognition. In Australia, the federal, state and territory governments are all engaged in activities that can involve high-risk uses of facial recognition and biometric technology, such as policing and law enforcement. In addition, all Australian governments share regulatory responsibility for the use of such technology by the private sector.

Hence, all Australian governments should work cooperatively to introduce legislation that regulates the use of facial recognition and other biometric technologies.

Until appropriate legislation is in effect, the Commission recommends the introduction of a limited or partial moratorium on the use of facial recognition and other biometric technology in AI-informed decision making (that is, decision making that has a legal or similarly significant effect). Particular attention should be given to high-risk contexts, such as the use of facial recognition in policing, in schools and in other areas where human rights breaches are more likely to occur.

The development of legislation will involve a high degree of complexity, and so it should involve consultation with the states and territories, affected groups, industry and experts, as has been proposed for a similar US reform process.[670]

9.5 Privacy reform

> **RECOMMENDATION 21:** The Australian Government should introduce a statutory cause of action for serious invasion of privacy.

As biometric surveillance profoundly engages the right to privacy, there is also a need to consider reform to Australian privacy law itself.

Australian privacy law is directed primarily towards *information privacy*. In this sense, current law offers limited protection to the right to privacy more broadly, and the Commission recommends the introduction of a statutory cause of action for serious invasion of privacy.

(a) Options for reform

Australian law prohibits the misuse of 'personal information' about an identified individual, including sensitive information (such as a person's health information, their racial or ethnic orientation, sexual orientation or criminal record) and credit information.[671] The Australian Privacy Principles (APPs) in the *Privacy Act 1988* (Cth) (Privacy Act), guide Australian Government agencies and some private sector organisations (APP entities) in how they collect, store, manage and use personal information, including in the context of data and data analytics. Principle 10, for example, requires APP entities to 'ensure that the personal information that the entity collects is accurate, up-to-date and complete'.[672]

The Australian Privacy Principles permit personal information that has been de-identified or anonymised to be processed for the primary purpose for which it was collected, based on the consent of the individuals concerned. However, technological advances are challenging this model of information privacy protection. For example, AI increasingly offers the capability of disaggregating a dataset made up of a conglomeration of de-identified data to reveal the personal information of specific, identifiable people.

Data-processing technology is developing quickly with ever-increasing new uses of personal information being developed, many of which could not have been envisaged, let alone specifically consented to, at the point of collection. Certain potentially revealing information, including metadata, has been held by Australian courts not to fall within the parameters of the Privacy Act.[673]

Three Australian law reform bodies—the Australian Law Reform Commission (ALRC) and its counterpart bodies in Victoria and New South Wales—have now recommended enacting a statutory cause of action for serious invasion of privacy.[674]

In 2014, the ALRC examined how new and serious invasions of privacy have arisen in the digital era—without legal protection.[675] The ALRC recommended the creation of a statutory cause of action for serious invasion of privacy, especially given the increased 'ease and frequency' of invasions of personal privacy that may occur with new technologies.[676] It recommended such a law to apply in two contexts: on intrusions upon seclusion, such as the physical intrusion into a person's private space; and misuse of private information, 'such as by collecting or disclosing private information' about an individual.[677]

By extending the protection of Australian law beyond 'information privacy', such reform could address some, though not all, of the concerns about how personal information can be misused in the context of facial recognition and other forms of biometric surveillance, and AI-informed decision making generally.

More recently, the ACCC supported implementation of the ALRC's recommendation in order to 'increase the accountability of businesses for their data

practices and give consumers greater control over their personal information'.[678] The ACCC noted that individual consumers are not able to bring direct actions for breaches of their privacy under the Privacy Act, or for serious invasions of privacy that result in financial or emotional harm.[679]

In response to the ACCC report, the Government announced a review of the Privacy Act.[680] The Government stated that the review will identify any areas where consumer privacy protection can be improved and consider how to ensure Australia's privacy regime operates effectively, and allow for innovation and growth of the digital economy.[681] Due for completion in 2021, the review will consider the impact of new technologies, including AI, on whether Australian privacy law continues to be fit for purpose.

Many stakeholders supported reform of privacy law, and in particular the creation of a statutory cause of action for serious invasion of privacy.[682] Some stakeholders referred specifically to the desirability of implementing the recommendations of the ALRC and ACCC.[683]

Support for the proposal emerged from all sectors, including state and federal privacy regulators, privacy and legal experts, and technology companies. Stakeholders argued this would improve accountability, providing access to a remedy for some of the worst forms of privacy infringement, and increase the accountability of private organisations.[684]

There was also a pragmatic acknowledgement that legislative reform would offer greater certainty in this area, rather than leaving change in this area to occur incrementally via the common law.

Other stakeholders opposed this reform, or urged a more cautious approach. They referred to:

- the increased risk of litigation
- a potential chilling of innovation, with consequent social and economic impact on both the public and private sectors
- the risk that a stronger privacy law could threaten the delivery of healthcare,[685] and could undermine press freedom.[686]

(b) Conclusion

Several government-initiated inquiries have proposed the enactment of a statutory cause of action for serious invasion of privacy. The Commission agrees.

This reform would help combat the misuse and overuse of biometric technologies, and in fulfilling Australia's human rights obligations regarding AI-informed decision making, given that AI frequently involves the extensive use of personal information.

In practical terms, this reform would present a barrier to intrusive, wide-scale surveillance. It would extend privacy protection in Australian law beyond personal information, to include interference with bodily and territorial privacy. This would more appropriately implement Australia's obligations under Article 17 of the International Covenant on Civil and Political Rights, which requires states to protect, in law, against the interference or attack on the 'arbitrary or unlawful interference' with an individual's 'privacy, family, home or correspondence'.[687]

The Commission agrees with the OAIC that the statutory cause of action should be comprehensive and non-restrictive, and cover all intentional, reckless and negligent acts of privacy invasion by public and private entities.[688]

10. Supporting effective regulation

10.1 Summary

This Part recommends the creation of an AI Safety Commissioner to support regulators, policy makers, government and business develop and apply policy, law and other standards in this area. The Commission considers that an AI Safety Commissioner could address three major needs.

First, government agencies and the private sector are often unclear on how to develop and use AI lawfully, ethically and in conformity with human rights. An AI Safety Commissioner could provide expert guidance on how to comply with laws and ethical standards that apply to the development and use of AI.

Secondly, regulators face the challenge of fulfilling their functions even as the bodies they regulate make important changes to how they operate. An AI Safety Commissioner could play a key role in building the capacity of existing regulators and, through them, of the broader 'regulatory ecosystem' to adapt and respond to the rise of AI.

Thirdly, legislators and policy makers are under unprecedented pressure to ensure Australia has the right law and policy settings to address risks and take opportunities connected to the rise of AI. An AI Safety Commissioner could monitor trends in the use of AI here and overseas. This would help it to be a source of robust, independent expertise.

As an independent statutory office that champions the public interest, including human rights, an AI Safety Commissioner could help build public trust in the safe use of AI—a goal the Australian Government is rightly seeking to advance.[689]

Structure & focus

Diverse expertise

Independent statutory authority

Focus on risk of harm

AI Safety Commissioner

Functions

Guidance on the use of AI

Capacity building for regulators

Expert advice

Private sector

Government

Education & training

Targeted advice

Parliament

Policy makers
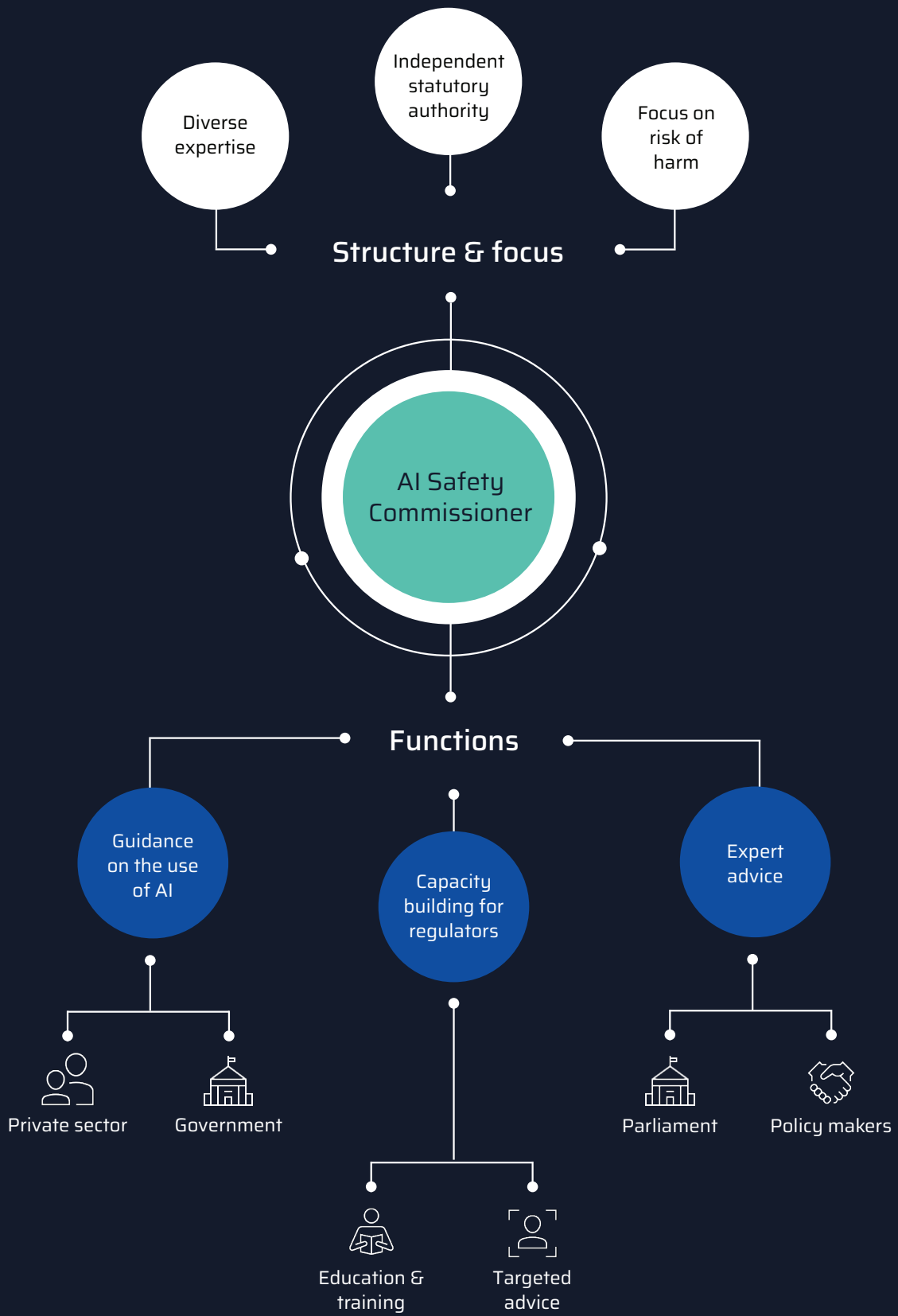
10.2 An independent AI Safety Commissioner

The unprecedented rise in AI presents a once-in-a-generation challenge to develop and apply regulation that supports positive innovation, while addressing risks of harm.

The Australian Government should establish an AI Safety Commissioner to support regulators, policy makers, government and business apply laws and other standards in respect of AI-informed decision making.

(a) Value of an AI Safety Commissioner

Stakeholders strongly supported the creation of an independent statutory authority to help government and the private sector manage the rapid growth in AI, especially in decision making.[690] Some saw the creation of an AI Safety Commissioner as a way to improve government cooperation and coordination in developing policy and regulation on the use of AI.[691] It was also suggested that this body could be a source of much-needed technical expertise to support existing regulators and others.[692]

Debate regarding the general idea of creating an AI Safety Commissioner centred on a key question: should this new body focus exclusively on addressing human rights and related risks, or should its remit be broader to include the promotion of innovation?

A diverse group of stakeholders urged that the AI Safety Commissioner focus on protecting human rights,[693] with several emphasising that strong human rights protections are the firmest foundation for public trust in the use of new technologies such as AI.[694] Stakeholders also recognised the need for a broad mandate that includes the full spectrum of civil, political, economic, social and cultural rights—not solely the right to privacy.[695]

In supporting a focus on human rights, stakeholders observed the unequal impact of new technologies on some population groups.[696] This was recognised also by some regulators such as the Office of the eSafety Commissioner.[697] Therefore, any new body should focus on protecting the rights of groups who can be at particular risk from the use of AI, such as people with disability.[698]

Some stakeholders argued that the AI Safety Commissioner should not be limited to promoting human rights—that is, it should also promote innovation.[699] Others were concerned that there was an inherent conflict or tension between protecting human rights and promoting innovation.[700]

There was also an intermediate position: the goal of innovation differs from the promotion of safety and human rights, but it is not necessarily irreconcilable with those other goals. In particular, a number of government and private sector organisations saw nothing unusual in a single government body promoting both innovation and human rights.[701] Some stakeholders warned that any action in this area should not stifle innovation or weaken the digital economy,[702] and highlighted the difficulty of regulating appropriately in this area.[703]

(b) Conclusion

An AI Safety Commissioner could support regulators, policy makers, government and business apply laws and other standards in respect of AI-informed decision making.

The use of AI, especially in momentous decision making, brings real human rights risks. For this reason, the primary focus of the AI Safety Commissioner should be to promote and protect human rights, with a special focus on groups at greatest risk of harm.

The Commission acknowledges the legitimacy, indeed the importance, of promoting technological innovation and the growth of Australia's digital economy.[704] To this end, responsible innovation should be central to the *Digital Australia Strategy* (see Chapter 3).

Moreover, many companies have a legitimate commercial interest in promoting innovation involving AI. By contrast, far fewer bodies are focused on promoting human rights, and safety more broadly, in the use of AI especially in decision making. The AI Safety Commissioner should not play a direct role beyond those areas of focus—by, for example, promoting the economic benefits of innovation.

In any event, a regulatory framework that effectively upholds human rights is more likely to foster, rather than stifle, responsible innovation. In particular, working to ensure that risks associated with AI are effectively understood and addressed would help create a stable regulatory environment, which can help to drive investment.

Similarly, by strengthening institutions responsible for protecting the public, the AI Safety Commissioner could contribute to a firm foundation of public trust in how AI is developed and used in Australia. This is consistent with growing concern in Australia and internationally that regulation needs to be more effective in protecting human rights in AI-informed decision making.[705]

10.3 Functions, powers and operation of AI Safety Commissioner

RECOMMENDATION 22: The Australian Government should establish an AI Safety Commissioner as an independent statutory office, focused on promoting safety and protecting human rights in the development and use of AI in Australia. The AI Safety Commissioner should:

(a) work with regulators to build their technical capacity regarding the development and use of AI in areas for which those regulators have responsibility

(b) monitor and investigate developments and trends in the use of AI, especially in areas of particular human rights risk

(c) provide independent expertise relating to AI and human rights for Australian policy makers

(d) issue guidance to government and the private sector on how to comply with laws and ethical requirements in the use of AI.

> **RECOMMENDATION 23:** The AI Safety Commissioner (see Recommendation 22) should:
>
> (a) be independent from government in its structure, operations and legislative mandate, but may be incorporated into an existing body or be formed as a new, separate body
>
> (b) be adequately resourced, wholly or primarily by the Australian Government
>
> (c) be required to have regard to the impact of the development and use of AI on vulnerable and marginalised people in Australia
>
> (d) draw on diverse expertise and perspectives including by convening an AI advisory council.

The remainder of this Part considers the optimal functions, powers and operation of an AI Safety Commissioner.

(a) Building the capacity of existing regulators

We have always made predictions and decisions. Increasingly, it is AI that is driving those predictions and decisions.

This presents a challenge for regulators: as AI enables new ways to analyse data, to make predictions and ultimately to form decisions, regulators must continue to fulfil their functions even while the bodies they regulate are changing how they act.

The Commission considers that the primary role of the AI Safety Commissioner should be to assist regulators manage a major transition towards the use of AI in the public and private sectors. It would build their capacity to fulfil their regulatory functions amid the rise of AI-informed decision making.

(i) The challenge of AI for regulators

The AI Safety Commissioner should work with regulators to provide direct training, focused on how AI is used in the areas of activity that each individual regulator has responsibility for, as well as building an understanding of the typical 'lifecycle of AI'. This would help regulators assess where problems are most likely to arise.

Take, as an example, how financial service providers, like banks, make lending decisions. This is not a new activity: banks have always assessed the creditworthiness of people who apply for loans, and made decisions accordingly. The critical difference is the *method* by which banks make those decisions is changing—with that assessment increasingly made using AI.

The challenge for regulators is to apply the relevant rules and laws in this changing environment. Regulators generally recognised the need for increased capacity building, coordination and cooperation to respond to the rise of AI in their areas of responsibility.[706] For example, the OAIC stated:

> [R]egulators require technical expertise to enforce regulatory schemes as the use of technologies such as AI becomes increasingly prevalent in the public and private sectors. Technical capacity-building within regulators would further support regulatory efforts. Also, a body could act as a central source of technical expertise and capability to assist agencies and regulators in addressing these challenges. We consider that the UK Centre for Data Ethics and Innovation (CDEI), referred to in the discussion paper, is a model that has merit.[707]

It was suggested that an AI Safety Commissioner could work with individual regulators to understand how AI is used in their respective settings.[708] Some of these settings are highly specialised and, in some areas, error can result in significant human rights violation. The use of AI to make decisions in the criminal justice and law enforcement area is an important case in point.[709]

(ii)   No need for a dedicated regulator of AI

The AI Safety Commissioner should not have a broader regulatory role, beyond supporting existing regulators. AI is a cluster of technologies that can be used in widely divergent ways in almost limitless contexts. Some uses of AI engage human rights, while others do not. A focus on regulating AI *as technologies* would not be as effective as regulating uses of AI in particular contexts. Regulators will be better placed to respond to the seismic changes prompted by the rise of AI if they are *supported* by the AI Safety Commissioner recommended in this Part.

Multiple stakeholders recognised the burden on existing regulators in protecting people from risks of harm associated with AI. To this end, they welcomed the idea of a new body that would assist regulators in bearing that burden.[710]

Some stakeholders cautioned against an AI Safety Commissioner moving beyond the role of *supporting* regulators, to become a regulator itself, and there was general agreement that neither the AI Safety Commissioner nor any other body should be the single regulator for all uses of AI.[711]

For example, the Digital Industry Group, which represents technology companies including Google and Facebook, expressed caution about the risk of creating a new AI regulator, arguing that most problems that occurred with AI were the contextual application of AI in a particular sector.[712]

(b)   Monitoring, investigation and policy expertise

The AI Safety Commissioner should be a source of trusted expertise on AI policy for government. The need is clear: many of the issues in this area are technical and complex and require cross-disciplinary expertise.

The AI Safety Commissioner could provide expert advice on issues such as:

- Australian law and policy reform, including the application of human rights law
- voluntary standards and ethical frameworks
- the direction of advances in relevant areas of scientific discovery.

In doing so, the AI Safety Commissioner could draw on material from Australia and elsewhere—including from regulators, government, law, industry, academia and civil society.

This would respond to a need recognised internationally and in Australia. A number of major international bodies—such as the OECD, the World Economic Forum, and the Council of Europe—have identified a need for governments to be better informed about the implications of AI, including its risks and opportunities.[713] The Australian Council of Learned Academies has specifically pointed to the need for Australian policy makers to have access to frank, expert advice on precisely how the rise of AI and related technological developments are causing change that the Government needs to be aware of and respond to.[714]

Stakeholders in Australia also emphasised the need for an expert body to advise our Government on AI, with a view to developing good law and policy in this area, and specifically to promote human rights in ways that do not stifle positive, responsible innovation.[715] It was suggested that the proposed AI Safety Commissioner would be well placed to monitor national and international developments to help promote best practice.[716] In this way, the body could contribute to long-term policy on AI in Australia.[717]

(i)   Expertise on developments and trends in AI

To provide the necessary guidance and advice, the AI Safety Commissioner would need to monitor and report on how AI is being developed and used in decision making in Australia and internationally, especially in areas where human rights are likely to be especially at risk.

The monitoring and reporting function is important due to the rapid development and growing use of AI. Given that some forms of AI tend to be opaque, as there is a lack of transparency in how the algorithm makes decisions, there is a heightened need for specific expertise in monitoring AI developments, especially in relation to the operation of AI-informed decision-making systems, which can be difficult to assess.[718]

The need for good coordination within government was a recurring theme in the Commission's consultation process.[719] The AI Safety Commissioner could play a role in fostering collaboration with other Australian Government bodies that have relevant expertise, such as the ACCC, the Office of the eSafety Commissioner and the OAIC.[720] It could also bring to bear input from experts outside of government, and from groups that are not frequently consulted on policy issues relating to AI.

Some stakeholders pointed to a need for broader capacity building on AI across government. KPMG Australia, for example, suggested that the AI Safety Commissioner could play a role in developing an AI curriculum for government officials, which would help them understand the opportunities and risks.[721]

More broadly, the AI Safety Commissioner could draw on the expertise of international counterparts, including intergovernmental organisations such as the OECD and organisations such as the UK Centre for Data Ethics and Innovation.[722]

(ii) Investigative powers

One specific concern raised by some stakeholders related to the lack of transparency in how AI and algorithms are used by government and others.[723] This problem could be addressed by giving the AI Safety Commissioner a function to monitor developments in AI.[724] Monitoring the use of AI could range from assessing individual areas of human rights concern on a case-by-case basis, to systemic monitoring of AI trends.
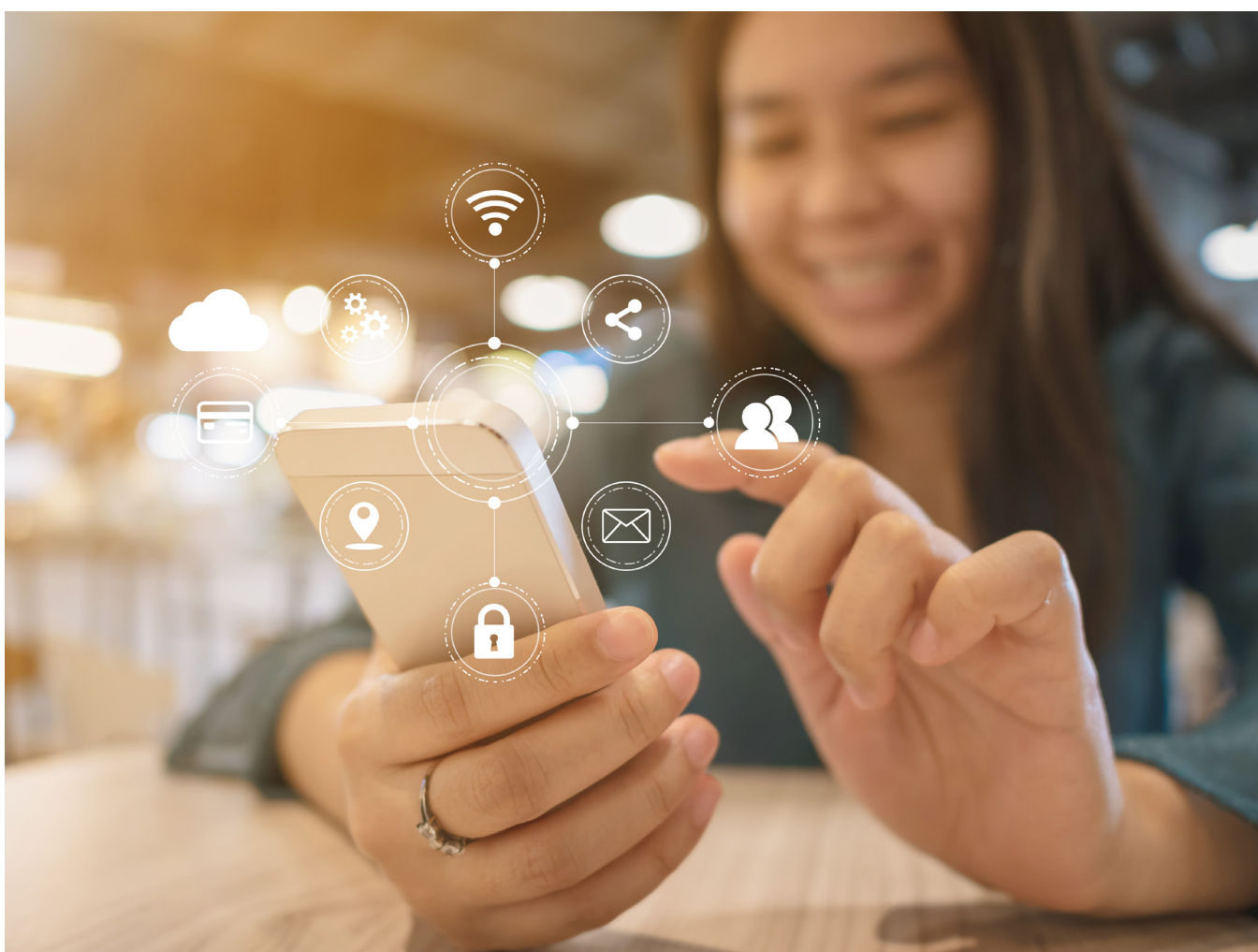
The AI Safety Commissioner could obtain much of the information it needs through publicly available sources or with the cooperation of industry. However, much of the research and development in this area occurs in commercial settings where strict limits are set on how information may be disclosed.[725] The AI Safety Commissioner should remain abreast of change in this area, especially as it relates to human rights.

Some urged that the AI Safety Commissioner be given investigative powers to inquire into practices of particular concern.[726] The NSW Bar Association advocated going further, suggesting that if a statutory office is established, it should possibly have enforcement powers.[727] Similarly, the NSW Council of Civil Liberties suggested providing additional powers to investigate and detect bias in algorithms through system audits, accompanied by legal enforcement and authority to impose a ban or a fine.[728]

The Commission recommends that the AI Safety Commissioner be given powers to investigate or audit the development and use of AI (including algorithms) in some circumstances to identify and mitigate human rights impacts. This is a power available to expert government bodies in other jurisdictions, such as the Information Commissioner Office in the UK, and it has been called for by civil society groups and experts in the Toronto Declaration.[729] While it is anticipated that investigative powers would need to be exercised only sparingly, they would be an important tool available to provide a clear picture of the direction of AI in this country.

Others opposed the AI Safety Commissioner focusing on the detail of how algorithms and AI work, given the risk that such monitoring could lead to the publication of sensitive commercial information. Being required to disclose such information could deter companies expanding or initiating investment in Australian AI which could, in turn, affect the quality and diversity of AI products available in Australia.[730]

(iii) An AI advisory council

One way of ensuring the AI Safety Commissioner is well informed about developments in AI would be for it to convene an advisory council on AI. Such an AI advisory council could have similar functions to those of the proposed National Data Advisory Council in relation to sharing and use of public sector data, and assist the AI Safety Commissioner in performing its functions.[731]

The advisory council could include senior representatives from bodies such as the Australian Competition and Consumer Commission, the Office of the Australian Information Commissioner, the Office of the eSafety Commissioner, the National Data Commissioner, the Australian Human Rights Commission, the Digital Transformation Agency, the Department of Industry, Science, Energy and Resources, Australia's Chief Scientist, CSIRO, and the Australian Statistician.

The composition of the advisory council would mean that high-level external expertise from sectors relevant to AI and human rights could be accessed in areas relating to building capacity of existing regulators, monitoring the use of AI and providing policy advice. Formal access to this expertise would enable the AI Safety Commissioner to play a practical role in helping regulators and other key government agencies coordinate their activities.

(c) Guidance on responsible use of AI

Where government and the private sector are considering the use of AI in decision making, they would also benefit from technical guidance on complying with existing laws and ethical frameworks, especially as they relate to human rights.[732] The AI Safety Commissioner, with cross-disciplinary expertise, would be well placed to develop such materials.

(i) A need for guidance

Guidance could provide practical tools on a range of areas including:

- the application of existing consumer protection, privacy and human rights laws to AI-informed decision making
- the use of voluntary standards and ethical frameworks
- the use of human rights impact assessment and design tools in this area.
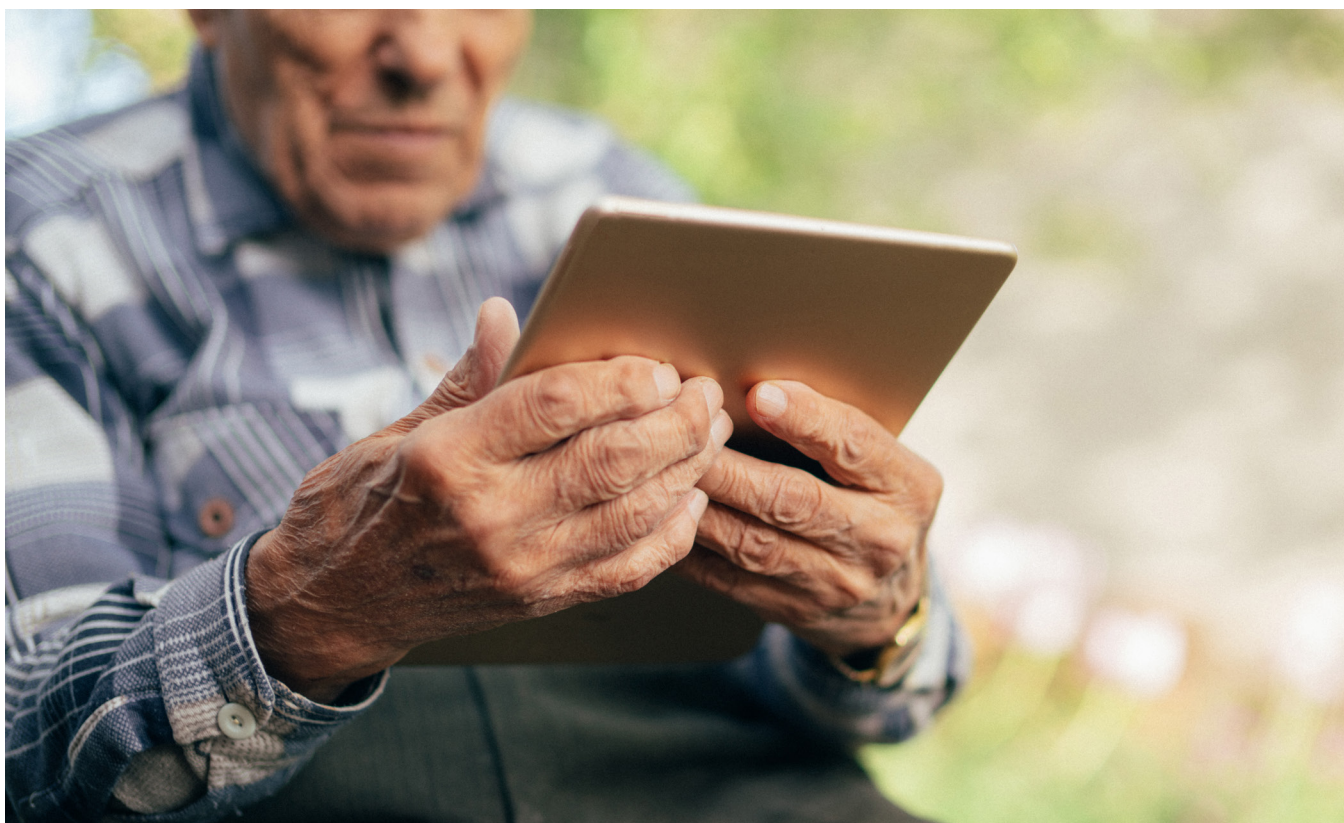
For example, government agencies would benefit from guidance on how to fulfil their obligations to provide reasons for administrative decisions, when those decisions are made using AI. In particular, such guidance could deal with how a technical explanation could be provided.[733]

Guidance could also include practical tools that support a co-regulatory approach. This could assist public and private sector bodies comply with human rights standards for AI, and conduct human rights impact assessments.[734]

The Commission's 2020 technical paper on algorithmic bias is an example of the sort of guidance that might be of assistance in this regard. That paper, *Using artificial intelligence to make decisions: Addressing the problem of algorithmic bias*, was the product of a collaboration with Gradient Institute, Consumer Policy Research Centre, CHOICE and CSIRO's Data61.[735]

Stakeholders from the public and private sectors identified a need for expert advice on the use of AI in ways that uphold human rights.[736] Stakeholders also recognised the need for guidance to promote a clearer understanding of how existing laws and policies apply to the development and use of AI.[737]

Some stakeholders identified a need for practical guidance in particular contexts where AI is being used, including in business and health.[738] For example, KPMG Australia noted that business would benefit from practical guidance on applying human rights principles in relation to AI-informed decision making.[739] The SAS Institute Australia identified a desire from the technology community for 'clear and simple guidance and a meaningful "translation" of how to consider legal requirements and rules'.[740]

(ii) Specific recommendations where guidance is needed

In Part B, the Commission recommends a number of important activities that the AI Safety Commissioner would be suitable to perform—especially in issuing guidance. These are:

- conducting an audit of all current or proposed use of AI-informed decision making by or on behalf of Government agencies[741]
- developing guidance for government and non-government bodies on how to generate reasons, including a technical explanation, for AI-informed decisions[742]
- issuing guidance for the private sector on how to undertake human rights impact assessments[743]
- convening a multi-disciplinary taskforce on AI-informed decision making to consider how to embed human rights throughout the AI life cycle[744]
- developing a tool to assist private sector bodies undertake human rights impact assessments in developing AI-informed decision-making systems[745]
- reviewing Australian law, policy and guidance relevant to government procurement of AI-informed decision-making tools[746]
- issuing guidance to the private sector on good practice regarding human review, oversight and monitoring of AI-informed decision-making systems.[747]

In time, there could also be a role for the AI Safety Commissioner in broader public education and awareness raising about AI.

(d) Resourcing, structure and expertise

The Commission recommends that the AI Safety Commissioner be an independent appointment, with core funding from the Australian Government to help ensure independence and secure the public's trust. There could be opportunities for other income sources from industry or the community, with appropriate protections to prevent conflicts of interest or inappropriate commercial pressures.

The AI Safety Commissioner should have access to expertise across a broad range of professional disciplines, including engineering, science, technology; law and business; human rights and ethics; and social science. This range of expertise is necessary due to the complexity of AI-informed decision-making systems, and the need for a sophisticated understanding of the operation of such systems.

While it is important that the AI Safety Commissioner be an independent statutory authority, the Commission remains agnostic on whether it would be better to incorporate it into an existing body or to create a separate entity.

There are successful examples of each of these models. For example, the Office of the eSafety Commissioner was established as a standalone body under the *Enhancing Online Safety Act 2015* (Cth).[748] The eSafety Commissioner is supported by the ACMA, with all staff except for the Commissioner employed by ACMA.[749]

Another model, where an independent commissioner is integrated entirely within an existing statutory body is the National Children's Commissioner in the Australian Human Rights Commission.[750] The National Children's Commissioner performs its functions on behalf of the Commission and has a responsibility to work collegially with other Commissioners. Benefits of this approach include being able to have formal access to expertise within the Commission on a range of human rights matters that are of relevance to children.[751]

A decision about where the AI Safety Commissioner is located should be informed by a transparent consultation process facilitated by the Attorney-General's Department. Consultation with industry, regulators and other government agencies would help ensure this decision minimises any duplication of roles and activities between the AI Safety Commissioner and other bodies. It would also help build acceptance and understanding of the role of the new AI Safety Commissioner in industry and the community.

Stakeholders noted the need for adequate resourcing of an AI Safety Commissioner.[752] Responsible Technology Australia suggested an industry levy could be one way of securing appropriate independence.[753]

Stakeholders identified a need for specialised technical expertise on AI, and in-depth sector-specific knowledge across different settings where AI was deployed.[754] The Australian Academy of Sciences, for example, considered that both cross disciplinary and interdisciplinary expertise are needed to deal with the complex problems raised by AI.[755]

A strong theme throughout the consultation was that establishing an AI Safety Commissioner presented an opportunity for civil society input on law and policy relating to AI. Some stakeholders emphasised the need for the AI Safety Commissioner to play a role in protecting the human rights of groups that experience structural and individual discrimination.[756]

Stakeholders generally agreed that the AI Safety Commissioner should be independent, with legislative backing.[757] However, there were differing views on how this should be achieved. Some stakeholders focused on avoiding duplication of roles and responsibilities with other regulators and urged that a new body focus on collaboration with existing regulators.[758] Some suggested that the AI Safety Commissioner be incorporated into an existing body that focuses on human rights and consumer interests such as the Commission, OAIC, ACCC or ASIC.[759]

The OAIC observed that an existing agency could be well placed to take the lead in implementing the national strategy (Recommendation 1). This could be done 'in collaboration with a technical body such as Data61', with a view to 'driving a whole-of-Government, economy-wide approach to AI technology'.[760]

11. The right to access technology

11.1 Summary

This Part of the Final Report considers how people with disability are experiencing the rise of new technologies. It recommends practical ways of promoting more equal access to the benefits of new technology for people with disability.

All members of society use technology to participate in almost every aspect of individual and community life. This includes in areas that are fundamental to the enjoyment of our human rights, such as education, government services and employment. As a result, our human rights depend on being able to access and use technology.

New technology can enable the participation of people with disability as never before—from the use of real-time live captioning to reliance on smart home assistants. But inaccessible technology brings a heightened risk of exclusion.

Poor design, such as cashless payment systems that are inaccessible to people who are blind, can cause significant harm, reducing the capacity of people with disability to participate in activities that are central to the enjoyment of human rights, and their ability to live independently.

Two types of 'access' are referred to throughout this part of the Final Report. The first involves being able to *obtain* goods, services and facilities that use a particular technology. The second type, known as 'functional access', involves being able to *use* goods, services and facilities that use a particular technology.[761]

Reflecting the feedback from stakeholders, this Part of the Report focuses on technologies that are used primarily for communication. The Report uses the term 'Digital Communication Technology' to refer to technologies associated with information and communication technology (ICT), connected devices and the Internet of Things (IoT), virtual reality (VR) and augmented reality (AR).

This first chapter of Part D focuses on the right to access technology, and especially Digital Communication Technology. The later chapters in this Part consider the functional accessibility of technology (Chapter 12), accessible broadcasting and audio-visual services (Chapter 13), the experience of people with disability in obtaining technology (Chapter 14), and design, education and capacity building in relation to technology (Chapter 15).

> **PART D FINDINGS:**
>
> 1. Accessing technology is an enabling right for people with disability.
> 2. Many people with disability encounter barriers in accessing Digital Communication Technologies.
> 3. Law and policy reform is needed to improve functional access to Digital Communication Technologies.
> 4. A 'human rights by design' strategy can improve the functional accessibility of Digital Communication Technologies.

Access to Digital Communication Technology is an enabling right for people with disability

Addressing disability discrimination

- New Disability Discrimination Act Standard
- New voluntary standards

Design, education & capacity building

- Human rights by design in curricula
- Accessible technology in new National Disability Strategy

Industry action

- Concessional NBN broadband for people with disability
- Inquiry into industry compliance with accessibility standards

Government action

- Government procurement rules promote accessibility
- Australian Governments comply with accessibility standards: policies & targets
- Accessible tech under the NDIS

News, information & entertainment

- Audio description & captioning
- Accessible emergency announcements

11.2 The right to access technology

Australia is a party to the *Convention on the Rights of Persons with Disabilities* (CRPD). The CRPD aims to 'promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities'.[762] Article 9 focuses on accessibility and sets out the right of people with disability to access ICT and other technology open or provided to the public.[763] This right is referred to in this Part as the 'right to access technology'.[764]

States Parties to the CRPD must take appropriate measures to identify and eliminate barriers to people with disability accessing technology, including by implementing minimum accessibility standards, and promoting the design and development of accessible technology.[765] As discussed in Chapter 12, a number of Australian laws, policies and guidelines go some way to implementing this obligation.

The following CRPD articles are particularly relevant to the right of people with disability to access technology.

Box 9: Key provisions of CRPD:[766]

Convention principles Article 3

a) Inherent dignity, individual autonomy, freedom of choice and independence;
b) Non-discrimination;
c) Full and effective participation and inclusion in society;
d) Respect for difference and acceptance;
e) Equality of opportunity;
f) Accessibility;
g) Equality between men and women;
h) Respect for evolving capacities for children and their identities.

Accessibility Article 9

People with disability have the right to access all aspects of society on an equal basis with others including the physical environment, transportation, information and communications, and other facilities and services provided to the public.

Living independently and being included in the community Article 19

People with disability have the right to live independently in the community

Freedom of expression and opinion, and access to information Article 21

People with disability have the right to express themselves, including the freedom to give and receive information and ideas through all forms of communication, including through accessible formats and technologies, sign languages, Braille, augmentative and alternative communication, mass media and all other accessible means of communication.

(a) The right to access technology as an enabling right

Stakeholders consistently described access to technology as an enabling right.[767] For example, the Australian Communications Consumer Action Network (ACCAN) stated:

> Access to technology can offer expanding opportunities to people with disability. With greater access to accessible technology comes greater inclusion within society and more equal enjoyment of human rights, including for instance more inclusive workplaces, better access to education (including lifelong learning), and greater participation in cultural life, in recreation activities, leisure and sport.[768]

As Article 9 of the CRPD reflects, access to technology can 'enable persons with disabilities to live independently and participate fully in all aspects of life'. It enables the enjoyment of other CRPD rights and is a key underlying principle,[769] because it is 'a vital precondition for the effective and equal enjoyment of civil, political, economic, social and cultural rights by persons with disabilities'.[770]

Accessible technology can be compared with other enabling rights, such as the right to education, as it helps build skills, capacity and confidence to help people achieve other rights.[771]

(b) Inaccessible technology and impact on other human rights

Digital Communication Technologies are pervasive and indispensable throughout our community, including in workplaces, for education, healthcare and as a means of communicating.[772] Stakeholders made clear that lack of access to these technologies can limit enjoyment of CRPD rights.[773] Some illustrations are set out in Table 1 below.

Table 1: CRPD–protected rights engaged by inaccessible technology

The right to work (art 27)	The right to work is compromised when the technologies required for work are inaccessible. This problem is exacerbated by the near ubiquity of ICT in the workplace. For example, more and more job advertisements appear primarily or solely online, which disadvantages those who cannot access such websites. Similarly, it was reported that ICT routinely used in employment settings—such as for content management and internal human resources and finance systems—is not accessible. This creates a barrier for people with disability working in those environments.
The right to freedom of expression and opinion (art 21)	This right can be constrained by difficulties for people with disability accessing ICT hardware, easy-to-read online information and websites.
The right to education (art 24)	This right is limited when accessible educational materials are not provided. Inaccessible technologies can have a significant effect on the education of children with disability.
The right to privacy (art 22)	Privacy can be breached when technology tools inappropriately collect personal information from people with disability.
Political rights (art 29)	This right can be compromised when accessible ICT hardware is not provided at voting stations and information portals.
The right to highest attainable standard of health (art 25)	This right can be compromised when the cost of assistive technology is prohibitive or a technology is not available for people who live in rural or remote areas.
The rights to equality before the law (art 5), equal legal capacity (art 12) and effective access to justice on an equal basis with others (art 13)	These rights can all be negatively affected by the use of predictive data, especially where it leads to algorithmic bias affecting groups such as people with disability.[774] These rights may also be compromised when access to justice requires online communication which is inaccessible to a person with disability.
The right to cultural life (art 30)	This right can be limited where television programs, subscription services, films, online content and theatre are not captioned or audio described.
Situations of risk and humanitarian emergencies (art 11)	States must take all necessary measures to protect and safeguard people with disability in situations of risk and emergencies. This brings special obligations during the COVID-19 pandemic and in natural disasters, such as bushfires.

11.3 The COVID–19 pandemic

The Commission's final stage of public consultation occurred in the first half of 2020. People with disability and their representatives reflected on their experience of the direct and indirect effects of the COVID-19 pandemic.

A consistent message was that COVID-19 has highlighted and exacerbated existing inequalities, including in regard to inaccessible Digital Communication Technologies.[775] Prior to the pandemic, the National Association of Community Legal Centres observed:

> [E]xisting inequalities are often perpetuated through access to technology, and access to technology is increasingly central to engagement with essential services and opportunities.[776]

A direct consequence of the pandemic has been to increase the reliance on digital technology for participation in all aspects of society, including education, employment and healthcare. This has heightened the importance of accessible technology for people with disability.

Some specific concerns raised by people with disability and their representatives included the following.[777]

(a)   Internet access

Restrictions associated with the COVID-19 pandemic increased the need for reliable and affordable broadband for people with disability. Online became the sole or principal way of accessing carers, health supports, workplaces and education facilities during pandemic restrictions.

Stakeholders also referred to the problems of isolation, especially for people with disability who received less in-person support as a result of government lockdowns or advice to reduce social interaction. Instead, many were forced to rely more on remote platforms to stay connected with people.

Many stakeholders observed that the sudden transition to working, studying and connecting via digital platforms increased the urgency of problems they had been experiencing before COVID-19. The existence of an inaccessible digital platform was not a new problem but during COVID-19 often the digital platform became the *only* way that a service provider, health professional, workplace or education facility was communicating.

Examples included:

- barriers for people with disability in carrying out their employment duties when they were suddenly instructed to 'work from home', due to inaccessible software and digital platforms
- people who are engaging with the justice system being unable to access legal services or participate in a court matter via videolink which is inaccessible to a person with disability.[778]

(b)   Emergency and public service announcements

Federal, state and territory governments have communicated vital information related to the pandemic through public service announcements and special broadcasts. However, some of this information has been communicated in ways that are inaccessible for some people with disability.

For instance, some early features of the COVIDSafe app were not functionally accessible for people who are blind or who have a vision impairment (though these features were later included via software updates). In addition, as discussed in greater detail in Chapter 13, some emergency broadcasts were not accessible for many people with disability. This included some televised community information about safe hand washing and mask wearing which did not include audio description, captions or Auslan.

(c)   An opportunity for positive change

Stakeholders also shared some positive stories emerging from the shift to digital platforms during the COVID-19 pandemic.[779] A representative from one disability group noted that some of their members had previously requested more flexibility in their working arrangements, which had been denied. However, with more people now working from home, many employers took this opportunity to reconsider these arrangements, providing greater flexibility for people with disability to structure their care supports, personal and professional lives.[780]

One disability group representative noted:

> This pandemic has shown everyone that we need good policies in place before an event like this—we need to plan for crisis-driven scenarios. It's not good enough to hope that people will do the right thing, we need enforceable law for accessible technology.[781]

Given the dramatic and rapid shift from in-person communication to digital platforms, accessible technology is more urgent than ever. This change has highlighted the existence of inaccessible goods, services and facilities, and reinforces the imperative to promote and protect the right to access technology.

11.4 Importance of accessibility

People with disability have diverse experience with Digital Communication Technologies. However, as these technologies are integrated into almost every conceivable area of life, the importance of accessibility grows ever greater.

When accessible, these technologies—and the goods, services and facilities in which they are used—enable people with disability to enjoy greater independence and participation in all areas of life. When inaccessible, they present barriers to the most fundamental human rights, including to education, employment, health and more.

FINDING:

The right to access technology, and especially Digital Communication Technology, is an enabling right that supports people with disability to realise a range of political, economic, social and cultural rights.

The following four chapters explore some key implications that flow from this finding, and set out recommendations for reform. In particular, these recommendations would assist Australia to fulfil its obligation to implement CRPD rights.[782]

12. Functional accessibility

12.1 Summary

This chapter considers the functional accessibility of goods, services and facilities that rely on Digital Communication Technology.

Something is *functionally accessible* if it accommodates the needs associated with a person's disability. This form of technology tends to be designed for the entire community, not solely people with a particular disability.

By contrast, 'assistive technology' is specifically designed to support people with a particular disability to perform a task. An example of assistive technology is a screen reader, which can assist a person who is blind, or who has a vision impairment, to read the content of a website.

Where problems arise in goods, services and facilities that use Digital Communication Technologies, they tend to relate to the user interface being designed in a way that excludes people with one or more disabilities.[783] For example, a person who is blind cannot read information on a visual display like a typical computer screen.

Different disabilities bring different accessibility requirements.[784] Hence, functional accessibility is sometimes described as a match between the user's individual accessibility needs and the user interface of the product or service.[785]

The recommendations in this chapter aim to improve functional accessibility in three ways:

1. the creation of a new Disability Standard, focused on Digital Communication Technology, under the *Disability Discrimination Act 1992* (Cth) (DDA)

2. amending government procurement rules to require accessible goods, services and facilities

3. improving private sector use of accessible Digital Communication Technology.

12.2 Functional accessibility in practice

Functional accessibility needs to be incorporated in the design of both the hardware and software, and in any updates or new iterations, of goods, services and facilities that use Digital Communication Technologies.

For example, a particular smartphone may be accessible, in the sense that it can be operated by people with disability. However, some applications that people buy to use on the smartphone may not be accessible. Industry stakeholders observed that the online stores where consumers obtain these applications play an important gatekeeping role: they can mandate accessibility, security and other features of applications that they make available. Ultimately, however, application developers are primarily responsible for making applications accessible.[786]

When an accessibility problem relates to a Digital Communication Technology that is used in many types of product and service, all of the resultant products and services can be rendered inaccessible.[787] An example of this phenomenon is where a device requires a passcode or PIN to be entered by using a touchscreen (also known as 'PIN on Glass' or POG). Unless specially modified, this technology is generally inaccessible for people who are blind or have a vision impairment, because it is impossible for them to know where to enter the passcode.

People with disability and representative groups outlined many examples of goods, services and facilities that use Digital Communication Technology, and which are not functionally accessible.[788]

Table 2: Examples of functional accessibility problems

Context	Digital Communication Technology	Limits on functional accessibility
Domestic and personal	Connected and smart digital devices	Some digital home assistants may be more accessible for people who are blind or have a vision impairment, but those that require voice input are inaccessible for people with a voice communication disability.
	Whitegoods and household electrical devices	Products with touch screens are sometimes inaccessible for people who are blind or have a vision impairment. Connectedness through IoT may help address this problem—at least for people with disability who are able to connect online.
Employment	ICT	Some content management systems, client referral systems, internal human resources and finance, and business technologies are inaccessible for people with various types of disability.
News and entertainment services	Broadcasting, video and online content	A high proportion of broadcasting and video content available to the Australian public is inaccessible to people who are deaf or have a hearing impairment. There is currently no minimum requirement for audio description, for people who are blind or have a vision impairment, in respect of free-to-air television, on-demand and subscription broadcasting and online content. Emergency and public service announcements are inaccessible for people who are deaf or have a hearing impairment where automatic captioning is unavailable or inaccurate, and Auslan interpreters are not provided or visible on the screen.
Online information	Web accessibility	Web accessibility has improved through wider use of accessibility guidelines, but there remain many inaccessible websites, webpages and online services, especially for people with print disability. Inaccessible security tools such as CAPTCHA, which are incorporated into otherwise accessible webpages, can render the whole content inaccessible for the user.

The Commission heard many examples of digitisation making a service, which was previously accessible, inaccessible for people with disability.[789] These include:

- Some machines used for credit card payment in shops require payment via a POG touch screen, and automated self-service and information kiosks can be inaccessible or more difficult to use for people with a vision impairment.[790]
- Automatic airline check-in using passport facial recognition technology can present barriers for people with eye or facial differences.[791]
- Smartphone transport applications, which replace information in Braille or talking text at transport interchanges, are difficult for people who do not have access to mobile phone applications or are not confident digital users.[792]

- Interactive voice response software, which is often used on service telephone lines, is inaccessible for some people with intellectual disability who require human customer support.[793]
- The primary means of accessing some essential government services, such as My Health Record, My Aged Care and the National Disability Insurance Scheme (NDIS), is now online. This can present barriers for people with limited or no Internet coverage or computer literacy.[794]

12.3 A new Standard under the Disability Discrimination Act

> **RECOMMENDATION 24:** The Attorney-General should:
>
> (a) develop a Digital Communication Technology Standard under section 31 of the *Disability Discrimination Act 1992* (Cth), and
>
> (b) consider other law and policy reform to implement the full range of accessibility obligations regarding Digital Communication Technologies under the *Convention on the Rights of Persons with Disabilities*.
>
> In doing so, the Attorney-General should consult widely, especially with people with disability and the technology sector.

The Commission recommends the creation of a new Digital Communication Technology Standard under s 31 of the DDA.

A broad range of stakeholders—including people with disability, community and advocacy groups, and academic experts—advocated strengthening disability discrimination law in respect of Digital Communication Technology.[795] Many specifically endorsed the creation of a new Standard under the DDA.[796]

Three common concerns emerged:

1. people with disability bear a heavy burden in enforcing disability discrimination law by raising complaints under the DDA

2. there are no legally-enforceable national standards for accessible technology

3. international standards for accessible technology, which could benefit Australians, are not being applied here.

(a) Disability discrimination law

Some stakeholders emphasised Australia's obligations under international human rights law regarding disability. Some, but not all, of these obligations have been incorporated into federal, state and territory laws and the National Disability Strategy.[797]

The DDA prohibits discrimination on the basis of disability in employment, education, accommodation and in the provision of goods, services and facilities. An individual may complain to the Commission that they have suffered discrimination on the basis of their disability.[798]

The Commission can then investigate and conciliate the complaint. Conciliation is an informal dispute resolution process that involves the complainant and the respondent seeking an agreed resolution of the dispute. The Commission is not a court and does not make binding decisions.

If the dispute is not resolved through conciliation, the complainant can take their matter to the Federal Circuit Court or Federal Court of Australia, which can determine the matter according to law.[799] State and territory anti-discrimination laws contain similar protections and dispute resolution mechanisms for disability discrimination matters.[800]

Only a person who is personally affected by a breach of the DDA has standing to seek a remedy. In other words, there is no independent body to monitor and enforce the DDA. Many stakeholders reported that this creates a heavy burden on the disability sector, with individuals bearing the burden of resolving disability discrimination problems, including where those problems are systemic or affect others as well.

There can be a power imbalance in any litigation process, including under the DDA. Typically, an individual complainant has fewer resources than an organisation responding to the complaint. It has been observed that, in practice, only people with structural, relational, financial and community support are well equipped to engage in formal dispute resolution such as litigation.[801] If a complaint of disability discrimination can be resolved in a no-cost informal complaints jurisdiction, such as the Commission, this can reduce this power imbalance.

Outcomes of conciliation are usually confidential between the parties. This has significant practical impacts:

• The conciliation process is designed to resolve the problem for the individual complainant, with any changes in practice focused on the parties to the dispute. However, the conciliation process is not directed towards *systemic* problems that extend beyond the disputing parties. In other words, a successful conciliation can result in practical changes at the organisation that was subject to the complaint, but not at other companies in the same sector where similar problems may also exist.

• The conciliation process does not produce legal precedent or judicial guidance on what is required to ensure equal treatment and avoid discrimination. While the Commission provides de-identified information about the resolution of some significant complaints, this is necessarily limited.

The emotional, social and financial costs to complainants under the DDA can have especially adverse impacts on people with disability.[802] Advocacy fatigue is common among people who are already exposed to systemic inequalities and who are continually fighting for their rights.[803] The University of Technology Sydney observed that 'large cases are rare, and they expose a plaintiff to considerable financial risk'.[804]

Digital Gap Initiative submitted:

> [F]rom first-hand experience, the burden imposed on individuals with disabilities to seek legal remedies under Australian law is far too onerous. Placing the onus on minority communities to lodge complaints and fight for change presents an unnecessary challenge.[805]

The Commission is currently finalising recommendations for reform of federal discrimination law, including the DDA, as part of the *Free and Equal* project. A report, to be released in 2021, will propose ways of improving access to justice, how to create a proactive, preventative culture, as well as modernising Australia's discrimination laws.

(b) An obligation to provide accessible Digital Communication Technology

As noted above, community and advocacy groups expressed support for a new Standard under the DDA.[806] This would be in addition to the current DDA Standards, which cover the areas of education, buildings and public transport.[807]

Stakeholders submitted that a new standard under the DDA would help relieve the burden on the disability sector to redress inaccessible Digital Communication Technology. Kingsford Legal Centre submitted:

> The reactive nature of the complaints system means that it is difficult to address inaccessible technologies once they have already been made available to the market.[808]

These stakeholders observed that guidelines, such as Web Content Accessibility Guidelines (WCAG) 2.1, are not legally enforceable. Standards Australia is not a government regulator and does not enforce or monitor compliance with standards.[809] Some stakeholders suggested that the voluntary nature of such standards presents more of a problem if the law does not provide sufficient protection. For example, the Digital Gap Initiative stated:

> While voluntary standards are a positive start, no meaningful action will be taken without some formal mandate and even punitive measures for businesses which fail to comply with legislative requirements.[810]

The Digital Gap Initiative concluded:

> In our view the DDA should be the focal point for standards and enforceability of accessibility. At the end of the day, disability discrimination is against the law and this should be emphasised and leveraged where possible.[811]

Blind Citizens Australia urged

> the promotion of mandatory and implementable standards in this space in order to safeguard the rights of Australians who are blind or vision impaired to full and equal access to technology, which is critical to our ability to contribute to the social, economic and cultural life of our communities.[812]

Stakeholders suggested a range of approaches and features to support the success of the proposed Standard, including that it should:[813]

- adopt best practice from existing international standards

- be developed in consultation with people with disability and the technology industry

- be reviewed regularly to address swift technological change

- include a range of indicators to measure accessibility and compliance, and incorporate 'human rights by design' and universal design principles, notably co-design with people with disability[814]

- include civil penalties for non-compliance and for vendors who provide misleading information about their accessibility compliance.

Several stakeholders submitted that the success of a Digital Communication Technology Standard would be enhanced with strong, independent regulatory oversight of its operation. This could help support the implementation of Australia's international treaty obligations and complement any industry self-regulatory measures.[815]

Some stakeholders anticipated the potential significant impacts of a new legally enforceable standard on the technology industry. Some suggestions were made that would support industry with this transition including that:

- the introduction of a new standard should involve an open, consultative approach between any regulatory body and technology service providers[816]

- the standard should adopt a progressive approach to implementation, to help achieve true compliance through building organisation awareness and capacity[817]

- resourcing and funding should be made available to assist organisations comply.[818]

12.4 Improving operation of disability discrimination law

(a) Experience of inaccessible Digital Communication Technology

There is no comprehensive national data about the accessibility of goods, services and facilities that use Digital Communication Technology. However, the problem of inaccessibility is pervasive in this area, and it limits the rights of people with disability.

The Commission heard from a broad range of stakeholders across the nation over two rounds of public consultation. Many of the views expressed are broadly consistent with stakeholder input to a 2017 parliamentary committee on inclusive and accessible communities,[819] and a 2009 report on the experiences of people with disability in Australia.[820]

Where Digital Communication Technologies are inaccessible, this can have a profoundly negative impact on people with disability. As a State Party to the CRPD, Australia should act decisively to eliminate barriers to accessibility.

(b) A new Standard under the Disability Discrimination Act

The CRPD requires Australia to adopt appropriate measures in law for the full realisation of human rights for people with disability,[821] and to effectively monitor implementation of the CRPD itself.[822] The United Nations (UN) Committee on the Rights of Persons with Disabilities has recommended that Australia take the necessary legislative and policy measures, including through the use of public procurement policies, to implement the full range of accessibility obligations under the CRPD and ensure effective sanctions or remedies for non-compliance.[823]

This goal can be advanced in a number of ways. For example, compliance and data collection reforms are being considered by the Commission in its Free and Equal Project. In 2021, the Disability Discrimination Commissioner will also be reviewing the effectiveness of standards made under the DDA and how compliance with standards may be improved.

This Project has focused on another critical reform: the creation of a new Digital Communication Technology Standard under s 31 of the DDA. The DDA's protection should be improved as it applies to Digital Communication Technologies, as people with disability encounter multiple barriers when accessing goods, services and facilities that rely on these technologies.

(i) Benefits of a new Standard

The development of a new Digital Communication Technology Standard would have a number of potential benefits.

It is likely to increase availability of accessible Digital Communication Technology for people with disability, reducing the likelihood of unlawful discrimination. A binding standard would clarify, for government and the private sector, the DDA's minimum requirements regarding goods, services and facilities that use Digital Communication Technologies.[824] It wound send a clear message that people with disability use Digital Communication Technology and so it needs to be accessible.

Such a standard would help guide the design and development of those goods, services and facilities, thereby spurring innovation that promotes accessibility for people with disability. It would also provide legal recourse for anyone negatively affected by a good (such as a product), service or facility that fails to comply with the Standard.

There may also be broader commercial and community benefits. Accessible design and development can give businesses a competitive advantage, increased market share and enhanced reputation, and greater adaptability to external forces such as market changes and regulatory reform.

(ii) Addressing difficulties in implementing a new Standard

A new Digital Communication Technology Standard cannot be a panacea. It will have limitations in its effectiveness, and these need to be considered when deciding on what is included in the new Standard.

Standards are delegated legislation under the DDA and require individuals to bring complaints, collate evidence, prove facts and understand potential legal defences. Therefore, it may be additional regulation is also needed to protect the functional accessibility of goods, services and facilities that rely on Digital Communication Technology. For example, this may be the case where a sector regulator is required to protect the interests of individuals who might struggle to advocate on their own behalf. Any additional or different regulation should complement the proposed Standard and reflect Australia's obligations under the CRPD.

(iii) The coverage of a Digital Communication Technology Standard

A Digital Communication Technology Standard should cover the provision of publicly-available goods, services and facilities that use digital technologies for communications purposes. This would include any software, hardware, VR and AR technologies used in:

- ICT: for example, desktops, laptops and mobile devices

- websites, as well as features and tools embedded in online platforms (eg, CAPTCHA)

- public-facing communication platforms in areas such as banking (eg, ATMs, EFTPOS machines) and travel (eg, ticketing machines, kiosks).

There was some support for including IoT-enabled technologies in a new DDA Standard.[825] Goods and services that use IoT tend to operate via a user interface, which allows people to input and receive information. The user interface is the primary barrier for people with disability when accessing IoT-enabled devices. By including within its scope the user interface of IoT-enabled goods, services and facilities, the Standard would include home automation products, household appliances, wearable technology (eg, smart watches), health appliances and remote monitoring.

As discussed below, the new Standard should also cover information that is needed to *operate* goods and services—such as instruction manuals.

(iv) The development and content of the new Standard

The process of developing a new Standard under the DDA will be critical to its success.

Some in industry are already making accessible products and services that incorporate Digital Communication Technology, and they would require no or minimal adjustment. Others might need more support and capacity building.

That could be achieved through a range of measures. For example, Chapter 15 explores education and professional development to support industry understand and implement accessible practices and policies. In addition, a new Standard under the DDA could provide for progressive compliance milestones, as has been the experience with some existing Standards.[826] This would give industry time to adjust its design, development and manufacturing processes to comply with the requirements of the Standard.

There should be open consultation between the Australian Government, technology industry and the community in developing the Standard. This will be aided by the Disability Discrimination Commissioner's forthcoming review of standards under the DDA. In addition, the consultation process should consider the following factors:

- A balance needs to be struck between principles, outcomes and rules-based content to allow flexibility for different contexts, and yet be specific enough to be useful for technology developers. Some outcomes-based elements could help balance the need to promote innovation with providing regulatory certainty. Principles of 'human rights by design' could help industry incorporate human rights norms into product design (through, for example, co-design with people with disability).[827]

- Standards should adopt international best practice guidelines and allow for a range of other indicators to measure success, such as inclusion of innovative and co-design practices. Compliance measures should cover existing goods, services and facilities that are inaccessible, and allow for gradual and systematic removal of barriers under continuous monitoring, with the aim of achieving full compliance.[828]

- Standards need to be updated periodically to account for technological changes, and also provide a level of certainty for developers as they manufacture and release products according to the Standard.

(c) Compliance framework and data collection

There is currently no comprehensive mechanism for monitoring and enforcing compliance with the DDA. This can contribute to the financial and emotional burdens on individuals who make a complaint under the DDA, especially if a complaint cannot be resolved informally or by conciliation.[829] There has been difficulty in ensuring that rights are upheld with respect to accessibility for people with disability in the absence of additional enforcement mechanisms—something recognised by the UN in its assessment of Australia's implementation of the CRPD.[830]

The DDA contains measures to promote compliance and enable remedies for people affected by non-compliance. These measures, including the existing Disability Standards, have had only mixed success in achieving this goal.[831] On one hand, the current Standards have helped to clarify general legal principles. However, they have not always been practical and effective in sanctioning non-compliance.[832]

Consequently, in addition to the creation of the proposed new Digital Communication Technology Standard, broader reform may be necessary to ensure Australian laws dealing with disability discrimination effectively fulfil the CRPD obligations.[833] Some of these larger questions of discrimination law reform are being considered separately.

In particular, the Commission's Free and Equal Project has proposed a modernisation of the regulatory framework to include more effective enforcement powers for the Commission. These might include audits; own-motion investigations; compliance notices; enforceable undertakings; and applications to the Court to require compliance. The Commission, in that Project, proposes building and supporting a culture of prevention so that duty-holders take responsibility to ensure discrimination does not occur.

Similarly, in his comprehensive review of DDA standards, the Disability Discrimination Commissioner is considering ways to achieve: more effective monitoring of compliance with standards; higher rates of compliance; greater clarity about legal obligations; and a more accessible and effective complaint-handling process for the most vulnerable people in the community.[834] The Commission acknowledges there is scope for a greater emphasis on systemic discrimination and placing less pressure on individual complainants, as well as a review of the financial costs associated with court cases where the complaint is not resolved at the Commission level.

In the Free and Equal Project, the Commission proposes enhancing access to justice for complainants and improving the practical operation of anti-discrimination law. Specific reforms could include: shifting the evidentiary burden at the judicial phase, after the establishment of a prima facie case; limiting the costs liabilities of meritorious complainants, subject to established criteria; allowing unions and representative groups to bring a claim; and reviewing funding for community legal centres and legal aid to ensure adequate resources.

The Digital Communication Technology Standard is more likely to achieve its aims if these kinds of additional measures can strengthen the legislative framework, support providers of goods, services and facilities to comply with their obligations, and help empower members of the community to make a complaint if needed.

12.5 Government services and activities

RECOMMENDATION 25: The Australian Government and state, territory and local governments should commit to using Digital Communication Technology that fully complies with recognised accessibility standards—especially WCAG 2.1 and Australian Standard EN 301 549, and successor standards. To this end, all Australian governments should:

(a) introduce whole-of-government requirements for compliance with these standards, including by:

- providing information that is publicly available about how each agency complies with these requirements, reported annually

- establishing central line agency and ministerial responsibility for monitoring compliance across government

- resourcing training and advisory support to assist compliance

(b) promote accessible goods, services and facilities that use Digital Communication Technology by favouring procurement from entities that implement such accessibility standards in their own activities

(c) develop policies and targets to increase the availability of government communications in Easy English and provide human customer supports for people with disability who need to communicate with people instead of accessing digital services.

This section considers the role of all levels of Australian government in adopting and promoting accessible Digital Communication Technology.

The Commission recommends the Australian Government adopt a whole-of-government approach to the procurement and use of accessible goods, services and facilities that involve Digital Communication Technology. A key goal should be to enhance compliance with the latest international accessibility standards.

(a)   Experience of government services

People with disability have varied experiences when communicating with government agencies. Some reported positive examples of accessible services and facilities.[835] Others reported inaccessible communication with agencies across all levels of government.[836]

There were several suggestions for improving government policy and practice. First and most importantly, it was suggested that there should be better adherence to WCAG 2.1 and Australian Standard EN 301 549.[837] Stakeholders observed that the digitisation of government services has made it difficult for people with intellectual disability and require human customer supports.[838] One solution would be to provide important government information in Easy English.[839]

The Australian Government adopted Australian Standard EN 301 549 in 2016.[840] This deals with accessibility requirements suitable for public procurement of ICT products and services.[841]

The Australian Government also encourages its agencies to meet WCAG 2.1 in all communications.[842] WCAG 2.1 aims to provide a single, shared accessible standard for web content to a wide range of people with disability including: blindness and low vision; deafness and hearing loss; learning disabilities; cognitive limitations; limited movement; speech disabilities; and photosensitivity.[843]

The Australian Government's National Transition Strategy, to implement the earlier WCAG 2.0 version, commenced in 2010 with the aim of implementation across all levels of government over four years.[844] There is no recent Government audit or evaluation of that strategy and adoption of WCAG 2.0.[845] An external assessment suggested that conformity with WCAG 2.0 varied across agencies, and that the strategy was 'successful in the raising of awareness of the issues and requirements of website accessibility, particularly for government agencies'.[846]

(b)   Government procurement

Stakeholders across civil society, academia and industry supported all levels of government being required to procure accessible ICT.[847]

The effectiveness of any government procurement policy turns on the extent to which it is followed. Some stakeholders observed that previously such policies were not consistently applied across government, and suggested that new monitoring and compliance measures be introduced to support implementation of new procurement policies.[848]

Stakeholders advocated that government procurement rules incorporate some or all of the following accessibility components:

- application to government agencies, vendors, contractors and partners, as well as essential industries used by the public such as finance, healthcare and legal organisations[849]

- compliance mechanisms allowing government employees to sue their employer agency for failing to provide accessible equipment required to do their job[850]

- compliance measures to test accessibility, such as EN 301 549 compliance documentation or Voluntary Product Accessibility Templates,[851] and allow for progressive realisation as accessibility becomes better understood and practiced across government services[852]

- advantages for vendors who comply with accessibility standards in their own operations[853] and promote inclusive design.[854]

(c) Conclusion

Some government agencies are already taking positive steps to promote accessibility.[855] However, the experience of people with disability accessing public services varies and depends on the service and the person's disability.

The CRPD includes a requirement for States Parties to provide accessible public services,[856] which necessarily entails the procurement of accessible goods, services and facilities. The UN Committee on the Rights of Persons with Disabilities noted that 'it is unacceptable to use public funds to create or perpetuate the inequality that inevitably results from inaccessible services and facilities'.[857] In applying this requirement to Australia, the Committee found that Australia should develop public procurement criteria to implement the full range of CRPD accessibility obligations for ICT.[858]

Government leadership is vital in promoting human rights compliant Digital Communication Technology, especially through the provision of public services. Government procurement policies can influence markets and be a lever for change in the public and private sectors.[859]

For example, the Commonwealth Indigenous Procurement Policy incentivises the inclusion of Indigenous enterprises at all levels of the supply chain to 'help maximise the development of the Indigenous business sector'.[860] Overall, the policy has had a positive effect on Indigenous business.[861] Since 2015, the policy has successfully generated over $3.5 billion in contracting for Indigenous businesses, across 24,470 contracts awarded to 2,140 businesses.[862]

Outside government, procurement policies are also gaining traction, as demonstrated by the Business Council of Australia's 'Raising the Bar' initiative which is a $3 billion procurement agreement between some of its member organisations and Indigenous suppliers.[863]

The Commission recommends that the Australian Government adopt a whole-of-government approach to the procurement and use of accessible goods, services and facilities that involve Digital Communication Technology. A key goal should be to enhance compliance with the latest international accessibility standards.

The Commission recommends that accessibility requirements be included in the Government's procurement frameworks, such as the Commonwealth Procurement Rules,[864] as well as in corresponding state and territory procurement rules and policies.[865] This would have a number of benefits.

- It would enhance accessibility for public sector employees with disability. Inclusive and accessible workplaces help attract and retain employees with disability, as they are more likely to feel supported and encouraged in their employment.[866]

- It would enhance accessibility for the 4.4 million (about 1 in 5) Australians with disability when they interact with public services.[867]

- It would signal to the private sector the importance of manufacturing accessible Digital Communication Technology and incentivise meeting these requirements for any involvement in public sector procurement or funding.

- This would, in turn, improve accessibility across large public and private institutions that procure similar products and services (for example, universities, hospitals and banks). An increase in demand from the public service for accessible goods and services would likely result in increased availability and competition across the market.

- As the market shifts more towards accessible goods and services, it would promote best practice and showcase leading providers.

The Australian Government should consider several guiding principles in the development and implementation of accessibility requirements in procurement at the federal level:[868]

- people with disability and their representatives should be involved in the development, testing and evaluation of accessible services

- the government should commit to building the capacity of industry to respond to this requirement through early and frequent engagement, and support the involvement of small and medium enterprises

- the government should monitor and evaluate policies to ensure consistent implementation and effectiveness across government

- the government should promote innovative public procurement processes through activities such as technology contests

- government agencies and departments should collaborate on the implementation, successes and challenges of the policy, to improve outcomes and learn from each other.

12.6 Improving private sector use of accessible Digital Communication Technology

RECOMMENDATION 26: The Australian Government Department of Industry, Science, Energy and Resources or the Digital Transformation Agency should conduct an inquiry into compliance by industry with accessibility standards such as WCAG 2.1 and Australian Standard EN 301 549.

The inquiry should consider the extent to which incentives for compliance with standards should include changes relating to taxation, grants and procurement, research and design, and the promotion of good practices by industry.

In addition to law reform, it was clear from the Commission's consultation that the public and private sectors could benefit also from better policy and self-regulation in this area.

There is limited hard data on *private sector* compliance with accessibility requirements in respect of Digital Communication Technologies. This data is needed to formulate a plan for how government could most effectively incentivise good practice in the private sector.

Civil society and industry stakeholders supported a government inquiry into compliance by industry with accessibility standards.[869] Several focused on the role that government incentives might play in lifting industry performance, such as:

- incorporating accessibility requirements into the terms of government grants[870]

- tax concessions and grant incentives to businesses that provide accessible technology[871]

- a trust mark to symbolise a business' adherence to accessible technology,[872] or a requirement that Australian businesses make information about the accessibility of their goods and services available and accessible to consumers[873]

- industry awards, prizes and showcases for best designs and processes.[874]

Telstra suggested any audit into accessibility standards compliance by industry be conducted progressively:

There is currently no real national standard in this space and disability advocates tell us compliance with the different standards that do exist is poor. We suggest a progressive introduction of standards, with audits conducted after the standards have been introduced, and that the technology sector must be involved in designing and testing the standards to ensure they are workable.[875]

The Commission heard from industry stakeholders that want to adopt more accessible practices, and from accessibility consultants and disability groups who have collaborated with business to achieve positive accessibility outcomes. There are clear opportunities for further improvements across the private sector.[876]

Collaboration across industry and non-government organisations has a role to play in promoting accessible technology. For example, with funding from ACCAN, the Melbourne Social Equity Institute developed a program in collaboration with industry, people with disability and mental health consumers to support providers of goods and services with their communications with people who have a cognitive disability.[877]

However, there is limited data on industry compliance with accessibility standards. In the Commission's view, an inquiry is needed to expose barriers to the adoption of accessibility standards, as well as reveal good practices and innovation in the area. The Digital Transformation Agency (DTA) and the Department of Industry, Science, Energy and Resources (DISER) would each be well placed to lead such an inquiry.

DISER has a strategic purpose to improve business capability and support 'industry transformation by encouraging innovation and investment'.[878] The DTA has a national role in leading and shaping whole-of-government policies on shared ICT and digital services.[879] The DTA supports government agencies in adopting accessible services through its Digital Service Standard.[880]

Together, the DTA's expertise with understanding barriers to the provision of accessible services, and DISER's business development and innovation focus, could lead this inquiry and help identify incentives to improve accessible policies and practices.

Conclusion

The Australian Government should stimulate the development and use of accessible Digital Communication Technology through policies that favour industry participants that promote accessibility.

Stakeholders provided examples of the kind of incentives that could promote accessibility across industry, including tax concessions to accessible businesses, industry awards, accessible trust marks, and prescribing accessibility in government grants.

In addition to promoting compliance with accessibility standards WCAG 2.1 and AS EN 301 549, government incentives such as grants and research opportunities might be provided for industry to develop and adopt innovative ways of communicating with people with disability.

13. Broadcasting and audio–visual services

13.1 Summary

News, information and entertainment are central to democratic and cultural life. Until recently, broadcast television was the dominant way of *watching* this material. Technological developments, which have accelerated in the 21st century, have resulted in an ever-increasing range of media that provide this content to us—including free-to-air broadcasting, subscription television, video and online platforms.

The use of accessibility features—especially captioning and audio description—can enable this audio-visual content to be enjoyed by people with disability, and especially people with disabilities affecting their vision or hearing. As the media and platforms on which audio-visual content increase and fragment, ensuring accessibility of this content has become more complex.

Many people with disability experience difficulty in obtaining functionally accessible audio-visual news, information and entertainment. Stakeholders focused especially on the level of unmet need for captioning and Auslan interpretation for people who are deaf or who have a hearing impairment; and audio description for people who are blind or who have a vision impairment.

People with disability have a right to access news, information and entertainment.[881] The Commission considers that this right should apply to all the principal ways in which people access such content in the 21st century, including broadcasting services on free-to-air and subscription television, as well as newer forms of content transmission such as online streaming services and social media.

This chapter includes recommendations to address this problem of functional accessibility by facilitating:

1. increased audio description and captioning requirements for broadcasting services, as well as video, film and online platforms

2. improved provision of accessible information during emergency and important public announcements

3. better monitoring of compliance with accessibility requirements and voluntary targets for the distribution of audio-visual content.

People with disability have a right to access news, entertainment & emergency information

Audio description

Auslan

Captioning

Television

Film & cinema

Online & social media

Subscription channels & video-on-demand

Auslan during important public announcements & emergencies

Television

Online & social media

Film & cinema

Subscription channels & video-on-demand
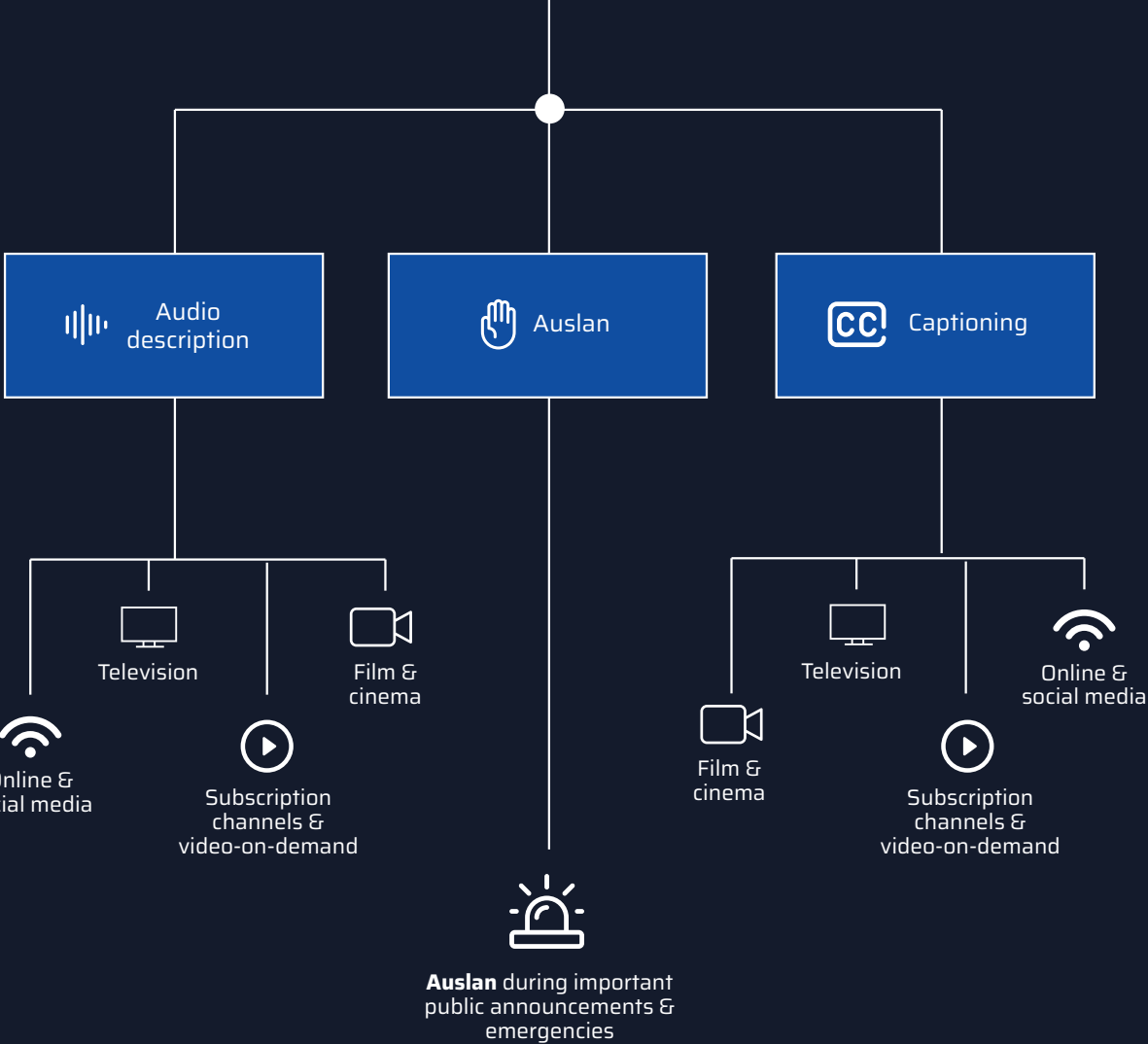
13.2 Accessibility of traditional broadcasting services

RECOMMENDATION 27: The Australian Government should amend the *Broadcasting Services Act 1992* (Cth) to increase the amount of accessible content available for people who have hearing or vision difficulties as follows:

(a) national and commercial free-to-air television services should be required to provide audio described content for a minimum of 14 hours of programming per week, distributed across the primary and secondary channels. This should be increased to a minimum of 21 hours per week in a timeframe to be determined in consultation with people with disability and broadcasting services.

(b) subscription television services should be required to provide audio described content for a minimum of 14 hours of programming per week for their main channels. This should be increased to a minimum of 21 hours per week in a timeframe to be determined in consultation with people with disability and broadcasting services.

(c) national and commercial television free-to-air services should be required to increase the captioning of their content on an annual basis, resulting in all such broadcasting being captioned on primary and secondary channels within five years. The Government should determine a formula for annual progressive increases of captioning in consultation with industry, people with disability and their representatives.

RECOMMENDATION 28: The Australian Government Department of Infrastructure, Transport, Regional Development and Communications should conduct a review to identify effective, practical ways to increase audio description and captioning on secondary or specialist broadcast television channels.

People with disability have a right to access audio-visual content, regardless of how that content is distributed. Australian law should recognise and protect this right.

Captioning has become more cost effective through advances in technology and as policies, practices and regulation have made captioning more common. Although audio description was developed more recently than captioning, the cost associated with audio description are also decreasing over time. Nevertheless, the obligation to provide accessible services will require industry commitment and dedicated resources. To achieve this goal, some broadcasters may need to re-prioritise their functions and activities; others may need some Government support.

(a) Audio description

In the Discussion Paper, the Commission proposed that broadcasters be required to audio describe a minimum of 14 hours of content per week with annual increases, and to increase current minimum hours of captioned content.[882]

Disability and other civil society groups overwhelmingly supported a legislated requirement for free-to-air and subscription television channels to provide a minimum of 14 hours of audio description per week, with minimum annual increases.[883] This is consistent with broader community advocacy for mandatory audio description quotas.[884]

The ABC and SBS started broadcasting on average approximately 14 hours of audio-described programming per week in June 2020.[885] The national broadcasters each received $2 million from the Federal Government to fund their audio description services in 2020-21.[886] Prior to this, the Government funded trials of audio description on ABC1 in 2012 and on the ABC's online streaming platform, iview, in 2015-16.[887]

The Commission's final round of community consultation took place at around the same time as the new Government-funded audio description services started. While there was support for increased audio description in broadcasting, many people with disability described feeling uncertain and disappointed with the changing policy positions in Australia, despite long-term advocacy to effect change.[888]

The 2015-16 audio description trial in Australia did not lead to significant change, despite its apparent success, prompting one consultation participant to say:

> I don't want to get my hopes up. I started to get into some TV series the last time around and stopped watching TV after the last trial ended. It's too psychologically difficult and devastating. This [audio description] is not just a nice-to-have.[889]

One disability group representative spoke about their membership base being

> concerned about what will happen after the funding finishes in 12 months. They've been guinea pigs before for trials and they're worried they're going to lose [audio description] again. [Audio description] can't keep being given, and then taken away.[890]

Some disability representative groups submitted that the most important feature of any new policy is certainty that it will be adopted and enforced. They suggested audio description is most likely to succeed in Australia if industry is supported by government with the establishment of necessary infrastructure needed for audio description.[891]

It was submitted that a graduated approach to audio description—a minimum number of 14 hours per week and annual increases—would help ensure industry commitment to audio description in Australia.[892] Representative groups noted that the most effective way to provide certainty for the community and ensure long-term implementation of audio description is to legislate minimum quotas in the *Broadcasting Services Act 1992* (Cth) (Broadcasting Services Act).[893]

Some advocates noted that now is an opportune moment for the Australian Government to legislate for audio description, and to act on the culmination of concerted advocacy efforts over decades, as well as current ABC and SBS audio description services.[894]

Stakeholders also urged that, in addition to broadcasting, audio description quotas be introduced for online content, video content, and streaming services.[895]

(b) Captioning and Auslan

Several disability representative groups urged an increase in captioned content quotas on broadcast television, with improved measures for quality assurance.[896] Currently, free-to-air broadcasters are required to caption 100 per cent of programs broadcast on main channels between 6am and midnight, and all news and current affairs programs on main channels, regardless of the time at which they are broadcast.[897] This basic rule does not extend to television broadcasters' secondary channels (sometimes known as 'multi-channels') unless the program has been broadcast with captioning on another of the broadcaster's television services.[898]

ACCAN recommended an increase to captioning quotas:

> We are keen to ensure that this requirement also applies across national, commercial and subscription broadcasting services, and across all channels (including multi-channels). We strongly believe that broadcasters should be providing captioning for the full 24 hour viewing day. Furthermore, efforts must be made to ensure that access features follow video content across different platforms.[899]

Disability representatives noted that accessibility is compromised for people who are deaf or hearing impaired when captioning does not accurately represent the content. This can be a problem when captioning is automated and not checked for error before being transmitted to the viewer.[900]

(c) Secondary and specialist broadcast channels

Part of the rationale in imposing a limited quota for audio described content is a recognition that some programming is more difficult to audio describe. People who use audio description have previously reported that scripted content (such as drama and documentary) is better suited to audio description, as compared with live or near-live content (for example, news and live sports).[901]

Moreover, following reform to Australian broadcasting law since 2000, which was coupled with the introduction of digital broadcasting, television networks are now permitted to have a primary channel, as well as one or more secondary or 'multi' channels (referred to in this Final Report as 'secondary channels').

The popularity of secondary channels has increased since their introduction. However, commercial and government-owned television networks sometimes offer more specialised content on secondary channels, such as dedicated foreign language, music, sports and news channels. This can appeal to, or be suitable for, a smaller number of people in the community, as compared with the content typically broadcast on primary channels. In addition, sometimes secondary channels include material that is re-broadcast directly from international providers. This combination of factors can make the content on these secondary channels less suited to audio description, for cost and practical reasons.

(d) Conclusion: a need for reform

The Commission recommends reform to law and policy to ensure that people with disability can enjoy the right to access audio-visual content, regardless of how that content is distributed.

The changes recommended by the Commission will require broad consultation. Consistently with the requirements of the CRPD, that consultation should include people with disability.[902] As ACCAN has observed, such consultation should

> occur throughout the reform process. People with disability must be kept informed about changes that will affect them and must have the opportunity to have their say regarding these changes.[903]

(i) Audio description

The ABC and SBS provide an average of 14 hours per week of audio description to Australian audiences. The ABC and SBS spread these 14 hours of audio described content across their primary and secondary channels.[904] There is further, but limited, availability of audio description through some DVDs, specialist cinema screenings and via international subscription video-on-demand (SVOD) services.[905]

Audio description is primarily used by people who are blind or have a vision impairment. In addition, some sighted members of the community also report using audio description. For example, some people with autism spectrum disorder and intellectual disability use audio description to better enjoy and understand the content, and some other people find it useful when multitasking or attempting to understand culturally-specific references.[906]

Australia is the only English-speaking OECD country without compulsory minimum quotas for audio description on free-to-air television.[907] Free-to-air broadcast services are the most popular medium for older people, who make up almost three quarters of people who are blind or vision impaired in Australia.[908] This proportion is predicted to increase with an ageing population and the age-related nature of vision loss.[909]

People who are blind or have a vision impairment have long advocated minimum quotas for audio description on free-to-air television, video-on-demand and subscription broadcasting.[910] Senator Steele-John introduced a private member's bill in 2019, proposing a minimum of 14 hours per week per channel of audio description for the first three years of operation, followed by annual increases to 21 and 28 hours per week.[911]

In December 2017, a working group of the then Australian Government Department of Communications stated that 'significant work would be required on the broadcast transmission side and the consumer receiver side before an AD service could be introduced'.[912] Free-to-air broadcasters expressed concerns at the time that if audio description were mandated in law, this would cause structural, technical and financial disruptions to their services.[913] The Commission acknowledges the significant effort needed for free-to-air broadcasters to provide audio description services to the Australian public.

The ABC and SBS consulted people with disability and their representative groups to prepare for the implementation of their audio description services. They consulted on suitable audio description formats that would align with TVs and set top boxes, as well as audience preferences for audio-described programming and information regarding the service. Since its inception in mid-2020, the broadcasters have received positive feedback from the community and are continuing to engage with them throughout the process.[914]

ABC's and SBS's groundwork to address some of the technical challenges and consult with the community could help other broadcasters implement audio description services.

The Commission supports calls for broadcasting content to be made more accessible for people with disability. As a first and important step, adopting a minimum audio description requirement of 14 hours per week for national, commercial and subscription broadcasting services would benefit many Australians.[915]

This minimum quota of 14 hours per week should be increased to 21 hours in an appropriate timeframe, to be determined in consultation with people with disability and broadcasting services. The Australian Government should also provide reasonable support to national, commercial and subscription broadcasting services to help with the establishment of these services. Over time, minimum quotas should continue to be increased further.

(ii) Captioning

Under the Broadcasting Services Act, broadcasters on free-to-air television currently must provide captioning for:

- content broadcast between 6am and midnight on primary channels
- news and current affairs programs at any time on primary channels
- any program that is broadcast as a 'repeat' on secondary channels having previously been broadcast on a primary channel.

Stakeholders representing people with disability generally urged that the Act be amended to require captioning for *all* content on free-to-air television 24 hours per day. This position is consistent with the views described in the Australian Communications and Media Authority (ACMA) report of 2017 on captioning obligations in the Broadcasting Services Act.[916] Representative groups have previously advocated the extension of minimum hours of captioned content across free-to-air secondary or multi-channels, rather than applying only to a broadcaster's primary channel.[917] In that review, commercial and national broadcasters opposed an extension to 24 hour captioning, citing concerns regarding additional costs.[918]

People who are deaf or have a hearing impairment have a right to access broadcasting services, including news and entertainment broadcasting. The Commission recommends that the minimum requirement for captioned content on free-to-air broadcasting be increased to support this right. Progressive quotas and targets should help national and commercial broadcasters gradually build on their existing systems and processes to achieve this.

Subscription broadcasting services are already subject to legislated annual increases of content that must be captioned.[919] There are nine categories of subscription television. Each category has a captioning target, which increases by 5 per cent each year until it reaches 100 per cent. In 2021, all the content on some dedicated movie channels and 90 per cent on some dedicated entertainment channels must be captioned. News and sports currently have a target of 55 per cent, which will reach 100 per cent in 2031.[920] The Commission acknowledges that this already provides a pathway towards captioning of all content for subscription television.

(iii) Secondary and specialist broadcast channels

There are commercial and other factors that free-to-air and subscription television service providers consider in offering content.

For free-to-air channels, the difference in average audience numbers between primary and secondary channels can be significant, but often less so than for subscription television. Each free-to-air television network currently has a primary channel and up to four multi-channels which contain a mix of general and specialised content.[921]

By contrast, the total audience for subscription television is spread over a much larger number of channels than those used by each free-to-air network. There are significant differences between subscription television channels that attract a relatively large proportion of the audience (for example, some movies and entertainment channels), and the dozens of other specialised channels that attract smaller audiences.[922]

The combination of smaller audiences and more specialised content can present commercial challenges for operators of that second tier of channels in complying with regulation, including rules related to accessibility of broadcast content. While policy in this area should pay due regard to this commercial reality, accessibility is a legally-protected right. Catering for the needs of people with disability should never be abandoned simply because, at times, there are costs associated with doing so.

As this area of broadcasting has developed significantly in recent years, and it is continuing to develop, detailed expert analysis is needed to ensure practical and effective ways of providing accessible content—especially using captioning and audio description—via the second tier of channels on subscription television. To this end, the Commission recommends that the Department of Infrastructure, Transport, Regional Development and Communications undertake a review to identify ways to increase audio description and captioning on that tier of subscription television channels.

There is diversity in viewers and reach across national, commercial and subscription broadcasting. The Department of Infrastructure, Transport, Regional Development and Communications should determine a practical basis of distinguishing between the two tiers of subscription channel broadcasting, by reference to factors including audience numbers and the nature of the content offered.

13.3 Newer ways of distributing audio–visual content

RECOMMENDATION 29: The Australian Government should introduce legislation to provide minimum requirements for audio description and captioning in respect of audio-visual content delivered through subscription video-on-demand, social media and other services that are not covered by the *Broadcasting Services Act 1992* (Cth). Obligations should be determined in consultation with industry, and people with disability and their representatives.

Current federal legislation deals with audio description and captioning on 'traditional' television broadcasting services. The legislation does not apply to newer or more specialised ways of communicating audio-visual content, such as SVOD, DVDs, films, social media, and online services.

In particular, leading SVOD services such as Netflix, Stan, Amazon Prime and Apple TV, as well as social media platforms such as Facebook, Twitter and YouTube, are rapidly increasing in size and carrying an increasing proportion of content consumed by the Australian community at large. Hence, any accessibility problems with the content on those services takes on greater significance.

The Commission considers that the Broadcasting Services Act should be amended to provide for minimum accessibility requirements for audio description and captioning on those services.

Stakeholders expressed concern about this phenomenon.[923] This input was consistent with other civil society advocacy to increase the availability and promotion of audio description and captioning across SVOD and other content distribution platforms.[924]

Many of the leading SVOD services state on their respective websites which programming and other material offer the option of audio description and/ or captioning, and some civil society groups provide lists and overviews of audio-described content.[925]

Some cinemas provide for audio description and open and closed captions for select movie sessions.[926] Vision Australia provides information about audio-described video content at cinemas.[927]

Conclusion: new forms of content distribution and accessibility

A very significant number of Australians are using SVOD, online and social media services to consume audio-visual content, and the market share of these newer services is increasingly rapidly as compared with more traditional television broadcasting services. The Commission is concerned that, unlike those broadcasting services, these increasingly important services are not required to provide minimum accessible content.

The Australian Government should introduce legislation to provide for minimum accessibility requirements for audio description and captioning on those newer services. This would have two principal benefits.

First and most importantly, such reform would improve the human rights protection for people with disability who rely on audio description or captioning to experience audio-visual content. Secondly, it would provide for a fairer market among companies that distribute content, by harmonising the obligation to adhere to these accessibility requirements. This is consistent with one of the core objectives in the Australian Government's *Media Reform Green Paper*—namely, to reduce the regulatory imbalance between free-to-air television and internet-based competitors.[928]

The Commission acknowledges that this would be a significant reform, and the precise detail would require consultation and coordination with key stakeholders, including people with disability, media and communications policy makers and regulators, as well as the companies involved in the various forms of audio-visual content distribution. The Department of Infrastructure, Transport, Regional Development and Communications and ACMA would be well placed to lead this consultation process.

13.4 Emergency and public service announcements

RECOMMENDATION 30: The Australian Government, and state and territory governments, should ensure that people with disability can receive and understand emergency and other important public announcements, including by requiring government agencies to provide Auslan interpreters at their emergency and important public announcements.

The Australian Government should amend the *Broadcasting Services Act 1992* (Cth) to require any television or other company, which broadcasts or re-broadcasts emergency and other important public announcements, to ensure that Auslan interpretation is visible on the screen at all relevant times; and captions are readable, accurate and comprehensible.

People with disability raised serious concerns about the accessibility of emergency and public service announcements.

Some of these critical announcements are broadcast with Auslan and/or captioning. However, the availability and quality of those accessibility features are inconsistent. Sometimes there are significant inaccuracies in live captioning and no visible Auslan interpreter on the screen for emergency and public service announcements broadcast on Australian television. The Commission recommends reform to improve this critical accessibility issue.

In light of the 2019-20 summer bushfires and the COVID-19 pandemic, stakeholders emphasised the importance of improving the overall performance regarding the quality and presence of captioning and Auslan interpreters in emergency and public service announcements broadcast in Australia. Stakeholders reported:

- emergency briefings where there was no Auslan interpreter, or where the interpreter was not visible on the screen

- emergency briefings for which the captions had an unacceptable number of errors

- rebroadcast of announcements on digital platforms (for example, YouTube), where the content was inaccessible.[929]

Similar concerns were raised by the disability sector in the ACMA review of the captioning obligations in the Broadcasting Services Act.[930] In that review, the ACMA noted that some broadcasters had undertaken to include Auslan interpreters when they were present at an emergency announcement.[931] These undertakings are not enforceable, and the ACMA stated that it would monitor future enquiries and complaints to assess whether any further regulatory intervention should be considered.[932]

Conclusion

The CRPD requires States Parties to take measures necessary to ensure the safety of persons with disabilities in situations of risk, including humanitarian emergencies and natural disasters.[933] In response to the 2019 summer bushfires and the COVID-19 pandemic, Deaf Australia wrote to the Prime Minister saying:

> Deaf people need Auslan to access information so they can make informed decisions and take actions to protect themselves, their families and others around them. Text-based resources, such as captioning, do not have the same capacity to deliver accurate information as one would receive through Auslan.[934]

The Commission heard from community stakeholders who experienced severe anxiety and concern throughout the bushfires and pandemic due to inaccessible information during public emergency announcements.

Emergency and public announcements are critical communication strategies during emergencies, and 'play an important role in community safety by empowering people to make informed and timely decisions, thereby taking protective action'.[935] The Royal Commission into National Natural Disaster Arrangements recommended that an education campaign on the Bushfire Warning System consider the needs of all Australians, and target people with disability.[936] The importance of providing accessible information and communications in the form of Auslan was noted in the Australian Health Sector COVID-19 emergency response plan.[937]

The provision of accessible information during emergency and public announcements of national significance is essential to protect the rights of people with disability, including the rights to access information and the highest attainable standard of health.

In addition to law reform, other measures may also be required to support people with disability in receiving and understanding information during emergency and important public announcements. For example, people with cognitive disability may require alternative forms of accessible content, which should be considered by the Australian Government in due course.

13.5 Monitoring and compliance

RECOMMENDATION 31: The Australian Communications and Media Authority should consult with broadcasters and introduce monitoring and compliance measures to support them to:

(a) comply with accessible service requirements

(b) provide quality accessible services

(c) increase organisational capacity to comply with current and future accessible service obligations.

There is no independent or regular monitoring of the accessibility of broadcasting services. Civil society stakeholders expressed concern about a lack of monitoring for compliance with captioning obligations (and any future audio description obligations), with a lack of data on the presence and quality of captioning. This places the responsibility on individuals to complain about shortfalls.[938]

Similar concerns are also reflected in a recent research report by ACCAN and Curtin University.[939] This report suggested that live caption quality is poor in certain circumstances, which may lead to a consumer not being able to follow the program. The report reiterated the vital role that captions play for people who are deaf or have a hearing impairment, and called for increased monitoring activities by ACMA and a review of the *Broadcasting Services (Television Captioning) Standard 2013* (Standard).[940]

This Standard, made under the Broadcasting Services Act, must be followed by free-to-air broadcasters when captioning programs.[941] Under the Standard, captions must be readable, accurate and comprehensible.[942] Broadcasters are required to report on compliance with their captioning requirements through annual reports to ACMA,[943] and individuals may make a complaint about the absence of required captioning or about the quality of captioning.[944]

The Australian Government and broadcasters have a responsibility to gather data and implement monitoring and compliance mechanisms for accessible broadcasting services (including captioning, audio description and Auslan interpretation). This responsibility arises from CRPD requirements that States Parties collect information and monitor the rights contained in the Convention.[945]

14. Availability of new technology

14.1 Summary

Accessibility includes ensuring that goods, services and facilities that use Digital Communication Technologies are sufficiently *available* to people with disability.

Availability can be reduced where people with disability cannot afford, or do not know, about such goods, services and facilities. Socio-economic disadvantage, which is more common among people with disability, exacerbates this problem. This form of exclusion can also worsen inequality and disadvantage for people with disability.[946] Barriers to availability may be compounded when disability intersects with other factors, including being older, having multiple health conditions or one's geographic location.[947]

The problem of availability differs from a problem of functional inaccessibility. For example, a smartphone may be designed to enable a person with vision impairment to use it, but if they cannot afford the phone they will not benefit from this good design.

As summarised in Table 3, the Project's consultation revealed three common barriers to access for people with disability in this area: understanding and awareness of what is available to people with disability (also referred to as digital ability);[948] affordability of home internet service; and affordability of critical goods, services and facilities that use Digital Communication Technologies. These barriers are often interrelated, and exacerbated by socio-economic factors.

This chapter recommends measures to support greater availability of goods, services and facilities that use Digital Communication Technologies for people with disability through:

1. the provision of accessible information on how goods, services and facilities can be used by people with disability

2. more accessible broadband internet by introducing a concessional rate for people with disability

3. improved access to Digital Communication Technologies for people with disability through National Disability Insurance Scheme (NDIS) funding.

Table 3: Digital Communication Technologies: problems of availability

Internet access

People with disability experience lower rates of broadband internet access compared with the rest of the Australian population. This gap is sometimes called the 'digital divide'.[949] People with disability in regional and remote areas can experience inadequate and unreliable internet coverage.

Cost of assistive technology

Goods, services and facilities that use assistive technology, including where inaccessible items are altered to make them accessible for people with disability, are often costly. For example, screen readers, voice activation software and eye-gaze software can be especially expensive. This can be problematic for people with disability and older people, as they are more likely to be on low incomes, pensions, unemployed or underemployed.

Digital ability

The individual characteristics, experiences and preferences of a person with disability can affect their ability to engage with and use Digital Communication Technologies effectively. For example, people who have not received support and training may have low confidence and skills with tech-powered products and services.

Socio-economic factors

Barriers described by people with disability are often interrelated with socio-economic factors, such as educational attainment, income, and access to health, legal and social support services. For example, one in four community legal centre clients has a disability—a cohort who experience digital exclusion due to cost of technology and limited ability to access essential services online.[950]

14.2 Information about goods, services and facilities

> **RECOMMENDATION 32:** Standards Australia should develop, in consultation with people with disability and other stakeholders, an Australian Standard or Technical Specification that covers the provision of accessible information, instructional and training materials to accompany consumer goods, services and facilities.
>
> This Australian Standard or Technical Specification should inform the development of the recommended Digital Communication Technology Disability Standard under section 31 of the *Disability Discrimination Act 1992* (Cth) (see Recommendation 24).

People with disability experience barriers in accessing information about how goods, services and facilities operate and their suitability for people with disability. For example, a product may be available but a lack of accessible instructions or information may mean that a person with disability is unaware of the product, or unable to determine if it is suitable for their needs.

The Commission recommends that Standards Australia work with industry and the community to develop a standard or technical specification to ensure the provision of consistent accessible information for Digital Communication Technologies.[951] This could improve the provision of two forms of information:

1. information about the *functional accessibility* of the product. For example, it could state whether a product is compatible with a screen reader or whether it has raised buttons for a person who is blind

2. instructional and training materials for products in an *accessible format*, such as online content (for a person who is blind and uses a screen reader), Braille, Easy English or large print.[952]

The Commission received positive feedback on this proposal from disability representative groups and business.[953]

Stakeholders provided examples of everyday goods that use Digital Communication Technologies—such as personal and household items and assistive technologies—which are difficult to use because of limited accessible information and instructional material.[954] Accessible information for these goods would enable greater autonomy and participation for people with disability.

Stakeholders submitted that they sometimes need to purchase a product before finding out whether the product will be functionally accessible for their needs.[955] There is generally low awareness and understanding of new technologies among people with disability,[956] and their supporters or carers.[957] This can make it difficult to keep up to date with new technological developments and opportunities for their individual circumstances.[958]

For example, the Ability Research Centre stated:

> There is a significant paucity of knowledge about what assistive technology is available, and how all kinds of technology can be harnessed for the specific purpose of assisting people with disability … In essence, the sector languishes from a lack of clear knowledge about new, often generic technology, how it integrates with existing, often specialised, technology, how options can be meaningfully evaluated, compared and trialled, and where to turn for this information.[959]

Standards Australia has indicated that it could facilitate the development of an Australian Standard or Technical Specification to cover this information.[960] Standards Australia noted the current gap in this type of guidance, and the negative impact this can have on people with disability.

Standards Australia and disability representative groups also highlighted the importance of including people with disability and their representatives in the development of a new Standard.[961] ACCAN and the Digital Gap Initiative submitted that the proposed Australian Standard be mandatory for the providers of goods to consumers.[962]

Conclusion

When we buy a new product, or access a new service or facility, we generally take for granted that instructions will be readily available to make the good, service or facility useable. Too often this assumption does not hold for people with disability.

This might be because there are no instructions. In theory, the absence of any instructions would disadvantage all users equally, but people with disability are more likely to be disadvantaged because certain features, thought to be intuitive, might rely on a person being able bodied. Without the ability to see a particular product, for example, some explanation might be needed about how to operate it.

Where instructions are written on the assumption that all users have the same characteristics and abilities, this can also be problematic. Even where a good, service or facility has been designed for use by people of all abilities, the way a person with disability uses it might differ from how others use it. If the instructions do not explain the alternative way that people with disability may operate the good, service or facility, those people will be disadvantaged and, in a practical sense, might not be able to access the thing at all. The same problem arises if the instructions are available only in a format that is inaccessible for people with disability.

Digital Communication Technologies often bring unavoidable complexity. Hence, it is important that goods, services and facilities that use these technologies are accompanied by instructions that accommodate the needs of people with disability.

The development of an Australian Standard would be a relatively straightforward way of addressing this challenge. Information and instructions directed towards meeting the needs of people with disability would support informed consumer choice, and bring added benefits in terms of greater independence and participation through the use of these items.

Some designers and developers are pioneering the use of accessible Digital Communication Technologies, while others do not appear to prioritise accessibility. The role of 'human rights by design' is considered in the next chapter. There is scope, however, for the private sector to improve the accessibility of goods, services and facilities at the point of sale and use by the consumer.

Consumer goods, services and facilities should come with accessible instructions and dedicated information about accessible features. For example, a smart TV's accompanying instructions should be in an accessible format and include information about its accessibility features and functionality. Businesses that adopt such measures could benefit from increased market share and goodwill among the disability community.[963]

The Commission recommends that Standards Australia work with industry and the community to develop a Standard or Technical Specification to ensure the provision of consistent accessible information for Digital Communication Technologies.[964]

These standards and specifications should support people with disability in obtaining goods, services and facilities and when finalised, be incorporated into the recommended Digital Communication Technology Disability Standard under section 31 of the DDA.[965]

14.3 Internet access

RECOMMENDATION 33: The NBN Co should implement a reasonable concessional broadband rate for people with disability who are financially vulnerable, in consultation with them, their representatives and other stakeholders.

The Commission supports the call from many civil society and disability representative groups for a concessional broadband rate for low-income households, to make internet access more affordable and improve digital inclusion.[966]

An example of this advocacy is the *No Australian Left Offline* campaign, led by ACCAN. ACCAN estimates that a concession to the 2 million Australian households on the lowest incomes could be budget neutral when offset against outcomes of increased take-up of broadband services, including an increase in average incomes and creation of new businesses.[967]

There is an opportunity to increase digital inclusion for people with disability through the establishment of a concessional rate for people with disability who are financially vulnerable. This could be an extension and expansion of the NBN *Education Assistance Package* or through a new concession scheme.[968]

In assessing any such scheme, consideration should be given to the needs of people with disability who might be financially vulnerable, such as people who are studying, have high support needs or are on rehabilitation pathways.

The internet is a significant gateway for people with disability to be connected with services, to give and receive information and enjoy their full range of human rights, including freedom of expression and opinion.[969]

Internet access as a central element of digital inclusion, and the barrier of affordability for people with disability, were common themes throughout this Project. Digital inclusion rates in 2020 show that people with disability experience lower digital inclusion, and that affordability has worsened for this group over the last six years:

> Australians with disability spend a greater proportion of their household income on internet access than the Australian average and receive less data for each dollar of expenditure than the average.[970]

The social and economic causes of digital exclusion are complex and varied. Rates of inclusion are influenced by differences in income, education levels, and the geography of socio-economic disadvantage.[971] Low internet access is correlated strongly with disability, low family income, and employment and education status.[972] Further, the distribution of poverty and inequality in Australia means some people start from a position of disadvantage when it comes to digital inclusion, and there is a real risk that the changing digital environment may exacerbate experiences of poverty and inequality.[973]

The Australian Red Cross submitted:

> Pervasive service digitisation and dependence on technology in our private and public lives can further disadvantage vulnerable Australians. Improving digital inclusion is critical to ensure that everyone in our community is empowered to participate and contribute. Technology can empower people in so many ways – they can stay connected and involved with their social and community networks, access knowledge and services to help them stay well, or link to learning and job opportunities.[974]

In supporting the proposal to increase broadband access for people with disability, SAS Institute Australia said:

> [T]he adoption of digital technology yields enormous benefits for society and it is critically important to ensure that all members of society can participate in those benefits.[975]

Stakeholders observed that the COVID-19 pandemic has highlighted an even greater need for internet access, as people with disability rely on digital platforms to access carers, disability and health

supports during pandemic restrictions.[976] The pandemic required an almost immediate transition from in-person activities to digital platforms. This was reflected in the uptake of higher internet speeds, to accommodate increased broadband use for work, education and entertainment.[977]

In recognition of this increased need, NBN Co offered a wholesale discount for people who had not accessed broadband services prior to March 2020.[978] It recognised that broadband was required to enable access to education, and offered the *Education Assistance Package* until January 2021.[979] Further, some telecommunications businesses offered free additional data through mobile or broadband plans during some of the COVID-19 lockdown period.[980]

People with disability have reported increased cost of living throughout the COVID-19 pandemic and, in a recent national survey, 91% of people with disability and carers who responded said that they experienced higher expenses in groceries, healthcare, internet and phone, and hygiene/sanitising equipment.[981]

14.4 Role of the National Disability Insurance Scheme

RECOMMENDATION 34: The National Disability Insurance Agency, in consultation with people with disability, should review its policies regarding funding of reasonable and necessary supports as those policies apply to accessible goods, services and facilities, which use Digital Communication Technologies and which can be shown to enable people with disability to enjoy greater independence and participation in all areas of life.

In particular, the NDIA should focus on increasing access to internet plans, computers, tablets, laptops and smartphones and other items that rely on Digital Communication Technologies.

The NDIS plays an important role in ensuring that people with disability have access to goods, services and facilities that enable participation in the community, although most people with disability do not participate in the scheme.[982]

Under the NDIS, people with disability receive 'reasonable and necessary' supports under individualised NDIS plans. The *National Disability Insurance Scheme Act 2013* (Cth) (NDIS Act) provides that reasonable and necessary supports for people with disability are those that:

(a) support people with disability to pursue their goals and maximise their independence; and

(b) support people with disability to live independently and to be included in the community as fully participating citizens; and

(c) develop and support the capacity of people with disability to undertake activities that enable them to participate in the community and in employment.[983]

NDIS Rules prescribe what will be funded or provided and the methods or criteria used by the National Disability Insurance Agency (NDIA).[984] The rules and policies on the funding of assistive technology (which include Digital Communication Technologies) are complex. For example, the NDIS uses four levels to describe the complexity of a participant's assistive technology needs.[985]

The NDIS should support improved access to the internet and 'mainstream' goods, services and facilities that use Digital Communication Technologies. The NDIS should extend and expand its current policies on funding mainstream devices, or establish a new policy to support people with disability to obtain these items.

There is some community concern about how the NDIS deals with the technology needs of people with disability. This is part of a broader debate about the extent to which the NDIS should prioritise the provision of assistive or accessible technologies. Some stakeholders reported that the NDIA takes an inconsistent approach when determining whether to provide accessible 'mainstream' technology, such as smartphones, under NDIS plans.[986]

It was claimed that some NDIS planning regions allow the purchase of mainstream technology, such as a smartphone; others a lease; and others do not allow this at all.[987] Some suggested that individuals with greater capacity to articulate their own needs, or those who had a planner to help them do so, were more likely to receive goods, services and facilities that use Digital Communication Technologies under an NDIS plan.[988] These sorts of inconsistency were said to cause confusion and frustration across the disability sector.[989]

Stakeholders submitted that those most at risk of exclusion from accessible and assistive technology are people with disability who are on a low income.[990] Blind Citizens Australia stated that the use of assistive technology often depends on access to internet and ICT devices, which are considered 'mainstream' technology and not funded under the NDIS:

> Most people who receive social security as their only source of income are living below the poverty line. This could well mean that assistive technologies that are funded through an individual's NDIS plan, are unable to be accessed due to unaffordability of ongoing internet connection, smart phone infrastructure and data plan, computer, or other device.[991]

Conclusion

The NDIS may cover an item of assistive technology if it is considered a reasonable and necessary support to meet the needs of the participant.[992] Until recently, internet access and 'mainstream' goods that use Digital Communication Technologies—such as computers, tablets and smartphones—were not usually included in NDIS plans.

However, the NDIA modified its approach in 2020 in acknowledgement that many face-to-face services were suspended during the COVID-19 pandemic, and people with disability need mainstream devices to support online delivery of their services.[993] Until 28 February 2021, an NDIS participant could use their plan to obtain a computer tablet so that they can take part in online activities.[994]

The Commission welcomes this change in policy, but the change is constrained in two important ways. First, it is time limited, because it responds to the immediate needs associated with the COVID-19 pandemic. The Commission urges that this time limitation be removed because the pandemic merely makes obvious and more acute an existing, serious problem. Secondly, devices such as smart phones and tablet computers with mobile connections cannot be purchased with NDIS funding.[995] This also should be reconsidered.

Affordability barriers are difficult to overcome for people with disability who are on low incomes. They may encounter multiple socio-economic barriers to access and inclusion. People with disability experience higher levels of poverty than other Australians, and 38% of Australians living in poverty have a disability.[996]

The NDIS should support improved access to the internet and 'mainstream' goods, services and facilities that use Digital Communication Technologies, where they enable other human rights for people with disability, and support increased independence and participation. The NDIS should extend and expand its current policies on funding mainstream devices, or establish a new policy to support people with disability to obtain these items. These amendments would have particular benefit for people with disability who are financially vulnerable.

15. Design, education and capacity building

15.1 Summary

Good design is central to making goods, services and facilities that use Digital Communication Technologies accessible for people with disability.

A 'human rights by design' approach involves considering the human rights implications of what one is creating at the earliest stages of design and development, and taking steps to uphold the rights of end users and others who may be affected. Applying a human rights by design approach in the context of Digital Communication Technologies not only benefits people with disability who may have particular needs, but it also benefits the broader community and the technology sector.

This chapter recommends three key ways to apply human rights by design in the context of Digital Communication Technologies:

1. the Australian Government should adopt and promote this approach through the National Disability Strategy and in the design and delivery of services
2. human rights by design should be included in education and training—especially in the areas of science, technology, engineering and mathematics (STEM)
3. this approach should be a part of accreditation, ongoing professional development, training and capacity building for those involved in designing and developing with Digital Communication Technologies.

15.2 Design approaches

> **RECOMMENDATION 35:** The Disability Reform Council, through the Disability Reform Ministers' Meeting, should:
>
> (a) include accessible technology as an outcome area in the next National Disability Strategy to improve access to Digital Communication Technologies for people with disability
>
> (b) lead a process for the Australian Government and state and territory governments to adopt and promote human rights by design in the development and delivery of government services using Digital Communication Technologies, and monitor progress in achieving this aim.

This section explores some of the benefits in promoting human rights by design in the development of goods, services and facilities that use Digital Communication Technologies.

The Commission urges the Australian Government to include accessible technology in the next National Disability Strategy, and promote human rights by design in government services that use Digital Communication Technologies.

(a) Designing for people with disability

Stakeholders across industry and the community considered that the whole community benefits when technology is accessible for all.[997] For example:

- people with disability benefit through better access to these things and, through this, they can enjoy greater independence and participation

- other members of the community tend to experience simpler functionality

- the technology industry benefits from a bigger consumer market and better reputation.

Stakeholders emphasised that the right of people with disability to access technology should be foundational, and considered in the earliest conceptual, research and design phases. For example, Google submitted:

> Access and accessibility need to be considered from the beginning of the development cycle in order to produce technologies and products that contribute positively to people's lives.[998]

Industry stakeholders provided positive examples of accessible design in their production processes, and disability advocacy groups also recognised the importance that some businesses have placed on accessible design.[999] The Digital Gap Initiative emphasised the importance of avoiding the mentality of accessibility as an afterthought:

> [I]n instances where accessibility is provided, our experience is that accessibility is a design feature added on towards the end of the product lifecycle, as opposed to being considered in early design phases. The consequence is that accessibility is not coherently integrated into products, including websites, and thus provides an inconsistent experience for end users.[1000]

While this Project has focused primarily on human rights by design, this is just one of a number of similar design-led approaches, which tend to share goals such as inclusivity. Other approaches, which were raised in the consultation process, include the following.[1001]

1. **Universal design** aims for products and services that are usable by all people, including people with disability, to the greatest extent possible, without the need for adaptation or specialised design.[1002]

2. **Accessible design** aims for independent use, specifically by people with disability,[1003] and has internationally recognised standards considering a range of disabilities.[1004]

3. **Inclusive design** considers the full range of human diversity with respect to characteristics such as ability, language, gender and age, aiming for outcomes usable by all people.[1005]

4. **Co-design** focuses on the inclusion of people with disability in all design phases with the goal of producing greater accessibility in the final product. This can involve people with disability being employed or consulted in the design process.

5. **Safety by design** aims to put user safety and rights at the centre of the design, development and release of online products and services.[1006]

These approaches overlap in their operation and conceptual underpinning.[1007] For example, the 'Accessibility Principles for Banking Services' uses principles of universal design, accessible WCAG 2.1 guidelines, and inclusive design methodology.[1008]

Stakeholders noted that each approach has its own strengths and challenges.[1009] No single solution will meet the accessibility needs of all people with disability.[1010] For instance, Adobe submitted:

> Because different users have different needs, it is important to acknowledge there is no single perfect accessible final result… Design is not engineering, and you can't 'certify' designers the way you can products. The creative phases of product design are too abstract to pin down that way. What they need to do is create some kind of incentive to build it right from the start.[1011]

Stakeholders also noted that designers need to appreciate that one person may have several accessibility requirements. The Co-Innovation Group at the University of Queensland submitted that some people

> require both simple, clear design for cognitive accessibility, and high-quality audio and features to support hearing accessibility. Managing multiple streams of accessibility considerations may be challenging and may potentially lead to technology that is less accessible because of range of choices and set up requirements.[1012]

(b) Human rights by design

The various design-led approaches described above can be seen as all providing elements of human rights by design. Most critically, each approach focuses on the importance of embedding accessibility into the entire technology cycle—from concept, research and design, testing and production through to implementation and use—but focusing especially on the earliest phases of this cycle.

In the Discussion Paper, the Commission proposed that human rights by design strategies be adopted and promoted by the Australian Government, including in service delivery, policy and in the National Disability Strategy. There was broad support from industry representatives, people with disability, and accessibility consultants for this proposal.[1013]

Some stakeholders saw a benefit in human rights by design, over other design-led approaches, because it can draw attention to rights that might otherwise be neglected in the design process, such as the rights to privacy and non-discrimination.[1014] Three civil society organisations submitted that human rights by design principles should form the basis of legal obligations.[1015]

Some key principles that underlie a human rights by design approach in this area include:

- the common goal is functional accessibility for people with disability

- accessibility is considered at all points in the product cycle[1016]

- people with disability and their representatives are engaged and consulted in the design process, including people with different disabilities, perspectives, ages and backgrounds[1017]

- the most effective way to include people with disability in design is to have better representation of people with disability in the technology sector.[1018]

Concept

Updates

Research
& design

People with
disability

+

Technology
industry

Use

Testing

Production

Outcomes

Functional accessibility

Increased market share

Independence

Competitive edge

Participation

(c) Business case for human rights by design

Stakeholders across many sectors pointed to the commercial opportunities for businesses that implement human rights by design.[1019] This included through the expansion of markets and building a stronger reputation for corporate social responsibility.

(i) Expanding markets

Human rights or inclusive design can be a tool to expand commercial opportunities by strengthening existing market share, and by creating and growing new markets.[1020] Research conducted by PwC Australia for the Centre for Inclusive Design estimates that inclusive design can increase the potential market of products and services by three to four times.[1021] In a similar vein, the Digital Gap Initiative submitted:

> The private sector should be allowed and encouraged to innovate and create products that are accessible by all or create products that bridge the accessibility gap. Accessibility in our view is an untapped commercial market which should be highlighted to businesses. Almost one in five Australians has some form of a disability, which represents a substantial target market for business.[1022]

Delivering innovative products to consumers and solving 'unmet need' can help businesses tap into network effects and increase customer base and market share.[1023] The University of Melbourne summarised the commercial imperative as being that '[i]n the age of personalisation, a device which cannot be used in every environment is not competitive'.[1024]

In addition, tech-powered products may be initially designed for people with disability but end up benefiting a broader base of customers. For example, captions on television and SMS or text messages were both initially developed for people who are deaf or have a hearing impairment, but are now used by the entire community.[1025]

One stakeholder submitted that inclusive design is likely to improve the functionality for all users, because it encourages designers to be more creative and innovative.[1026] 'Edge users'—that is, people who are not considered to be among the mainstream users of a product or service—are included in the design process. They are 'less likely to defend and validate a current design that doesn't meet their needs', generating greater creativity in the design process.[1027] This can

> respond not only to disability needs but also enhance access for people of all ages and varying literacy abilities, thus addressing human rights principles regarding non-discrimination and equity of access for all.[1028]

These benefits extend to goods, services and facilities that use AI. Stakeholders submitted that functionality is enhanced for all users through inclusive design as 'outlier data' is valued and included, informing more adaptive and innovative AI systems.[1029]

(ii) Commercial reputation and risk mitigation

Some stakeholders referred to the value of human rights compliant design for shareholders, employees and customers through the corporate social responsibility lens.[1030] Businesses with a commitment to human rights and social concerns can reap benefits across the organisation, including better job performance, increased shareholder returns, and loyal customer bases.[1031]

Some people with disability noted that businesses with a commitment to accessible and inclusive practices have good reputations and loyal customer bases across the disability community.[1032]

Industry and community stakeholders noted that a human rights by design strategy can be more cost effective than retrofitting accessibility into a product after it has been developed and distributed.[1033] Harpur said, where universal design is adopted, 'many access barriers are not created in the first place and thus the need to engage in retrofitting is reduced or eliminated'.[1034]

(d) Challenges to implementation of human rights by design

Industry and community stakeholders highlighted some challenges to the implementation of human rights by design strategies in policy and practice.

The pace of technological development was cited as the most pressing concern for industry. In this respect, Telstra submitted:

> There are a range of competing interests that could make it challenging to implement this in a technology business environment, notably the rapid evolution of technology and the short time to market from initial concepts that are a significant competitive advantage in this sector.[1035]

Some observed that the upfront costs of human rights by design could be prohibitive or a disincentive for business, depending on the technology setting and their business capabilities.[1036] Commercial considerations can outweigh accessible design considerations in the fast-paced technology marketplace, where businesses are striving to be innovators and market leaders.[1037]

It is common for tech businesses to release what is known as a minimum viable product. A minimum viable product undergoes iterative improvements as it is tested and used by consumers, with the aim of producing a more effective and refined final product.[1038] If the initial version of the product is not accessible for people with disability, they must then wait for further accessibility refinements, which are not guaranteed.[1039]

Stakeholders also noted concerns about improving STEM professional and educational training on human rights by design, as well as increasing the employment of people with disability in the technology industry. These issues are explored below.

(e) Conclusion

The Commission has concluded that there are significant benefits in promoting human rights by design and there is strong support for this approach in the design and development of goods, services and facilities that use Digital Communication Technologies. There are opportunities for the Australian Government to lead in this space, through policy and practice, including service delivery.

A human rights by design approach would be an effective way of fulfilling Australia's CRPD obligations. These include to promote the design, development and production of accessible information and communication technology, and research and development of universally-designed goods, services, equipment and facilities.[1040]

The Commission recognises the links among many design-led approaches, such as accessible design, universal design and inclusive design. In all of these approaches, accessibility is both a goal and a measure of success in judging the end product.[1041]

Decisions made in the design process are unavoidably informed by the individual life experiences of those included in that process.[1042] In this way, the best and worst of human motivations—from kindness and altruism, to narrow thinking and prejudice—can be infused into the outputs of any design process.

Introducing human rights by design, and seeking out the involvement of people with disability, at the earliest stage has a number of benefits. First and most importantly, it benefits people with disability who rely on accessibility features. In addition, this approach also can have benefits for shareholders, employees and other customers. A strategy that enables accessibility issues to be dealt with early is generally more cost effective than retrofitting accessible features at a later stage.

The Commission concludes, taking into account Australia's obligations under the CRPD, and its consultation and research, that a human rights by design strategy generally emphasises the following principles:

- The primary goal is accessibility to all people, to the greatest extent possible, without the need for adaptation or specialised design.[1043]

- People with disability and their representatives should be encouraged to provide meaningful input in the development process, in roles such as designers, co-designers and expert consultants.

- People with disability and their representatives should be encouraged to participate in all phases of the development process—concept, research, design, iterations, testing, production, manufacture and upgrades.

A human rights by design strategy draws on principles that underpin the CRPD—individual autonomy, independence, non-discrimination, full and effective participation and inclusion in society, respect for difference, equality of opportunity, accessibility, equality of men and women, and respect for children.[1044]

The adoption of a human rights by design strategy in government policies and procedures would be an important step in promoting accessible goods, services and facilities that use Digital Communication Technologies.

The Disability Reform Council, which is now convened as the Disability Reform Ministers' Meeting, is a forum for Australia's federal, state and territory governments to progress key national reform in disability policy.[1045] The Council oversees the implementation of the NDIS, and National Disability Agreement and National Disability Strategy reforms, to support people with disability, their families and carers.

In 2020, the Department of Social Services (DSS) released two papers inviting input on the proposed outcome areas in the next National Disability Strategy.[1046] In its submission to that Department, the Commission urged that 'accessible technology' be included as an additional outcome area, with measures to improve accessible and inclusive practices across government services.[1047]

Human rights by design strategies should be incorporated into policies at all levels of government through the Disability Reform Ministers' Meeting. The DTA has a role in leading and shaping whole-of-government policies on accessible ICT and digital services and could support these efforts. It could also provide some guidance for state, territory and local governments.[1048]

15.3 Education, training and capacity building

RECOMMENDATION 36: Providers of tertiary and vocational education should include the principles of human rights by design in relevant degree and other courses in science, technology, engineering and mathematics. The Australian Government should engage the Australian Council of Learned Academies to provide advice on how to achieve this aim most effectively within the tertiary and vocational sectors.

RECOMMENDATION 37: Professional accreditation bodies for science, technology, engineering and mathematics should introduce mandatory training on human rights by design as part of continuing professional development.

RECOMMENDATION 38: The Australian Government should commission an expert body to lead the national development and delivery of education, training, accreditation, and capacity building for accessible technology for people with disability.

Goods, services and facilities relying on Digital Communication Technologies are too often designed and developed in ways that are inaccessible for people with disability. There are many contributing factors to this problem. However, in the Commission's view, greater use of a human rights by design strategy would help address the problem.

Human rights by design is still a relatively new concept. More could be done to promote this strategy through education, training and capacity building initiatives. There was strong support among stakeholders for human rights by design in Digital Communication Technologies production, and for building capacity in the technology industry to design and develop human rights compliant products and services. There was also recognition that building the capacity of technology designers would provide benefits for the whole community through more usable technology. As discussed above, there is also a strong business case for human rights by design.

The Commission recommends three areas where human rights by design should be promoted in the technology sector:

- tertiary and vocational education and training
- professional development
- an organisation to lead the national development and delivery of education, training, accreditation and capacity building.

The initiatives recommended by the Commission would enhance Australia's compliance with Article 9(2)(c) of the CRPD to provide training on accessibility issues, and they would also help businesses meet their obligations under the UN Guiding Principles on Business and Human Rights.[1049]

(a) Education and training

Stakeholders from industry, academia and civil society gave strong support for a proposal to introduce human rights by design principles into relevant STEM tertiary and vocational courses.[1050] Many of these stakeholders suggested this coursework should be considered a core component for students.

There was also strong support for the proposal that professional accreditation bodies for science, technology and engineering introduce mandatory training on human rights by design.[1051]

Core components of formal education and professional development present the best training and intervention opportunities to target the workforce responsible for technological design and development.[1052] These education and training opportunities would help the workforce understand accessibility issues and barriers for people with disability, and how they might play a role in improving accessible and inclusive design.[1053]

It was suggested that educational and professional development coursework on human rights by design be developed and delivered with the involvement of people with disability.[1054] It could include content on: understanding disabilities, international human rights obligations (including the CRPD and the UN Guiding Principles on Business and Human Rights), design methods,

internationally recognised standards and best practice.[1055]

To this end, the Australian Council of Learned Academies (ACOLA) observed:

> Incorporating 'human rights by design' principles, alongside initiatives that support a diverse workforce to design emerging technologies, will facilitate opportunities for access and uptake of emerging technologies by all members of our community and provide scope to overcome existing societal inequalities. If programmed with these principles from the beginning, we can facilitate beneficial and safe integration and opportunities between humans and emerging technologies.[1056]

Several stakeholders urged that a human rights by design course be included in the curricula of other tertiary courses, such as communications, media, business, law, human resources and social sciences.[1057] They noted the intersection of these disciplines with the use of new and emerging technologies, such as the use of AI in hiring practices. However, many of these stakeholders noted the importance of prioritising science, technology and engineering students when considering the design and delivery of accessible goods, services and facilities to people with disability.[1058]

(b) Awareness and capacity building

There was strong stakeholder support for the proposal that an organisation be commissioned by the Australian Government to lead the national development and delivery of education, training, accreditation and capacity building for accessible technology for people with disability.[1059]

Stakeholders recognised a gap in these important roles of increasing awareness across public and private providers of goods, services and facilities that use Digital Communication Technologies. The Co-Innovation Group at the University of Queensland stated:

> While many express willingness to create accessible and ethical technologies, they lack knowledge about both ethical frameworks and considerations and accessibility related needs and approaches.[1060]

Speech Pathology Australia highlighted the importance of raising understanding and awareness in areas where there are known to be significant communication barriers for people with disability—especially the justice system, primary health services and general practice, hospital systems, aged care systems, and local government consumer-facing services.[1061] Vision Australia noted significant barriers for people who are blind and studying at university and submitted that there is a need for capacity building across the education sector.[1062]

A key concern was a lack of organisational knowledge and skills.[1063] In this respect, one industry stakeholder said:

> There is an appetite to build accessible platforms and technology—the biggest issue we have is getting clarity on all the various things we need to do. There are so many places to go to, but industry needs one guiding source of information.[1064]

The Public Interest Advocacy Centre noted the need for a consistent approach to accessibility standards across industry and the private sector, to avoid products like the Commonwealth Bank 'Albert' EFTPOS touch screen machine, which was not able to be used by some people who are blind or have a vision impairment.[1065]

Some stakeholders referred to the difficulties of high turnover across large organisations, and the complexity of issues where several teams are involved in procurement and operational decision-making:

> We need a better culture of 'human rights by design' throughout business, but it's a huge challenge. There is a high turnover of staff, and I spend so much time re-training people across the organisation—designers, analysts, testers—plus the constant problem of procuring accessible products.[1066]

Microsoft submitted that a broader cultural change across industry is needed. In this context, a leading organisation could be involved in encouraging

> senior executive awareness and board level support for accessibility and growing the support available to organisations seeking to implement good practice—such as accessibility design and development expertise—which is in relatively short supply in Australia.[1067]

Stakeholders gave strong support to the proposal that an organisation be commissioned by the Australian Government to lead the national development and delivery of education, training, accreditation and capacity building for accessible technology for people with disability.[1068] Industry representatives and accessibility consultants recognised a significant need for such an organisation, to help build capacity and support accessible practices across industry.

(c) People with disability in the workplace

People with disability will have more opportunities for meaningful input into human rights by design work if they have greater representation in the technology sector. The benefits of this were highlighted by stakeholders.

First, people with disability can directly inform the design of new and emerging technologies in their work.[1069] SAS Institute Australia noted this is the most effective practice for embedding human rights into design practices:

> it is useful to include people with disabilities in the design process. It is much better for that process to be led by people with disabilities.[1070]

Secondly, stakeholders submitted that a positive workplace culture change towards people with disability and accessible design is best achieved through the employment of people with disability at work.[1071] Designers are more likely to consider the accessibility needs of people with disability if people with lived experience of disability form part of design teams and the broader businesses or organisations they sit within.[1072]

SAS Institute Australia stated that their efforts to create accessible products were only possible when they had invested in building the capacity of their workforce through cross-team training and collaboration. People with disability are essential contributors to this activity.[1073]

Thirdly, stakeholders noted the reputational and corporate social responsibility benefits for businesses employing people with disability. These include positive links between organisational commitment to the social cause, high levels of in-role job performance,[1074] and increased shareholder returns from a more diverse employee and board membership.[1075]

(d) Conclusion

The Commission focuses on three areas where human rights by design should be promoted in the technology sector:

- tertiary and vocational education and training
- professional development
- an organisation to lead the national development and delivery of education, training, accreditation and capacity building.

(i) Tertiary and vocational education and training

Tertiary and vocational students of science, technology and engineering are or will become the primary designers of goods, services and facilities that use Digital Communication Technologies. Others are also involved in the implementation and deployment of these technologies. However, targeting scientists, technologists and engineers as a priority for courses relating to human rights by design will help raise the importance of these issues more broadly across educational contexts.

A human rights by design course could cover different models of disability (for example, social, legal and medical), international and national legal frameworks such as the CRPD and DDA, accessible design methodologies, and best industry practice.

ACOLA brings together four independent learned academies: the humanities; science; social sciences; and technology and engineering.[1076] ACOLA helps inform national policy through various activities, including coordinating multi-stakeholder groups and consulting on significant national issues.

ACOLA has indicated that it would welcome the opportunity to facilitate human rights by design coursework with appropriate support.[1077] Such courses should be developed in consultation with people with disability and their representatives, professional engineers, technologists and scientists, the Department of Education, Skills and Employment, and the tertiary education sector.

(ii) Professional development

Education and training on human rights by design would benefit professionals who are already practising as designers and engineers. Such training could be offered to Chartered Professional Engineers and Technologists, for example, who are required to undertake 150 hours of continuing professional development (CPD) over three years to maintain their Chartered Status.[1078]

CPD activities support an engineer as they carry out their technical and professional duties, through conferences and training courses, and also allows for the completion of tertiary or post-graduate courses.[1079]

The current CPD requirements include a minimum number of hours to be dedicated to the engineer's area of practice, risk management and business and management skills. A human rights by design course should be a minimum requirement within an engineer's three-year CPD cycle.

(iii) An education, training, accreditation and capacity building organisation

There should be targeted capacity building across the technology sector and a role for accessibility accreditation.

There was broad agreement across industry, government and the community about a lack of understanding in the technology industry of the access rights of people with disability. This problem could be addressed by encouraging developers of Digital Communication Technologies to incorporate human rights by design principles through existing frameworks, such as corporate social responsibility.

There were two main activities supported by stakeholders as vital for industry:

- education, training and capacity building for public and private entities on human rights by design
- the creation of an accessibility accreditation scheme to support organisations implement and achieve nationally standardised accessibility benchmarks.

Capacity building in the technology sector would improve awareness and understanding of the right of people with disability to access technology, and the obligation to design and develop human rights compliant products and services.

An expert body tasked with capacity building and accreditation roles could also support education and training efforts such as the development of a human rights by design professional and educational unit of study.

The Commission does not have a strong view on what entity should take up this role. The Digital Transformation Agency and the Department of Industry, Science, Energy and Resources have experience in supporting accessible policies and practices, and capacity building and support in industry.[1080] They could work with the Disability Reform Council, at Disability Reform Ministers' Meetings, to determine a suitable organisation for the role.

(iv) Employment of people with disability

There are clear benefits in increasing the employment of people with disability in the design and development of new technologies.

Goods, services and facilities that use Digital Communication Technologies are likely to be more accessible when designers have lived experience of disability. In addition, businesses may realise other benefits from employing of people with disability, such as enhanced reputation and brand, and improved employee and customer retention.[1081]

The employment rate for working-age people with disability is 48%, which is lower than the those without disability (80%); and people with disability are more likely to be employed part-time than the rest of the population.[1082]

The Commission is examining measures to increase employment opportunities for people with disability in its 'IncludeAbility' project, led by the Disability Discrimination Commissioner, Dr Ben Gauntlett.

APPENDICES

Appendix A: Recommendations

PART A: NATIONAL STRATEGY ON NEW AND EMERGING TECHNOLOGIES

Recommendation 1: The *Digital Australia Strategy,* which is currently being developed by the Australian Government Department of the Prime Minister and Cabinet, should set Australia's national strategy for new and emerging technologies. The *Digital Australia Strategy* should promote responsible innovation through:

> (a) effective regulation—including law, co-regulation and self-regulation—that upholds human rights in the development and use of new technologies

> (b) the development of a community-wide action plan on education, training and capacity building regarding the human rights implications of new and emerging technologies

> (c) funding and investment for responsible innovation that complies with human rights

> (d) practical measures to achieve the Strategy's aims, including through the establishment of an AI Safety Commissioner (see Recommendation 22).

PART B: ARTIFICIAL INTELLIGENCE

Chapter 5 Legal accountability for government use of AI

Recommendation 2: The Australian Government should introduce legislation to require that a human rights impact assessment (HRIA) be undertaken before any department or agency uses an AI-informed decision-making system to make administrative decisions.

An HRIA should include public consultation, focusing on those most likely to be affected. An HRIA should assess whether the proposed AI-informed decision-making system:

> (a) complies with Australia's international human rights law obligations

> (b) will involve automating any discretionary element of administrative decisions, including by reference to the Commonwealth Ombudsman's *Automated decision-making better practice guide* and other expert guidance

> (c) provides for appropriate review of decisions by human decision makers

> (d) is authorised and governed by legislation.

Recommendation 3: The Australian Government should introduce legislation to require that any affected individual is notified where artificial intelligence is materially used in making an administrative decision. That notification should include information regarding how an affected individual can challenge the decision.

Recommendation 4: The Australian Government should commission an audit of all current or proposed use of AI-informed decision making by or on behalf of Government agencies. The AI Safety Commissioner (see Recommendation 22), or another suitable expert body, should conduct this audit.

Recommendation 5: The Australian Government should not make administrative decisions, including through the use of automation or artificial intelligence, if the decision maker cannot generate reasons or a technical explanation for an affected person.

Recommendation 6: The Australian Government should make clear that, where a person has a legal entitlement to reasons for a decision, this entitlement exists regardless of how the decision is made. To this end, relevant legislation including s 25D of the *Acts Interpretation Act 1901* (Cth) should be amended to provide that:

> (a) for the avoidance of doubt, the term 'decision' includes decisions made using automation and other forms of artificial intelligence

> (b) where a person has a right to reasons the person is entitled also to a technical explanation of the decision, in a form that could be assessed and validated by a person with relevant technical expertise

> (c) the decision maker must provide this technical explanation to the person within a reasonable time following any valid request.

Recommendation 7: The Australian Government should engage a suitable expert body, such as the AI Safety Commissioner (see Recommendation 22), to develop guidance for government and non-government bodies on how to generate reasons, including a technical explanation, for AI-informed decisions.

Recommendation 8: The Australian Government should introduce legislation to create or ensure a right to merits review, generally before an independent tribunal such as the Administrative Appeals Tribunal, for any AI-informed administrative decision.

Chapter 6 Legal accountability for private sector use of AI

Recommendation 9: The Australian Government's *AI Ethics Principles* should be used to encourage corporations and other non-government bodies to undertake a human rights impact assessment before using an AI-informed decision-making system. The Government should engage the AI Safety Commissioner (Recommendation 22) to issue guidance for the private sector on how to undertake human rights impact assessments.

Recommendation 10: The Australian Government should introduce legislation to require that any affected individual is notified when a corporation or other legal person materially uses AI in a decision-making process that affects the legal, or similarly significant, rights of the individual.

Recommendation 11: The Australian Government should introduce legislation that provides a rebuttable presumption that, where a corporation or other legal person is responsible for making a decision, that legal person is legally liable for the decision regardless of how it is made, including where the decision is automated or is made using artificial intelligence.

Recommendation 12: Centres of expertise, including the newly established Australian Research Council Centre of Excellence for Automated Decision-Making and Society, should prioritise research on the 'explainability' of AI-informed decision making.

Recommendation 13: The Australian Government should introduce legislation to provide that where a court, or regulatory, oversight or dispute resolution body, has power to order the production of information or other material from a corporation or other legal person:

> (a) for the avoidance of doubt, the person must comply with this order even where the person uses a form of technology, such as artificial intelligence, that makes it difficult to comply with the order

> (b) if the person fails to comply with the order because of the technology the person uses, the body may draw an adverse inference about the decision-making process or other related matters.

Chapter 7 Encouraging better AI-informed decision making

Recommendation 14: The Australian Government should convene a multi-disciplinary taskforce on AI-informed decision making, led by an independent body, such as the AI Safety Commissioner (Recommendation 22). The taskforce should:

> (a) promote the use of human rights by design in this area

> (b) advise on the development and use of voluntary standards and certification schemes

> (c) advise on the development of one or more regulatory sandboxes focused on upholding human rights in the use of AI-informed decision making.

The taskforce should consult widely in the public and private sectors, including with those whose human rights are likely to be significantly affected by AI-informed decision making.

Recommendation 15: The Australian Government should appoint an independent body, such as the AI Safety Commissioner (Recommendation 22), to develop a tool to assist private sector bodies undertake human rights impact assessments (HRIAs) in developing AI-informed decision-making systems. The Australian Government should maintain a public register of completed HRIAs.

Recommendation 16: The Australian Government should adopt a human rights approach to procurement of products and services that use artificial intelligence. The Department of Finance, in consultation with the Digital Transformation Agency and other key decision makers and stakeholders, should amend current procurement law, policy and guidance to require that human rights are protected in the design and development of any AI-informed decision-making tool procured by the Australian Government.

Recommendation 17: The Australian Government should engage an expert body, such as the AI Safety Commissioner (Recommendation 22), to issue guidance to the private sector on good practice regarding human review, oversight and monitoring of AI-informed decision-making systems. This body should also advise the Government on ways to incentivise such good practice through the use of voluntary standards, certification schemes and government procurement rules.

Chapter 8 AI, equality and non-discrimination

Recommendation 18: The Australian Government should resource the Australian Human Rights Commission to produce guidelines for government and non-government bodies on complying with federal anti-discrimination laws in the use of AI-informed decision making.

Chapter 9 Biometric surveillance, facial recognition and privacy

Recommendation 19: Australia's federal, state and territory governments should introduce legislation that regulates the use of facial recognition and other biometric technology. The legislation should:

> (a) expressly protect human rights

> (b) apply to the use of this technology in decision making that has a legal, or similarly significant, effect for individuals, or where there is a high risk to human rights, such as in policing and law enforcement

> (c) be developed through in-depth consultation with the community, industry and expert bodies such as the Australian Human Rights Commission and the Office of the Australian Information Commissioner.

Recommendation 20: Until the legislation recommended in Recommendation 19 comes into effect, Australia's federal, state and territory governments should introduce a moratorium on the use of facial recognition and other biometric technology in decision making that has a legal, or similarly significant, effect for individuals, or where there is a high risk to human rights, such as in policing and law enforcement.

Recommendation 21: The Australian Government should introduce a statutory cause of action for serious invasion of privacy.

PART C: SUPPORTING EFFECTIVE REGULATION

Recommendation 22: The Australian Government should establish an AI Safety Commissioner as an independent statutory office, focused on promoting safety and protecting human rights in the development and use of AI in Australia. The AI Safety Commissioner should:

> (a) work with regulators to build their technical capacity regarding the development and use of AI in areas for which those regulators have responsibility

> (b) monitor and investigate developments and trends in the use of AI, especially in areas of particular human rights risk

> (c) provide independent expertise relating to AI and human rights for Australian policy makers

> (d) issue guidance to government and the private sector on how to comply with laws and ethical requirements in the use of AI.

Recommendation 23: The AI Safety Commissioner (see Recommendation 22) should:

> (a) be independent from government in its structure, operations and legislative mandate, but may be incorporated into an existing body or be formed as a new, separate body

> (b) be adequately resourced, wholly or primarily by the Australian Government

> (c) be required to have regard to the impact of the development and use of AI on vulnerable and marginalised people in Australia

> (d) draw on diverse expertise and perspectives including by convening an AI advisory council.

PART D: ACCESSIBLE TECHNOLOGY

Chapter 12 Functional accessibility

Recommendation 24: The Attorney-General should:

> (a) develop a Digital Communication Technology Standard under section 31 of the *Disability Discrimination Act 1992* (Cth), and

> (b) consider other law and policy reform to implement the full range of accessibility obligations regarding Digital Communication Technologies under the *Convention on the Rights of Persons with Disabilities.*

In doing so, the Attorney-General should consult widely, especially with people with disability and the technology sector.

Recommendation 25: The Australian Government and state, territory and local governments should commit to using Digital Communication Technology that fully complies with recognised accessibility standards—especially WCAG 2.1 and Australian Standard EN 301 549, and successor standards. To this end, all Australian governments should:

> (a) introduce whole-of-government requirements for compliance with these standards, including by:
>
> > • providing information that is publicly available about how each agency complies with these requirements, reported annually
> >
> > • establishing central line agency and ministerial responsibility for monitoring compliance across government
> >
> > • resourcing training and advisory support to assist compliance
>
> (b) promote accessible goods, services and facilities that use Digital Communication Technology by favouring procurement from entities that implement such accessibility standards in their own activities
>
> (c) develop policies and targets to increase the availability of government communications in Easy English and provide human customer supports for people with disability who need to communicate with people instead of accessing digital services.

Recommendation 26: The Australian Government Department of Industry, Science, Energy and Resources or the Digital Transformation Agency should conduct an inquiry into compliance by industry with accessibility standards such as WCAG 2.1 and Australian Standard EN 301 549.

The inquiry should consider the extent to which incentives for compliance with standards should include changes relating to taxation, grants and procurement, research and design, and the promotion of good practices by industry.

Chapter 13 Broadcasting and audio-visual services

Recommendation 27: The Australian Government should amend the *Broadcasting Services Act 1992* (Cth) to increase the amount of accessible content available for people who have hearing or vision difficulties as follows:

> (a) national and commercial free-to-air television services should be required to provide audio described content for a minimum of 14 hours of programming per week, distributed across the primary and secondary channels. This should be increased to a minimum of 21 hours per week in a timeframe to be determined in consultation with people with disability and broadcasting services.
>
> (b) subscription television services should be required to provide audio described content for a minimum of 14 hours of programming per week for their main channels. This should be increased to a minimum of 21 hours per week in a timeframe to be determined in consultation with people with disability and broadcasting services.
>
> (c) national and commercial television free-to-air services should be required to increase the captioning of their content on an annual basis, resulting in all such broadcasting being captioned on primary and secondary channels within five years. The Government should determine a formula for annual progressive increases of captioning in consultation with industry, people with disability and their representatives.

Recommendation 28: The Australian Government Department of Infrastructure, Transport, Regional Development and Communications should conduct a review to identify effective, practical ways to increase audio description and captioning on secondary or specialist broadcast television channels.

Recommendation 29: The Australian Government should introduce legislation to provide minimum requirements for audio description and captioning in respect of audio-visual content delivered through subscription video-on-demand, social media and other services that are not covered by the *Broadcasting Services Act 1992* (Cth). Obligations should be determined in consultation with industry, and people with disability and their representatives.

Recommendation 30: The Australian Government, and state and territory governments, should ensure that people with disability can receive and understand emergency and other important public announcements, including by requiring government agencies to provide Auslan interpreters at their emergency and important public announcements.

The Australian Government should amend the *Broadcasting Services Act 1992* (Cth) to require any television or other company, which broadcasts or re-broadcasts emergency and other important public announcements, to ensure that Auslan interpretation is visible on the screen at all relevant times; and captions are readable, accurate and comprehensible.

Recommendation 31: The Australian Communications and Media Authority should consult with broadcasters and introduce monitoring and compliance measures to support them to:

> (a) comply with accessible service requirements

> (b) provide quality accessible services

> (c) increase organisational capacity to comply with current and future accessible service obligations.

Chapter 14 Availability of new technology

Recommendation 32: Standards Australia should develop, in consultation with people with disability and other stakeholders, an Australian Standard or Technical Specification that covers the provision of accessible information, instructional and training materials to accompany consumer goods, services and facilities.

This Australian Standard or Technical Specification should inform the development of the recommended Digital Communication Technology Disability Standard under section 31 of the *Disability Discrimination Act 1992* (Cth) (see Recommendation 24).

Recommendation 33: The NBN Co should implement a reasonable concessional broadband rate for people with disability who are financially vulnerable, in consultation with them, their representatives and other stakeholders.

Recommendation 34: The National Disability Insurance Agency, in consultation with people with disability, should review its policies regarding funding of reasonable and necessary supports as those policies apply to accessible goods, services and facilities, which use Digital Communication Technologies and which can be shown to enable people with disability to enjoy greater independence and participation in all areas of life.

In particular, the NDIA should focus on increasing access to internet plans, computers, tablets, laptops and smartphones and other items that rely on Digital Communication Technologies.

Chapter 15 Design, education and capacity building

Recommendation 35: The Disability Reform Council, through the Disability Reform Ministers' Meeting, should:

> (a) include accessible technology as an outcome area in the next National Disability Strategy to improve access to Digital Communication Technologies for people with disability

> (b) lead a process for the Australian Government and state and territory governments to adopt and promote human rights by design in the development and delivery of government services using Digital Communication Technologies, and monitor progress in achieving this aim.

Recommendation 36: Providers of tertiary and vocational education should include the principles of human rights by design in relevant degree and other courses in science, technology, engineering and mathematics. The Australian Government should engage the Australian Council of Learned Academies to provide advice on how to achieve this aim most effectively within the tertiary and vocational sectors.

Recommendation 37: Professional accreditation bodies for science, technology, engineering and mathematics should introduce mandatory training on human rights by design as part of continuing professional development.

Recommendation 38: The Australian Government should commission an expert body to lead the national development and delivery of education, training, accreditation, and capacity building for accessible technology for people with disability.

Appendix B: List of Submissions

Submissions to Issues Paper

The Commission received 14 confidential submissions.

Submission No	Full name
1	Ryan Bryer
4	Kayleen Manwaring
6	Access Now
7	Paul Harpur
8	Melville Miranda
9	Dietitians Association of Australia
10	Dan Svantesson
11	Lisa Fowkes
12	Commonwealth Ombudsman
13	Australian Library and Information Association
14	Royal Australian and New Zealand College of Radiologists
15	Public Interest Advocacy Centre
19	Martha Browning, Megan Ellis, Kelly Yeoh with Tania Leiman
20	Rafael Calvo, Julian Huppert, Dorian Peters, Gerard Goggin
21	Izerobzero
22	Diarmaid Harkin and Adam Molnar
23	Chartered Accountants Australia & New Zealand
24	Marcus Wigan
25	Adam Johnston
26	Pymetrics
27	Australian Red Cross
28	Portable
29	Australian Privacy Foundation, the Queensland Council for Civil Liberties, and Electronic Frontiers Australia
30	The Australian Rehabilitation and Assistive Technology Association
31	Google

Submission No	Full name
32	Uniting Church in Australia, Synod of Victoria and Tasmania
33	Moira Paterson
34	Australian Computer Society
35	Crighton Nichols
36	Office of the Victorian Information Commissioner
37	Mark Dean and Miguel Vatter
39	CHOICE
41	Society on Social Impacts of Technology, IEEE and Law Futures Centre, Griffith University
42	Consumer Policy Research Centre
43	Andrew Normand
44	Australian Centre for Health Law Research
45	Caitlin Curtis, Marie Mangelsdorf, and James Hereward
46	Nicola Henry
47	Ability Research Centre
48	National Disability Services
49	Online Hate Prevention Institute
50	Sean Murphy
51	Deloitte
52	Financial Rights Legal Centre
53	John Corker
54	Normann Witzleb
55	Australian Women Against Violence Alliance
56	Scott McKeown
58	NSW Young Lawyers Communications, Entertainment and Technology Law Committee
59	Sumathy Ramesh
60	The Warren Centre
61	Paul Henman
62	Speech Pathology Australia
63	Roger Clarke
64	Katalin Fenyo
65	Maria O'Sullivan

Submission No	Full name
66	Data Synergies
67	Domestic Violence Victoria
68	La Trobe LawTech
69	Australian Communications Consumer Action Network
70	The Allens Hub for Technology, Law and Innovation
71	Australian Council of Learned Academies
72	Michael Wildenauer
73	Intellectual Disability Rights Service
75	Pip Butt
76	Errol Fries
77	ANZ
78	Carers Australia
79	University of Melbourne
80	Feral Arts/Arts Front
81	Digital Gap Initiative
82	Castan Centre for Human Rights Law, Monash University
83	Global Partners Digital
84	Northraine
85	ThinkPlace
86	EMR Australia
87	Marco Rizzi and David Glance
89	Kingsford Legal Centre
90	Shelley Bielefeld
91	Nicolas Suzor, Kim Weatherall, Angela Daly, Ariadne Vromen, Monique Mann
92	The Centre for Inclusive Design
93	The Ethics Centre
95	Legal Aid New South Wales
97	PwC Indigenous Consulting
98	Office of the Australian Information Commissioner
99	National Association of Community Legal Centres
100	Ron McLay
101	Law Council of Australia

Submission No	Full name
103	University of Technology Sydney
104	Eleanor Salazar, Jerwin Parker Roberto, Leah Gelman, Angelo Gajo
105	Emily Mundzic, Llewellyn Thomas, Eleanor Salazar, Jerwin Parker Roberto
106	Dorotea Baljevic and Ksenija Nikandrova
107	Kate Mathews-Hunt
108	Jobs Australia
109	Ian Law
110	Migrant Worker Justice Initiative, UNSW, UTS
111	LexisNexis
112	Emma Jane and Nicole Vincent
113	Adobe
114	WebKeyIT
116	Emergency Services Levy Insurance Monitor
117	Intopia
118	Claire Devenney and Christopher Mills
119	Jane Refshauge

Submissions to White Paper

The Commission received 7 confidential submissions.

Submission No	Full name
1	Kate Mathews-Hunt
2	University of Wollongong
4	Roger Clarke
5	Letter from the Commissioner for Children and Young People
7	Marie Johnson
8	Graham Greenleaf, Roger Clarke, David Lindsay
10	Australian Human Rights Institute
11	NTT Communications Cloud Infrastructure Services Inc
12	Robert Chalmers
13	Remi AI
15	Ethics for AI and ADM
16	Stacy Carter, Nehmat Houssami and Wendy Rogers
17	Renee Newman Knake
18	Data2X and the UN Foundation
20	National Archives of Australia
21	Australian Council of Trade Unions
22	Chartered Accountants Australia and New Zealand
23	Henry Dobson
24	FutureLab.Legal
25	Queensland Council for Civil Liberties
26	Electronic Frontiers Australia
27	Australian Services Union
28	Marcus Smith
29	Joylon Ford
30	Michael Guihot and Matthew Rimmer
31	Office of the eSafety Commissioner
32	Interactive Games and Entertainment Association
33	Centre for Policy Futures, University of Queensland
34	Libby Young
35	The Australian Industry Group
36	Northraine

37	Social Innovation Research Institute, Swinburne University of Technology
38	The Allens Hub for Technology, Law and Innovation
39	Office of the Victorian Information Commissioner
40	The Royal Australian and New Zealand College of Radiologists
41	Ruth Lewis
42	Standards Australia
43	Hayden Wilkinson
44	Simon Moore
45	Law Council of Australia
46	Joanne Evans
47	Portable
48	The Montreal AI Ethics Institute
49	Australian Information and Industry Association
50	The University of Melbourne
51	Microsoft
53	Crighton Nichols
54	Julia Powles, Marco Rizzi, Fiona McGaughey, David Glance
56	Izerobzero
57	Access Now
58	Consumer Policy Research Centre
59	Blockchain Assets
60	Effective Altruism ANZ
61	Digital Industry Group Inc
62	Australian Research Data Commons
63	Office of the Australian Information Commissioner

Submissions to Discussion Paper

The Commission received 10 confidential submissions.

Submission No	Full name
1	Geoffrey Le Cren
2	Michael Kollo
3	Canberra Blind Society
4	Susan Fordham
5	Peter Caine
6	Izerobzero
7	Vanessa Teague
9	Sina Summers
10	Information and Privacy Commission NSW
11	Australian Fair Trade and Investment Network
12	Terry Aulich
13	Wendy Small
15	Robert Chalmers
17	Australian Lawyers Alliance
18	Blind Citizens Australia
19	National Health and Medical Research Council
20	Australian Services Union
21	Peter Kovesi
22	Phoensight
23	Brian Auckram
24	NSW Council for Civil Liberties
25	Ross Greenwood
26	Special Broadcasting Service (SBS)
27	Medical Insurance Group Australia
28	SAS Institute Australia
29	Office of the Victorian Information Commissioner
30	Andrew Normand
31	Herbert Smith Freehills
32	Australian Red Cross
33	Actuaries Institute
34	KPMG Australia

Submission No	Full name
35	Australian Women Against Violence Alliance
36	Ethics Matters Pty Ltd
37	Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, and NSW Council for Civil Liberties
38	Community and Public Sector Union
39	Microsoft
40	Victoria Legal Aid
43	Chartered Accountants Australia and New Zealand
44	SafeGround Inc
45	Capgemini
46	Telecommunications Industry Ombudsman
47	Pymetrics
49	Vision Australia
50	The Australia Institute's Centre for Responsible Technology
51	AI Now Institute
52	Allens Hub for Technology, Law and Innovation
53	Dan Jerker Borje Svantesson
54	Melinda Stratton
55	Sarah Hook, Anna Cody, Razeen Sappideen, Zhiqiang Wang, John Juriandz, Hadeel Al-Alosi, Liesel Spencer, Ellen Seymour, Simon Kozlina, Jennifer Whelan, Sandra Noakes
56	Australian Communications Consumer Action Network (ACCAN)
57	Rosa Walden
58	Australian Academy of Science
59	Digital Industry Group Inc
60	PricewaterhouseCoopers (PwC)
61	Consumer Policy Research Centre
62	Australian Industry Group
63	Aboriginal and Torres Strait Islander Legal Service (QLD)
64	Bill Calcutt
65	Ella Wylynko
66	Tetyana Krupiy
68	Public Interest Advocacy Centre
69	University of Technology Sydney

Submission No	Full name
70	Jonathan Crock, Alyssa Kurke, Emma DeMailly, Lexi Smith, Hyunmin Kim, Brian O'Gara, Charles Riviere, Nyla Jennings, Nuha Vora, Zaine Goins, Christa Fox, Stephanie Bueno, Kameria Harris, Alison Eisenhart, Zoha Zafar
71	WiseLaw
72	Zoran Milosevic
73	Caitlin Curtis, Amelia Radke, and James Hereward
74	Telstra
75	Kablamo Pty Ltd
77	Amazon Web Services
78	Jenny Ng
79	Co-Innovation Group, School of Information Technology and Electrical Engineering, University of Queensland
80	QUT Digital Media Research Centre
82	Sova Assessment
83	Australian Council of Learned Academies (ACOLA)
84	Australian National University Cyber Institute
85	Julia Thornton
86	NSW Young Lawyers
87	Julia Powles and Will Bateman
88	Digital Gap Initiative
90	Kimberlee Weatherall and Tiberio Caetano
91	University of Melbourne
92	Carers NSW
93	Piers Gooding
94	Responsible Technology Australia
95	Castan Centre for Human Rights Law
96	Maurice Blackburn Lawyers
97	Digital Rights Watch
98	Commonwealth Bank of Australia
99	Law Council of Australia
100	Greg Adamson
101	Element AI
102	Joylon Ford
103	Standards Australia

Submission No	Full name
104	Access Now
105	Financial Rights Legal Centre
106	NSW Bar Association
107	Michael Richardson
108	Office of the Australian Information Commissioner

Appendix C: Acronyms used in this Final Report

AAT Act	*Administrative Appeals Tribunal Act 1975* (Cth)
ACCAN	Australian Communications Consumer Action Network
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
ACOLA	Australian Council of Learned Academies
ADJR Act	*Administrative Decisions (Judicial Review) Act 1977* (Cth)
ALRC	Australian Law Reform Commission
AI	artificial intelligence
AR	augmented reality
ASIC	Australian Securities and Investment Commission
ATO	Australian Taxation Office
CAT	Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CPD	continuing professional development
CRC	Convention on the Rights of the Child
CRPD	Convention on the Rights of Persons with Disabilities
DDA	*Disability Discrimination Act 1992* (Cth)
DISER	Department of Industry, Science, Energy and Resources
DP	Human Rights and Technology Discussion Paper
DTA	Digital Transformation Agency
EU	European Union
GDPR	General Data Protection Regulation (European Union)
HRIA	human rights impact assessment
ICCPR	International Covenant on Civil and Political Rights
ICERD	International Convention on the Elimination of All Forms of Racial Discrimination
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICT	information and communications technology

IoT	Internet of Things
IP	Human Rights and Technology Issues Paper
NDIA	National Disability Insurance Agency
NDIS	National Disability Insurance Scheme
OAIC	Office of the Australian Information Commissioner
OECD	Organisation for Economic Cooperation and Development
STEM	science, technology, engineering and maths
SVOD	subscription video-on-demand
UDHR	Universal Declaration of Human Rights
UK ICO	United Kingdom Information Commissioner's Office
UN	United Nations
VR	virtual reality
WCAG	Web Content Accessibility Guidelines
WP	Human Rights and Technology White Paper

Endnotes

1   See Fergus Hunter and Jennifer Duke, "Not Messing Around': Government Unveils 'World-leading' Regulation of Tech Giants', *Sydney Morning Herald* (online, 12 December 2019) <https://www.smh.com.au/politics/federal/morrison-government-unveils-world-leading-privacy-competition-regulation-of-tech-giants-20191212-p53j8r.html?utm_medium=Social&utm_source=Twitter#Echobox=1576111210&utm_source=headtopics&utm_medium=news&utm_campaign=2019-12-12>; Prime Minister, Treasurer, Attorney-General, Minister for Industrial Relations, Minister for Communications Cyber Safety and the Arts, 'Response to Digital Platforms Inquiry' (Media Release, 12 December 2019).

2   See Australian Government, Department of Industry, Science, Energy and Resources, *An AI Action Plan for all Australians: A Call for Views - Discussion Paper* (2020) 19; Australian Government, Department of Industry, Innovation and Science, *AI Ethics Framework* (November 2019); Stefan Hajkowicz and Dave Dawson, *Digital Megatrends: A Perspective on the Coming Decade of Digital Disruption* (CSIRO's Data61, June 2019); Australian Government, Innovation and Science Australia, *Australia 2030: Prosperity Through Innovation* (2017).

3   These include the impact of social media on our democracy, the phenomenon of lethal autonomous weapons and the future of work. See, for example, Australian Competition and Consumer Commission (ACCC), *Digital Platforms Inquiry* (Final Report, June 2019). For a summary of other human rights issues raised during consultations see Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) 13.

4   *Universal Declaration of Human Rights,* GA Res 217A (III), UN GAOR, UN Doc A/810 (10 December 1948) art 1 ('*UDHR*'). In the identical Preambles of the *International Covenant on Civil and Political Rights* and the *International Covenant on Economic, Social and Cultural Rights*, it is stated that the rights the treaties seek to protect 'derive from the inherent dignity of the human person': *International Covenant on Civil and Political Rights*, opened for signature 16 December 1966, 999 UNTS 171 (entered into force 23 March 1976) Preamble ('*ICCPR*'); *International Covenant on Economic, Social and Cultural Rights*, opened for signature 16 December 1966, 993 UNTS 3 (entered into force 3 January 1976) Preamble ('*ICESCR*').

5   *Vienna Declaration and Programme of Action*, UN Doc A/CONF.157/23 (12 July 1993) para 5.

6   *ICCPR*; *ICESCR*; *Convention on the Elimination of all Forms of Discrimination Against Women*, opened for signature 18 December 1979, 1249 UNTS 13 (entered into force 3 September 1981) ('*CEDAW*'); *Convention on the Rights of the Child,* opened for signature 20 November 1989, 1577 UNTS 3 (entered into force 2 September 1990) ('*CRC*'); *International Convention on the Elimination of All Forms of Racial Discrimination*, opened for signature 21 December 1965, 660 UNTS 195 (entered into force 4 January 1969) ('*ICERD*'); *Convention on the Rights of Persons with Disabilities*, opened for signature 13 December 2006, 2515 UNTS 3 (entered into force 3 May 2008) ('*CRPD*'); *Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment,* opened for signature 10 December 1984, 1465 UNTS 85 (entered into force 26 June 1987) ('*CAT*').

7   See, for example, Organisation for Economic Cooperation and Development (OECD), *Recommendation of the Council on Artificial Intelligence,* OECD/Legal/0449 (adopted 22 May 2019); Amnesty International and Access Now, *The Toronto Declaration* (16 May 2018); Mark Latonero, *Governing Artificial Intelligence: Upholding Human Rights & Dignity* (Data & Society, October 2018); Mark Hodge and Dunstan Allison-Hope, *Artificial Intelligence: A Rights-Based Blueprint for Business* (Working Paper No 2, BSR, August 2018); Filippo A Raso, Hannah Hilligoss, Vivek Krishnamurthy, Christopher Bavitz and Levin Kim, *Artificial Intelligence & Human Rights: Opportunities & Risks* (Berkman Klein Center Research Publication No 2018-6, September 2018); Petra Molnar and Lex Gill, *Bots at the Gate: A Human Rights Analysis of Automated Decision-Making in Canada's Immigration and Refugee System* (Research Report No 114, Citizen Lab and International Human Rights Program, University of Toronto, September 2018) 13.

8   See, for example, Filippo A Raso, Hannah Hilligoss, Vivek Krishnamurthy, Christopher Bavitz and Levin Kim, *Artificial Intelligence & Human Rights: Opportunities & Risks* (Berkman Klein Center Research Publication No 2018-6, September 2018); Eileen Donahoe and Megan MacDuffee Metzger, 'Artificial Intelligence and Human Rights' (2019) 30(2) *Journal of Democracy* 115.

9   See, for example, Office of the High Commissioner of Human Rights, *UN Human Rights Business and Human Rights in Technology Project (B-Tech): Applying the UN Guiding Principles on Business and Human Rights to Digital Technologies* (November 2019).

10   See, for example, Institute of Electrical and Electronics Engineers (IEEE), *Ethically Aligned Design* (First Edition, 2019).

11   See, for example, the challenge brought against the use of facial recognition technology by police in Wales: Dan Sabbagh, 'South Wales Police Lose Landmark Facial Recognition Case', *The Guardian* (online, 12 August 2020) <https://www.theguardian.com/technology/2020/aug/11/south-wales-police-lose-landmark-facial-recognition-case>. See also Pete Fussey and Daragh Murray, *Independent Report on the London Metropolitan Police Service's Trial of Live Facial Recognition Technology* (Human Rights, Big Data and Technology Project, July 2019); Hannah Couchman, *Policing by Machine: Predictive Policing and the Threat to Our Rights* (Liberty Human Rights, January 2019).

12   Brief by the United Nations (UN) Special Rapporteur on Extreme Poverty and Human Rights as *Amicus Curiae* in the Case of NJCM c.s./De Staat der Nederlanden (SyRI), District Court of the Hague, Case No C/09/550982/HA ZA 18/388 (5 February 2020) [8]-[9]. See also Philip Alston, *Report of the Special Rapporteur on Extreme Poverty and Human Rights,* UN Doc A/74/493 (11 October 2019).

13   The UN Special Rapporteur on Freedom of Opinion and Expression, the Organization for Security and Cooperation in Europe Representative on Freedom of the Media, the Organization of American States Special Rapporteur on Freedom of Expression and the African Commission on Human and People's Rights Special Rapporteur on Freedom of Expression and Access to Information, *Twentieth Anniversary Joint Declaration: Challenges to Freedom of Expression in the Next Decade* (10 July 2019).

14   David Kaye, *Report of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression*, UN Doc A/HRC/29/32 (22 May 2015) [12]; UN Office of the High Commissioner for Human Rights, '"Smart Mix" of Measures Needed to Regulate New Technologies – Bachelet' (Media Release, 24 April 2019); *The Right to Privacy in the Digital Age*, GA Res 68/167, UN Doc A/RES/68/167 (21 January 2014, adopted 18 December 2013); Office of the High Commissioner of Human Rights, *UN Human Rights Business and Human Rights in Technology Project (B-Tech): Applying the UN Guiding Principles on Business and Human Rights to Digital Technologies* (November 2019).

15   Office of the High Commissioner of Human Rights, *UN Human Rights Business and Human Rights in Technology Project (B-Tech): Applying the UN Guiding Principles on Business and Human Rights to Digital Technologies* (November 2019).

16   OECD, *Recommendation of the Council on Artificial Intelligence,* OECD/Legal/0449 (adopted 22 May 2019).

17   G20 Ministerial Meeting on Trade and Digital Economy, *G20 Ministerial Statement on Trade and the Economy*, Tsukuba City, Japan, 8-9 June 2019.

18   See Australian Government, Department of Industry, Science, Energy and Resources, *An AI Action Plan for all Australians: A Call for Views - Discussion Paper* (2020) 19.

19   Government of Canada, *Canada-France Statement on Artificial Intelligence* (7 June 2018) <http://international.gc.ca/world-monde/international_relations-relations_internationales/europe/2018-06-07-france_ai-ia_france.aspx?lang=eng>.

20   Microsoft, *Microsoft Global Human Rights Statement* <https://www.microsoft.com/en-us/corporate-responsibility/human-rights-statement>.

21   See, for example, IEEE, *Ethically Aligned Design* (First Edition, 2019).

22   This approach reflects a common way of applying a human rights approach via the PANEL principles. See, for example, Australian Human Rights Commission, *Human Rights Based Approaches* <https://www.humanrights.gov.au/our-work/rights-and-freedoms/human-rights-based-approaches>; Scottish Human

Rights Commission, *Human Rights Based Approach* <https://www.scottishhumanrights.com/projects-and-programmes/human-rights-based-approach/>.

23   Karen Yeung, Andrew Howes and Ganna Pogrebna, 'AI Governance by Human Rights-Centred Design, Deliberation and Oversight: An End to Ethics Washing' in Markus D Dubber, Frank Pasquale, and Sunit Das (eds), *The Oxford Handbook of AI Ethics* (Oxford University Press, 2020) 77; Evgeni Aizenberg and Jeroen van den Hoven, 'Designing for Human Rights and AI' [2020] (July–December) *Big Data & Society* 1.

24   For example, Australian Government, Office of the Australian Information Commissioner, *Privacy by Design* <https://www.oaic.gov.au/privacy/privacy-for-organisations/privacy-by-design/>; Australian Government, eSafety Commissioner, *Safety by Design* (October 2019).

25   Australian Government, Department of Prime Minister and Cabinet, *Digital Technology Taskforce* <https://www.pmc.gov.au/digital-technology-taskforce>.

26   OECD, *Artificial Intelligence in Society (Summary in English)* (2019) 1. Stakeholders noted the OECD's approach favourably. See DP submissions: K Weatherall, T Caetano, 2; SAS Institute Australia, 4.

27   *Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation)* [2016] OJ L 119/46 *('General Data Protection Regulation')* art 22.

28   The Human Rights and Technology Expert Reference Group has met quarterly to discuss the work of the Project and forms an important part of Project governance. Members of the group and their biographies are available at Australian Human Rights Commission, *Human Rights & Technology, About* <https://tech.humanrights.gov.au/about>.

29   Australian Government, Department of Prime Minister and Cabinet, *Digital Technology Taskforce* <https://www.pmc.gov.au/digital-technology-taskforce>.

30   DP submission: Office of the Victorian Information Commissioner, 2; Australian Red Cross, 1; Ethics Matters Pty Ltd, 1; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 3; Confidential submission 42; Pymetrics, 2; Confidential submission 48; Allens Hub for Technology, Law and Innovation, 2; S Hook, 2-3; Australian Council of Learned Academies, 3; Standards Australia 3; R Walden ,4; NSW Bar Association,12; Carers NSW, 2; Microsoft 1-2; SAS Institute Australia, 3; Public Interest Advocacy Centre, 1; Australian Communications Consumer Action Network, 8; PwC, 2; WiseLaw,1; Maurice Blackburn Lawyers, Access Now, 2; Digital Rights Watch,1; Law Council of Australia, 5; Commonwealth Bank of Australia, 2; Element AI, 1; R Chalmers, 1; NSW Council for Civil Liberties, 3-4; Medical Insurance Group Australia, 2; Information and Privacy Commission NSW, 2; Financial Rights Legal Centre, 1.

31   See Global Partners Digital, *National Artificial Intelligence Strategies and Human Rights: A Review* (April 2020 2.

32   Global Partners Digital, *National Artificial Intelligence Strategies and Human Rights: A Review* (April 2020) 9.

33   Global Partners Digital, *National Artificial Intelligence Strategies and Human Rights: A Review* (April 2020) 9.

34   Global Partners Digital, *National Artificial Intelligence Strategies and Human Rights: A Review* (April 2020) 9.

35   Federal Government of Germany, *Artificial Intelligence Strategy* (November 2018) 6.

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148 *ICCPR* art 2(3) requires each State Party to ensure a person whose Covenant rights have been violated has an effective remedy, and that this remedy will be enforced. See also UN Human Rights Committee, *General Comment No 31 [80]: The Nature of the General Legal Obligation Imposed on States Parties to the Covenant,* 80th sess, UN Doc CCPR/C/21/Rev/1/Add/13 (26 May 2004, adopted 29 March 2004).

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181   The Joint Council for the Welfare of Immigrants, *We Won! Home Office to Stop Using Racist Visa Algorithm* <https://www.jcwi.org.uk/news/we-won-home-office-to-stop-using-racist-visa-algorithm>.

182   *Migration Legislation Amendment (Electronic Transactions and Methods of Notification) Act 2001* (Cth) s 9.

183   Explanatory Memorandum, Migration Legislation Amendment (Electronic Transactions and Methods of Notification) Bill 2001 (Cth) para 9.

184   The Committee noted that 'under the 2018 instrument some matters which could be subject to decision by computer program may involve complex or discretionary considerations'. This was in contrast to other provisions expressly exempting certain decisions from being able to be determined by a computer program. The Committee sought ministerial advice, and received correspondence from the Minister stating the computer program deployed in this instance could not refuse a visa decision, thereby potentially arbitrarily depriving an individual of their liberty, and noted 'The Minister's personal decision-making powers are not automated through departmental computer programs': Joint Committee on Human Rights, Parliament of Australia, *Human Rights Scrutiny Report 7 of 2018* (14 August 2018) 12; Joint Committee on Human Rights, Parliament of Australia, *Human Rights Scrutiny Report 11 of 2018* (16 October 2018) 78.

185   DP submissions: T Krupiy, 2; Australian Communications Consumer Action Network, 8; AI Now Institute, 3. Several submissions referred to the disproportionate impact on Aboriginal and Torres Strait Islander youth of the operation of the NSW Police Suspect Target Management Plan; see IP submissions: Public Interest Advocacy Centre, 11; PwC Indigenous Consulting, 33; National Association of Community Legal Centres, 7. DP submissions: NSW Young Lawyers, 8; Maurice Blackburn Lawyers, 4. DP Consultation roundtables: 13, 10. See also Michael McGowan, 'More Than 50% of Those on Secretive NSW Police Blacklist are Aboriginal', *The Guardian* (online, 11 November 2017) <https://www.theguardian.com/australia-news/2017/nov/11/more-than-50-of-those-on-secretive-nsw-police-blacklist-are-aboriginal>.

186   Virginia Eubanks, *Automating Inequality: How High-Tech Tools Profile, Police and Punish the Poor* (St Martin's Press, 2018).

187   See, for example, hearings undertaken by the US Senate Judiciary Committee into social media and misinformation: Cat Zakrzewski and Rachel Lerman, 'The Election Was a Chance for Facebook and Twitter to Show They Could Control Misinformation. Now Lawmakers are Grilling Them on it', *The Washington Post* (online, 18 November 2020) <https://www.washingtonpost.com/technology/2020/11/17/tech-hearing-dorsey-zuckerberg/>.

188   DP submission: K Weatherall, T Caetano, 3. See also Virginia Eubanks, *Automating Inequality: How High-Tech Tools Profile, Police and Punish the Poor* (St Martin's Press, 2018); Philip Alston, *Report of the Special Rapporteur on Extreme Poverty and Human Rights*, UN Doc A/74/493 (11 October 2019); Martin Tisné, *The Data Delusion: Protecting Individual Data Isn't Enough When the Harm is Collective* (July 2020) <https://fsi-live.s3.us-west-1.amazonaws.com/s3fs-public/the_data_delusion_formatted-v3.pdf> 3.

189   Karen Hao, 'Facebook's Ad-serving Algorithm Discriminates by Gender and Race', *MIT Technology Review* (online, 5 April 2019) <https://www.technologyreview.com/2019/04/05/1175/facebook-algorithm-discriminates-ai-bias/>; Jeffrey Dastin, 'Amazon Scraps Secret AI Recruiting Tool That Showed Bias Against Women,' *Reuters* (online, 11 October 2018) <https://www.reuters.com/article/us-amazon-com-jobs-automation-insight-idUSKCN1MK08G>; Commonwealth Ombudsman, *Centrelink's Automated Debt Raising and Recovery System: A Report About the Department of Human Services' Online Compliance Intervention System for Debt Raising and Recovery* (April 2017); NJCM c.s./De Staat der Nederlanden (SyRI), District Court of the Hague, Case No C/09/550982/HA ZA 18/388 (5 February 2020); Virginia Eubanks, *Automating Inequality: How High-Tech Tools Profile, Police and Punish the Poor* (St Martin's Press, 2018).

190   Yee-Fui Ng, Maria O'Sullivan, Moira Paterson and Normann Witzleb, 'Revitalising Public Law in a Technological Era: Rights, Transparency and Administrative Justice' (2020) 43(3) *University of New South Wales (UNSW) Law Journal* 1041, 1043.

191   Danielle Keats Citron and Frank Pasquale, 'The Scored Society: Due Process for Automated Predictions' (2014) 89(1) *Washington Law Review* 1.

192   Karen Yeung, Rapporteur, *A Study of the Implications of Advanced Digital Technologies (Including AI Systems) for the Concept of Responsibility Within a Human Rights Framework*, Council of Europe MSI-AUT (2018) 05 (9 November 2018) 32.

193   Karen Yeung, Rapporteur, *A Study of the Implications of Advanced Digital Technologies (Including AI Systems) for the Concept of Responsibility Within a Human Rights Framework*, Council of Europe MSI-AUT (2018) 05 (9 November 2018) 72.

194   National survey of 2,575 Australian adults conducted between 24 June and 21 July 2020. 96% respondents expect AI to be regulated and 66% expect government oversight of AI: Nicole Gillespie, Steve Lockey and Caitlin Curtis, *Trust in Artificial Intelligence: Australian Insights* (University of Queensland and KPMG Australia, October 2020) 3; National survey of 2,019 Australian adults conducted between 1 and 24 April 2020. 'The majority of the public agrees with the need for industry guidelines and/or new legislation to address all possible harms associated with AI': Neil Selwyn, Beatriz Gallo Cordoba, Mark Andrejevic and Liz Campbell, *AI for Social Good? Australian Public Attitudes Toward AI and Society* (Monash University, August 2020) 9; National survey of 1,058 Australian adults conducted between 23 and 26 July 2020. Between 41% and 48% of participants would have 'a lot more trust' and between 30% and 33% would have 'a little more trust' in an automated decision if any of the oversight measures including human checks, limitations on personal information sharing within the government and stronger laws to protect their rights were implemented: Essential Research, *The Essential Report—Human Rights Commission* (29 July 2020).

195   UN Office of the High Commissioner for Human Rights, '"Smart Mix" of Measures Needed to Regulate New Technologies – Bachelet' (Media Release, 24 April 2019).

196   Infographic based on: UK Information Commissioner's Office, *An Overview of the Auditing Framework for Artificial Intelligence and its Core Components* (26 March 2019) <https://ico.org.uk/about-the-ico/news-and-events/ai-blog-an-overview-of-the-auditing-framework-for-artificial-intelligence-and-its-core-components/>.

197   DP submissions: Herbert Smith Freehills, 4; Actuaries Institute, 4; University of Technology Sydney, 55; Amazon Web Services, 4.

198   IP submissions: Castan Centre for Human Rights Law, 2; University of Melbourne, 2. See WP submissions: Microsoft; Digital Industry Group, 4. DP submissions: Herbert Smith Freehills, 4; Actuaries Institute, 4; University of Technology Sydney, 55; Amazon Web Services, 4; Australian Industry Group.

199   WP submissions: Allens Hub for Technology, Law, and Innovation, 3; Microsoft; Digital Industry Group Inc. DP submissions: Herbert Smith Freehills, 4; Actuaries Institute, 4; University of Technology Sydney, 55; Amazon Web Services, 4.

200   This comment was made in the first major court decision on the use of automated facial recognition technology: *Bridges, R v The Chief Constable of South Wales Police* [2019] EWHC 2341 (Admin), [84] (Haddon-Cave J, Swift J).

201   Reform related to government use of AI is discussed in Chapter 5, and reform related to private sector use is discussed in Chapter 6.

202   As noted in IP submissions, including: N Suzor, K Weatherall, A Daly, A Vromen, M Mann, 2, 7; NSW Young Lawyers Communications, Entertainment and Technology Law Committee, 10; National Association of Community Legal Centres, 9; M Rizzi, D Glance, 2; Intopia, 8. DP submissions: Australian Academy of Science, 3; University of Technology, 7; Element AI, 2.

203   See IP submissions: N Suzor, K Weatherall, A Daly, A Vromen, M Mann; University of Technology Sydney, 43.

204   National survey of 1,058 Australian adults conducted between 23 and 26 July 2020. Between 41% and 48% of participants would have 'a lot more trust' and between 30% and 33% would have 'a little more trust' in an automated decision if any of the oversight measures including human checks, limitations on personal information sharing within the government and stronger laws to protect their rights were implemented: Essential Research, *The Essential Report—Human Rights Commission* (29 July 2020).

205   National survey of 1,058 Australian adults conducted between 23 and 26 July 2020. When asked about the importance of steps in automated decision making: right to appeal – 68% 'very important', 19% 'quite important'; reasons for the decision – 67% 'very important', 21% 'quite important'; informed about automation – 59% 'very important', 26% 'quite important': Essential Research, *The Essential Report—Human Rights Commission* (29 July 2020).

206   National survey of 2,866 Australian adults conducted between February and April 2020. Australian Government, Office of the Australian Information Commissioner, *Australian Community Attitudes to Privacy Survey 2020* (2020) 87.

207   Australian Government, Office of the Australian Information Commissioner, *Australian Community Attitudes to Privacy Survey 2020* (2020) 87.

208   Neil Selwyn, Beatriz Gallo Cordoba, Mark Andrejevic and Liz Campbell, *AI for Social Good? Australian Public Attitudes Toward AI and Society* (Monash University, August 2020) 43-44.

209   Survey participants were asked: 'How much confidence, if any, do you have in each of the following to manage the development and use of AI in the best interests of the public?'. Survey participants identified they had 'a great deal of confidence' in CSIRO (32.4%); Office of the Chief Scientist of Australia (24.8%); Australian Human Rights Commissioner (23.5%); Australian Federal Government (18.9%); Australian Privacy Commissioner (17.9%): Neil Selwyn, Beatriz Gallo Cordoba, Mark Andrejevic and Liz Campbell, *AI for Social Good? Australian Public Attitudes Toward AI and Society* (Monash University, August 2020) 46.

210   See Chapter 2.

211   See Chapter 2.

212   See, for example, Filippo A Raso, Hannah Hilligoss, Vivek Krishnamurthy, Christopher Bavitz and Levin Kim, *Artificial Intelligence & Human Rights: Opportunities & Risks* (Berkman Klein Center Research Publication No 2018-6, September 2018); Eileen Donahoe and Megan MacDuffee Metzger, 'Artificial Intelligence and Human Rights' (2019) 30(2) *Journal of Democracy* 115.

213   Some commentators and submissions are calling for new rights. See, for example, IP submissions: R Calvo, J Huppert, D Peters, P Goggin, 5; N Witzleb, 27.

214   At the 2018 FAT (Fairness, Accountability and Transparency) conference, A/Prof Arvind Narayanan delivered a paper with the title 'Twenty-one Fairness Definitions and their Politics'. Cited and discussed in Ellen Broad, *Made by Humans: The AI Condition* (Melbourne University Press, 2018) 92.

215   *ICCPR* art 2(3) requires each State Party to ensure a person whose Covenant rights have been violated has an effective remedy, and that this remedy will be enforced. See also UN Human Rights Committee, *General Comment No 31 [80]: The Nature of the General Legal Obligation Imposed on States Parties to the Covenant,* 80th sess, UN Doc CCPR/C/21/Rev/1/Add/13 (26 May 2004, adopted 29 March 2004).

216   Accountability is the second limb of the PANEL principles, discussed in Chapter 2.

217   Karen Yeung, Rapporteur, *A Study of the Implications of Advanced Digital Technologies (Including AI Systems) for the Concept of Responsibility Within a Human Rights Framework*, Council of Europe MSI-AUT(2018)05 (9 November 2018) 73.

218   DP submissions: Australian Communications Consumer Action Network, 11; Australia Institute Centre for Responsible Technology, 3; Office of the Australian Information Commissioner, 5; Safe Ground Inc, 1; Victoria Legal Aid, 2. Victoria Legal Aid also proposed additional principles to underpin a regulatory approach to AI, including consultation and user testing, and technology informed laws.

219   Council of Europe Committee of Ministers, *Recommendation CM/Rec (2020) 1 of the Committee of Ministers to Member States on the Human Rights Impacts of Algorithmic System* (adopted 8 April 2020).

220   Algorithmic Accountability Act 2019 Bill, HR 2231, 116th Congress (2019).

221   See IP submissions: M Wigan, Question 1; M O'Sullivan, 3.

222   IP submissions: Australian Red Cross, 6; Uniting Church in Australia, Synod of Victoria & Tasmania, 8. DP submissions: Australian Red Cross, 5; SafeGround Inc; Allens Hub for Technology, Law and Innovation, 3. DP Consultation roundtables: 7, 13.

223   IP submissions: Access Now, 4; Global Partners Digital; National Association of Community Legal Centres, 5; Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, 11; Warren Centre, 5; PwC Indigenous Consulting, 25. WP submissions: M Smith, 1; Law Council of Australia, 4; Montreal AI Ethics Institute, 8; M Guihot, M Rimmer, 26.

224   DP submissions: Allens Hub for Technology, Law and Innovation, 3; Herbert Smith Freehills.

225   DP submission: AI Now Institute, 2.

226   AI Now Institute, *Submission to the European Commission on "White Paper on AI – A European Approach"* (14 June 2020) 2, 6.

227   Protecting Consumer Data Bill, Washington Senate Bill 5376 (2019). A similar provision is included in New York Privacy Act Bill, New York State Senate Bill 5642 (2019).

228   DP submission: Microsoft, 2, 3.

229   DP submission: Amazon Web Services, 1.

230   DP submission: Element AI, 3.

231   European Commission, *On Artificial Intelligence – A European Approach to Excellence and Trust* (White Paper, 19 February 2020) 17.

232   European Commission, *On Artificial Intelligence – A European Approach to Excellence and Trust* (White Paper, 19 February 2020) 11. In its response to the White Paper, the German Government expressed a concern that this 'high-risk' classification should be tightened, and the limitation to certain sectors could result in high-risk uses of AI falling outside the regulatory scope. Germany's submission also recommended a new scheme be developed that involves more levels of classification, including considering potential threats to life, property and economic participation. See Catherine Early, 'Germany Urges Tightening of Draft European AI Regs', *Global Government Forum* (online, 1 July 2020) <https://www.globalgovernmentforum.com/germany-urges-tightening-of-draft-european-ai-regs/>.

233   New Zealand Government, *Algorithm Charter for Aotearoa New Zealand* (July 2020).

234   New Zealand Government, *Algorithm Charter for Aotearoa New Zealand* (July 2020) 3.

235   Government of Canada, *Directive on Automated Decision-Making* (5 February 2019) <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32592>.

236   Government of Canada, *Directive on Automated Decision-Making* (5 February 2019) <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32592>.

237   Government of Canada, *Directive on Automated Decision-Making* (5 February 2019) <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32592#appB> Appendix B, C.

238 UN Office of the High Commissioner for Human Rights, *Who Will be Accountable? Human Rights and the Post-2015 Development Agenda* (HR Pub/13/1, 2013) 10.

239 DP submissions: Element AI, 1, 2; Access Now, 4.

240 See, for example, *Social Security Act 1999* (Cth) s 6A; *Superannuation (Government Co-contribution for Low Income Workers) Act 2003* (Cth) s 48; *My Health Records Act 2012* (Cth) s 13A; *Child Support Assessment Act 1989* (Cth) s 12A. See Simon Elvery 'How Algorithms Make Important Government Decisions – and How That Affects You,' *ABC News* (online, 21 July 2017) <https://www.abc.net.au/news/2017-07-21/algorithms-can-make-decisions-on-behalf-of-federal-ministers/8704858>.

241 *Pintarich v Deputy Commissioner of Taxation* [2018] FCAFC 79.

242 DP submissions: Amazon Web Services, 2; Australian Academy of Science, 4; Ethics Matters Pty Ltd, 3; R Walden, 6; WiseLaw, 4; Maurice Blackburn Lawyers, 12.

243 DP submissions: Information and Privacy Commission NSW, 13; Office of the Australian Information Commissioner, 7.

244 The NSW Government, for example, has developed an AI strategy that 'sets out a bold roadmap for the trusted, tested and transparent use of AI in government services': NSW Government, 'First NSW AI Strategy to Make Life Easier for Citizens' (Media Release, 4 September 2020). See also Monika Zalnieriute, Lyria Bennett Moses and George Williams, 'The Rule of Law and Automation of Government Decision-making' (2019) 82(3) *Modern Law Review* 425.

245 See Joint Committee on Human Rights, Parliament of Australia, *Human Rights Scrutiny Report 7 of 2018* (14 August 2018) 12; Joint Committee on Human Rights, Parliament of Australia, *Human Rights Scrutiny Report 11 of 2018* (16 October 2018) 78.

246 Monika Zalnieriute, Lyria Bennett Moses and George Williams, 'The Rule of Law and Automation of Government Decision-making' (2019) 82(3) *Modern Law Review* 425; AI Now Institute, *Confronting Black Boxes: A Shadow Report of the New York City Automated Decision System Taskforce* (4 December 2019).

247 Justice Melissa Perry, 'iDecide: Administrative Decision-making in the Digital World' (2017) 91(1) *Australian Law Journal* 29, 33.

248 Robert French AC, 'Rationality and Reason in Administrative Law – Would a Roll of the Dice be Just as Good?' (Australian Academy of Law Lecture, 29 November 2017) <https://www.fedcourt.gov.au/digital-law-library/seminars/r-french-20171120> 4.

249 Commonwealth Ombudsman, *Automated Decision-making Better Practice Guide* (2019) 9.

250 Commonwealth Ombudsman, *Automated Decision-making Better Practice Guide* (2019) 8

251 *General Data Protection Regulation* art 22.

252 UK Information Commissioner's Office, *Guide to the General Data Protection Regulation (GDPR)* (January 2021) 154.

253 Government of Canada, *Directive on Automated Decision-Making* (5 February 2019) <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32592#6> Part 6, Appendix C.

254 Government of Canada, *Directive on Automated Decision-Making* (5 February 2019) <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32592#appC> Appendix C.

255 European Commission, *On Artificial Intelligence – A European Approach to Excellence and Trust* (White Paper, 19 February 2020).

256 DP submissions: S Hook, 9; Public Interest Advocacy Centre, 4; Law Council of Australia, 9. IP submissions: Australian Red Cross, 6; Uniting Church in Australia, Synod of Victoria & Tasmania, 8.

257 DP submissions: Community and Public Sector Union, 1; Information and Privacy Commission NSW, 13; KPMG Australia, 21; Robert Chalmers, 5.

258 DP submissions: Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 6; AI Now Institute, 5; J Ng, 3.

259 DP submissions: AI Now Institute, 6; Australian Academy of Science, 4; Australian Red Cross, 4; Community and Public Sector Union, 1; Ethics Matters Pty Ltd, 3; Information and Privacy Commission NSW, 13; KPMG Australia, 21; Maurice Blackburn Lawyers, 13; Office of the Victorian Information Commissioner, 5; R Chalmers, 5; WiseLaw, 4; Victoria Legal Aid, 2; University of Technology Sydney, 18.

260 DP submissions: Community and Public Sector Union, 3; WiseLaw, 4; Victoria Legal Aid, 1.

261 IP submissions: N Suzor, K Weatherall, A Daly, A Vromen, M Mann, 17, 18; Northraine, 84(a), 12; S Ramesh, 7(c); Castan Centre for Human Rights Law, 27; ThinkPlace, 5; University of Technology Sydney, 41. WP submissions: Australian Information Industry Association, 4; Access Now, 3.

262 DP submissions: AI Now Institute, 6; KPMG Australia, 21.

263 See, for example, Microsoft, *Human Rights Annual Report* (2018) 8; BSR, *Google Celebrity Recognition API Human Rights Assessment: Executive Summary* (October 2019); Mark Latonero, *Governing Artificial Intelligence: Upholding Human Rights & Dignity* (Data & Society, 10 October 2018) 18.

264 The Government of Canada has developed an Algorithmic Impact Assessment: Government of Canada, *Algorithmic Impact Assessment (AIA)* (July 2020) <https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/responsible-use-ai/algorithmic-impact-assessment.html>. A national strategy for meaningful AI produced by a mission assigned by the French Prime Minister Édouard Philippe, recommended a 'Discrimination Impact Assessment' be introduced: Cédric Villani, *For a Meaningful Artificial Intelligence: Towards a French and European Strategy* (A parliamentary mission from 8th September 2017 to 8th March 2018) 120.

265 Dillon Reisman, Jason Schultz, Kate Crawford and Meredith Whittaker, *Algorithmic Impact Assessments: A Practical Framework for Public Agency Accountability* (AI Now Institute, April 2018).

266 Australian Government, Department of Industry, Innovation and Science, *AI Ethics Framework* (November 2019).

267 DP submissions: Kablamo Pty Ltd, 1; WiseLaw, 4.

268 Council of Europe Commissioner for Human Rights, *Unboxing Artificial Intelligence: 10 Steps to Protect Human Rights* (May 2019) 7.

269 NJCM c.s./De Staat der Nederlanden (SyRI), District Court of the Hague, Case No C/09/550982/HA ZA 18/388 (5 February 2020). See also Yee-Fui Ng, Maria O'Sullivan, Moira Paterson and Normann Witzleb 'Revitalising Public Law in a Technological Era: Rights, Transparency and Administrative Justice' (2020) 43(3) *UNSW Law Journal* 1041, 1043.

270 Brief by the UN Special Rapporteur on Extreme Poverty and Human Rights as *Amicus Curiae* in the Case of NJCM c.s./De Staat der Nederlanden (SyRI), District Court of the Hague, Case No C/09/550982/HA ZA 18/388 (5 February 2020) [8]-[9].

271 Brief by the UN Special Rapporteur on Extreme Poverty and Human rights as *Amicus Curiae* in the Case of NJCM c.s./De Staat der Nederlanden (SyRI), District Court of the Hague, Case No C/09/550982/HA ZA 18/388 (5 February 2020) [24]-[25].

272 Brief by the UN Special Rapporteur on Extreme Poverty and Human Rights as *Amicus Curiae* in the Case of NJCM c.s./De Staat der Nederlanden (SyRI), District Court of the Hague, Case No C/09/550982/HA ZA 18/388 (5 February 2020) [22]. See also Philip Alston, *Report of the Special Rapporteur on Extreme Poverty and Human Rights,* UN Doc A/74/493 (11 October 2019) [6].

273 Australian Government, Department of Industry, Innovation and Science, *AI Ethics Framework* (November 2019).

274 Council of Europe Commissioner for Human Rights, *Unboxing Artificial Intelligence: 10 Steps to Protect Human Rights* (May 2019) 7.

275 NSW Government, *Building Public Trust* (4 September 2020) <https://www.digital.nsw.gov.au/policy/artificial-intelligence-ai/ai-strategy/building-public-trust>.

276 *Privacy Act 1988* (Cth) s 33D.

277 Under legislation passed in 2018, modern slavery statements—describing the risks of modern slavery in the operations and supply chains, and actions taken to address those risks—must be provided to the Minister by specific entities: *Modern Slavery Act 2018* (Cth) Part 2.

278 See, for example, *Human Rights (Parliamentary Scrutiny) Act 2011* (Cth) ss 8, 9(1); *Legislation Act 2003* (Cth) s 15J(2)(f).

279 *Privacy Act 1988* (Cth) s 33D.

280 Under legislation passed in 2018, modern slavery statements—describing the risks of modern slavery in the operations and supply chains, and actions taken to address those risks—must be provided to the Minister by specific entities: *Modern Slavery Act 2018* (Cth) pt 2.

281   The Attorney-General's Department has provided guidance on this process. See Australian Government, Attorney-General's Department, *Statements of Compatibility* <https://www.ag.gov.au/rights-and-protections/human-rights-and-anti-discrimination/human-rights-scrutiny/statements-compatibility>.

282   Monika Zalnieriute, Lyria Bennett Moses and George Williams, 'The Rule of Law and Automation of Government Decision-making' (2019) 82(3) *Modern Law Review* 425, 429.

283   Toby Walsh, Neil Levy, Genevieve Bell, Anthony Elliott, James Maclaurin, Iven Mareels and Fiona Wood, *The Effective and Ethical Development of Artificial Intelligence: An Opportunity to Improve our Wellbeing* (Report for the Australian Council of Learned Academies, July 2019) 10.

284   Australian Government, Department of Industry, Innovation and Science, *AI Ethics Framework* (November 2019).

285   Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) Proposal 5.

286   DP submissions: AI Now Institute, 4; Australian Academy of Science, 3; Australian Privacy Foundation, Queensland Council for Civil Liberties, Liberty Victoria, Electronic Frontiers Australia, NSW Council for Civil Liberties, 6; Community and Public Sector Union, 1; Consumer Policy Research Centre, 13; Digital Rights Watch, 3; Element AI, 3; Ethics Matters Pty Ltd, 3; Information and Privacy Commission NSW, 10; J Powles, W Bateman, 3; Law Council of Australia, 14; Maurice Blackburn Lawyers, 12; Microsoft, 5; Medical Insurance Group Australia, 3; NSW Bar Association, 7; NSW Council for Civil Liberties, 5; Office of the Victorian Information Commissioner, 4; WiseLaw, 3; University of Technology Sydney, 17.

287   DP submissions: Element AI, 1; Maurice Blackburn Lawyers; Access Now, 4; Victoria Legal Aid, 1-2; SAS Institute Australia, 7.

288   DP submissions: AI Now Institute, 4; Australian Industry Group, 6; J Powles, W Bateman, 3; K Weatherall, T Caetano, 6; KPMG Australia, 21; R Chalmers, 4; SAS Institute Australia, 7; W Small, 1; University of Technology Sydney, 17; Digital Industry Group, 13; Digital Rights Watch, 3.

289   DP submission: Digital Industry Group Inc, 9.

290   DP submissions: Australian Academy of Science, 3; Law Council of Australia, 14 (stated the cost of this proposal is potentially onerous, but noted 'That does not detract from its value'); WiseLaw, 4 (noting the potential cost but endorsing the proposal).

291   DP submissions: Commonwealth Bank of Australia, 4; Microsoft, 5; Office of the Australian Information Commissioner, 7; Medical Insurance Group Australia, 3.

292   DP submissions: Aboriginal and Torres Strait Islander Legal Services (QLD), 2; Australian Industry Group, 3; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 13; Consumer Policy Research Centre, 10; Ethics Matters Pty Ltd, 3; K Weatherall, T Caetano, 7; KPMG Australia, 26; Maurice Blackburn Lawyers, 18; Office of the Victorian Information Commissioner, 5; The Australia Institute's Centre for Responsible Technology, 10; WiseLaw, 9.

293   DP submission: Consumer Policy Research Centre, 10.

294   DP submission: Microsoft, 6.

295   DP submissions: Maurice Blackburn Lawyers, 6; K Weatherall, T Caetano, 6.

296   59% of respondents said it was 'very important' to be informed that a computer program has been used to make an automated decision, and 26% said it was 'somewhat important': Essential Media, *The Essential Report—Human Rights Commission* (29 July 2020).

297   The Australian Government's 'Digital Business Plan' outlines Government investment of close to $800 million in digital technology as a part of its economic recovery plan: Prime Minister of Australia, 'Digital Business Plan to Drive Australia's Economic Recovery' (Media Release, 29 September 2020).

298   Australian Government, Department of Industry, Science, Energy and Resources, *An AI Action Plan for all Australians: A Call for Views - Discussion Paper* (2020) 4.

299   New Zealand Government, Stats NZ, *Algorithm Assessment Report* (October 2018).

300   UK Government, Centre for Data Ethics and Innovation, *AI Barometer Report* (June 2020).

301   AI Now Institute, *Confronting Black Boxes: A Shadow Report of the New York City Automated Decision System Taskforce* (4 December 2019).

302   See Lyria Bennett Moses and Edward Santow, 'Accountability in the Age of Artificial Intelligence: A Right to Reasons' (2020) 94(11) *Australian Law Journal* 829, 831; Jenna Burrell, 'How the Machine 'Thinks': Understanding Opacity in Machine Learning Algorithms' (2016) 3(1) *Big Data and Society* 1; Monika Zalnieriute, Lyria Bennett Moses and George Williams, 'The Rule of Law and Automation of Government Decision-making' (2019) 82(3) *Modern Law Review* 425; Yee-Fui Ng, Maria O'Sullivan, Moira Paterson and Normann Witzleb 'Revitalising Public Law in a Technological Era: Rights, Transparency and Administrative Justice' (2020) 43(3) *UNSW Law Journal* 1041.

303   UK Information Commissioner's Office, *Explaining Decisions Made with AI* (20 May 2020).

304   OECD, *Recommendation of the Council on Artificial Intelligence,* OECD/Legal/0449 (adopted 22 May 2019).

305   Australian Government, Department of Industry, Innovation and Science, *AI Ethics Framework* (November 2019).

306   IEEE, *Ethically Aligned Design: A Vision for Prioritizing Human Well-being with Autonomous and Intelligent Systems* (Version 2 For Public Discussion, December 2017) 71.

307   There is no general common law duty for decision makers to provide reasons, or explanations for decisions: *Public Service Board of New South Wales v Osmond* (1986) 159 CLR 656. The legislative review process provides clear avenues for review of decision making and a right to reasons: in *Re Palmer and Minister for the Capital Territory* (1978) 1 ALD 183 at 192, Fisher J (Deputy President), A N Hall (Senior Member) and C A Woodley (Member) said that obtaining reasons is 'fundamental to the whole scheme of administrative review embodied in the [AAT] Act'.

308   *Administrative Appeals Tribunal Act 1975* (Cth) s 28.

309   *Administrative Decisions (Judicial Review) Act 1977* (Cth) s 13. This includes administrative decisions made under a Commonwealth Act, but not including decisions covered by s 28 of the *Administrative Appeals Tribunal Act 1975* (Cth) or decisions described in Schedule 2 of the *Administrative Decisions (Judicial Review) Act 1977* (Cth).

310   DP submissions: Information and Privacy Commission NSW, 19-21 (arguing for reform of state information access laws to provide greater access to information held by governments around machine learning); K Weatherall, T Caetano, 18; S Hook, 9.

311   DP submission: K Weatherall, T Caetano, 17, 18.

312   Andrew Smith, 'Using Artificial Intelligence and Algorithms', *Federal Trade Commission* (online, 8 April 2020) <https://www.ftc.gov/news-events/blogs/business-blog/2020/04/using-artificial-intelligence-algorithms>.

313   Sandra Wachter, Brent Mittelstadt and Luciano Floridi, 'Why a Right to Explanation of Automated Decision-making Does Not Exist in the General Data Protection Regulation' *International Data Privacy Law* (2017) 7(2) 76. Compare with the opinion of Andrew D Selbst and Julia Powles, 'Meaningful Information and the Right to Explanation' (2017) 7(4) *International Data Privacy Law* 233.

314   European Parliamentary Research Service, *The Impact of the General Data Protection Regulation (GDPR) on Artificial Intelligence* (15 June 2020) 64-65.

315   DP submissions: Aboriginal and Torres Strait Islander Legal Service Qld, 2; Access Now, 4; AI Now Institute, 7; Australian Council of Learned Academies, 4; Australian Industry Group, 5 (supported the concept of explainability in principle); Australian Lawyers Alliance, 1; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 7; Capgemini, 5 (recognised the 'overarching obligation' and need to provide explanations for AI-informed decisions, particularly where there is an adverse outcome for an individual); Castan Centre for Human Rights Law, 18; Commonwealth Bank of Australia, 4, 6 (offered qualified support, transparency through explanation 'supported by the ongoing development' of AI standards by the Australian Government); Community and Public Sector Union, 1; Consumer Policy Research Centre, 20 (offered broad support to Proposal 7, and the Commission's 'commitment to greater accountability in this field'); Digital Rights Watch, 3; Element AI, 3; Ethics Matters Pty Ltd, 3; Financial Rights Legal Centre, 3 (provided qualified support for the proposal, noting support only if it applies to financial services decisions); Information and Privacy Commission NSW, 14; J Ng, 2; J Powles, W Bateman, 3 (supporting the substance of Proposal 7, but considered them to

be underdeveloped); K Weatherall, T Caetano, 10; KPMG Australia, 15; Law Council of Australia, 16; Maurice Blackburn Lawyers, 13; Microsoft, 6 (agreed in principle with the proposal to provide an explanation); NSW Bar Association, 7; NSW Young Lawyers, 11; Office of the Australian Information Commissioner, 5; Office of the Victorian Information Commissioner, 4; Sova Assessment, 5; R Walden, 6; QUT Digital Media Research Centre, 3; S Hook, A Cody, R Sappideen, Z Wang, J Juriandz, H Al-Alosi, L Spencer, E Seymour, S Kozlina, J Whelan, S Noakes, 10; University of Melbourne, 3; WiseLaw, 4; Australian Communications Consumer Action Network, 13; B Auckram, 6.

316 DP submissions: Aboriginal and Torres Strait Islander Legal Service Qld (Ltd), 3; Australian Lawyers Alliance, 2; Element AI, 3; Information and Privacy Commission NSW, 14; J Ng (who supports the inclusion in Australian legislation of a Data Protection Impact Assessment to support the 'right of explanation' on automated decisions); University of Melbourne, 5; Australian Communications Consumer Action Network, 13; Microsoft, 6 (agreeing in principle to legislation, but recommended considering 'less prescriptive methods' first given the time taken to pass legislation, such as internal reviews, explanatory notes and guidelines).

317 DP submission: Microsoft, 6 (stated 'detailed consideration' is necessary to determine if new legislation is required, overly prescriptive legislation may not be feasible).

318 DP submissions: K Weatherall, T Caetano, 9. 10; Amazon Web Services, 3; Capgemini, 6; Information and Privacy Commission NSW, 11; Consumer Policy Research Centre, 13 (highlighting the importance of understandability).

319 DP submissions: K Weatherall, T Caetano, 10; Capgemini, 6.

320 DP submissions: KPMG Australia, 16; Medical Insurance Group Australia, 4 (arguing that healthcare should be carved out from these discussions).

321 Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) Proposal 8.

322 DP submissions: Actuaries Institute, 3 ('if adopted, seems reasonable to apply in any context, not just AI'); Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 7; Ethics Matters Pty Ltd, 3; J Powles, W Bateman, 3 (agreeing with the proposal in substance, but considered the proposals underdeveloped without the provision of clear remedial frameworks for breaches of the obligations to explain how AI was used); Law Council of Australia, 17; Office of the Victorian Information Commissioner, 4; S Hook, 10; The Australia Institute's Centre for Responsible Technology, 9; University of Melbourne, 5; WiseLaw, 5.

323 DP submissions: Amazon Web Services, 3; Australian Academy of Science, 5; K Weatherall T Caetano, 11; Microsoft, 6; NSW Bar Association, 9; R Chalmers, 7; Telstra, 4.

324 DP submissions: Amazon Web Services, 3; KPMG Australia, 22; Microsoft, 6; Digital Industry Group Inc, 10.

325 DP submissions: Amazon Web Services, 3; Australian Academy of Science, 5; Telstra, 4.

326 DP submissions: NSW Bar Association, 10; Pymetrics, 3.

327 DP submissions: NSW Bar Association, 9; K Weatherall, T Caetano, 11.

328 DP submissions: Aboriginal and Torres Strait Islander Legal Service (Qld), 3; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 8; QUT Digital Media Research Centre, 3; Information and Privacy Commission NSW, 15; Maurice Blackburn Lawyers, 3; NSW Young Lawyers, 3; S Hook, 10; WiseLaw, 5; Australian Lawyers Alliance, 5.

329 DP submissions: Allens Hub for Technology, Law and Innovation, 3; Amazon Web Services, 3; Commonwealth Bank of Australia, 7; Kablamo Pty Ltd, 2; K Weatherall, T Caetano, 16 (considered it a possible approach, but noted the proposal, as written in the Discussion Paper, lacks nuance, and leaves many questions unanswered); Microsoft, 7; R Chalmers, 7; SAS Institute Australia, 9.

330 DP submissions: Allens Hub for Technology, Law and Innovation, 4; Commonwealth Bank of Australia, 7.

331 DP submission: Amazon Web Services, 3.

332 Brent Mittelstadt, Chris Russell and Sandra Wachter, 'Explaining explanations in AI', (Conference Paper, FAT*19, January 2019).

333 DP submissions: Element AI, 3; Access Now, 4, 6; Australian Lawyers Alliance, 4; Castan Centre for Human Rights Law, 18; Maurice Blackburn Lawyers, 13; Law Council of Australia, 16; B Auckram, 6.

334 UN Committee on the Elimination of Racial Discrimination, *General Recommendation No 36: Preventing and Combating Racial Profiling by Law Enforcement Officials,* CERD/C/GC/36 (24 November 2020) [31].

335 DP submissions: Information and Privacy Commission NSW, 14; Office of the Australian Information Commissioner, 5; Australian Lawyers Alliance, 4; AI Now Institute, 7; Aboriginal and Torres Strait Islander Legal Service (Qld), 2; Castan Centre for Human Rights Law, 18; Maurice Blackburn Lawyers, 13; Law Council of Australia, 16; The Australia Institute's Centre for Responsible Technology, 8; University of Melbourne, 5.

336 DP submissions: R Chalmers, 6; Capgemini, 5; Telstra, 4; K Weatherall, T Caetano, 15.

337 DP submissions: Information and Privacy Commission NSW, 14; SAS Institute Australia, 8; K Weatherall, T Caetano, 10.

338 DP submissions: AI Now Institute, 7; R Chalmers, 6; Capgemini, 6.

339 High-Level Expert Group on Artificial Intelligence, *Ethics Guidelines for Trustworthy AI* (European Commission, 8 April 2019) 18.

340 DP submissions: Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 9; Castan Centre for Human Rights Law, 23 (in favour in principle, but queried whether it would have the practical effect of increasing decision-making transparency); Commonwealth Bank of Australia, 6 (if it applies only where a person would otherwise have been entitled to an explanation); NSW Council for Civil Liberties, 6; Information and Privacy Commission NSW, 21; Maurice Blackburn Lawyers, 4; WiseLaw, 5.

341 DP submissions: Commonwealth Bank of Australia, 5; Law Council of Australia, 16; Digital Rights Watch, 3; NSW Young Lawyers, 12.

342 DP submissions: Commonwealth Bank of Australia, 6; K Weatherall, T Caetano, 11, 15; Microsoft, 6; NSW Young Lawyers, 12.

343 DP submissions: AI Now Institute, 7; Maurice Blackburn Lawyers, 13-16.

344 DP submissions: Information and Privacy Commission NSW, 19-21 (arguing for reform of state information access laws to provide greater access to information held by governments around machine learning); K Weatherall, T Caetano, 18; S Hook, 9.

345 DP submissions: Amazon Web Services, 4; Castan Centre for Human Rights Law, 23; Commonwealth Bank of Australia, 7; Digital Industry Group Inc, 7; Microsoft, 7; Telstra, 4.

346 DP submissions: Amazon Web Services, 4; Allens Hub for Technology, Law and Innovation, 4; R Chalmers, 8.

347 DP submissions: AI Now Institute, 8; Allens Hub for Technology, Law and Innovation, 5.

348 See, for example, DP submission: Castan Centre for Human Rights Law, 23.

349 DP submissions: AI Now Institute, 8; Actuaries Institute, 5.

350 See Monika Zalnieriute, Lyria Bennett Moses and George Williams, 'The Rule of Law and Automation of Government Decision-making' (2019) 82(3) *Modern Law Review* 425.

351 *Ansett Transport Industries (Operations) Pty Ltd v Wraith* (1983) 48 ALR 500, 507 (Woodward J).

352 *Burns v Australian National University* (1982) 40 ALR 707; 61 FLR 76, 85; *Secretary, Dept of Foreign Affairs and Trade v Boswell* (1992) 108 ALR 77, 88.

353 *Re Minister for Immigration and Multicultural and Indigenous Affairs; Ex parte Palme* (2003) 216 CLR 212, 242 (Kirby J).

354 96% respondents expect AI to be regulated and 66% expect government oversight of AI: Nicole Gillespie, Steve Lockey and Caitlin Curtis, *Trust in Artificial Intelligence: Australian Insights* (University of Queensland and KPMG Australia, October 2020) 3; 'The majority of the public agrees with the need for industry guidelines and/or new legislation to address all possible harms associated with AI': Neil Selwyn, Beatriz Gallo Cordoba, Mark Andrejevic and Liz Campbell, *AI for Social Good? Australian Public Attitudes Toward AI and Society* (Monash University, August 2020) 9; Between 41% and 48% of participants would have 'a lot more trust' and between 30% and 33% would have 'a little more trust' in an automated decision if any of the oversight measures including

355 human checks, limitations on personal information sharing within the government and stronger laws to protect their rights were implemented: Essential Research, *The Essential Report—Human Rights Commission* (29 July 2020).

355 *Ombudsman Act 1976* (Cth) s 15.

356 Toby Walsh, Neil Levy, Genevieve Bell, Anthony Elliott, James Maclaurin, Iven Mareels and Fiona Wood, *The Effective and Ethical Development of Artificial Intelligence: An Opportunity to Improve our Wellbeing* (Report for the Australian Council of Learned Academies, July 2019) 124.

357 Commonwealth Ombudsman, *Centrelink's Automated Debt Raising and Recovery System: A Report About the Department of Human Services' Online Compliance Intervention System for Debt Raising and Recovery* (April 2017).

358 67% respondents considered it 'very important' and 21% considered it 'somewhat important': Essential Research, *The Essential Report— Human Rights Commission* (29 July 2020).

359 Monika Zalnieriute, Lyria Bennett Moses and George Williams, 'The Rule of Law and Automation of Government Decision-making' (2019) 82(3) *Modern Law Review* 425.

360 *Trivago NV v Australian Competition and Consumer Commission* [2020] FCAFC 185, [64].

361 UK Information Commissioner's Office, *Explaining Decisions Made with AI* (20 May 2020); European Parliamentary Research Service, *The Impact of the General Data Protection Regulation (GDPR) on Artificial Intelligence* (15 June 2020) 54. Pointed out also in DP submissions, see, for example: SAS Institute Australia, 8; Office of the Victorian Information Commissioner, 4; K Weatherall, T Caetano, 10.

362 European Parliamentary Research Service, *The Impact of the General Data Protection Regulation (GDPR) on Artificial Intelligence* (15 June 2020) 54.

363 For discussion of the range of information that may be required to explain an AI-informed decision see DP submissions: K Weatherall, T Caetano, 17; SAS Institute Australia, 8. See also UK Information Commissioner's Office, *Explaining Decisions Made with AI* (20 May 2020); Office of the Victorian Information Commissioner, *Closer to the Machine: Technical, Social and Legal Aspects of AI* (August 2019) 56.

364 All-Party Parliamentary Group on Artificial Intelligence, *Ethics and Legal in AI: Decision Making and Moral Issues* (March 2017) 6; Robert French AC, 'Rationality and Reason in Administrative Law – Would a Roll of the Dice be Just as Good?' (Australian Academy of Law Lecture, 29 November 2017) <https://www.fedcourt.gov.au/digital-law-library/seminars/r-french-20171120> 4.

365 68% survey respondents considered this 'very important' and 19% 'somewhat important': Essential Research, *The Essential Report— Human Rights Commission* (29 July 2020).

366 See, for example, *Data Protection Act 2018* (UK) s 14(4).

367 See, for example, Jake Goldenfein 'Algorithmic Transparency and Decision-making Accountability', in Office of the Victorian Information Commissioner, *Closer to the Machine: Technical, Social and Legal Aspects of AI* (August 2019) 56.

368 DP submissions: R Chalmers, 8; KPMG Australia, 15; AI Now Institute, 10.

369 DP submissions: Aboriginal and Torres Strait Islander Legal Service (Qld), 3; Allens Hub for Technology, Law and Innovation, 6; Castan Centre for Human Rights Law, 22, 24 Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 9; Ethics Matters Pty Ltd, 3; SAS Institute Australia, 11.

370 DP submission: AI Now Institute, 9, 10; Allens Hub for Technology, Law and Innovation, 4.

371 DP submissions: Aboriginal and Torres Strait Islander Legal Service (Qld), 3; Allens Hub for Technology, Law and Innovation, 6; Castan Centre for Human Rights Law, 22; Ethics Matters Pty Ltd, 3.

372 DP submission: Allens Hub for Technology, Law and Innovation, 6.

373 DP submissions: Commonwealth Bank of Australia, 8; Information and Privacy Commission NSW, 21; Actuaries Institute, 4.

374 *Administrative Decisions (Judicial Review) Act 1977* (Cth) s 5.

375 *Administrative Decisions (Judicial Review) Act 1977* (Cth) s 16.

376 See Lyria Bennett Moses and Edward Santow, 'Accountability in the Age of Artificial Intelligence: A Right to Reasons' (2020) 94(11) *Australian Law Journal* 829, 833.

377 *Pintarich v Deputy Commissioner of Taxation* [2018] FCAFC 79.

378 *Pintarich v Deputy Commissioner of Taxation* [2018] FCAFC 79, [140]; approving the decision of Finn J in *Semunigus v Minister for Immigration and Multicultural Affairs* [1999] FCA 422, [19]; affirmed in *Seamunigus v Minister for immigration and Multicultural Affairs* [2000] FCA 240.

379 *Pintarich v Deputy Commissioner of Taxation* [2018] FCAFC 79, [46], [49]. Compare *Gramar Pty Ltd (t/as Valley View Nursing Home) v Workcover Corporation of South Australia* [2011] SASC 237; the Supreme Court of South Australia considered the plaintiff's argument that the imposition of a supplementary levy, calculated by an automated computer-generated process, was not a decision by the delegated authority under the legislation in question and therefore was an invalid decision that should be set aside. Justice Kelly determined that as the automated process was based on a formula adopted and maintained for the purposes of the levy scheme some years prior: 'Effectively therefore the rate was arrived at by the defendant in accordance with its policies, even though the precise calculation was performed by a computer, using the formula': [27]-[34].

380 All-Party Parliamentary Group on Artificial Intelligence, *Ethics and Legal in AI: Decision Making and Moral Issues* (March 2017) 6; Robert French AC, 'Rationality and Reason in Administrative Law – Would a Roll of the Dice be Just as Good?' (Australian Academy of Law Lecture, 29 November 2017) <https://www.fedcourt.gov.au/digital-law-library/seminars/r-french-20171120> 4.

381 68% survey respondents considered this 'very important' and 19% 'somewhat important': Essential Research, *The Essential Report— Human Rights Commission* (29 July 2020).

382 Government of Canada, *Directive on Automated Decision-Making* (February 2019) <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32592> Part 6.39.

383 Georgina Ibarra, Meena Tharmarajah and David Douglas, 'Designing Trustworthy Machine Learning Systems', *CSIRO's Data61* (online, 5 November 2020) <https://algorithm.data61.csiro.au/designing-trustworthy-machine-learning-systems/>.

384 European Parliamentary Research Service, *The Impact of the General Data Protection Regulation (GDPR) on Artificial Intelligence* (15 June 2020) 22.

385 Commonwealth Ombudsman, *Automated Decision-making Better Practice Guide* (2019).

386 See, for example, *Administrative Appeals Tribunal Act 1975* (Cth) s 43.

387 See UN Office of the High Commissioner for Human Rights, *Addressing Business Model Related Human Rights Risks: A B-Tech Foundational Paper* (2020) <https://www.ohchr.org/Documents/Issues/Business/B-Tech/B_Tech_Foundational_Paper.pdf>.

388 *UDHR* art 8; *ICCPR* art 2(3); *ICERD* art 6; *CAT* art 14; *CRC* art 39.

389 UN Human Rights Committee, *General Comment No 31 [80]: The Nature of the General Legal Obligation Imposed on States Parties to the Covenant,* 80th sess, UN Doc CCPR/C/21/Rev/1/Add/13 (26 May 2004, adopted 29 March 2004).

390 While the legal dividing line between government and non-government decisions is generally obvious, there are some situations where it is less clear (for example, where a non-government entity makes a decision on behalf of the government). See, generally, *NEAT Domestic Trading Pty Ltd v AWB* (2003) 216 CLR 277.

391 *Human Rights Act 2004* (ACT) s 40(1)(g); *Charter of Human Rights and Responsibilities Act 2006* (Vic) s 4(1)(c); *Human Rights Act 2019* (Qld) ss 9-10.

392 *Corporations Act 2001* (Cth) s 180.

393 *Corporations Act 2001* (Cth) s 180.

394 Samar Ashour, 'Artificial Intelligence in the Boardroom: An Outright Exposure to Directorial Liability', *Oxford Business Law Blog* (online, 12 October 2020) <https://www.law.ox.ac.uk/business-law-blog/blog/2020/10/artificial-intelligence-boardroom-outright-exposure-directorial>.

395 This is explored further in Chapter 9.

396 Australian Government, Department of Industry, Innovation and Science, *AI Ethics Framework* (November 2019).

397 Australian Government, Department of Industry, Science, Energy and Resources, *An AI Action Plan for all Australians: A Call for Views - Discussion Paper* (2020) 7.

398 Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) Proposal 5.

399 DP submissions: Element AI, 3; Microsoft, 5; AI Now Institute, 4; Australian Academy of Science, 3; Wiselaw, 3; Maurice Blackburn Lawyers, 12; Law Council of Australia, 14.

400 DP Submission: Microsoft, 5.

401 DP submission: Capgemini, 7.

402 DP submissions: Microsoft, 5; Australian Academy of Science, 3.

403 Australian Government, Department of Industry, Innovation and Science, *AI Ethics Framework* (November 2019).

404 Nicole Gillespie, Steve Lockey and Caitlin Curtis, *Trust in Artificial Intelligence: Australian Insights* (University of Queensland and KPMG Australia, October 2020) 31.

405 UN Office of the High Commissioner for Human Rights, *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework* (HR/PUB/11/04, 2011) Principle 21, 23.

406 David Kaye, *Report of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression*, UN Doc A/73/348 (29 August 2018) 21.

407 Council of Europe Commissioner for Human Rights, *Unboxing Artificial Intelligence: 10 Steps to Protect Human Rights* (May 2019) 9.

408 Sale of Automated Employment Decision Tools Bill, Intro 1894-2020, New York City (27 February 2020).

409 Australian Securities and Investment Commission (ASIC)*, Responsible Lending Disclosure Obligations: Overview for Credit Licensees and Representatives* (Information Sheet 146, October 2020).

410 Karen Yeung, Rapporteur, *A Study of the Implications of Advanced Digital Technologies (Including AI Systems) for the Concept of Responsibility Within a Human Rights Framework*, Council of Europe MSI-AUT(2018)05 (9 November 2018) 74. Product safety and questions of liability for AI technologies are currently under consideration by the EU: see European Commission, *Report on the Safety and Liability Implications of Artificial Intelligence, the Internet of Things and Robotics* (COM/2020/64, 19 February 2020) 74.

411 IP submissions: R McLay, 9.1; University of Technology Sydney, 34; LexisNexis, 16; Royal Australian and New Zealand College of Radiologists, 5; Intopia, 6, 7; P Henman, 6; NSW Young Lawyers Communications, Entertainment and Technology Law Committee, 11; N Suzor, K Weatherall, A Daly, A Vromen, M Mann, 3. WP submissions: Law Council of Australia, 2; Montreal AI Ethics Institute, 7; Royal Australian and New Zealand College of Radiologists, 3; R Clarke, 17; Microsoft, 5. See also Toby Walsh, Neil Levy, Genevieve Bell, Anthony Elliott, James Maclaurin, Iven Mareels and Fiona Wood, *The Effective and Ethical Development of Artificial Intelligence: An Opportunity to Improve our Wellbeing* (Report for the Australian Council of Learned Academies, July 2019) 137.

412 Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) Proposal 10.

413 DP submissions: AI Now Institute, 11; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 9; Castan Centre for Human Rights Law, 22 (only 'in instances where an AI system could adapt and generate an outcome not intended or reasonably foreseen by the user of the AI system'); Digital Rights Watch, 3; Information and Privacy Commission NSW, 14; Law Council of Australia, 17; Maurice Blackburn Lawyers, 14; NSW Bar Association, 10; Office of the Victorian Information Commissioner, 4; University of Technology Sydney, 23; Victoria Legal Aid, 4; WiseLaw, 5; The Australia Institute's Centre for Responsible Technology, 8; QUT Digital Media Research Centre, 4; NSW Young Lawyers, 4; Amazon Web Services, 4.

414 DP submissions: Amazon Web Services, 4; Australian Industry Group, 6; Digital Industry Group Inc, 10; J Powles, W Bateman, 3; Kablamo Pty Ltd, 2; Microsoft, 3; SAS Institute Australia, 10; Medical Insurance Group Australia, 3.

415 DP submissions: Microsoft, 3; J Powles, W Bateman, 3; Commonwealth Bank of Australia, 7; Law Council of Australia, 18.

416 DP submissions: AI Now Institute, 11; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 9; Izerobzero, 2; SAS Institute Australia, 10; Telstra, 4; Australian Industry Group, 6; Castan Centre for Human Rights Law, 22; Law Council of Australia, 18.

417 DP submissions: Amazon Web Services, 4; Australian Industry Group, 6; KPMG Australia, 16; University of Sydney, 23; Digital Industry Group Inc, 10.

418 See, for example, the Banking Executive Accountability Regime (BEAR), Banking Act 1959 (Cth) pt IIAA.

419 *Competition and Consumer Act 2010* (Cth) s 155 confers powers on the ACCC to obtain information, documents and evidence in relation to specified matters that constitute or may constitute a contravention of the Act and other legislative provisions. See ACCC, *ACCC Guidelines—Use of Section 155 Powers* (June 2020).

420 Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) Part B.

421 DP submissions: Amazon Web Services, 3; Digital Industry Group Inc, 9; Kablamo Pty Ltd, 2; Medical Insurance Group Australia, 3 (argued against a positive duty of explanation being applied to healthcare, where there are already existing obligations around disclosure); Telstra, 4, (recognising the importance of explainability and accountability in building public trust in AI-informed decision making, but strongly opposed to a legislated explainability requirement).

422 DP submissions: Australian Industry Group, 5; Telstra, 4; Pymetrics, 3; Microsoft, 7; W Small, 1; DP Consultation roundtables: 4, 15.

423 DP submissions: Capgemini, 6; Commonwealth Bank of Australia, 6; NSW Bar Association, 7.

424 DP submission: Allens Hub for Technology and Law, 4.

425 DP submission: University of Technology Sydney, 16.

426 DP submissions: Allens Hub for Technology, Law and Innovation, 4; Microsoft, 7; NSW Bar Association, 8; Telstra, 4; University of Technology Sydney, 21; Commonwealth Bank of Australia, 4.

427 DP submissions: K Weatherall, T Caetano, 9. 10; Amazon Web Services, 3; Capgemini, 6; Information and Privacy Commission NSW, 14; Consumer Policy Research Centre, 13 (highlighting the importance of understandability).

428 DP submissions: Victoria Legal Aid, 3; AI Now Institute, 6; NSW Bar Association, 9.

429 The Law Council of Australia, for example, argued a public interest steward could be offered as an alternative, or an addition, to public disclosure: DP submission: Law Council of Australia, 16. See also DP submissions: NSW Bar Association, 8; Office of the Australian Information Commissioner, 5.

430 DP submissions: K Weatherall, T Caetano, 10; Capgemini, 6.

431 DP submissions: Aboriginal and Torres Strait Islander Legal Service (Qld), 3; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 8; QUT Digital Media Research Centre, 3; Information and Privacy Commission NSW, 15; Maurice Blackburn Lawyers, 3; NSW Young Lawyers, 3; S Hook, 10; WiseLaw, 5; Australian Lawyers Alliance, 5.

432 DP submission: Financial Rights Legal Centre, 32.

433 DP submissions: Allens Hub for Technology, Law and Innovation, 3; Amazon Web Services, 3; Commonwealth Bank of Australia, 7; Kablamo Pty Ltd, 2; K Weatherall, T Caetano, 16 (considered it a possible approach, but noted the proposal, as written in the Discussion Paper, lacks nuance, and leaves many questions unanswered); Microsoft, 7; R Chalmers, 7; SAS Institute Australia, 9.

434 DP submissions: Allens Hub for Technology, Law and Innovation, 4; KPMG Australia, 22.

435 DP submissions: Allens Hub for Technology, Law and Innovation, 4; Commonwealth Bank of Australia, 7.

436 DP submission: Amazon Web Services, 3.

437 See, for example, written evidence submitted by The Alan Turing Institute, to the UK House of Commons Science and Technology Committee Inquiry: Algorithms in Decision-making (28 February 2017).

438 Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) Proposal 9.

439 DP submissions: Allens Hub for Technology, Law and Innovation, 3; Australian Council of Learned Academies, 5; Australian Industry Group, 5; Commonwealth Bank of Australia, 6; Digital Rights Watch, 4; Digital Industry Group Inc, 10; Ethics Matters Pty Ltd, 3; QUT Digital Media Research Centre, 3; KPMG Australia, 22; Office of the Victorian Information Commissioner, 4; WiseLaw, 5.

440 DP submissions: Allens Hub for Technology, Law and Innovation, 3; Australian Council of Learned Academies, 5; R Chalmers, 7.

441 See Communications Alliance Ltd, *Industry Code C268:2019 Telecommunications Consumer Protections Code* (July 2019) 45.

442 DP Submissions: K Weatherall, T Caetano, 13; Financial Rights Legal Centre, 3; SafeGround Inc.

443 *Privacy Act 1988* (Cth) s 21P, for example, provides that where a credit provider refuses an application for consumer credit, and the refusal is based wholly or partly on credit eligibility information, the credit provider must provide specific information to the applicant, in writing, regarding the refusal.

444 *Competition and Consumer Act 2010* (Cth) s 155 confers powers on the ACCC to obtain information, documents and evidence in relation to specified matters that constitute or may constitute a contravention of the Act and other legislative provisions; ACCC, *ACCC Guidelines—Use of Section 155 Powers* (June 2020).

445 *Australian Securities and Investment Commission Act 2001* (Cth) gives ASIC a range of compulsory information-gathering powers to compel a person or entity to provide documents and information, and attend an examination: ASIC, *ASIC's Compulsory Information-gathering Powers* (Information Sheet 145, March 2020).

446 *Privacy Act 1988* (Cth) ss 44, 45.

447 See, for example, Aleksandra Mojsilovic, 'Introducing AI Explainability 360', *IBM* (online, 8 August 2019) <https://www.ibm.com/blogs/research/2019/08/ai-explainability-360/>.

448 Executive Office of the President of the United States, *Maintaining American Leadership in Artificial Intelligence,* Executive Order 13859 of 11 February 2019 (14 February 2019).

449 Australian Government, Australian Research Council, *2020 ARC Centre of Excellence for Automated Decision-Making and Society* (7 January 2021) <https://www.arc.gov.au/2020-arc-centre-excellence-automated-decision-making-and-society>.

450 UN Office of the High Commissioner for Human Rights, *Who Will be Accountable? Human Rights and the Post-2015 Development Agenda* (HR Pub/13/1, 2013) 10.

451 Australian Government, Administrative Review Council, *Administrative Accountability in Business Areas Subject to Complex and Specific Regulation* (2008) 5.

452 Australian Communications and Media Authority (ACMA), *Optimal Conditions for Effective Self- and Co-regulatory Arrangements* (Occasional Paper, September 2011) 4.

453 ACMA, *Optimal Conditions for Effective Self- and Co-regulatory Arrangements* (Occasional Paper, September 2011) 5.

454 ACMA, *Optimal Conditions for Effective Self- and Co-regulatory Arrangements* (Occasional Paper, September 2011) 12.

455 ACMA, *Artificial Intelligence in Communications and Media* (Occasional Paper, July 2020) 26.

456 DP submissions: Element AI, 3; KPMG Australia, 2, 8; Microsoft, 1; Digital Industry Group Inc, 8; PwC, 2; WiseLaw, 1; Telstra, 1; Responsible Technology Australia, 4; IP submissions: Chartered Accountants Australia and New Zealand, 23, 3.

457 DP submissions: Australian Services Union, 4; Information and Privacy Commission NSW, 1; R Chalmers, 1; Pymetrics, 2; Public Interest Advocacy Centre, 1;University of Technology Sydney, 54; Digital Gap Initiative, 12; Responsible Technology Australia, 4; Law Council of Australia, 5. IP submissions: WebKeyIT, 7(b); Confidential submission 18, response to question 7(b); Confidential submission 2,7(b); S Ramesh 7(b); S Murphy, 7(b); P Henman, 8; Castan Centre for Human Rights Law, 19, 28; EMR Australia, 14; University of Technology Sydney, 61; Castan Centre for Human Rights Law, 20, 28.

458 Harvard University's Berkman Klein Center for Internet & Society at Harvard University has conducted thematic mapping of 47 ethical frameworks: Jessica Fjeld, Nele Achten, Hannah Hilligoss, Adam Christopher Nagy and Madhulika Srikumar, *Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-Based Approaches to Principles for AI* (Berkman Klein Center, 15 January 2020).

459 See, for example, OECD, *OECD Principles on AI* (9 June 2019) <https://www.oecd.org/going-digital/ai/principles/>.

460 Australian Government, Department of Industry, Innovation and Science, *AI Ethics Framework* (November 2019).

461 Microsoft, *Microsoft AI Principles* <https://www.microsoft.com/en-us/ai/responsible-ai?activetab=pivot1%3aprimaryr6>.

462 Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) 52-54.

463 Australian Government, Department of Industry, Innovation and Science, *AI Ethics Framework* (November 2019).

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619 IBM's CEO wrote to five Members of the United States Congress on 8 June, 2020, stating IBM 'no longer offers general purpose IBM facial recognition or analysis software': IBM, *IBM CEO's Letter to Congress on Racial Justice Reform* (8 June 2020) <https://www.ibm.com/blogs/policy/facial-recognition-sunset-racial-justice-reforms/>; Amazon implemented a one-year moratorium on police use of Amazon's facial recognition technology software, Rekognition, on 10 June 2020: Amazon, *We are Implementing a One-year Moratorium on Police Use of Rekognition* (10 June 2020) <https://www.aboutamazon.com/news/policy-news-views/we-are-implementing-a-one-year-moratorium-on-police-use-of-rekognition?tag=wwwfccom-20>. Microsoft announced on 12 June 2020 that it would not sell facial recognition technology to police until national law, grounded in human rights, was put in place: 'Microsoft President Brad Smith Says the Company Will Not Sell its Facial Recognition Technology', *Washington Post Live* (online, 12 June 2020) <https://www.washingtonpost.com/video/washington-post-live/microsoft-president-brad-smith-says-the-company-will-not-sell-its-facial-recognition-technology/2020/06/11/f6ccd46e-a8e6-42f5-82d2-61323f0368d0_video.html>.

620 See, for example, Stefanie Coyle and Rashida Richardson, 'Bottom-Up Biometric Regulation: A Community's Response to Using Face Surveillance in Schools' in Amba Kak (ed) *Regulating Biometrics: Global Approaches and Urgent Questions* (AI Now Institute, 1 September 2020) 110.

621 See Josh Bavas, 'Facial Recognition Quietly Switched on at Queensland Stadiums, Sparking Privacy Concerns,' *ABC News* (online, 6 June 2019) <https://www.abc.net.au/news/2019-06-05/facial-recognition-quietly-switched-on-at-queensland-stadiums/11178334>; Josh Bavas, 'The Facial Recognition Security Issue Police Tried to Keep Secret', *ABC News* (online, 6 May 2019) <https://www.abc.net.au/ news/2019-05-06/australias-biggest-facial-recognition-roll-out-rushed/11077350>; Lisa Neville MP, 'New Police Eye in the Sky to Keep Victorians Safe' (Media Release, 10 July 2019); see, for example, Samantha Dick, 'Perth's Facial Recognition Cameras Prompt Scowls - And a Campaign to Stop 'Invasive'

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622 See, for example, UN Committee on the Elimination of Racial Discrimination, *General Recommendation No 36: Preventing and Combating Racial Profiling by Law Enforcement Officials,* CERD/C/GC/36 (24 November 2020) [35].

623 DP submissions: Microsoft, 4; Australian Red Cross, 3. DP Consultation roundtables: 4, 6.

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625 DP submissions: Access Now, 8; Castan Centre for Human Rights Law, 28; Commonwealth Bank of Australia, 7; Herbert Smith Freehills, 2; J Ng, 4; Office of the Australian Information Commissioner, 8; SAS Institute Australia, 11. DP Consultation roundtables: 2, 4, 6, 10, 16.

626 Pete Fussey and Daragh Murray, *Independent Report on the London Metropolitan Police Service's Trial of Live Facial Recognition Technology* (Human Rights, Big Data and Technology Project, July 2019) 36.

627 DP submission: Access Now, 8.

628 Karen Yeung, Rapporteur, *A Study of the Implications of Advanced Digital Technologies (Including AI Systems) for the Concept of Responsibility Within a Human Rights Framework*, Council of Europe MSI-AUT (2018) 05 (9 November 2018) 28.

629 Corrine Reichert, 'Senator Fears Clearview AI Facial Recognition Could be Used on Protesters', *CNet* (online, 8 June 2020) <https://www.cnet.com/news/senator-concerned-clearview-ai-facial-recognition-is-being-used-by-police-in-black-lives-matter-protests/>.

630 See David Pozen, 'The Mosaic Theory, National Security, and the Freedom of Information Act' (2005) 115 *Yale Law Journal* 628.

631 *Report of the Special Rapporteur on the Right to Privacy*, UN Doc A/HRC/40/63 (27 February 2019) 3. Also see IP submissions: Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, 9; Law Council of Australia, 20; University of Technology Sydney, 27; Access Now; M Dean and M Vatter, 2; Red Cross, 5. See also Telecommunications and Other Legislation Amendment (Assistance and Access) Bill 2018; Australian Human Rights Commission, Submission No 47 to the Parliamentary Joint Committee on Intelligence and Security, *Review of the Telecommunications and Other Legislation Amendment (Assistance and Access Bill) 2018* (12 October 2018); Access Now, Submission No 33 to the Parliamentary Joint Committee on Intelligence and Security, *Review of the Telecommunications and Other Legislation Amendment (Assistance and Access Bill) 2018* (12 October 2018).

632 See, for example, Human Rights Watch, *China's Algorithms of Repression: Reverse Engineering a Xinjiang Police Mass Surveillance App* (1 May 2019).

633 UN Committee on the Elimination of Racial Discrimination, *General Recommendation No 36: Preventing and Combating Racial Profiling by Law Enforcement Officials,* CERD/C/GC/36 (24 November 2020) [35].

634 See, for example, Joy Buolamwini and Timinit Guru, 'Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification' (2018) 81 *Proceedings of Machine Learning Research* 1; KS Krishnapriya, Kushal Vangara, Michael C King, Vitor Albiero and Kevin Bowyer, 'Characterizing the Variability in Face Recognition Accuracy Relative to Race' (Conference Paper, IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops, 2019); Inioluwa Deborah Raji and Joy Buolamwini, 'Actionable Auditing: Investigating the Impact of Publicly Naming Biased Performance Results of Commercial AI Products' (Conference on Artificial Intelligence, Ethics, and Society, 2019).

635 UN Committee on the Elimination of Racial Discrimination, *General Recommendation No 36: Preventing and Combating Racial Profiling by Law Enforcement Officials,* CERD/C/GC/36 (24 November 2020) [35].

636 UK Centre for Data Ethics and Innovation, *Snapshot Paper – Facial Recognition Technology* (Independent Report, 28 May 2020) 23; Pete Fussey and Daragh Murray, *Independent Report on the London Metropolitan Police Service's Trial of Live Facial Recognition Technology* (Human Rights, Big Data and Technology Project, July 2019). An independent review of the Metropolitan Police Service trials between 2018 and 2019 showed that 42 matches were produced by the software, 16 were rejected by the human operator as not credible, 4 people were lost in the crowd, 14 were wrongly stopped, while 8 people were correctly stopped.

637 UK Centre for Data Ethics and Innovation, *Snapshot Paper – Facial Recognition Technology* (Independent Report, 28 May 2020) 23.

638 DP submissions: Access Now, 9; Castan Centre for Human Rights Law, 28; J Crock, 13.

639 DP submission: Castan Centre for Human Rights Law, 29.

640 DP submission: Access Now, 9.

641 DP submission: Access Now, 9.

642 There is a growing amount of literature on the use of facial recognition in a range of settings including sports stadiums, schools and retail outlets in Australia. See Brett Hutchins and Mark Andrejevcic, 'Olympian Surveillance: Sports Stadiums and the Normalization of Biometric Monitoring' (2021) 15 *International Journal of Communication,* 363; See Josh Bavas, 'Facial Recognition Quietly Switched on at Queensland Stadiums, Sparking Privacy Concerns,' *ABC News* (online, 6 June 2019) <https://www.abc.net.au/news/2019-06-05/facial-recognition-quietly-switched-on-at-queensland-stadiums/11178334>; Mark Andrejevic and Neil Selwyn, 'Facial Recognition Technology in Schools: Critical Questions and Concerns' (2020) 45(2) *Learning, Media and Technology*, 115; Sarah Basford, 'Australian Schools Have Been Trialling Facial Recognition Technology Despite Serious Concerns About Children's Data', *Gizmodo* (online, 10 March 2020) <https://www.gizmodo.com.au/2020/03/australian-schools-trial-facial-recognition-technology-looplearn/>; Rick Sarre, 'Facial Recognition Technology is Expanding Rapidly Across Australia. Are Our Laws Keeping Pace?' *The Conversation* (online, 10 July 2020) <https://theconversation.com/facial-recognition-technology-is-expanding-rapidly-across-australia-are-our-laws-keeping-pace-141357>; Eden Gillespie, 'Are You Being Scanned? How Facial Recognition Technology Follows You, Even as You Shop', *The Guardian* (online, 24 February 2019) <https://www.theguardian.com/technology/2019/feb/24/are-you-being-scanned-how-facial-recognition-technology-follows-you-even-as-you-shop>. Ethics Matters highlighted neuroimaging and brain computer interface technology being commercially marketed in Australia, notably Emotiv recently covered by the Australian Financial Review referred to in DP submission: Ethics Matters Pty Ltd, 3-4. DP Consultation roundtable: 4.

643 Australian Government, Office of the Australian Information Commissioner, *Australian Community Attitudes to Privacy Survey 2020* (2020) 84.

644 DP submissions: Microsoft, 4; KPMG Australia,14; Confidential submission 42,14. DP Consultation roundtable: 2.

645 *R (on the application of Edward Bridges) v The Chief Constable of South Wales Police* [2020] EWCA Civ 1058.

646 *R (on the application of Edward Bridges) v The Chief Constable of South Wales Police* [2020] EWCA Civ 1058, [164].

647 *R (on the application of Edward Bridges) v The Chief Constable of South Wales Police* [2020] EWCA Civ 1058, [91].

648 *R (on the application of Edward Bridges) v The Chief Constable of South Wales Police* [2020] EWCA Civ 1058, [199] – [201].

649 DP submissions: Access Now, 7; Ethics Matters Pty Ltd, 3; The Australia Institute's Centre for Responsible Technology,9; AI Now Institute, 12; Allens Hub for Technology, Law and Innovation, 2; Aboriginal and Torres Strait Islander Legal Service (QLD), 3; WiseLaw, 6; Castan Centre for Human Rights Law, 30; Maurice Blackburn Lawyers, 14.

650 DP submissions: Access Now, 8; Castan Centre for Human Rights Law, 28; Commonwealth Bank of Australia, 7; Herbert Smith Freehills, 2; J Ng, 4; Office of the Australian Information Commissioner, 8; SAS Institute Australia, 11. DP Consultation roundtables: 2, 4, 6, 10, 16.

651 DP submission: S Hook, 11.

652 DP Consultation roundtables: 3, 13.

653 DP submission: KPMG Australia, 14. DP Consultation roundtable: 3. See also Jake Goldenfein and Monique Mann, 'Australian Identity-Matching Services Bill' in Amba Kak (ed) *Regulating Biometrics: Global Approaches and Urgent Questions* (AI Now Institute, September 1, 2020) 44.

654 DP submissions: Microsoft, 4; Amazon Web Services, 3-4; Herbert Smith Freehills, 4; Commonwealth Bank of Australia, 8.

655 DP submission: Office of the Australian Information Commissioner, 8.

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660 *Regulation 2018/1860/EU on the Use of the Schengen Information System for the Return of Illegally Staying Third-country Nationals*, OJ L312 (28 November 2018).

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664 Arvind Krishna, 'IBM CEO's Letter to Congress on Racial Justice Reform' *IBM* (8 June 2020) <https://www.ibm.com/blogs/policy/facial-recognition-susset-racial-justice-reforms/>.

665 Amazon, 'We are Implementing a One Year Moratorium on Police Use of Rekognition' (10 June 2020) <https://blog.aboutamazon.com/policy/we-are-implementing-a-one-year-moratorium-on-police-use-of-rekognition>.

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667 *Report of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression*, UN doc A/HRC/41/35 (28 May 2019); UN Office of the High Commissioner for Human Rights, *UN Expert Calls For Immediate Moratorium on Sale, Transfer and Use of Surveillance Tech* (25 June 2019) <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=24736>; UN Office of the High Commissioner for Human Rights, UN Expert Joins Call for Immediate *Moratorium on Sale, Transfer and Use of Surveillance Tech* (15 July 2020) <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=26098&LangID=E>; E Tendayi Achiume, *Report of the Special Rapporteur on Contemporary Forms of Racism, Racial Discrimination, Xenophobia and Related Intolerance*, UN Doc A/HRC/44/57 (18 June 2020).

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669 Consultative Committee of the Convention for the Protection of Individuals with Regard to Automatic Processing of Personal Data, *Guidelines on Facial Recognition* (Council of Europe, T-PD/2020/03rev4, 28 January 2021) 5.

670 For example, the current draft Washington Privacy Act, State of Washington, Senate Bill 5528 (2019) proposes a 'task force consisting of fifteen 7 representatives of communities historically impacted by surveillance 8 technologies including, but not limited to, African American, 9 Hispanic American, Native American, and Asian American communities, 10 religious minorities, protest and activist groups, and 11 other vulnerable communities, and such task force delivers to the 12 legislature a report documenting the potential consequences of 13 government use of facial recognition systems on the civil rights and civil liberties of vulnerable communities'.

671 Australian Government, Office of the Australian Information Commissioner, *What is Personal Information?* (5 May 2017) <https://www.oaic.gov.au/privacy/guidance-and-advice/what-is-personal-information/>.

672 See IP submission: Office of the Australian Information Commissioner, 7. OAIC also produces relevant guidance for organisations dealing with data, and conducting data analytics; see, for example, Australian Government, Office of the Australian Information Commissioner, *Guide to Data Analytics and the Australian Privacy Principles* (March 2018).

673 Australian Privacy Principle 6.1 provides a right to access 'personal information' that is 'about an individual'. The Full Court of the Federal Court of Appeal in *Privacy Commissioner v Telstra Corporation Limited* [2017] FCAFC 4 determined that in order for information to be considered 'personal information...about an individual' within the parameters of the Privacy Act, it will need to be determined on a case by case basis whether the information requested is an about an individual, which 'will require an evaluative conclusion, depending upon the facts of any individual case, just as a determination of whether the identity can *reasonably* be ascertained will require an evaluative conclusion', [63].

674 Victorian Law Reform Commission, *Surveillance in Public Places* (Final Report, 1 June 2010); NSW Law Reform Commission, *Invasion of Privacy* (Report 120, April 2009); Australian Law Reform Commission, *Serious Invasions of Privacy in the Digital Era* (Report 123, September 2014).

675 Australian Law Reform Commission, *Serious Invasions of Privacy in the Digital Era* (Report 123, September 2014) 51.

676 Australian Law Reform Commission, *For Your Information: Australian Privacy Law and Practice* (Report 108, 12 August 2008).

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678 Recommendation 19: Statutory tort for serious invasions of privacy: ACCC, *Digital Platforms Inquiry* (Final Report, June 2019) 37.

679 ACCC, *Digital Platforms Inquiry* (Final Report, June 2019) 23.

680 Australian Government, *Regulation in the Digital Age: Government Response and Implementation Roadmap for the Digital Platforms Inquiry* (2019) 6, 11.

681 Australian Government, *Regulation in the Digital Age: Government Response and Implementation Roadmap for the Digital Platforms Inquiry* (2019) 6, 11.

682 DP submissions: Information and Privacy Commission NSW, 9; Office of the Victorian Information Commissioner, 3; Office of the Australian Information Commissioner, 5; Access Now, 7; Digital Rights Watch, 2; QUT Digital Media Research Centre, 2; Castan Centre for Human Rights Law, 8; Law Council of Australia, 12; J Ng, 1; University of Melbourne, 4; R Chalmers, 4; WiseLaw, 3; Maurice Blackburn Lawyers, 11. DP Consultation roundtable: 16.

683 DP submissions: Information and Privacy Commission NSW, 9; Access Now, 7; KPMG Australia, 20; Confidential submission 42, 12; R Chalmers, 4; WiseLaw, 3; J Ng, 1; University of Melbourne, 4; Castan Centre for Human Rights Law, 8; Law Council of Australia, 12; Australian Law Reform Commission, *Serious Invasions of Privacy in the Digital Era* (Report 123, September 2014); ACCC, *Digital Platforms Inquiry* (Final Report, June 2019).

684 DP submissions: Information and Privacy Commission NSW, 9; Office of the Victorian Information Commissioner, 3; Maurice Blackburn Lawyers, 12.

685 DP submission: Medical Insurance Group Australia, 2.

686 DP submissions: Amazon Web Services, 2; KPMG Australia, 20; Medical Insurance Group Australia, 2; Special Broadcasting Service, 3.

687 *ICCPR* art 17.

688 Noting that the ALRC's recommendation confined the application of the tort to serious invasions of privacy either by intrusion upon seclusion or by misuse of private information, the OAIC has submitted to the review of the Privacy Act by the Commonwealth Attorney-General's Department that the tort should not be confined to the two proposed categories given some serious privacy invasions may not fall within them, which 'will create further fragmentation in privacy protections'. See Australian Government, Office of the Australian Information Commissioner, *Privacy Act Review – Issues Paper (Submission by the Office of the Australian Information Commissioner)* (11 December 2020) 136.

689 See, for example, Australian Government, Department of Industry, Science, Energy and Resources, *An AI Action Plan for all Australians: A Call for Views - Discussion Paper* (2020).

690 See Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) 68, 69; IP submissions: Law Council of Australia; N Suzor, K Weatherall, A Daly, A Vromen, M Mann; D Glance, M Rizzi; LexisNexis; University of Technology Sydney. DP submissions: Element AI, 1; Access Now, 4; Australian Red Cross, 4; Ethics Matters Pty Ltd, 5; Confidential submission 42, 17; R Walden, 7; Aboriginal and Torres Strait Islander Legal Service (Qld), 4; Wiselaw; 10; P Gooding; Commonwealth Bank of Australia, 9; University of Technology Sydney, 54; NSW Council of Civil Liberties, 8; Telecommunications Industry Ombudsman, 1.

691 DP submissions: Telstra, 4; Confidential submission 16, 1; SAS Institute Australia, 13; Consumer Policy Research Centre, 12; P Gooding; Responsible Technology Australia, 5. DP Consultation roundtable: 7.

692 DP submissions: Australian Academy of Science; 3; Office of the Australian Information Commissioner, 10; Access Now, 5. DP Consultation roundtable: 14.

693 WP submission: Australian Council of Trade Unions, 4, 5. DP submissions: University of Technology Sydney; 54; Aboriginal and Torres Strait Islander Legal Service (Qld), 4; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 14; KPMG Australia, 28; Commonwealth Bank of Australia, 9; Wiselaw, 10.

694 DP submissions: NSW Bar Association,10; J Thornton, 1.

695 WP submission: Australian Council of Trade Unions, 4, 5. DP submission: C Curtis, A Radke, J Hereward, 2.

696 DP submissions: Access Now, 6; Australian Red Cross, 1; KPMG Australia, 3; Community and Public Sector Union, 1; Microsoft, 8; SafeGround Inc; The Australia Institute's Centre for Responsible Technology, 3; Aboriginal and Torres Strait Islander Legal Service (Qld), 2; Public Interest Advocacy Centre, 3; Telstra, 4; Law Council of Australia, 6; Castan Centre for Human Rights Law, 8; S Hook, 55; University of Technology Sydney, 2; Maurice Blackburn Lawyers, 1; C Curtis, A Radke, J Hereward, 4; J Crock, 14; Telecommunications Industry Ombudsman, 1.

697 WP submission: Office of the eSafety Commissioner, 3.

698 See WP submissions: Consumer Policy Research Centre, 3; Effective Altruism ANZ, 12.

699 WP Symposium, 6 March 2019.

700 See, for example, WP submissions: J Powles, M Rizzi, F McGaughey, D Glance, 1, 2; G Greenleaf, R Clarke, D Lindsay, 1; Allens Hub for Technology, Law and Innovation, 7; WP Symposium, 6 March 2019.

701 DP submissions: KPMG Australia, 29; University of Technology Sydney, 55; WP Symposium, 6 March 2019.

702 See, for example, IP submissions: Castan Centre for Human Rights Law, 2; University of Melbourne, 2. See WP submissions: Microsoft; Digital Industry Group Inc, 4. DP submissions: Australian Industry Group, 1; Digital Industry Group Inc, 13.

703 WP submission: Allens Hub for Technology, Law, and Innovation, 3. DP submissions: Microsoft, 8; Digital Industry Group Inc, 13.

704 See, for example, Australian Government, Innovation and Science Australia, *Australia 2030: Prosperity Through Innovation* (2017).

705 See Chapters 2, 3, 5.

706 DP submission: Office of the Australian Information Commissioner, 10. DP Consultation roundtable 1. WP submission: Office of the Victorian Information Commissioner, 2.

707 DP submission: Office of the Australian Information Commissioner, 10.

708 DP submission: Consumer Policy Research Centre, 22.

709 DP submission: Element AI, 4.

710 DP submissions: Office of the Australian Information Commissioner, 10; Access Now, 4; Australian Red Cross, 4; Aboriginal and Torres Strait Islander Legal Service (Qld) 4; University of Technology Sydney, 54.

711 DP submission: Commonwealth Bank of Australia, 9; R Chalmers,13; Access Now, 5.

712 DP submission: Digital Industry Group Inc, 13.

713 See, for example, Australian Human Rights Commission and World Economic Forum, *Artificial Intelligence: Governance and Leadership* (White Paper, January 2019); Council of Europe Commissioner for Human Rights, *Unboxing Artificial Intelligence: 10 Steps to Protect Human Rights* (May 2019).

714 Toby Walsh, Neil Levy, Genevieve Bell, Anthony Elliott, James Maclaurin, Iven Mareels and Fiona Wood, *The Effective and Ethical Development of Artificial Intelligence: An Opportunity to Improve our Wellbeing* (Report for the Australian Council of Learned Academies, July 2019) 13.

715 DP submission: Office of the Australian Information Commissioner, 10. WP submissions: Centre for Policy Futures, 6; H Dobson, 5; J Ford, 16; G Greenleaf, R Clarke, D Lindsay, 5.

716 DP submissions: D Svantesson, 2; University of Melbourne; 6.

717 WP submission: Remi AI, 5.

718 See, for example, Anna Brown, Alexandra Chouldechova, Emily Putnam-Hornstein and Andrew Tobin, 'Toward Algorithmic Accountability in Public Services: A Qualitative Study of Affected Community Perspectives on Algorithmic Decision-making in Child Welfare Services', (Conference Paper, Conference on Human Factors in Computing Systems, May 2019) 1; Maciej Kuziemski and Gianluca Misuraca, 'AI Governance in the Public Sector: Three Tales From the Frontiers of Automated Decision-making in Democratic Settings' (2020) 44(6) *Telecommunications Policy* 101976.

719 DP submissions: Office of the Victorian Information Commissioner, 2; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 14; University of Melbourne, 6.

720 DP submissions: University of Melbourne, 6; Australian Industry Group, 3; Consumer Policy Research Centre, 9.

721 DP submission: KPMG Australia, 28.

722 UK Centre for Data Ethics and Innovation, *About Us* <http://www.gov.uk/government/organisations/centre-for-data-ethics-and-innovation/about>.

723 See IP submissions: L Fowkes, 7; M Paterson; M Wildenauer; Allens Hub for Technology, Law and Innovation; Choice, 2. DP submissions: Access Now, 4; Element AI, 5; T Aulich, 2.

724 DP submission: Aboriginal and Torres Strait Islander Legal Service (Qld), 4.

725 Stefano Baruffaldi, Brigitte van Beuzekom, Helene Dernis and Dietmar Harhoff, *Identifying and Measuring Developments in Artificial Intelligence: Making the Impossible Possible* (OECD Science, Technology and Industry Working Paper, May 2020) 8.

726 DP submissions: NSW Bar Association, 10; Digital Rights Watch, 2; NSW Council of Civil Liberties, 8. DP Consultation roundtable: 1.

727 DP submissions: NSW Bar Association, 10; Digital Rights Watch, 2.

728 DP submission: NSW Council of Civil Liberties, 8.

729 UK Information Commissioner's Office, *Guidance on the AI Auditing Framework: Draft Guidance for Consultation* (2020) <https://ico.org.uk/media/2617219/guidance-on-the-ai-auditing-framework-draft-for-consultation.pdf>; see also, ASIC, ASIC's Compulsory Information Gathering Powers (Information Sheet 145, March 2020); Amnesty International and Access Now, *The Toronto Declaration* (16 May 2018).

730 DP submission: Digital Industry Group Inc, 7.

731 See Exposure Draft: Data Availability and Transparency Bill 2020, Part 4.3 <https://www.datacommissioner.gov.au/sites/default/files/2020-09/Data%20Availability%20and%20Transparency%20Bill%202020_exposure%20draft.pdf>.

732 See Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) 131.

733 See Chapter 5.

734 See Chapters 6 and 7.

735 Australian Human Rights Commission, *Using Artificial Intelligence to Make Decisions: Addressing the Problem of Algorithmic Bias* (Technical Paper, November 2020).

736 DP submissions: AI Now Institute, 10; Access Now, 5; Actuaries Institute, 3; Microsoft, 9.

737 DP submission: Confidential submission 16, 1.

738 DP submissions: Medical Insurance Group Australia, 4; KPMG Australia, 11.

739 DP submission: KPMG Australia, 23.

740 DP submission: SAS Institute Australia, 13.

741 See Recommendation 4.

742 See Recommendation 7.

743 See Recommendation 9.

744 See Recommendation 14.

745 See Recommendation 15.

746 See Recommendation 16.

747 See Recommendation 17.

748 See Australian Government, eSafety Commissioner, *Our Legislative Functions* <https://www.esafety.gov.au/about-us/who-we-are/our-legislative-functions>.

749 *Enhancing Online Safety Act 2015* (Cth) s 67.

750 *Australian Human Rights Commission Act 1986* (Cth) pt 22AA National Children's Commissioner.

751 See Australian Human Rights Commission, *About* <https://humanrights.gov.au/about>.

752 DP submissions: University of Technology, 54; Maurice Blackburn Lawyers, 16; Commonwealth Public Sector Union, 38; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 14. DP Consultation roundtable: 6.

753 DP submission: Responsible Technology Australia, 5.

754 DP submissions: Australian Academy of Science; 3; Digital Industry Group Inc, 7; Office of the Australian Information Commissioner, 10.

755 DP submission: Australian Academy of Sciences, 3.

756 DP submission: Law Council of Australia, 6.

757 DP submissions: NSW Bar Association,10; Element AI, 6; Australian Red Cross, 4; KPMG Australia, 28; P Gooding; WiseLaw, 10; Access Now, 4; Aboriginal and Torres Strait Islander Legal Service (Qld), 4; Confidential submission 42, 17; R Walden, 7; Telstra, 4; University of Technology Sydney, 54; Access Now, 4.

758 DP submissions: Australian Academy of Science, 3; Consumer Policy Research Centre, 9; Confidential submission 16, 1.

759 DP submissions: R Chalmers,13; Commonwealth Bank of Australia, 9.

760 DP submission: Office of the Australian Information Commissioner,10.

761 Stakeholders broadly referred to these two types of access throughout the consultation process. See, for example, IP submission: Digital Gap Initiative, 8. DP submission: Australian Communications Consumer Action Network, 18.

762 *CRPD* art 1. All people, including people with disability, have the right to equality and non-discrimination: *ICCPR* arts 2, 26; *ICESCR* art 2.

763 *CRPD* art 9 is informed by the broad definition of 'communication' in art 2 and the principles in art 3. For the purposes of art 9, ICT includes any information and communication device or application and its content: Committee on the Rights of Persons with Disabilities, *General Comment No 2 (2014) Article 9: Accessibility*, 11ᵗʰ sess, CRPD/C/GC/2 (11 April 2014) 2. The *CRPD* sets out durable principles that apply as technology develops.

764 This *CRPD*-protected right is also related to the right to benefit from scientific progress: *ICCPR* art 15(1)(b).

765 *CRPD* arts 9(2)(a), 9(h). The term 'universal design' is defined in *CRPD* art 2.

766 Excerpts have been adapted from: Disability Action, *What is the UNCRPD?* <https://www.disabilityaction.org/what-is-the-uncrpd>.

767 DP submissions: Digital Gap Initiative; Australian Communications Consumer Action Network. DP Consultation roundtables: 17, 18, 19, 20, 21. Some stakeholders expressed endorsement for the framework, as well as a statement of broad support for all or many of the Discussion Paper Part D proposals. DP submissions: KPMG Australia, 30; Ethics Matters Pty Ltd, 5; Liberty Victoria, Australian Privacy Foundation, Queensland Council for Civil Liberties, Electronic Frontiers Australia, NSW Council for Civil Liberties, 14; Consumer Policy Research Centre; WiseLaw, 10-13; Maurice Blackburn Lawyers, 1; Digital Rights Watch, 6; Commonwealth Bank of Australia, 9. See also IP submissions: Australian Rehabilitation and Assistive Technology Association, 3; Northraine, 13; Digital Gap Initiative, 4; Intopia, 10; Ability Research Centre, 2; National Disability Services, 1; University of Technology Sydney, 65; Carers Australia, 1; Public Interest Advocacy Centre, 16.

768 IP submission: Australian Communications Consumer Action Network, 6.

769 *CRPD* art 3.

770 Committee on the Rights of Persons with Disabilities, *General Comment No 2 (2014) Article 9: Accessibility*, 11ᵗʰ sess, CRPD/C/GC/2 (11 April 2014) 2. This Committee noted that the general right to access places and services is reflected in the international human rights framework.

771 UNESCO, *Education for People and Planet: Creating Sustainable Futures for All* (Global Education Monitoring Report, 2016) 8.

772 See, for example, DP submissions: Digital Gap Initiative; Blind Citizens Australia; Public Interest Advocacy Centre; R Walden; Consumer Policy Research Centre. IP submissions: Australian Communications Consumer Action Network; Kingsford Legal Centre; National Association of Community Legal Centres.

773 Written submissions and consultation feedback from IP and DP public consultation phases.

774 Bias and discrimination in automated decision making are considered in detail at Chapter 8.

775 DP submissions: Digital Gap Initiative, 10-11; NSW Bar Association 12-16. DP Consultation roundtables: 17, 18, 19, 20, 21.

776 IP submission: National Association of Community Legal Centres, 10.

777 DP Consultation roundtables: 17, 18, 19, 20, 21.

778 DP submission: NSW Bar Association, 12-16.

779 DP Consultation roundtables: 17, 21.

780 DP Consultation roundtable: 17.

781 DP Consultation roundtable: 17.

782 *CRPD* arts 4, 31, 33.

783 IP submission: S Murphy, 6.

784 DP submission: Blind Citizens Australia, 5. IP submission: S Murphy, 6.

785 IP submission: Confidential submission 38, 2.

786 IP submission: ANZ, 1.

787 DP submission: Blind Citizens Australia, 5. IP submission: ANZ, 1.

788 Written submissions and consultation feedback from IP and DP public consultation phases.

789 IP submissions: National Association of Community Legal Centres, 4, 10; Intellectual Disability Rights Service, 3-4; Public Interest Advocacy Centre, 16; Speech Pathology Australia, 4.

790 IP submissions: Public Interest Advocacy Centre, 16; S Murphy, 7.

791 IP submission: S Murphy, 7.

792 IP submission: Public Interest Advocacy Centre, 16.

793 IP submission: Intellectual Disability Rights Service, 3-4.

794 IP submission: Speech Pathology Australia, 4.

795 See, for example, DP submissions: Digital Gap Initiative; Australian Communications Consumer Action Network; Blind Citizens Australia; A Normand; Public Interest Advocacy Centre; Confidential submission 42, S Hook. DP Consultation roundtables: 17, 18, 19, 20, 21.

796 See DP submissions: Blind Citizens Australia, 2; Australian Communications Consumer Action Network, 22; Digital Gap Initiative, 24; Public Interest Advocacy Centre, 5. DP Consultation roundtables: 17, 18, 19, 20, 21.

797 See, for example, DP submission: Digital Gap Initiative, 8-9. DP Consultation roundtables: 18, 20, 21.

798 *Disability Discrimination Act 1992* (Cth) s 24.

799 Australian Human Rights Commission, *Complaints under the Disability Discrimination Act* (14 December 2012) <https://www.humanrights.gov.au/complaints/complaint-guides/complaints-under-disability-discrimination-act>.

800 See, for example, *Anti-Discrimination Act 1977* (NSW), *Human Rights Act 2004* (ACT).

801 As noted in DP submission: Digital Gap Initiative, 12-13. DP consultation roundtable: 19. IP submissions: Australian Communications Consumer Action Network, 11; Public Interest Advocacy Centre, 16.

802 IP submission: Australian Communications Consumer Action Network, 11.

803 IP submission: P Harpur, 41.

804 IP submission: University of Technology Sydney, 69.

805 IP submission: Digital Gap Initiative, 5.

806 DP submissions: Blind Citizens Australia, 2; Australian Communications Consumer Action Network, 22; Digital Gap Initiative, 24; Public Interest Advocacy Centre, 5. DP Consultation roundtables: 17, 18, 19, 20, 21. One industry representative group, Digital Industry Group Inc, was broadly supportive of the inclusion of accessible Digital Communication Technology under the DDA, but suggested any new standard draw upon existing standards.

807 *Disability Discrimination Act 1992* (Cth) s 31.

808 IP submission: Kingsford Legal Centre, 15.

809 Standards Australia, *About Us* <https://www.standards.org.au/>.

810 IP submission: Digital Gap Initiative, 13.

811 DP submission: Digital Gap Initiative, 24.

812 DP submission: Blind Citizens Australia, 2.

813 DP submissions: Australian Communications Consumer Action Network; Blind Citizens Australia; A Normand; Digital Gap Initiative; S Hook; IP submissions: Public Interest Advocacy Centre; P Harpur; A Normand; Digital Gap Initiative; S Murphy.

814 See, for example, DP submissions: SAS Institute Australia, 18; A Normand, 6. A Normand, for example, stated the introduction of a flat screen interface for a mobile 'was at first baffling for many users and certainly didn't fall withing the boundaries of existing standards. Today, the use of gestures on mobile phones has been widely adopted by screen reader users, resulting in vastly improved access to technology'.

815 See, for example, DP submissions: Public Interest Advocacy Centre, 5; WiseLaw, 71; Australian Communications Consumer Action Network, 22; Digital Gap Initiative, 12; Carers NSW, 3. DP Consultation roundtable: 20.

816 IP submission: Digital Gap Initiative, 17.

817 IP submission: LexisNexis, 23-24.

818 IP submission: LexisNexis, 23-24.

819 Senate Community Affairs References Committee, Commonwealth of Australia, *Delivery of Outcomes Under the National Disability Strategy 2010-2020 to Build Inclusive and Accessible Communities* (2017).

820 Australian Government, *Shut Out: The Experience of People with Disabilities and their Families in Australia* (2009).

821 *CRPD* art 4(a).

822   *CRPD* art 33.
823   Committee on the Rights of Persons with Disabilities, *Concluding Observations on the Combined Second and Third Periodic Reports of Australia*, CRPD/C/AUS/CO/2-3 (15 October 2019) 5.
824   Australian Human Rights Commission, *Disability Standards* (1 November 2016) <https://www.humanrights.gov.au/our-work/disability-rights/disability-standards>.
825   See, for example, DP submissions: Digital Gap Initiative, 25; Australian Communications Consumer Action Network, 22.
826   See, for example, *Disability Standards for Accessible Public Transport 2002* (Cth) pt 34: Review, Schedule 1: Target dates for compliance.
827   See Section 15.2 on Human Rights by design.
828   Committee on the Rights of Persons with Disabilities, *General Comment No 2 (2014) Article 9: Accessibility*, 11th sess, CRPD/C/GC/2 (11 April 2014) 5.
829   The Commission has previously recorded similar concerns. See Australian Human Rights Commission, Submission No 30 to the Department of Infrastructure, Regional Development and Cities, *Review of the Disability Standards for Accessible Public Transport 2002* (December 2018) 15; and Australian Human Rights Commission, Submission to the UN Committee on the Rights of Persons with Disabilities*, Information Concerning Australia's Compliance with the Convention on the Rights of Persons with Disabilities* (25 July 2019), in which it noted the lack of measures to ensure nationally consistent implementation, enforceability, monitoring and compliance under the Building Standards and Transport Standards.
830   Committee on the Rights of Persons with Disabilities, *Concluding Observations on the Combined Second and Third Periodic Reports of Australia*, CRPD/C/AUS/CO/2-3 (15 October 2019) 5.
831   See, for example, Australian Government, Department of Education, Employment and Workplace Relations, *Report on the Review of the Disability Standards for Education 2005* (2012).
832   See, for example, Australian Human Rights Commission, Submission to the UN Committee on the Rights of Persons with Disabilities*, Information Concerning Australia's Compliance with the Convention on the Rights of Persons with Disabilities* (25 July 2019).
833   Committee on the Rights of Persons with Disabilities, *Concluding Observations on the Combined Second and Third Periodic Reports of Australia*, CRPD/C/AUS/CO/2-3 (15 October 2019) 5.
834   The Commission has previously recorded similar concerns relating to the DDA—for example, in the Disability Standards Public Transport Review.
835   See, for example, IP submission: Digital Gap Initiative, 11, which noted the positive steps taken by the NSW Government and the Digital Transformation Agency regarding accessible services and facilities.
836   See, for example, IP submissions: Intellectual Disability Rights Service, 3-4; Speech Pathology Australia, 4.
837   See IP submissions: Digital Gap Initiative, 11; Intopia, 6; WebKeyIT, 6.
838   IP submission: Intellectual Disability Rights Service, 3-4.
839   IP submission: Speech Pathology Australia, 7.
840   Digital Transformation Agency, *Make it Accessible* <https://www.dta.gov.au/help-and-advice/digital-service-standard/digital-service-standard-criteria/9-make-it-accessibleAccessibility ICT Procurement Standard>.
841   Standards Australia, *Standards Catalogue* <https://www.standards.org.au/standards-catalogue/sa-snz/communication/it-040/as--en--301-dot-549-colon-2016>.
842   Digital Transformation Agency, *Make it Accessible* <https://www.dta.gov.au/help-and-advice/digital-service-standard/digital-service-standard-criteria/9-make-it-accessibleAccessibility ICT Procurement Standard>.
843   W3C Web Accessibility Initiative, *Web Content Accessibility Guidelines (WCAG) Overview* (15 June 2018) <https://www.w3.org/WAI/standards-guidelines/wcag/>.
844   Department of Finance and Deregulation, *Web Accessibility National Transition Strategy* (2010).
845   For a 2012 Progress Report, see Australian Government, Department of Finance, *Web Accessibility National Transition Strategy 2012 Progress Report Data* (18 February 2017) <https://data.gov.au/dataset/ds-dga-e59c06a1-86e6-4ac7-8c34-d52f4d2406d8/details>.
846   Vivienne Conway, 'Website Accessibility in Australia and the National Transition Strategy: Outcomes and Findings' (Doctoral thesis, Edith Cowan University, 2014) iv.
847   DP submissions: Digital Gap Initiative, 19; Australian Communications Consumer Action Network, 18; Blind Citizens Australia, 2; SAS Institute Australia, 28; Public Interest Advocacy Centre, 2; Microsoft, 9; Carers NSW, 3. DP Consultation roundtables: 17, 18, 19, 20, 21.
848   DP submissions: Public Interest Advocacy Centre, 2; Blind Citizens Australia, 2; Digital Gap Initiative, 19; Australian Communications Consumer Action Network, 18. DP Consultation roundtables: 17, 18, 19, 20, 21.
849   DP submission: Digital Gap Initiative, 19.
850   DP submission: Digital Gap Initiative, 19. IP submission: S Murphy, 9. DP Consultation roundtables: 19, 21.
851   DP submissions: Digital Gap Initiative, 19; A Normand, 3.
852   DP submission: A Normand, 3.
853   IP submission: ANZ, 2.
854   IP submissions: Portable, 3; Australian Rehabilitation and Assistive Technology Association, 10.
855   See, for example, Government of South Australia, *Online Accessibility Toolkit* <https://www.accessibility.sa.gov.au>.
856   *CRPD* art 9.
857   Committee on the Rights of Persons with Disabilities, *General Comment No 2 (2014) Article 9: Accessibility*, 11th sess, CRPD/C/GC/2 (11 April 2014) 9-10.
858   Committee on the Rights of Persons with Disabilities, *Concluding Observations on the Combined Second and Third Periodic Reports of Australia*, CRPD/C/AUS/CO/2-3 (15 October 2019) 5.
859   World Economic Forum, *Guidelines for AI Procurement* (White Paper, September 2019) <http://www3.weforum.org/docs/WEF_Guidelines_for_AI_Procurement.pdf> 4; Gerard Goggin, Scott Hollier and Wayne Hawkins, 'Internet Accessibility and Disability Policy Lessons for Digital Inclusion and Equality from Australia' (2017) 6(1) *Internet Policy Review* 1, 9.
860   Australian Government, *Commonwealth Indigenous Procurement Policy* (2015) 19.
861   Commonwealth, Department of the Prime Minister and Cabinet, *Third Year Evaluation of the Indigenous Procurement Policy* (2019) 3.
862   Detailed data for 2019-20 Commonwealth Indigenous procurement outcomes is available at: Australian Government, National Indigenous Australians Agency, *Indigenous Procurement Policy* <https://www.niaa.gov.au/indigenous-affairs/economic-development/indigenous-procurement-policy-ipp#latest-news>.
863   Business Council of Australia, *Indigenous Engagement* <https://www.bca.com.au/indigenous_engagement>.
864   See Australian Government, Department of Finance, *Commonwealth Procurement Rules* (20 April 2019).
865   See, for example, NSW Government, *Procurement Policy Framework* (October 2020).
866   For more information on people with disability and employment see Australian Human Rights Commission, *Willing to Work: National Inquiry into Employment Discrimination Against Older Australians and Australians with Disability* (2016).
867   Australian Bureau of Statistics, *Disability, Ageing and Carers, Australia: Summary of Findings* (24 October 2019) <https://www.abs.gov.au/statistics/health/disability/disability-ageing-and-carers-australia-summary-findings/latest-release>.
868   Some of these principles are considered in World Economic Forum, *Guidelines for AI Procurement* (White Paper, September 2019) <http://www3.weforum.org/docs/WEF_Guidelines_for_AI_Procurement.pdf>.
869   DP submissions: Digital Gap Initiative, 20; Australian Communications Consumer Action Network, 18; SAS Institute Australia, 18; Microsoft, 9.
870   IP submission: Intopia, 6.
871   DP submission: Vision Australia. IP submissions: S Murphy, 10; University of Technology Sydney, 72; Digital Gap Initiative, 6.
872   See IP submissions: S Murphy, 6; University of Technology Sydney, 72.
873   IP submission: Australian Communications Consumer Action Network, 5.

874 See IP submissions: S Murphy, 6; University of Technology Sydney, 72. DP Consultation roundtable: 14.

875 DP submission: Telstra, 5.

876 As discussed in Chapter 15.

877 Yvette Maker, Alex Callahan, Bernadette McSherry, Jeannie Marie Paterson, Lisa Brophy and Anna Arstein-Kerslake, *Improving Access and Support for Consumers with Cognitive Disabilities* (University of Melbourne, 2018).

878 Australian Government, Department of Industry, Science, Energy and Resources, *Corporate Plan 2019-20* (2019) iv.

879 Digital Transformation Agency, *About Us* <https://www.dta.gov.au/about-us>.

880 Digital Transformation Agency, *Digital Service Standard Criteria* <https://www.dta.gov.au/help-and-advice/digital-service-standard/digital-service-standard-criteria>.

881 *CRPD* arts 9, 30(1)(b).

882 Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) Proposal 22.

883 DP submissions: Australian Communications Consumer Action Network, 19; Blind Citizens Australia, 4; SAS Institute Australia, 26; QUT Digital Media Research Centre, 4. Digital Gap Initiative, 20-21, broadly supported this position, but recommended a starting minimum quota of 10% of content. DP Consultation roundtables: 17, 18, 19, 20, 2.

884 See, for example, *Audio Description in Australia* <http://audiodescriptionau.com.au/>; Blind Citizens Australia, *Tv4all* <http://www.tv4all.com.au/>.

885 Vision Australia, *Audio Description Finally Arrives on Australian Free to Air TV* (24 June 2020) <https://www.visionaustralia.org/community/news/2020-07-01/audio-description-finally-arrives-australian-free-air-tv?mc_cid=129e36cd0b&mc_eid=95799fd1b6>.

886 Paul Fletcher MP, 'Audio Description on ABC and SBS Delivers Greater Accessibility' (Media Release, 22 June 2020).

887 Australian Government, Department of Communications and the Arts, *Audio Description Working Group—Final Report* (2017) 10.

888 DP submission: Australian Communications Consumer Action Network, 19. DP Consultation roundtables: 17, 18, 19, 20, 21.

889 DP Consultation roundtable: 18.

890 DP Consultation roundtable: 18.

891 DP Consultation roundtables: 17, 18, 19, 20, 21.

892 DP submission: Blind Citizens Australia, 4. DP Consultation roundtables: 17, 18, 19, 20, 21.

893 DP submissions: Australian Communications Consumer Action Network, 19; Blind Citizens Australia, 4.

894 DP Consultation roundtable: 18.

895 DP submission: Australian Communications Consumer Action Network, 19. DP Consultation roundtables: 17, 20.

896 DP submissions: Australian Communications Consumer Action Network, 19; Digital Gap Initiative, 20. DP Consultation roundtables: 17, 18, 19, 21. Other stakeholders also supported an increase in captioning quotas; DP submissions: Public Interest Advocacy Centre, 2; SAS Institute Australia, 26; QUT Digital Media Research Centre, 4.

897 'Free-to-air television broadcasters' includes commercial television broadcasting licensees and national television broadcasters (ABC, SBS). *Broadcasting Services Act 1992* (Cth) s 130ZR.

898 Some broadcasters have a primary broadcast channel and other multi-channels. For example, Channel 7 is the primary broadcast channel, and 7mate, 7TWO and 7flix are multi-channels.

899 DP submission: Australian Communications Consumer Action Network, 19.

900 DP Consultation roundtables: 18, 20, 21.

901 Australian Government, Department of Communications and the Arts, *Audio Description Working Group—Final Report* (2017); Katie Ellis, Gwyneth Peaty, Leanne McRae, Mike Kent and Kathryn Locke, *Audio Description in Australia* (Australian Communications Consumer Action Network, 2019).

902 *CRPD* art 4(3).

903 DP submission: Australian Communications Consumer Action Network, 19.

904 See ABC, *Audio Description Schedule* <https://www.abc.net.au/tv/audiodescription/>; SBS, *Audio Description Services* <https://www.sbs.com.au/aboutus/audio-description-services>.

905 Katie Ellis, Gwyneth Peaty, Leanne McRae, Mike Kent and Kathryn Locke, *Audio Description in Australia* (Australian Communications Consumer Action Network, 2019) 42.

906 Katie Ellis, Gwyneth Peaty, Leanne McRae, Mike Kent and Kathryn Locke, *Audio Description in Australia* (Australian Communications Consumer Action Network, 2019) 13, 63-65; Australian Government, Department of Communications and the Arts, *Audio Description Working Group—Final Report* (2017) 14.

907 Katie Ellis, Gwyneth Peaty, Leanne McRae, Mike Kent and Kathryn Locke, *Audio Description in Australia* (Australian Communications Consumer Action Network, 2019) 21.

908 Australian Government, Department of Communications and the Arts, *Audio Description Working Group—Final Report* (2017) 11

909 Australian Government, Department of Communisations and the Arts*, Audio Description Working Group—Final Report* (2017) 11.

910 See, for example, *Audio Description in Australia* <http://audiodescriptionau.com.au/>; Blind Citizens Australia, *Tv4all* <http://www.tv4all.com.au/>.

911 Broadcasting Services Amendment (Audio Description) Bill 2019 (Cth) Item 14.

912 Australian Government, Department of Communications and the Arts, *Audio Description Working Group—Final Report* (2017) 25.

913 Australian Government, Department of Communications and the Arts, *Audio Description Working Group—Final Report* (2017) 39.

914 SBS provided feedback to the Commission on the consultation and implementation process. See also: ABC, *ABC Launches Audio Description Service for Blind or Vision-impaired Audiences* <https://about.abc.net.au/press-releases/abc-launches-audio-description-service-for-blind-or-vision-impaired-audiences/>.

915 National (ABC and SBS) and commercial broadcasters make up free-to-air TV in Australia, and subscription broadcasting is an extra paid service (eg Foxtel).

916 ACMA, *Report on the Review of the Captioning Obligations in the Broadcasting Services Act 1992* (2017) 7-8.

917 ACMA, *Report on the Review of the Captioning Obligations in the Broadcasting Services Act 1992* (2017) 7-8.

918 ACMA, *Report on the Review of the Captioning Obligations in the Broadcasting Services Act 1992* (2017) 7-8.

919 See *Broadcasting Services Act 1992* (Cth) s 130ZV; ACMA, *Provide Captions on Subscription TV* <https://www.acma.gov.au/provide-captions-subscription-tv>.

920 See ACMA, *Provide Captions on Subscription TV* <https://www.acma.gov.au/provide-captions-subscription-tv>.

921 See freeview, *TV Guide* <https://www.freeview.com.au/tv-guide>.

922 For categories of subscription channels see: ACMA, *Provide Captions on Subscription TV* <https://www.acma.gov.au/provide-captions-subscription-tv>.

923 DP Consultation roundtables: 17, 18, 19.

924 See, for example, a recommendation to make captioning on SVOD compulsory under federal legislation if providers did not voluntarily provide acceptable levels of captioning by the end of 2016: Media Access Australia*, Access on Demand: Captioning and Audio Description on Video on Demand Services* (Report Series, April 2015).

925 See, for example, Vision Australia, *Audio Described Movies on Streaming Services* (7 May 2020) <https://www.visionaustralia.org/community/news/2020-05-07/audio-described-movies-streaming-services>; American Council of the Blind, *Audio Description Project* <https://www.acb.org/adp/>.

926 See, for example, Vision Australia, *At the Cinema* <https://www.visionaustralia.org/community/events/audio-description-services/at-the-cinema>; Open Captions Australia, *Open Captions* <https://opencaptions.com.au/open-captions/>; Event Cinemas, *Accessibility* <https://www.eventcinemas.com.au/promotions/accessibility>.

927 Vision Australian, *At the Cinema* <https://www.visionaustralia.org/community/events/audio-description-services/at-the-cinema>.

928 Commonwealth, *Media Reform Green Paper: Modernising Television Regulation in Australia* (2020).

929 These concerns are outlined in Letter from Deaf Australia to Prime Minister Scott Morrison, 12 March 2020 <https://www.afdo.org.au/deaf-australia-letter/>.

930 Commonwealth, *Report on the Review of the Captioning Obligations in the Broadcasting Services Act 1992* (2017) 18.

931 See Australian Subscription Television and Radio Association, *Broadcast of Emergency Information* <https://www.astra.org.au/advocacy/broadcast-of-emergency-information>; Free TV Australia, *Advisory Note Broadcast of Emergency Information* <https://www.freetv.com.au/wp-content/uploads/2019/12/FINAL-Amended-Advisory-Note-Emergency-Information-12-June.pdf>.

932 The Australian Subscription Television and Radio Association (ASTRA) and Free TV Australia made an undertaking to Victorian Deaf Society in relation to ensuring an Auslan interpreter is included in the broadcast if they are present at the announcement. See Commonwealth, ACMA, *Report on the Review of the Captioning Obligations in the Broadcasting Services Act 1992* (2017) 19.

933 *CRPD* art 11.

934 Letter from Deaf Australia to Prime Minister Scott Morrison, 12 March 2020 <https://www.afdo.org.au/deaf-australia-letter/>.

935 NSW Department of Premier and Cabinet, *Final Report of the NSW Bushfire Inquiry* (2020) 353. See also *Royal Commission into National Natural Disaster Arrangements* (Final Report, 28 October 2020) [13.7].

936 *Royal Commission into National Natural Disaster Arrangements* (Final Report, 28 October 2020) [13.71].

937 Commonwealth, Department of Health, *Management and Operational Plan for People with Disability* (2020) 28.

938 DP submission: Digital Gap Initiative, 12. DP Consultation roundtables 18, 19, 21.

939 Katie Ellis, Kai-Ti Kao, Gwyneth Peaty and Kathryn Locke, *Live Caption Quality Monitoring on Australian Free-to-Air Television* (ACMA, November 2019).

940 See recommendations 1 and 2. Katie Ellis, Kai-Ti Kao, Gwyneth Peaty and Kathryn Locke, *Live Caption Quality Monitoring on Australian Free-to-Air Television* (ACMA, November 2019).

941 ACMA, *Captions That TV Broadcasters Must Provide* (2 September 2020) <https://www.acma.gov.au/captions-tv-broadcasters-must-provide>; *Broadcasting Services (Television Captioning) Standard 2013.*

942 *Broadcasting Services (Television Captioning) Standard 2013* s 6.

943 ACMA, *Broadcaster Compliance with TV Captioning Obligations* (13 August 2020) <https://www.acma.gov.au/broadcaster-compliance-tv-captioning-obligations>.

944 ACMA, *Complain About Captioning on TV* (9 December 2019) <https://www.acma.gov.au/complain-about-captioning-tv>.

945 *CRPD* arts 31, 33.

946 See IP submissions: La Trobe LawTech, 9; National Association of Community Legal Centres, 4; Australian Red Cross, 8.

947 IP submission: Law Council of Australia, 6.

948 The Australian Digital Inclusion Index measures progress in addressing barriers to digital inclusion, including those relating to access, affordability and digital ability. 'Digital ability' is a concept that refers to a person's attitudes, skills and activities in the digital realm: Australian Digital Inclusion Index, *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2020* (2020) 10.

949 See, for example, IP submissions: Australian Red Cross, 8; Australian Rehabilitation and Assistive Technology Association, 8-9; CHOICE, 5. 'Digital divide' may be described as the gap between those who are digitally included and those who are not. Digital inclusion is based on the premise that everyone should be able to make full use of digital technologies to manage their health and wellbeing, access education and services, organise their finances, and connect with friends, family and the world beyond. Australian Digital Inclusion Index, *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2020* (2020).

950 IP submission: National Association of Community Legal Centres, 8.

951 Standards Australia, *What is a Standard?* <https://www.standards.org.au/standards-development/what-is-standard>.

952 Australian Human Rights Commission, *Human Rights and Technology* (Discussion Paper, December 2019) Proposal 23.

953 DP submissions: Digital Gap Initiative, 21; Australian Communications Consumer Action Network, 19; Standards Australia, 7; Confidential submission 42, 18; Commonwealth Bank of Australia, 9; Blind Citizens Australia, 4.

954 DP submissions: Digital Gap Initiative, 21; Australian Communications Consumer Action Network, 19; Blind Citizens Australia, 4.

955 IP submission: Australian Communications Consumer Action Network, 15.

956 See IP submissions: Intellectual Disability Rights Service, 1; Australian Rehabilitation and Assistive Technology Association, 12. DP Consultation roundtable: 18.

957 IP submission: Confidential submission 102, 1.

958 IP submission: Intopia, 10.

959 IP submission: Ability Research Centre, 2.

960 DP submission: Standards Australia, 7.

961 DP submissions: Standards Australia, 7; Digital Gap Initiative, 21; Blind Citizens Australia, 4.

962 DP submissions: Australian Communications Consumer Action Network, 19; Digital Gap Initiative, 21.

963 Centre for Inclusive Design, PwC Australia, *The Benefit of Designing for Everyone* (May 2019) 1.

964 Standards Australia, *What is a Standard?* <https://www.standards.org.au/standards-development/what-is-standard>.

965 See Recommendation 24.

966 DP submissions: Australian Communications Consumer Action Network, 19; Blind Citizens Australia, 6; SAS Institute Australia. DP Consultation roundtables: 18, 19, 21; ACMA, *Ideal Accessible Communications Roadmap* (2020) <http://accan.org.au/Ideal%20Accessible%20Communications%20Roadmap.pdf> 6.

967 ACMA, 'No Australian Left Offline: ACCAN Pushes for Affordable Broadband' (Media Release, 11 February 2019) 4.

968 NBN Co, *COVID-19 Education Assistance Package* <https://www.nbnco.com.au/campaigns/covid-19/education-assistance-package>.

969 *CRPD* art 21.

970 Australian Digital Inclusion Index, *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2020* (2020) 20.

971 Australian Digital Inclusion Index, *Measuring Australia's Digital Divide: The Australian Digital Inclusion Index 2018* (2018) 10.

972 Tony Vinson and Margot Rawsthorne, *Dropping off the Edge 2015: Persistent Communal Disadvantage in Australia* (2015) 48.

973 Australian Council of Social Service, *Digital Divide Policy Snapshot* (January 2016) 2.

974 IP submission: Australian Red Cross, 8.

975 DP submission: SAS Institute Australia, 20.

976 DP Consultation roundtables: 17, 18, 19, 20, 21.

977 NBN bandwidth per user increased by 31% and there was an 11.9% increase in the uptake of the higher speed 100Mbps plans in the three months to June 2020: ACMA, 'Increased Connection to Higher Speed Broadband Services During COVID-19' (Media Release 166/20, 13 August 2020).

978 NBN Co, *COVID-19 Education Assistance Package* <https://www.nbnco.com.au/campaigns/covid-19/education-assistance-package>.

979 NBN Co, *COVID-19 Education Assistance Package* <https://www.nbnco.com.au/campaigns/covid-19/education-assistance-package>.

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