Assessing Responsible AI through an ESG lens

Introducing an ESG-AI investor framework

December 2023

CSIRO Australia's National Science Agency

As excitement around artificial intelligence (AI) grows, Australia's national science agency, CSIRO, and fund manager Alphinity Investment Management have joined forces to co-design a framework to help investors identify and manage emerging AI risks and opportunities by building on existing environmental, social and governance (ESG) foundations.

Responsible AI as a backdrop for competitive advantage in Australian industry

Since the launch of ChatGPT, investment in generative AI (Gen AI) technologies, products, solutions, and services has exploded around the world. Possibilities to expedite and improve existing processes and products abound. Opportunities to build entirely new products and services from gen AI are everywhere. But all this potential comes with important risks that need to be managed.

Responsible AI (RAI) is the 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.[1]

CSIRO's vision is to make Australia a world leader in responsible AI science and technology, making Australia's adoption of AI safe, secure, and reliable. To achieve this, it is essential for companies to adopt responsible AI practices and for investors to understand risks and rewards associated with the AI boom and their impacts on environment, social and governance (ESG) performance.

> **Our 'do no harm' principal is fundamental when we introduce new technology**[2]
>
> – David Walker, Group Chief Technology Officer, Westpac

> **Every Shell asset runs through a data platform and the number of AI use cases stretches into the hundreds** – Shell

Investors have a crucial role to play in shaping Australia's RAI ecosystem, yet there is a **lack of established guidance** for investors to navigate this rapidly evolving space. While RAI governance and implementation is in its early days, **AI overlay onto existing ESG frameworks is a method to bridge this gap**.

OUR GOAL: equip investors with the knowledge and skills they need to:

- Understand the AI state of play and how companies can integrate RAI successfully into ESG strategies and across their business.
- Assess RAI practices within companies, guided by a unique framework that is built upon existing ESG foundations.
- Advance RAI leadership in industry, and push for meaningful, standardised company disclosures.

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1   Q. Lu, L. Zhu, J. Whittle, X. Xu, Responsible AI: Best Practices for Creating Trustworthy AI Systems, Addison-Wesley Professional, 2023.

2   The quoted materials have been sourced from company interviews. Consent was obtained for the use of all quotes in this report.

The commercialisation of AI brings with it a promising future

GROWTH MARKET
BY 2030: AI market is estimated to be worth **AU$22.17 trillion** to the global economy[3]

LISTED COMPANY INTEREST
Highest number of S&P 500 companies **citing 'AI'** on Q2 earnings calls in over 10 years[4]

TRANSFORMING OUR WORKPLACES AND WORKFORCES
2/3 occupations at risk of automation[5]

$600 billion of anticipated economic activity facing Gen AI disruption[5]

AUSTRALIA'S POTENTIAL
BY 2028: Digital and AI tech worth **$315 billion**[6]

INVESTMENT OPPORTUNITY
BY 2030: 7x amount invested annually in AI

IN 5 YEARS: Double daily users[7]

CHANGING REGULATION
31 countries have passed AI legislation and 13 more are debating AI laws[8]

Why unite responsible AI and ESG?

AI can accelerate or undermine company ESG performance. The uses of AI can positively or negatively affect ESG elements such as social licence, trust, data and privacy, bias, equity and inclusion, and human capital. Bringing them together makes sense for companies and investors alike.

We foresee that companies with a long-term strategy to design and adopt AI responsibly will future proof against regulatory shocks and loss of trust from consumers and investors, while maximising the vast opportunity set that AI creates.

> **It's important to have a safe sandbox in which to explore AI tools**
>
> – Keysight Technologies

3   Artificial Intelligence Roadmap: Solving problems, growing the economy and improving our quality of life (CSIRO, 2019)

4   Highest number of S&P 500 companies citing AI on Q2 Earnings (Factset, 2023)

5   Generation AI: Ready or not, here we come! (Deloitte Australia, 2023)

6   Artificial Intelligence Roadmap: Solving problems, growing the economy and improving our quality of life (CSIRO, 2019)

7   Generative AI: A quarter of Australia's economy faces significant and imminent disruption (Deloitte Australia, 2023)

8   AI Regulation is Coming – What is the Likely Outcome? (Centre for Strategic & International Studies, 2023)

Project snapshot

Driven by market need, we are developing an expert-led framework to support stronger integration of AI-related risks and opportunities into investment practices.

PHASE 1 – Deep dive interviews

We conducted 30 deep dive interviews exploring AI strategy, governance and risk management with digital and technology experts representing their companies.

Diverse sector and geographic representation from eight distinct sectors, with over half listed in Australia and the rest distributed across US, Europe and Asia.
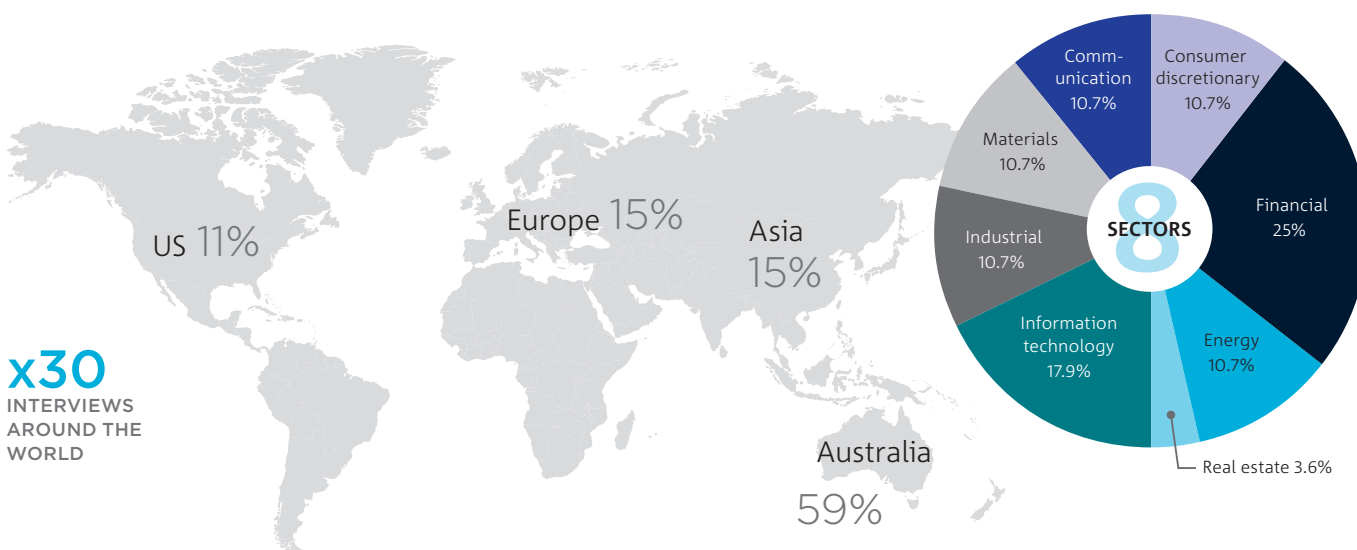
PHASE 2 – Framework design

To translate insights from interviews and experts into a practical investor tool, Alphinity and CSIRO's Data61 are currently designing a framework to empower investors to appropriately identify responsible AI risks and opportunities, building on existing ESG foundations.
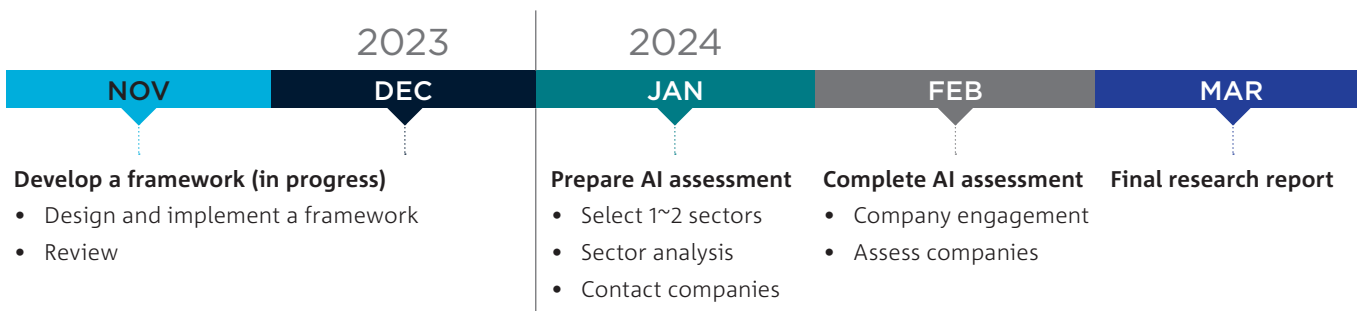
The framework is anchored in Australia's **Eight** AI ethics principles[9] and CSIRO's RAI research[10].

Ethics and user trust are paramount in our approach to AI

– MercadoLibre

x30 INTERVIEWS AROUND THE WORLD

US 11%
Europe 15%
Asia 15%
Australia 59%

8 SECTORS

- Communication 10.7%
- Consumer discretionary 10.7%
- Financial 25%
- Energy 10.7%
- Real estate 3.6%
- Information technology 17.9%
- Industrial 10.7%
- Materials 10.7%

Project timeline

2023		2024		
NOV	DEC	JAN	FEB	MAR

Develop a framework (in progress)
- Design and implement a framework
- Review

Prepare AI assessment
- Select 1~2 sectors
- Sector analysis
- Contact companies

Complete AI assessment
- Company engagement
- Assess companies

Final research report

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9   https://www.industry.gov.au/publications/australias-artificial-intelligence-ethics-framework/australias-ai-ethics-principles
10 https://www.csiro.au/en/research/technology-space/ai/responsible-ai

Framework design

The following pillars underpin the development of the framework for investors:

Established RAI principles endorsed by the Australian Government and developed by experts including CSIRO's Data61.

Investor AI question bank can be used to gain confidence in the company's RAI management capability, with specific questions for deeper analysis of companies with an elevated AI risk profile.

Materiality assessments with targeted analysis dependent on current and future AI use cases, high risk applications and their touch points with existing ESG considerations to move investor attention through a risk lens.

AI metrics to reveal successful RAI implementation or underexplored risks to guide investors in their own RAI assessments and encourage useful disclosures from companies.

USE CASE: Because current AI disclosures are limited, we expect that the framework will guide company engagement and encourage meaningful transparency. The framework will also be useful for companies to understand investor expectations and begin to shape disclosures for future years.

Insights from phase 1 deep dive interviews

INSIGHT 1: It's early days to consider RAI in ESG, however companies will need to accelerate AI strategy and governance to capitalise on AI opportunity and mitigate AI risk.

Always insource strategy, governance and risk, and hold responsibility for the outcomes – ANZ

For investors, evaluating a company's maturity in RAI practices, and their alignment with emerging standards, is becoming increasingly vital for long-term risk assessment and value creation.

- **Regulatory uncertainty persists**. Some companies are taking a wait and see approach, expecting the EU AI Act and international standards to drive a Brussels effect in RAI adoption.
- **ESG leadership is a lead RAI indicator**. Front runners are utilising existing ESG frameworks to overlap AI impacts to issues such as privacy, trust, and discrimination.
- **The hesitancy to openly communicate about RAI poses an underexplored risk for investors.** Only 39% of interviewed companies have a public RAI policy or framework. Many companies that declined the interview felt there was not currently enough RAI information for them to share.
- **Limited disclosure should not be a barrier.** Even in the absence of company disclosure, we have identified useful RAI characteristics and metrics that will allow investors to assess RAI use.

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INSIGHT 2: Good ESG governance is both a springboard and a gauge for investors navigating the complex, evolving landscape of AI risk and opportunity.

Any system that incorporates AI technology and meets the definition of a sensitive use case must be reviewed by the Office of Responsible AI

– Lee Hickin, AI Policy and Governance Lead, Microsoft

We want to have digital systems that reflect our corporate values. A technology may tick the boxes and still not feel right for our culture. That's why we include Woodside values in our responsible AI framework – **Woodside Energy**

The often-invisible nature of RAI in practice adds complexity for investors who must scrutinise not just what is being said, but what is being done. A company's history in ESG governance can serve as a proxy for its commitment and capability across key areas, including Responsible AI.

- **Good ESG governance facilitates responsible AI implementation.** Robust ESG reporting and social license leadership enables companies to integrate RAI principles, and navigate complexities and ethical dilemmas associated with AI deployment.
- Rather than reinventing the wheel, **companies can leverage their established ESG frameworks to expedite responsible AI practices** and accelerate compliance with emerging RAI standards.
- **Unique risks posed by some AI use cases may demand specialised governance structures**. The final report will include RAI questions and metrics to support assessment of AI use cases that require more attention.

Investors seeking indicators of RAI leadership can look for clear AI strategy, dedicated RAI resources, published RAI policies, and strong existing ESG frameworks for data governance, privacy, bias, equity, and inclusion, as well as coherent plans for workforce transition as productivity gains are realised through AI.

We are investing 3 billion into AI and doubling the AI workforce from 40k to 80k to accelerate client reinvention – Accenture

In the short term, there may be tension between the commercialisation of AI products and RAI. But long term, laggards in responsible AI design and application carry significant risks.

- **AI cannot be considered in isolation** due to the interlinked nature of digital readiness and AI readiness **or assumed to be static**. Even companies without a large AI footprint could change rapidly with AI evolution.

- **Companies leading the pack** are integrating RAI into their long-term business strategies and asking probing questions about the future of their sectors in an AI-enabled world. As AI evolves, so does their AI strategy, taking into consideration sector-specific nuances, global trends, regulatory developments, and coherent plans for workforce transition as productivity gains are realised through AI.

- **RAI transparency and policies can increase investor confidence**. Transparency can include insights into internal decision-making about where and how to deploy AI, to external communication that helps investors understand the company's approach to mitigating risks and ensuring ethical practice.

Mirvac uses a risk-reward matrix. Our approach to AI is context specific and risk aware. The whole area is full of unknown unknowns, but it will clearly impact most industries and we need to get in front of it. – Mirvac

We are taking a human in the loop strategy
– Worley Parsons
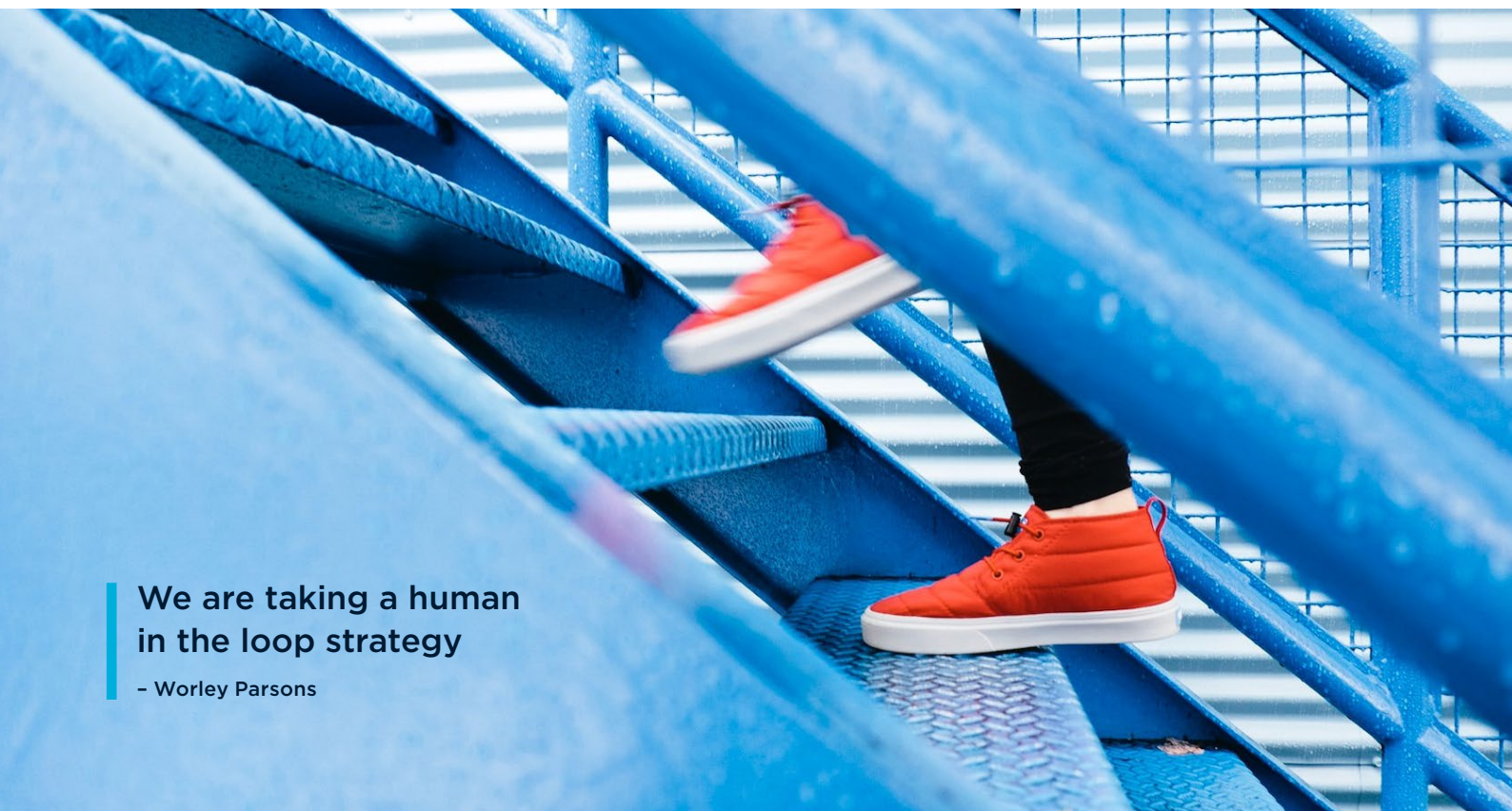
Next steps

Over the coming months, we will finalise the framework, prepare AI assessments along with sector analyses, and complete AI assessments with a range of companies and stakeholders.

We are calling on stakeholders to help Australia create our best possible AI future. It is our hope that this research will serve as a useful guide for investors to integrate RAI considerations within their ESG systems and take part in more informed AI discussions. This will support the opportunities brought by AI for individuals, societies, and the environment, while balancing risks for all. We look forward to releasing our final report in March 2024.

Register your interest in the report by visiting **csiro.au/RAIESG**

As Australia's national science agency, CSIRO is solving the greatest challenges through innovative science and technology.

CSIRO. Creating a better future for everyone.

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