



**Australian Government**

# **POSITIONING AUSTRALIA AS A LEADER IN DIGITAL ECONOMY REGULATION**

Automated Decision Making and AI Regulation  
Issues Paper

March 2022

## **Positioning Australia as a leader in digital economy regulation – Automated decision making and AI regulation – Issues Paper**

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## Consultation Process

### Request for feedback and comments

Interested parties are invited to comment on the issues raised in this paper by **22 April 2022**.

To make a submission, please visit: <https://www.pmc.gov.au/domestic-policy/digital-technology-taskforce/positioning-australia-leader-digital-economy-regulation-automated-decision-making-ai-regulation>

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# Positioning Australia as a leader in digital economy regulation

## Introduction

The Government's Digital Economy Strategy sets an ambitious vision for Australia to be a top 10 digital economy and society by 2030. A key part of this vision is delivering the right foundations – including smart, modern systems and regulation – that allow us to stay at the forefront of emerging technologies.

The safe and responsible development and deployment of new and emerging technologies, such as artificial intelligence (AI) and automated decision making (ADM), presents significant opportunities, underpinning improvements in productivity, facilitating economic growth and high quality jobs, improving our health, raising our living standards, protecting the environment and improving our defence and national security capabilities.

However, new and emerging technologies are challenging established approaches to regulation. Unclear or outdated legislation, or poor understanding of requirements under these laws, may impose a barrier to the adoption of these technologies and can undermine public trust and confidence. Ensuring regulation and our regulatory systems remain fit for purpose and agile as technology develops is essential to maximising the opportunities and managing the risks new technologies present in the digital economy.

AI is being deployed across the economy and society to solve problems as diverse as monitoring brain aneurysms and improving the management of fruit orchards. AI and ADM is also being deployed by government to dramatically improve service standards and operational capability. Smart Gates at international airports have reduced immigration queues and AI detection of mobile phone usage by drivers has improved road safety.

We are not alone in recognising the enormous benefits of these technologies, with global investment continuing to increase, and the pace of product development accelerating. For example, it has been estimated that AI could contribute more than \$20 trillion dollars to the global economy by 2030. Australia needs to adopt these technologies in order to ensure that productivity and living standards keep pace with the rest of the world.

To take advantage of the opportunities AI and ADM presents, we will need to harness our collective capabilities, talent and resources to be both early adopters, but also significant contributors to the progress and regulation of these technologies. This process focuses on examining how our regulatory settings and systems can be modernised to ensure they are fit for the digital age and facilitate accelerated and responsible uptake of new technologies. Appropriate regulatory safeguards can limit bias in automated systems, ensure private information and data remains protected, and promote transparency in ADM, which will be increasingly important as these technologies become more advanced and widespread.

Positioning Australia as a leader in digital economy regulation will enhance public trust and confidence and ultimately facilitate the greater uptake of these technologies in the long-term. Modernised legal frameworks will provide business and government with increased certainty about the benefits and risks of adopting these technologies, encouraging increased uptake and investment. It will also provide consumers with confidence that AI and ADM is being deployed in a way that it trusted, secure and to their benefit.



## What are we doing?

The Digital Technology Taskforce is seeking your views on how our regulatory settings and systems can maximise opportunities to enable and better facilitate the responsible use of new technologies, with a specific focus on AI and ADM. This could include clarifying the application of existing laws on AI and ADM, and developing best practice implementation standards.

Opportunities may include:

- clarifying the application of existing regulation of AI and ADM, possibly including the provision of additional guidance on the application of existing regulation;
- addressing inconsistent or overlapping regulation;
- ensuring current and new regulations are technology neutral;
- identifying where new regulation may be required to minimise existing and emerging risks; and
- driving shared best practice and implementation across government and industry.

Following consultation on the issues paper, a discussion paper will be released identifying possible reforms and action, which is expected to be published in the second half of 2022.

Feedback and discussion on these issues will also inform the development of an overarching Digital Age Policy Framework, which provide principles, guidance and best practice that will inform the development of future digital regulation. Further consultation on the Digital Age Policy Framework will occur in the second half of 2022.



## What are the opportunities?

Digital technologies present new opportunities to change how we work and live our lives. Digitally powered automation is creating new ways of working that will boost productivity, improve service delivery, create jobs, help solve the real-world problems of today and grow the businesses of tomorrow.

Increased automation will mean consumers will spend less time on the telephone or in a queue waiting to be assisted. Waiting times for applications to be processed or for approvals to be granted will be reduced. Costs of producing and delivering goods and services to consumers will be reduced for businesses and government, leading to lower prices and lower taxes or user charges. The environment will benefit from improved water management and more efficient recycling. Increased efficiency of dealing with relatively routine transactions or processes will allow human intervention to be focussed on more complex or higher risk areas, increasing safety and security.

### What is artificial intelligence?

AI is a collection of interrelated technologies that can be used to solve problems autonomously and perform tasks to achieve defined objectives. In some cases, it can do this without explicit guidance from a human being. AI is more than just the mathematical algorithms that enable a computer to learn from text, images or sounds. It is the ability for a computational system to sense its environment, learn, predict and take independent action to control virtual or physical infrastructure.

Australia is a leader in the strategic fields of AI like computer vision, deep learning, field robotics, neural networks and machine learning. Australia's broader policy settings will continue to support our success in this field.


### What do we mean by automated decision making?

ADM refers the deployment of technology to automate a decision making process – in whole or part. This extends from the use of a simple rules-based formula to affirm if someone meets objective criteria, to the use of predictive algorithms, which encompass a variety of techniques including rules, but where a computer learns a model to make a decision through machine learning capabilities, rather than being programmed to execute a decision making process in a specified way.

Automated systems can be used in different ways in decision-making. For example, they can:

- make a decision
- recommend a decision to the decision-maker
- guide a decision-maker through relevant facts, legislation and policy, closing irrelevant paths as they go. This may include guidance and commentary relevant across different points of the decision-making process
- provide preliminary assessments for individuals or internal decision-makers
- automate aspects of the fact finding process which may influence subsequent decisions, for example by applying data from other sources or data that has been directly entered or uploaded to the system.

ADM is increasingly being deployed across government and the private sector to improve the efficiency with which relatively routine decisions can be made and the effectiveness of outcomes. It has application across a broad range of government portfolios where a large number of transactions can be processed more efficiently. When used in government decision-making, these technologies engage with Australia's administrative law framework.



Current applications include in the ATO, Veterans Affairs, Immigration and Social Security portfolios. ADM is also increasingly common in the financial services sector, where credit approvals can be made rapidly, especially for existing clients.

## Existing examples of artificial intelligence and automated decision making

Sectors where AI is being rapidly developed and deployed include:

- **logistics** – AI detects fatigue in truck drivers to reduce fatigue-related incidents by more than 90 per cent;
- **bushfire management** - AI can derive fuel and vegetation information from remotely sensed data sources and integrate it with weather data and physics-based modelling to predict the spread of bushfires;
- **water and sewerage management** – AI can be used to analyse video footage from pipe inspection to identify cracks and blockages;
- **construction** – machine learning and high-resolution cameras can be used to identify defects when conducting building inspections;
- **recycling** – AI has been deployed to allow the autonomous sorting of recycled materials;
- **agriculture** – AI can map buds, flowers, fruitlet and fruit counts across entire orchards to improve management of crops and reduce the cost of producing food; and
- **medicine** – AI can measure a patient’s range of motion over telehealth and detect and monitor brain aneurysms

Examples of government use of AI and ADM include:

- **Implementation of SmartGate at ten Australian international airports** has dramatically improved both customer service and security. Checks that were previously time-consuming are now conducted by automated comparison of information on a biometric passport against immigration databases. Long immigration queues have been significantly reduced and immigration officials can focus their attention on higher risk cases that do not pass the automated process.
- **Automation of tax return processing** by the Australian Taxation Office means consumers generally receive a refund into their bank account within two weeks, compared to around 10 weeks for manual processing.
- **Detection of mobile phone use when driving using AI** has assisted the NSW Government to improve road safety. In this case, AI rejects photos where no mobile phone use is detected and refers positive detections to a human for review.

The Government welcomes the enormous benefits being delivered by these innovations. Review of regulation will ensure that the government can encourage implementation of these technologies by providing clear guidance and safeguards around their use. This will assist in fostering public trust in ADM processes and ultimately encourage the existing and future development of these technologies for the benefit of all Australians.



## What progress has already been made?

A number of earlier reviews by the Australian Government and processes led by international organisations have considered certain aspects of the regulation of AI and ADM. The current project does not seek to repeat work already completed by these earlier reviews. Instead, it builds on that work to consider whether any changes to regulatory settings and existing legal frameworks that address AI and ADM are required.

### Artificial Intelligence Ethics Framework (2019)

The Australian Government's AI Ethics Framework sets out 8 principles designed to ensure that AI is safe, secure and reliable. The principles are:

- **Human, societal and environmental wellbeing:** AI systems should benefit individuals, society and the environment.
- **Human-centred values:** AI systems should respect human rights, diversity, and the autonomy of individuals.
- **Fairness:** 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:** AI systems should respect and uphold privacy rights and data protection, and ensure the security of data.
- **Reliability and safety:** AI systems should reliably operate in accordance with their intended purpose.
- **Transparency and explainability:** There should be transparency and responsible disclosure so people can understand when they are being significantly impacted by AI, 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 outcomes of the AI system.
- **Accountability:** People 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 principles are voluntary, but they can be applied at each phase of the AI system lifecycle to prompt organisations to consider the impact of using AI enabled systems.

### Automated Decision Making Better Practice Guide (2019)

The Commonwealth Ombudsman's *Automated decision-making better practice guide* is a practical tool for agencies and includes a checklist designed to assist managers and project officers during the design and implementation of new automated systems, and with ongoing assurance processes once a system is operational. It covers six areas:

- Guiding principles for assessing the suitability of automated systems.
- Ensuring compliance with administrative law requirements.
- Ensuring the design of an automated system complies with privacy requirements.
- Establishing appropriate governance of automated systems projects.
- Developing quality assurance processes to maintain continued accuracy.
- Ensuring the transparency and accountability of the system and its accompanying processes.





This guide was originally published in February 2007 by a cross agency Working Group and updated in 2019 by the Commonwealth Ombudsman, the Office of the Australian Information Commissioner and the Attorney-General's Department.

## OECD/G20 AI principles (2019)

The OECD AI Principles were adopted in May 2019 and set standards for AI that are practical and sufficiently flexible to stand the test of time. They promote use of AI that is innovative and trustworthy and that respects human rights and democratic values. The OECD sets out five principles:


- **Inclusive growth, sustainable development and well-being:** Stakeholders should proactively engage in responsible stewardship of trustworthy AI in pursuit of beneficial outcomes for people and the planet, such as augmenting human capabilities and enhancing creativity, advancing inclusion of underrepresented populations, reducing economic, social, gender and other inequalities, and protecting natural environments, thus invigorating inclusive growth, sustainable development and well-being.
- **Human-centred values and fairness:** AI actors should respect the rule of law, human rights and democratic values, throughout the AI system lifecycle. These include freedom, dignity and autonomy, privacy and data protection, non-discrimination and equality, diversity, fairness, social justice, and internationally recognised labour rights.
- **Transparency and explainability:** AI Actors should commit to transparency and responsible disclosure regarding AI systems. To this end, they should provide meaningful information, appropriate to the context, and consistent with the state of art:
  - to foster a general understanding of AI systems,
  - to make stakeholders aware of their interactions with AI systems, including in the workplace;
  - to enable those affected by an AI system to understand the outcome, and,
  - to enable those adversely affected by an AI system to challenge its 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.
- **Robustness, security and safety:** AI systems should be robust, secure and safe throughout their entire lifecycle so that, in conditions of normal use, foreseeable use or misuse, or other adverse conditions, they function appropriately and do not pose unreasonable safety risk.
- **Accountability:** AI actors should be accountable for the proper functioning of AI systems and for the respect of the above principles, based on their roles, the context, and consistent with the state of art.

The OECD principles also set out certain actions that 'AI Actors' should take to promote these principles. The OECD principles were endorsed by the G20 in June 2019.

## Review of the Privacy Act (2020 – ongoing)

The Attorney-General's Department is conducting a review of the *Privacy Act 1988* to ensure privacy settings empower consumers, protect their data and best serve the Australian economy. The review was announced as part of the government's response to the Australian Competition and Consumer Commission's *Digital Platforms Inquiry*.

The review has released an issues paper and a discussion paper. The discussion paper included a chapter which examined the privacy implications of ADM systems that rely on personal information. Stakeholder feedback was sought on whether transparency measures should apply where personal information will be used in ADM which has a



legal, or similarly significant effect on an individual's rights. The discussion paper also noted international developments in privacy law in providing individuals with enhanced rights in relation to ADM which uses an individual's personal data, including rights to information about the logic used in such systems and rights to object or opt-out of the use of such processes.

Submissions in response to the discussion paper were due on 10 January 2022. Feedback received in response to the recent Privacy Act Review discussion paper on this topic will inform a final report to Government later in 2022.

## Human Rights and Technology Final Report (2021)

Part B of this report by the Australian Human Rights Commission examines AI and recommends a human rights impact assessment before the Australian Government introduces a new AI system to make administrative decisions. It also recommends measures to improve transparency. This includes notification of the use of AI and strengthening the right to reasons for administrative decisions and independent merits review for all AI-informed decisions. For private sector use of AI, it recommends that businesses be encouraged to undertake human rights assessments and that businesses notify individuals about AI decisions affecting them. It also recommends regulatory sandboxes to allow experimentation and innovation, and a moratorium on use of biometric technologies in high-risk decision making until better human rights and privacy protections are in place.

Part C of the report considers effective regulation and recommends the creation of an AI Safety Commissioner to provide expert advice to government and the private sector, work collaboratively with regulators to adapt and respond to AI and monitor trends in the use of AI in Australia and overseas.

## AI Action Plan (2021)

Australia's *AI Action Plan* sets a strategic vision of establishing Australia as a global leader in developing and adopting trusted, secure and responsible AI. It recommends actions under the focus areas of developing and adopting AI to transform Australian business, creating an environment to grow and attract the world's best talent, using cutting edge AI technologies to solve Australia's national challenges and making Australia a global leader in responsible and inclusive AI.


Of most relevance to positioning Australia as a leader in digital economy regulation, it recommends progressing the implementation of Australia's AI Ethics Principles, review of the Privacy Act to ensure privacy settings empower consumers, protect their data and best serve the Australian economy, and promoting the benefits of AI through engagement with business and the Australian public.

## Blueprint for Critical Technologies (2021)

The Blueprint for Critical Technologies (Blueprint) identifies critical technologies as current and emerging technologies that have the capacity to enhance or pose a risk to our national interest. It highlights that the safe and responsible development and deployment of critical technologies brings enormous opportunities, underpinning exponential improvements in productivity, facilitating economic growth and high quality jobs, enabling all Australians and businesses to securely participate in the digital economy, improving our health, raising our living standards.

Using an advanced foresight capability set up within the Defence Science and Technology Group, as well as expert consultation, the Government has identified a list of 63 technologies for Australia's first *List of critical technologies in the national interest*. Technologies included on the List are either critical for Australia today or because they have the potential to become critical for Australia within the next ten years.

Of particular relevance to the deep dive, the *List of critical technologies in the national interest* includes AI, algorithms and hardware accelerators. The List also includes machine learning (including neural networks and deep learning) and



natural language processing (including speech and text recognition and analysis), both of which are described as types of AI.

The Blueprint sets out four goals for critical technologies, supported by eight action pillars:

- **Goal 1:** Ensure we have access to, and choice in, critical technologies and systems that are secure, reliable, and cost-effective.
- **Goal 2:** Promote Australia as a trusted and secure partner for investment, research, innovation, collaboration, and adoption of critical technologies.
- **Goal 3:** Maintain the integrity of our research, science, ideas, information and capabilities – enable Australian industries to thrive and maximise our sovereign IP.
- **Goal 4:** Support regional resilience and shape an international environment that enables open, diverse and competitive markets and secure and trusted technological innovation

Of the eight action pillars that support these goals, the most relevant to the deep dives is ‘Ensure policies, regulation and standards are fit for purpose’.

### Government’s Regulator Performance Guide (2021)

The Government’s new Regulator Performance Guide came into effect on 1 July 2021, setting out the Government’s expectations for regulator performance and reporting via three principles of best practice. One of those principles – risk based and data driven – encourages regulators to ‘manage risks proportionately and maintain essential safeguards while minimising regulatory burden, and leveraging data and digital technology to support those they regulate to comply and grow’. Regulators are required to report annually on their performance against each principle.

### Critical Technology Supply Chain Principles (2021)

The Critical Technology Supply Chain Principles (the principles) were released on 15 November 2021. The principles provide clear Government guidance to both critical technology suppliers and purchasers. There are ten principles under the three pillars of Security-by-Design, Autonomy and Integrity, and Transparency. The principles are non-binding and voluntary for industry, and intended to assist businesses to make informed decisions regarding their suppliers of all technology types, including AI.

## What is Administrative Law?

Administrative law is the long-standing body of law applicable to government decision making. Its purpose is to hold government decision-makers to account for their decisions. Administrative law protects the rights and interests of individuals and businesses and promotes integrity in government.

The judicial reviewability of government action promotes good decision making, as it encourages decision-makers to uphold principles and associated procedures during the decision-making process. These include:

- **Fairness:** a **fair and proper procedure** is used when making a decision ('procedural fairness') – this includes upholding the hearing rule, which provides individuals with the opportunity to be heard throughout the decision-making process, and the bias rule which means that the decision maker must be impartial. This ties into the consideration of relevant criteria only, as below.
- **Lawfulness:** decisions are made under an appropriate **authority** and **all relevant considerations** are taken into account and no irrelevant considerations are included in the decision-making process. Acting lawfully also promotes **transparency**.
- **Transparency:** **reasons for a decision**, explaining why the decision was made, are able to be provided.
- **Reviewability:** the provision of **merits review**, where appropriate, is a further safeguard within the administrative law framework against the making of decisions which are not correct or preferable. Merits review can be internal, within the organisation which made the original decision, and external (through a body such as a tribunal).

Adherence to these key administrative law principles is integral to ensuring decisions are correct and preferable, both before and after they have been made, and made in accordance with the law, as passed by Parliament.



## What are the issues?

The Government is seeking feedback on the most pressing issues that need to be addressed to position Australia as a leader in digital economy regulation. The issues set out below provide a high level overview about digital economy regulation as it applies to AI and ADM. They are not intended to be exhaustive and potential submitters should raise additional issues to the extent that they are relevant to making Australia a leader in digital economy regulation.

### Uncertainty and complexity

Regulatory uncertainty for both industry and government risks inhibiting Australia's ability to achieve its goal of being a top 10 digital economy by 2030. Businesses and governments are subject to multiple regulatory frameworks, including those under privacy law, anti-discrimination law, consumer law, and administrative law. Designing AI or ADM systems that comply with all of the legal requirements can sometimes be challenging.

Complexity in the regulatory environment deters innovation within government and industry. While legal frameworks are generally designed to be technology-neutral, they have not been designed with the challenges of emerging technologies in mind. As a result, Australian regulators are sometimes perceived to be lagging behind industry in responding to rapid technological change, and not keeping pace with international counterparts developing regulation that facilitates innovation.

Siloed, sector and regime specific regulatory approaches have intensified problems of overlapping regulation creating barriers to the development and effective use of AI and ADM. Further, differing interpretations and treatments create confusing or contradictory compliance requirements imposing additional burdens on business, particularly for digital businesses operating across and within multiple sectors. These challenges are intensified where the same technologies are regulated by multiple agencies across different sectors.


Regulation that is not technology-neutral creates uncertainty as technology improves. A requirement as simple as a document needing to be 'signed' creates uncertainty. Is an electronic signature allowed? What if automation is employed, so that the person whose signature is required for a valid document is aware of the process and rules that will be employed to 'sign' documents, but not the particular instances where an electronic signature is applied?

### Rapidly evolving international developments

Australia faces strong global competition when seeking to be a leader in digital economy regulation. In April 2021, the European Commission published its *Proposal for a Regulation laying down harmonized rules on artificial intelligence* and the US Federal Trade Commission published *Aiming for truth, fairness, and equity in your company's use of AI*. In August 2021 the Chinese cybersecurity regulator released proposals for new rules for recommendation algorithms. In September 2021 the EU-US Trade and Technology Council released a joint statement committing to '...uphold and implement the OECD Recommendation on Artificial Intelligence'. Regulation of AI and ADM in Australia needs to keep pace with these developments, whilst taking into account developments in Australia's key trading partners to ensure consistency and interoperability.

### Public trust and confidence

Public trust and confidence in AI and ADM is a potential barrier to achieving the enormous benefits that they can offer. Attitudes towards AI and ADM may stem from a limited understanding of how these technologies work. Responsibility for improving public understanding of these technologies likely sits across government and the private sector.



Lack of guidance on the acceptable use of AI technologies can result in low take-up of these technologies as users are not provided with the parameters necessary to implement AI systems with confidence.

Positioning Australia as a leader in digital economy regulation can also enhance public trust and confidence. If Australians consider that regulation of these technologies is effective, they will be more accepting of their deployment. Government regulation can play a role in promoting trust and confidence in new technologies by addressing emerging risks and providing clear parameters for the implementation and proper use of these systems for individuals, industries and regulators. Where risks can be adequately identified, regulation can also clarify responsible parties and allocate liability accordingly, providing greater certainty for users. Individual consumers will often be in a better position than government to assess risks and benefits when applied to their own circumstances.

### Potential for bias or discrimination

In principle, automation has the potential to reduce bias and discrimination, as a machine can only reflect the inputs provided by human users. However, it has long been recognised that algorithms can reflect the bias of their programmers. Furthermore, as machine learning and AI starts to involve machines gathering their own data and learning from their environment, societal bias can be acquired by machines. Some government ADM systems that require input from members of the public may also have issues with accessibility (for example, a program may not be suitable for users with disabilities) or digital exclusion (for example, online programs may be difficult to access for people without connectivity).

The potential for bias or discrimination is a significant issue for the designers of systems implementing AI and ADM. The potential for bias or discrimination also links to the issue discussed below – transparency – as it is one way that bias or discrimination can be identified and corrected if designers of systems have erred in allowing bias or discrimination to be embedded in a system.

### Transparency and ability to explain decisions or outcomes


The transparency of the outcomes from ADM or AI likely has implications for public trust and confidence in these technologies and for identification and correction of any unwarranted biases. The type of transparency available from these systems may be different to what consumers are accustomed to from traditional systems for at least three reasons.

First, machine learning based on neural networks relies on mathematical optimisation across many dimensions. This can pose challenges for explaining decisions or outcomes in the relatively simplistic way usually expected of decisions made using traditional techniques. For example, hundreds of factors may be involved instead of the usual single-digit number of factors involved in decisions made according to established criteria.

Secondly, even when relatively traditional ADM or AI systems are used, algorithms are written in a computer programming language that is accessible to those that do not know the language to only a limited degree. Accordingly, even full transparency may not provide individuals with a well-founded understating of how decisions are being made or why outcomes are occurring.

Finally, intellectual property, commercial confidentiality and security considerations can lead to an unwillingness on the part of users of ADM or AI to share the details of how the relevant systems work.

There are differing opinions about the extent to which transparency of AI or ADM is desirable. Some argue for full transparency, whilst others suggest that it is sufficient that decisions are capable of being explained. A third point of view is that AI and ADM should not be held to a higher standard than applied to other decision making mechanisms, which also provide limited insights into the inner workings of how decisions are made.



For government decision making, transparency is a central element of ensuring accountability and promoting best practice decision making. Automation of a decision does not alter any laws providing a right of review. These decisions are subject to the same underlying administrative law principles of lawfulness, procedural fairness, rationality and transparency. When a government decision affects the rights and interests of an individual, an individual should be able to challenge that decision. Transparency ensures those who are subject to a government decision have the information necessary to seek review. Accordingly, government decisions made by automated processes must be capable of being explained, at least to the level of which factors were considered and how consideration of those factors were taken into account in reaching a decision. As AI systems become increasingly complex and difficult to understand this may present additional barriers to transparency.

## Exercise of discretion

Commonwealth laws frequently allow a decision maker to apply discretion to a decision. Similarly, decision-making in the private sphere often involve a degree of discretion – for example, to grant a person a loan or make an offer of employment. Discretion is sometimes required to ensure fair outcomes when rigid application of a rule could otherwise ignore strong evidence that should lead to a different outcome.

Discretion often requires a degree of judgment to weigh up a number of factors that contribute to a decision. It might also occur where a decision maker is offered a number of options. The process by which human decision makers sometimes exercise discretion has been called ‘instinctive synthesis’ by the Courts.

Machines used to automate decisions cannot currently conduct an instinctive synthesis in the same way that a human mind can. Machines can take into account numerous relevant considerations, apply complex weightings to various relevant factors and potentially learn from situations previously encountered. However these considerations, weightings and areas where machine learning might be permissible will need to be predicted and programmed by those operating the system. Automation is generally more straightforward when strict rules are to be applied.


The difficulty of applying discretion through automation may present policy makers with a trade-off between efficiency and fairness. Regulation by simple rules without discretion may be easier to automate, but novel circumstances may be more difficult to accommodate. Prioritising efficiency over fairness may undermine public trust in automated decisions which could impede the uptake of these technologies. In particular, limiting discretion to automate more government decisions would need to be carefully considered given the importance of accountability, fairness, rationality and transparency in government decision-making. On the other hand, more timely decisions could improve public trust and confidence, as sometimes delays in decision making impose considerable costs on consumers or businesses. In circumstances where discretion is integral for a particular decision, such as determining whether a particular action is in the public or national interest, automation will rarely be a suitable solution.

## Privacy

Personal information is regularly used in AI and ADM systems across a range of sectors. For example, an ADM system which determines loan applications could collect personal information from an applicant’s use of that system along with other de-identified information about other applicants’ circumstances to reach a decision about whether to grant the applicant a loan.

ADM systems can have significant impacts on privacy including the collation of data about individuals including by inference and decision-making based on personal information that may not be accurate.

Personal information must be collected, used and disclosed in accordance with 13 technology-neutral Australian Privacy Principles (APPs) in the Privacy Act. The role and scope of privacy law in relation to ADM which relies on personal information is being expanded in some overseas jurisdictions.



The Attorney-General's Department's is currently considering whether any changes to the Privacy Act are required to build trust in the increasing use of AI and ADM.

## How does this align with the Government's digital economy vision?

The Government's vision is for Australia to be a leading digital economy and society by 2030. The Digital Economy Strategy supports this vision through a range of policies organised under three pillars:

- **Right foundations to grow the digital economy:** putting in place the foundations that enable economic growth and prosperity.
- **Building capabilities in emerging technologies:** Building our capabilities in the emerging technologies we know today and preparing for others we cannot imagine now.
- **Lifting our ambition – Digital Growth priorities:** Identifying the key areas for collaboration and strategic investment across the economy to support digital growth, jobs and investment.

Positioning Australia as a leader in digital economy regulation – starting with AI and ADM – will ensure we have strong foundations through modern regulatory settings and systems and build trust, security and confidence in these new technologies. Australia has a burgeoning ecosystem of researchers, investors, innovators and service providers who are working hard to develop AI and ADM systems. Positioning Australia as a leader in digital economy regulation will ensure that they are not discouraged or frustrated by out-of-date laws, aiding the development of Australia's capabilities in emerging technologies. This initiative, like the Government's Deregulation Agenda, is focused on ensuring good regulation and improving interactions with business.

The Government's AI action plan also set goals of making Australia a global leader in responsible and inclusive AI and creating an environment to grow and attract the world's best AI talent. Far too often, talented Australians have been forced to leave Australia to pursue their passions in countries with more advanced technology or other industries. Combined with other elements of the Digital Economy Strategy – including the Government's \$1 billion investment in skills through the JobTrainer Fund and Digital Skills Organisation – making Australia a leader in digital economy regulation will help to attract talent to Australia and keep the best home grown talent in Australia.





## Our questions for you

1. What are the most significant regulatory barriers to achieving the potential offered by AI and ADM? How can those barriers be overcome?
2. Are there specific examples of regulatory overlap or duplication that create a barrier to the adoption of AI or ADM? If so, how could that overlap or duplication be addressed?
3. What specific regulatory changes could the Commonwealth implement to promote increased adoption of AI and ADM? What are the costs and benefits (in general terms) of any suggested policy change?
4. Are there specific examples where regulations have limited opportunities to innovate through the adoption of AI or ADM?
5. Are there opportunities to make regulation more technology neutral, so that it will more apply more appropriately to AI, ADM and future changes to technology?
6. Are there actions that regulators could be taking to facilitate the adoption of AI and ADM?
7. Is there a need for new regulation or guidance to minimise existing and emerging risks of adopting AI and ADM?
8. Would increased automation of decision making have adverse implications for vulnerable groups? How could any adverse implications be ameliorated?
9. Are there specific circumstances in which AI or ADM are not appropriate?
10. Are there international policy measures, legal frameworks or proposals on AI or ADM that should be considered for adoption in Australia? Is consistency or interoperability with foreign approaches desirable?



## Further reading

Australian Human Rights Commission (2021) [Human Rights and Technology](#)

Commonwealth Ombudsman (2019) [Automated Decision-making: Better Practice Guide](#)

Department of Industry, Science, Energy and Resources (2021) [AI Action Plan](#)

Department of the Prime Minister and Cabinet (2021) [Blueprint for Critical Technologies](#)

Department of the Prime Minister and Cabinet (2021) [Digital Economy Strategy](#)