

# ARM HUB POLICY

## GUIDELINES FOR THE RESPONSIBLE USE OF ARTIFICIAL INTELLIGENCE (AI)

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This policy has been prepared by Dr Cori Stewart, Founder and Chief Executive Officer of the ARM Hub. *AI generated content is used within this document.*

### OVERVIEW

The rapid evolution of AI technologies and their integration into our lives demands a proactive approach to its responsible use.

The ARM Hub adopts the definition of responsible use of AI as a 'practice of developing and using AI systems in a way that provides benefits to individuals, groups and wider society, while minimising the risk of negative consequences.'<sup>1</sup>

The ARM Hub's *Guidelines for the responsible use of AI* instructs Hub staff and affiliates<sup>2</sup> in the judicious use of AI in the workplace.

The guidelines support best practices in data integrity and ethical standards, and acts as an exemplar for the responsible use of AI to our stakeholders.

The guidelines illustrate how AI is to be used in the ARM Hub and provides examples of approaches for both the internal and the external use of AI.

'Internal use' describes the ARM Hub's staff and affiliates use of AI in the Hub's own business operations.

<sup>1</sup> 'Good AI, bad AI: decoding responsible artificial intelligence' (CSIRO, 2023)

<sup>2</sup> Affiliates are people or organisation officially attached to the ARM Hub through partnership or similar formal arrangements.

'Research and industry use' describes the use of AI that is developed by the ARM Hub and its affiliates for external via the Hub's services, encompassing collaborations with industry and research organisations.

Importantly, the guidelines support the ARM Hub's strategic vision for AI in industry by demonstrating best practice, including continuously evaluating these guidelines to incorporate advances in technology, new knowledge and learnings.

Leadership of the *ARM Hub's Guidelines for the use of Responsible AI* is undertaken by the Chief Executive Officer.

The ARM Hub's belief, based on staff experience, is that companies benefit from understanding themselves as data organisations because it better equips them to unlock the value, relevance, and a competitive advantage from data and AI.

These guidelines have been created to support the data and AI work of the ARM Hub, its affiliates and stakeholders and has been written in consultation with the ARM Hub Board, staff, researchers, AI companies and representative from manufacturing.

To prepare this document a wide range of reference material has been reviewed alongside the inputs from stakeholders.

Multiple resources are identified in the footnotes as reference that can support the implementation of AI responsibility and the implementation of these Guidelines.<sup>3</sup>

<sup>3</sup> The New South Wales (NSW) AI Assurance Framework is a best practice example that contain useful steps for evaluating the use of AI, see <https://www.digital.nsw.gov.au/policy/artificial-intelligence/nsw-artificial-intelligence-assurance-framework>

## INTERNAL USE

### 1. PURPOSE

The ARM Hub will be an early adopter of AI and performs a role as a commercial demonstrator for our stakeholders.

The aim is not only demonstrating efficiency but ensuring that AI augments human abilities without compromising people's rights or ability to undertake their work.

### 2. PRINCIPLES

In January 2024, the Honourable Ed Husic, Australian Minister for Industry and Science announced:

'Mandatory guardrails to promote the safe design, development and deployment of AI systems will be considered, including possible requirements relating to:

- Testing – testing of products to ensure safety before and after release.
- Transparency – transparency regarding model design and data underpinning AI applications; labelling of AI systems in use and/or watermarking of AI generated content.
- Accountability – training for developers and deployers of AI systems, possible forms of certification, and clearer expectations of accountability for organisations developing, deploying and relying on AI systems.'<sup>4</sup>

The ARM Hub's guidelines, with its five principals for using AI (community benefit; fairness; privacy and security; transparency; and accountability), will address each of these considerations as a minimum standard and will further develop its requirements as appropriate to the role of the ARM Hub and its services to industry.

The examples for 'internal use' below both apply and adapt these principles to demonstrate how AI will be used in the ARM Hub.

Staff and affiliates in the ARM Hub are to complete and document all relevant questions before using AI in the Hub or building AI solutions for clients.

<sup>4</sup> <https://www.minister.industry.gov.au/ministers/husic/media-releases/action-help-ensure-ai-safe-and-responsible>



# Example

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## PRINCIPLES OF INTERNAL USE

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### Community benefit

AI should deliver the best outcomes for the citizen and key insights into decision-making.

#### Example

Ask if the project could cause significant or irreversible harms?

#### Effective practice

If the answer is moderate or higher, discuss the project with all relevant stakeholders and assess the ethical impacts, including Human Rights impacts. Consider the legal advice.

#### Example

Test the product before and after release to ensure safety.

#### Effective practice

Implement a feedback system from staff users of a system and/or monitor reports of AI system outputs.

# Example

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## PRINCIPLES OF INTERNAL USE

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### Fairness

Use of AI will include safeguards to manage data bias or data quality risks.

#### Example

Does the ARM Hub's internal chatbot generate information that is not correct, not fair, or potentially harmful? Ask if the chatbot has the appropriate performance measures and targets given identified harms?

#### Effective practice

Ensure you have a record of any internal data that is used by the chatbot. Identify and track measures of success for the chatbot. Ensure staff members have the ability to override or adjust chatbot suggestions based on their understanding.

# Example

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## PRINCIPLES OF INTERNAL USE

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### Privacy and security

AI will include the highest levels of assurance.

#### Example

If an AI model requires data from the Hub's internal sources containing personal or confidential information, ensure access controls are applied. Where needed anonymise the data or be able to exclude the data before processing.

#### Effective practice

Refer to the standards for Data Centric AI.<sup>5</sup> Only approved personnel have access to data and consider using data anonymisation tools (such as those identifying fields to be omitted) before feeding data into AI systems. Store confidential data that cannot be included in an AI system separately. Adhere to existing Privacy laws and standards pertaining to the ARM Hub.

<sup>5</sup> See, Whitepaper, Data-Centric AI, Standards Australia, 2023

# Example

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## PRINCIPLES OF INTERNAL USE

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### Transparency

**Review mechanisms will ensure citizens can question and challenge AI-based outcomes.**

#### **Example**

Any document generated using AI for analysis should carry a tag or watermark stating its AI-driven origin. An example tag is made at the start of this document.

#### **Effective practice**

ARM Hub will implement a notation system for all documents, products or services that use AI-powered software to generate outputs.<sup>6</sup>

<sup>6</sup> One similar policy is highlighted by the Association of Computer Machine and its policy on authorship, <https://www.acm.org/publications/policies/new-acm-policy-on-authorship>, last viewed January 2024.



# Example

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## PRINCIPLES OF INTERNAL USE

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### Accountability

**Accountability - decision-making remains the responsibility of organisations and individuals.**

#### **Example**

Identify staff and affiliates responsible for using, monitoring, the outcomes and governance of AI system.

#### **Effective practice**

An accountability system is established and documented with a line to the CEO and/or Board for final accountability.

#### **Example**

Ensure contractors, staff and affiliates creating AI solutions are suitably qualified to creator and/or deploy AI systems responsibly.

#### **Effective practice**

At both the project scoping and project commencement phases undertake a review of the qualifications of relevant personnel creating and/or deploying AI systems.





## RESEARCH & INDUSTRY USE

### 1. PURPOSE

Our external AI offerings aim to provide industry-leading solutions that better enable research and industry innovation, collaboration and commercialisation.

This section ensures that our services are delivered responsibly and are relevant, ethical, transparent and beneficial to our clients.

In addition to the AI applications demonstrated in the ARM Hub above, the Hub will provide AI services and participate in AI collaborations that seek to accelerate the adoption of AI responsible in industry.

# Example

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## PRINCIPLES OF EXTERNAL USE

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### Community benefit

AI should deliver the best outcome for the citizen, and key insights into decision-making. To achieve this goal, support the needs of clients to make it possible.

#### Example

If we offer an AI-driven product such as an optimisation solution, provide clients with clear documentation on how the AI makes decisions.

#### Effective practice

Create clear documentation such as user manuals and FAQs for each AI service.

#### Example

Test the product before and after release to ensure safety.

#### Effective practice

Implement a feedback system from users of a system and/or monitor output from AI systems.



# Example

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## PRINCIPLES OF EXTERNAL USE

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### Fairness

Use of AI will include safeguards to manage data bias or data quality risks.

#### Example

When creating AI systems with and for clients ensure shared understanding of any bias (and potential for bias) in data, data quality risks (such as data drift) and algorithmic impact.

#### Effective practice

Document the bias, data quality risks and conduct and algorithmic impact assessments. Document actions and maintain this documentation using agreed tools and processes.

# Example

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## PRINCIPLES OF EXTERNAL USE

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### Privacy and security

AI will include the highest levels of assurance.

#### Example

Establish secure systems and maintain data security measures such as never storing data at rest containing personally identifying information that is not encrypted.

#### Effective practice

Use an integrated data platform such as ARM Hub's data lakehouse approach to consolidate data into a single location, making it easier to maintain security standards than having data across multiple sites.

# Example

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## PRINCIPLES OF EXTERNAL USE

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### Transparency

**Review mechanisms will ensure citizens can question and challenge AI-based outcomes.**

#### **Example**

If an AI tool is used as a decision-making tool or co-pilot, for example optimising production schedules, the methodology and assumptions should be documented.

#### **Effective practice**

Maintain a centralised documentation system for all AI-driven projects. Use tools nominated by the ARM Hub to guide documentation and if these tools are not identified consider using existing tools.<sup>7</sup>

<sup>7</sup> One similar policy is highlighted by the Association of Computer Machine and its policy on authorship, <https://www.acm.org/publications/policies/new-acm-policy-on-authorship>, last viewed January 2024.



# Example

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## PRINCIPLES OF EXTERNAL USE

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### Accountability

**Accountability - decision-making remains the responsibility of organisations and individuals.**

#### **Example**

ARM Hub AI-driven manufacturing optimisation should consistently provide results that are actionable and lead to tangible improvements.

#### **Effective practice**

Regularly gather client feedback and iterate on AI advice and models accordingly. Consider implementing a client portal for feedback or rating systems.

#### **Example**

Ensure ARM Hub created AI solutions are made by suitably qualified staff about to deploy AI systems responsibly.

#### **Effective practice**

At both the project scoping and project commencement phases undertake a review of the qualifications of relevant personnel creating and/or deploying AI systems.



## CONTINUOUS REVIEW AND ASSESSMENTS

Given AI is evolving rapidly, the ARM Hub will undertake regular systematic reviews of the Guidelines to keep our commitment to clients and stakeholders to deliver best practice, agile and accessible services for clients.

Where possible, the ARM Hub will establish client feedback systems reporting on our services as well as encouraging the use of portals or client rating systems in external AI products to accelerate the responsible adoption of AI in industry.