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19 July 2023

Department of Industry, Science and Resources

Dear Sir/Madam

RE: Safe and responsible AI in Australia: Discussion paper

Standards Australia (SA) is pleased to provide a submission to the Australian Government's Safe and responsible AI in Australia: discussion paper.

Introduction

The rapid development and deployment of artificial intelligence (AI) has the unique opportunity to deliver new capabilities and benefits to the Australian economy and community. These opportunities can improve the lives of Australians through improvements to environmental protection, energy efficiencies, defence, security, health care, safety and education. As with any new technology, these capabilities bear degrees of uncertainty which are cause for concern and can challenge public perception and trust. The vast opportunities which AI pose offers the Australian Government a unique opportunity to move with speed to improve the lives of many Australians for the better. SA can support the Australian Government to adopt and develop internationally aligned foundational standards as the basis for establishing approaches to the regulation of AI to build support, consensus and trust within responsible AI.

These challenges are not new to AI, however, with any new and emerging technology there is always a window of opportunity to establish new regulation that offer the Australian public the tools to increase adoption whilst also providing safeguards. Given the broad potential with AI in crosscutting industries and sectors, the primary concern is to ensure the Australian public develops a deeper level of confidence in these emerging technologies and can adopt them with confidence. Standards, both nationally and globally, are built through a harmonised approach driving consensus amongst industry, government, and community interests. In turn this process leads to a higher chance of market acceptance and implementation.

International standards are uniquely placed to provide a common base for AI governance across government jurisdiction and sector, applying the same principle of driving consensus on a global scale. A considerable amount of work has already been done in partnership with ISO/IEC to help govern the use of responsible and safe AI globally. Some International standards already underpin the development of regulatory frameworks and provide a means of demonstrating conformance through consensus. Standards will also support interoperability and regulatory compatibility with systems in other jurisdictions, such as those being developed by the EU and the US, reducing barriers to trade.

As Australia's peak not for profit standards body and the representative for Australia on a global platform within ISO and IEC, our recommendation would be for the Australian Government to work with SA to establish a standards based approach to AI. AI is a crosscutting issue traversing many sectors of the Australian economy, it is beneficial to consider the significant opportunities which SA can provide in creating mechanisms for responsible AI. SA's unique offering facilitates the creation of standards which can under pin future policy and regulation. SA's efforts internationally are positioning Australia as a figurehead on responsible AI, by collaborating with key global standards and regulatory bodies and remaining at the forefront of the global conversation. SA's international

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participation with ISO/IEC has continued to help shape regulation with a harmonised approach. For example, SA is closely involved in the drafting of the new Information technology - Artificial intelligence - Management system which is currently in the final balloting process and due for publishing Q4 2023. This is a foundational standard which once published could be used by industry and governments as one way to demonstrate the appropriate application of particular AI technologies.

In addition to this work, SA, through collaborative work with DFAT, has been working for a number of years on capability building within the region on critical and emerging technology (CET) standardisation to help support our neighbours through training and upskilling. This work is undertaken in recognition of the cross-border nature of CET and that it is in Australia's national interests to protect and strengthen the international standardisation system and good regulatory practice in the Indo-Pacific region. SA suggests that a key potential gap in the discussion paper is recognition of the risk that foreign states or corporations can abuse digital products with impacts in Australia. Australia must continue to work to increase capacity in our region to strengthen security and build resilience.

SA is already a key player in the domestic landscape of AI, bringing awareness through the Responsible AI Network (RAIN) which is in partnership with The National AI Centre, coordinated by CSIRO. As a founding member of the RAIN, SA is utilising the extensive network of industry, community and stakeholders with a deep knowledge of AI standards on a national and international scale to develop guidance material, content and implementation of AI standards to the general public. This partnership is a foundational tool for disseminating information on responsible AI globally. We suggest there is an appetite and a desire to continue to produce and share reliable information and educational materials on responsible AI in order to transform public skepticism and build trust. We suggest the Australian Government work closely with SA to continue to create and implement specific standards and materials that will assist the Australian Government in the development and deployment of responsible AI.

SA have provided an Annex to support these views which provides further insights on recent and current efforts to regulate AI on a national and international scale through standards and to illustrate the importance of standards.

Recommendations:

1. The Australian Government work with SA and industry experts to adopt specific standards that will help the development and deployment of responsible AI.
2. The Australian Government work with SA to continue to support the creation of educational guidance materials and content which will improve public sentiment on the trustworthiness of AI and to prepare business for emerging standards and conformance requirements.
3. The Australian Government leverage the forthcoming ISO/IEC Artificial intelligence - Management system standard to support regulatory or certification requirements for AI systems.
4. The Australian Government work with SA to understand the existing AI standards landscape and scope opportunities to become standard-setting in new fields of responsible AI both locally and globally.
5. The Australian Government to work with SA to continue to upskill and support the ASEAN and Pacific region with AI standardisation capacity building to uplift regional security.
6. The Australian Government to work with SA to continue to support the development of industry-based standards through multilateral systems

We look forward to the opportunity to discuss the submission in further detail. Please contact Soraya Selinger, Strategic Initiatives Manager, at soraya.selinger@standards.org.au

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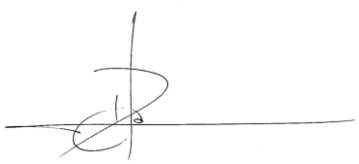
Yours sincerely



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Annex 1: Background to the Submission

Supporting responsible AI

The establishment of approaches to supporting responsible AI requires the development or adoption of appropriate national and international standards

Responsible AI standards development

SA is responsible for overseeing Australian Standards® development, and the adoption of International Standards through the International Standards Organisation (ISO) and International Electrotechnical Commission (IEC). We work with industry, government, and the community to develop and adopt standards through an open process of consultation and consensus. We invite interested parties to participate in these processes.

Our intent is to widen and deepen our engagement in supporting responsible AI standardisation, which we recognise as important enabling technologies for resilient communities and as critical drivers for Australia's future prosperity.

We view international standards, through ISO and IEC, as a sensible pathway to supporting international norms that facilitate the development of quality AI systems that are fit for purpose and benefit society.

International standards can function as market enablers, and a means to achieve broader business and public policy goals on raising responsible AI awareness. Standards can enable the growth of businesses, as globally embedded norms that service providers can build to, as they expand into new markets where adherence to International Standards might be beneficial.

The opportunity, and challenge, for Australian stakeholders is to effectively use the standards development process to promote, develop, and realise the opportunities of responsible AI. Internationally aligned standards can help to decrease barriers to trade, ensure quality and build greater public and consumer trust in digital products and services.

Accordingly, SA recommends the Australian Government continue to support Australia's participation in standards setting internationally through SA's trusted and established processes.

International responsible AI standards

ISO/IEC JTC 1/SC 42, Artificial intelligence (national mirror committee: IT-043) is the key international committee that sets standards related to AI. Their key objectives are to support the development of quality AI systems that are fit for purpose and benefit society. It develops guidance on three key aspects, ensuring data is appropriately processed when using AI, setting out steps to develop and use the model safely and developing tools for oversight of AI systems and management of risk, including ethical risk.

Published technical reports and standards on AI

- ISO/IEC 20546:2019, Information technology - Big data - Overview and vocabulary
- ISO/IEC TR 20547-1:2020, Information technology — Big data reference architecture — Part 1: Framework and application process

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- ISO/IEC TR 20547-2:2018, Information technology — Big data reference architecture — Part 2: Use cases and derived requirements
- ISO/IEC 20547-3:2020, Information technology — Big data reference architecture — Part 3: Reference architecture
- ISO/IEC TR 20547-5:2018, Information technology — Big data reference architecture — Part 5: Standards roadmap
- ISO/IEC TR 24028:2020, Information technology — Artificial intelligence — Overview of trustworthiness in artificial intelligence
- ISO/IEC TR 24029-1:2021, Artificial Intelligence (AI) — Assessment of the robustness of neural networks — Part 1: Overview
- ISO/IEC TR 24030:2021, Information technology — Artificial intelligence (AI) — Use cases
- ISO/IEC PRF TR 24027, Information technology — Artificial Intelligence (AI) — Bias in AI systems and AI aided decision making

A complete list of standards already published and currently under development is available at: https://www.iso.org/committee/6794475/x/catalogue/p/1/u/1/w/0/d/0

Other finalised standards that relate indirectly to AI

- ISO/IEC 27701 (Privacy Information Management)

Australia's domestic mirror committee

Standards Australia has formed a committee (IT-043) as the Australian mirror committee for ISO/IEC JTC1 SC 42 on Artificial Intelligence.

Standards Australia's IT-043 committee has a broad representation with members from academia, industry, government, regulators and consumer bodies. It is made up of six working groups that include experts drawn from the main committee, including:

- Working Group 1: Foundational Standard,
- Working Group 2: Data,
- Working Group 3: Trustworthiness,
- Working Group 4: Use cases,
- Working Group 5: Computational approaches and computational characteristics of AI systems; and,
- Joint Working Group 1: Governance implications of AI.

The committee works to shape, then identically adopt, key AI standards that are relevant to the Australian context. It ensures that Australia's voice is heard in important areas such as governance, management, ethics, societal concerns, justice, rule of law, trustworthiness (from both a technical and societal perspective), and technical aspects such as computational techniques and approaches.

An important current focus of IT-043 is influencing the development of AI Management System (ISO/IEC CD 42001), which will be able to be used in conjunction with management systems for privacy and information security and will provide a pathway to certification.

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Using standards to support responsible AI regulation

The Australian Government has a critical role in raising awareness and promoting regulatory best practice for responsible AI in Australia.

All levels of governments must carefully consider implementing relevant international standards as the basis for establishing common approaches to the regulation of responsible AI.

To support these considerations, SA suggests the Australian Government work with SA and industry to carefully consider how standards are to be best used for what purposes and in relation to specific public policy requirements. This could result in practical guidance material that might include detail on how to select standards and how to implement standards for specific policy objective use cases.

In addition, the Australian Government could consider working with Standards Australia to set up a Standards hub to improve collaboration between regulators, standards-setters and industry participants, and to trial new more agile approaches to responsible AI standards for Australia.

Government regulators can benefit from standards that establish a solid technical base that can be used to establish policy objectives and can be used as a means of demonstrating conformance with emerging regulatory requirements. While assurance frameworks based on standards can facilitate understanding of AI and its capabilities as well as promote the adoption of appropriate procedures at all key levels, including the data, algorithm and organisational levels.

Internationally, AI standards (ISO/IEC and IEEE) are increasingly being referenced in policy and legislation. For example, the European Union is looking to leverage the work of ISO/IEC JTC 1/SC 42, Artificial intelligence, the key international committee working on AI standards, to certify AI systems under its forthcoming AI Act. With any AI laws likely to have extraterritorial scope, international standards provide an opportunity to help shape best practice and to enhance regulatory compatibility, where they are leveraged as a means of demonstrating conformance with emerging regulatory requirements.

As per the findings of the Artificial Intelligence Standards Roadmap, there are ongoing opportunities for the Australian Government, Standards Australia and key industry participants to engage on international AI standards in considering approaches to the regulation of emerging AI technologies.

Safety and Security: Security-by-design

One key area is safety and security, where SA suggests that the ‘security-by-design’ model may be appropriate for addressing concerns on security as they relate to AI. The proliferation of cyber security risks facing Australia means the development of security-by-design could be a fundamental enabler of both safety and privacy.

It is now widely recognised that digital products and services should have a level of security built-in by design so that the next series of emerging technologies are built with security at the core and are able to be safely adopted. Security-by-design is particularly critical for the next wave of technologies as it is unlikely that traditional cyber security mitigations will be effective in addressing key security concerns.

AI systems should be developed with security built-in ‘by design’. Developing policy frameworks that ensure security in the maturing AI industry will be necessary to maintain information security,

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privacy and safety and ensure that Australia's systems and networks are secure and resilient. AI security standards, governance frameworks, and management systems, which complement both national regulations and global conventions, will provide greater certainty to industry as AI matures.

For this reason, Standards Australia suggests that the Australian Government consider supporting the development of a security-by-design initiative, which leverages existing Standards used in the market, and which recognises and supports the work being carried out by Australia's safety-by-design initiative.