Ethical AI for sustainable adoption

Connecting AI and ESG

Machine learning
More science than fiction

Explainable AI:
Putting the user
at the core
Think Ahead

MEANINGFUL WORK FOR THE DIGITAL PROFESSIONAL
ROADMAP BEYOND THE PANDEMIC

EY

12%

86%

Ethics and
trust in a
digital age
Think Ahead

ETHICS IN A
COVID-19 WORLD
Think Ahead

CODING: AS A
PROFESSIONAL
ACCOUNTANT,
WHY YOU
SHOULD BE
INTERESTED

ETHICS FOR SUSTAINABLE AI ADOPTION
CONNECTING AI AND ESG

ACCA Think Ahead

CHARTERED ACCOUNTANTS
AUSTRALIA · NEW ZEALAND

DIFFERENCE
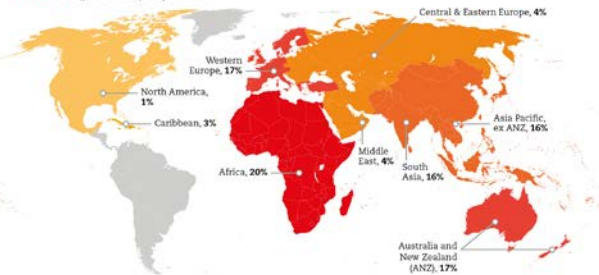MAKERS™

© ACCA   Public

Methodology

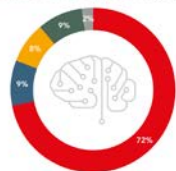This report is based on the following primary sources.

- **Global survey: 5,723 respondents**
  Regional and country-specific data is available in the appendices.

LOCATION of global survey respondents

Central & Eastern Europe, **4%**

Western Europe, **17%**

North America, **1%**

Caribbean, **3%**

Asia Pacific, ex ANZ, **16%**

Africa, **20%**

Middle East, **4%**

South Asia, **16%**

Australia and New Zealand (ANZ), **17%**

EMPLOYMENT STATUS of global survey respondents

9%

8%

9%

72%

- Part/full-time accounting or finance related role, **72%**
- Part/full-time non-accounting or finance related role, **9%**
- Not currently working/career break/retired, **8%**
- Studying full-time, **9%**
- Other, **2%**

- **Online discussion group (ODG):** in keeping with the qualitative nature of ethics, survey data was supplemented with an online discussion. This involved 42 accountancy and finance professionals from around the world in an online forum on AI ethics that took place over five days.

LOCATIONS OF ODGs	
Africa	7
Asia Pacific	7
Caribbean	5
Europe	11
Middle East	3
South Asia	7
Other	2
TOTAL	42

- **Expert interviews:** a list of individuals consulted is given in the Acknowledgements.
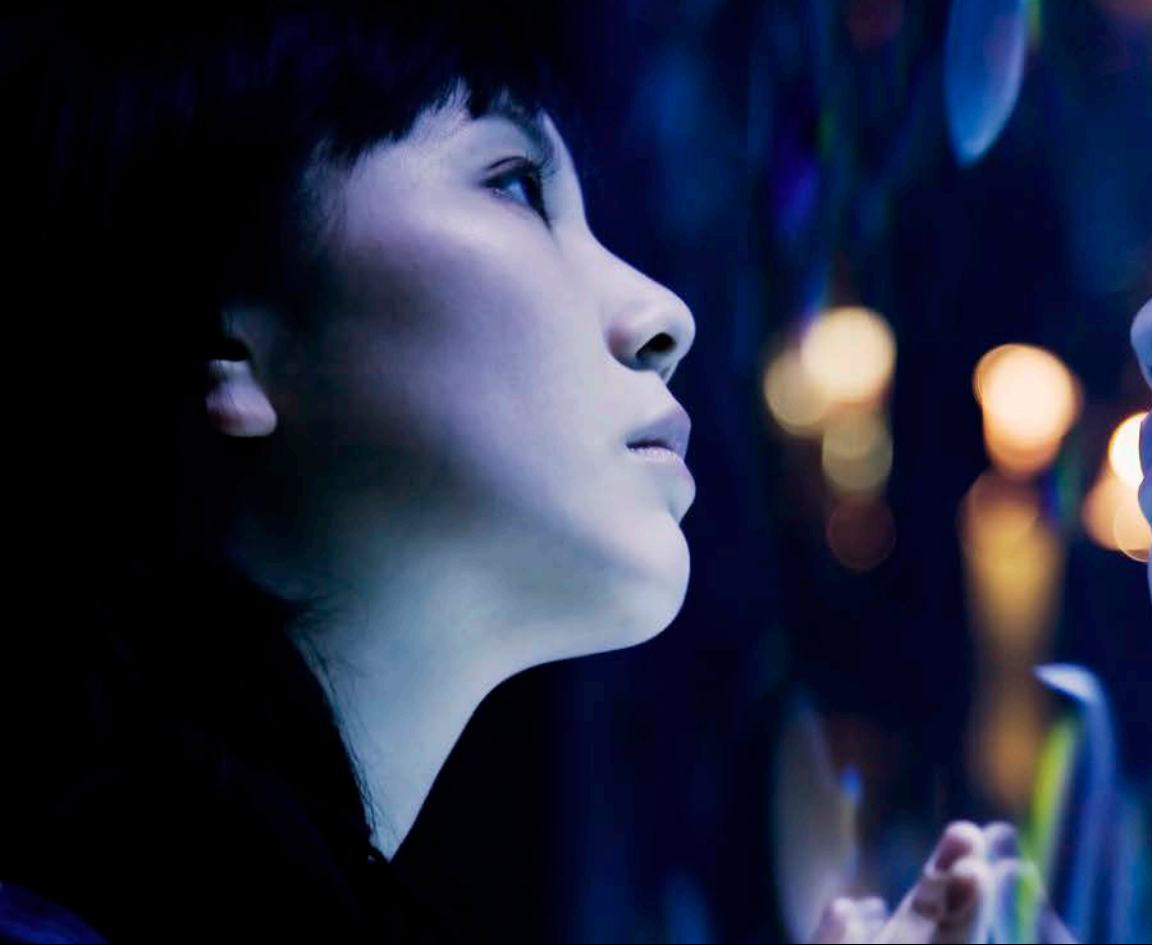
'I agree that leaders in my organisation prioritise ethics as highly as generating profits'. **66%**

LIVING WITH AI: *The impact of AI is positive/very positive on…*

43% My rights as an INDIVIDUAL *(eg safety and personal security, discriminatory treatment, lack of choice, lack of transparency)*

51% My ability to live according to my values

35% My rights as a CONSUMER *(eg how my data is used by a company, discriminatory treatment, lack of transparency)*

64% The overall standard of living in society

47% My rights as an EMPLOYEE *(eg fair and transparent hiring and remuneration practices)*

32% Levels of inequality within society

USING AI:

48% I have a basic understanding of how an AI algorithm works

7% My organisation uses AI in audit and assurance

19% My organisation uses AI for accountancy and finance related tasks or functions *(eg preparing financial statements, management reporting, to inform decision making etc)*

15% My organisation uses AI outside of the accountancy and finance function

GOVERNING AI:

21% My organisation has implemented an ethical framework for AI use

64% My organisation is effective/very effective in managing DATA QUALITY

35% My organisation has considered relevant regulatory requirements for AI use

72% My organisation is effective/very effective in managing DATA CONFIDENTIALITY

DATA QUALITY – My organisation's biggest challenge within the data life cycle is:

| **44%** Collection | **33%** Use | **27%** Secure storage | **19%** Dissemination/Spread | **9%** Lawful destruction |

DATA CONFIDENTIALITY – My organisation's biggest challenge within the data life cycle is:

| **16%** Collection | **23%** Use | **46%** Secure storage | **26%** Dissemination/Spread | **17%** Lawful destruction |

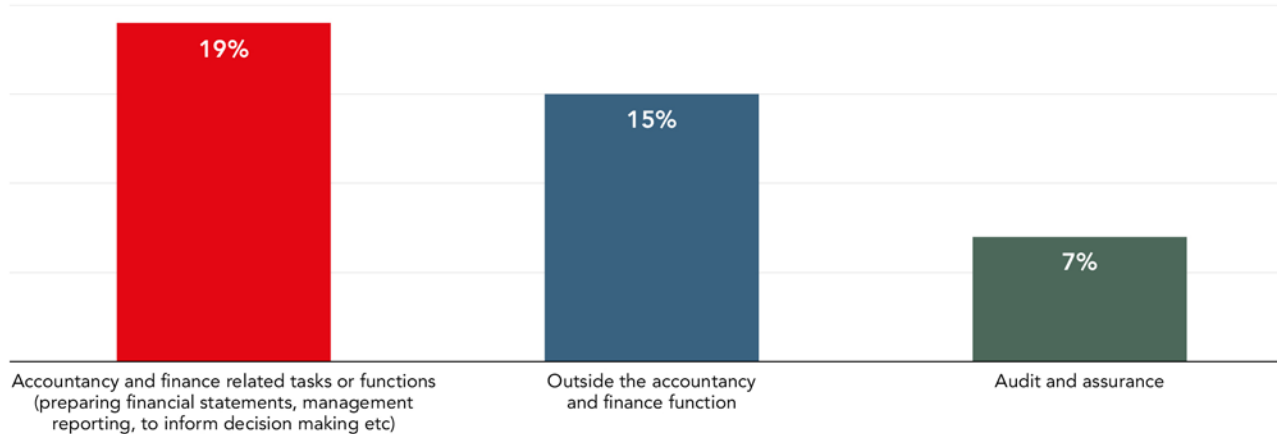|	OBSERVATION	ETHICAL IMPLICATIONS FOR ACCOUNTANCY AND FINANCE
ENVIRONMENT	■ AI systems have an identifiable carbon footprint	■ **Professional competence and due care** in engaging vendors to assess implications
	■ With focus on the path to net-zero, some will attempt to misrepresent sustainability performance	■ **Objectivity** to assess claims v performance to challenge 'greenwashing'. **Professional competence and due care** to upskill on upcoming reporting requirements and role of AI to assess compliance
SOCIAL	■ Positive AI impact on overall standard of living cited by 64% but on societal inequality by just 32%	■ **Public interest** obligation, particularly to under-represented or vulnerable groups
	■ Fewer than half (47%) positive about AI impact on rights as an employee	■ **Integrity** in communicating impact of AI to employees in straightforward way
	■ Just over a third (35%) positive about AI impact on rights as consumers	■ **Confidentiality** of customer data and treating customers fairly. **Integrity** in communicating transparently when AI is being used
GOVERNANCE	■ Algorithms are shaped by ideas, cultures, and values	■ **Professional judgement** cannot be replaced by a compliance-based checklist
	■ Only 2 in 3 leaders prioritise ethics as highly as profits	■ **Professional competence and due care** obligation to ensure responsible AI adoption
	■ 1 in 3 have considered regulatory requirements	■ **Professional standards** for compliance with evolving AI regulatory landscape
	■ 13% using AI without considering regulatory needs	■ **Professional standards** at risk of compromise
	■ 28% using AI without an ethical framework	■ **Professional competence and due care** challenge
	■ Adopting AI is a strategic decision needing coordination across siloes and spearheaded by senior leaders.	■ **Professional competence and due care** for oversight and delivery mechanisms
	■ Only 1 in 3 aware of AI use in their industry	■ **Professional competence and due care** challenge ensure sufficient AI knowledge to interrogate vendor offer
	■ Good documentation is key to tracking what AI is doing	■ **Professional competence and due care** in operationalising control and monitoring
	■ 75% effective or very effective at data confidentiality	■ **Confidentiality** and **Professional standards**: need to handle data in a compliant manner
	■ Fewer than half (48%) have a basic understanding of how an algorithm works	■ **Professional competence and due care** to understand what the AI system is doing. **Integrity** in not passing accountability to the algorithm.
	■ Channels to contest AI decisions are vital	■ **Professional competence and due care** in setting up mechanisms for redress
	■ Need for training on ethical implications of AI	■ **Professional competence** obligation for continuous learning and development

IESBA®

GLOBAL ETHICS DAY

AI and the environment (1/3): data explosion, including unstructured

AI adoption, by use case

19%	15%	7%
Accountancy and finance related tasks or functions (preparing financial statements, management reporting, to inform decision making etc)	Outside the accountancy and finance function	Audit and assurance

AI and the environment (2/3): energy consumption

Responsible computing (IBM)

'The main impact AI has on creating a sustainable planet is that it may lead to ecological costs in terms of energy needed to power training and inference stages of AI'. **ODG participant**

✓ **Ethics for accountancy and finance professionals:** Professional competence and due care must be applied when engaging vendors to assess environmental implications of AI.

AI and the environment (3/3): greenwashing

Double materiality (Datamaran)
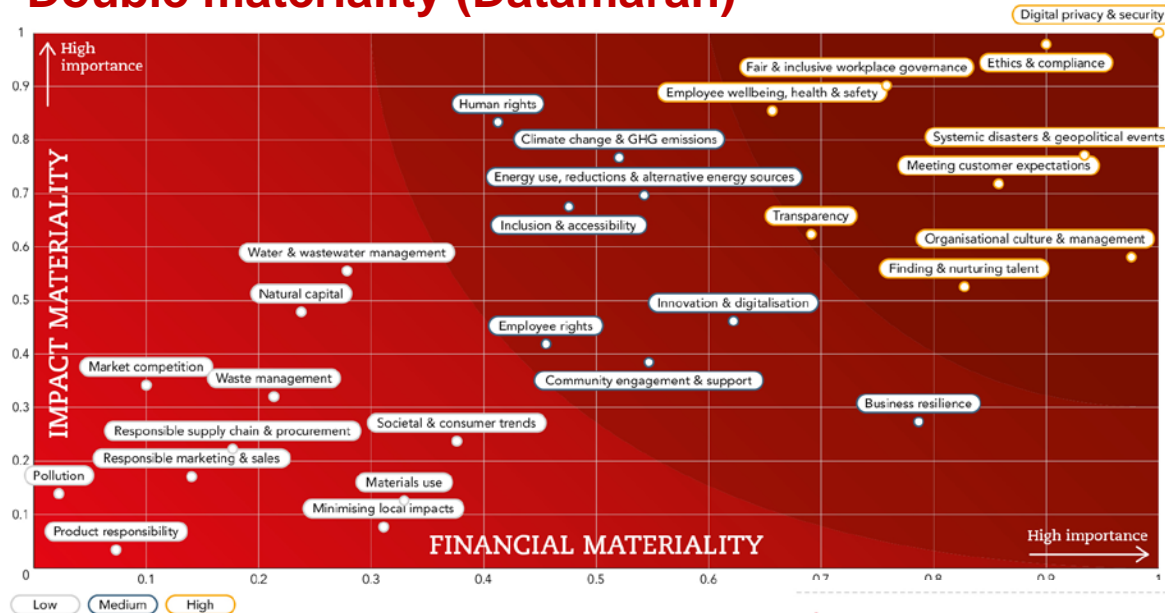
'The main impact AI has on creating a sustainable planet is that it enables efficient use of natural resources by closely monitoring the consumption pattern'. **ODG participant**

✓ **Ethics for accountancy and finance professionals:** Integrity in challenging greenwashing if encountered; objectivity in assessing Green Claims versus Green Performance, regardless of pressures that may be applied; and professional competence and due care to address upcoming ESG reporting and assurance considerations, eg TCFD requirements.
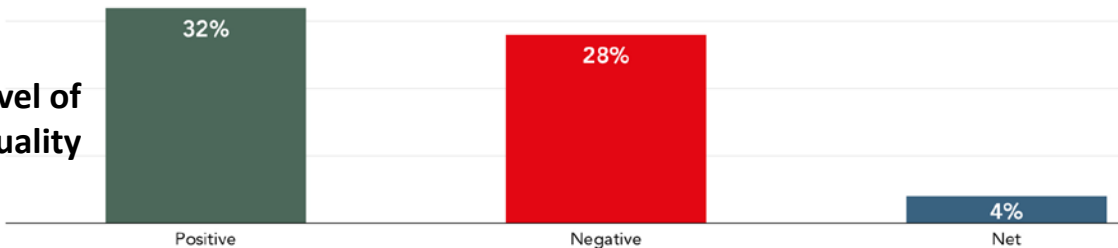
AI and society (1/3): rising tide to lift all boats?

Overall standard of living

64% Positive

11% Negative

53% Net

Level of inequality

32% Positive

28% Negative

4% Net

Not to scale
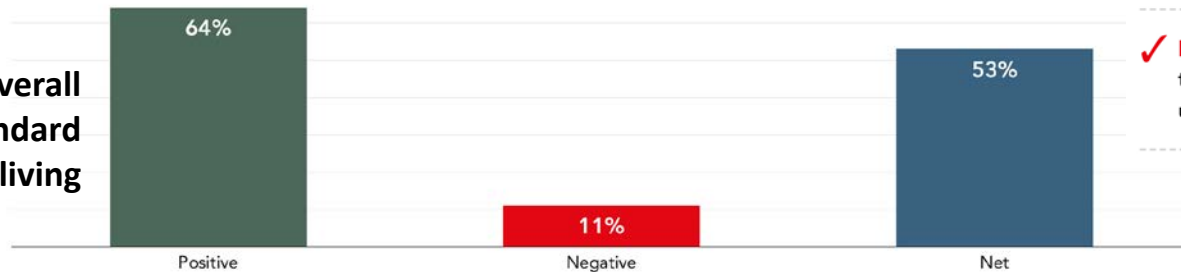
✓ **Ethics for accountancy and finance professionals:** there is a public interest obligation, particularly to under-represented or vulnerable groups.

'The government's tax-collecting arm has announced that it will use AI to detect tax evaders. Therefore, I expect an end to the corruption and an increase in government revenue'. **ODG participant**

'I feel my rights as a citizen are restricted as assumptions are made about me based on scattered data collected'. **ODG participant**

AI and society (2/3): availability, quality of work

Impact of AI on my rights as an employee
(eg fair and transparent hiring and remuneration practices)

Positive	Negative	Net
47%	18%	29%
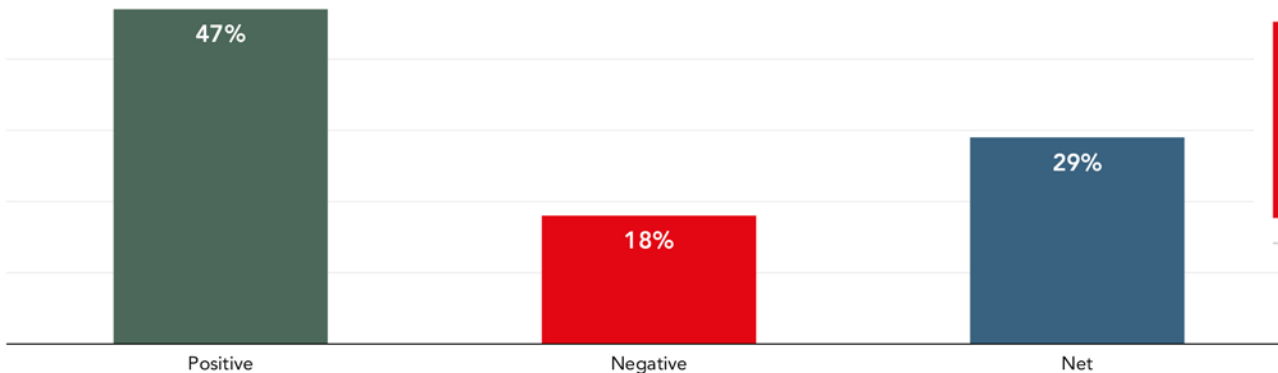
✓ **Ethics for accountancy and finance professionals:** Integrity is essential in communicating impact of AI to employees in straightforward way.

'My rights as an employee are both positively and negatively impacted by AI. Positives could be increasing productivity, and less [involvement in] boring activities. Negatives are that AI processes might dictate human behaviour, forcing the employee to behave in certain way to align – which will restrict freedom'. **ODG participant**

AI and society (3/3): consumer distrust

Impact of AI on my rights as a consumer
(eg how my data is used by a company, discriminatory treatment, levels of transparency)

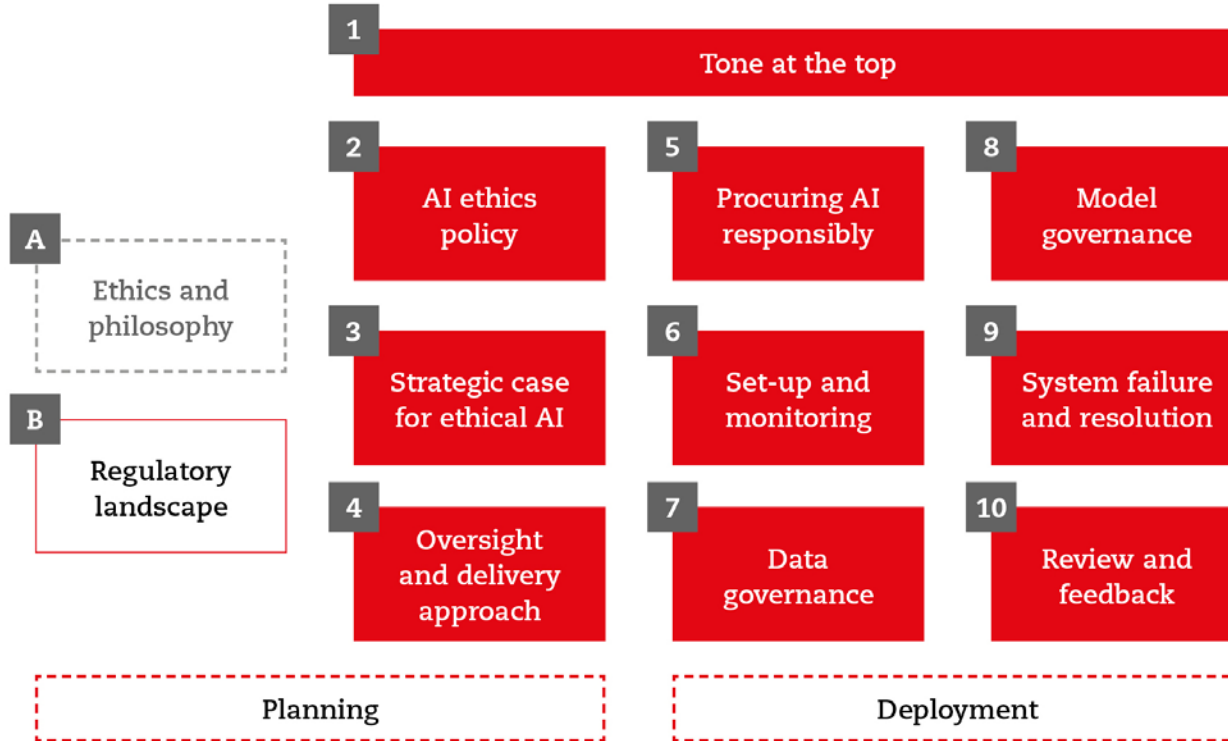|		
35%	34%	1%
Positive	Negative	Net
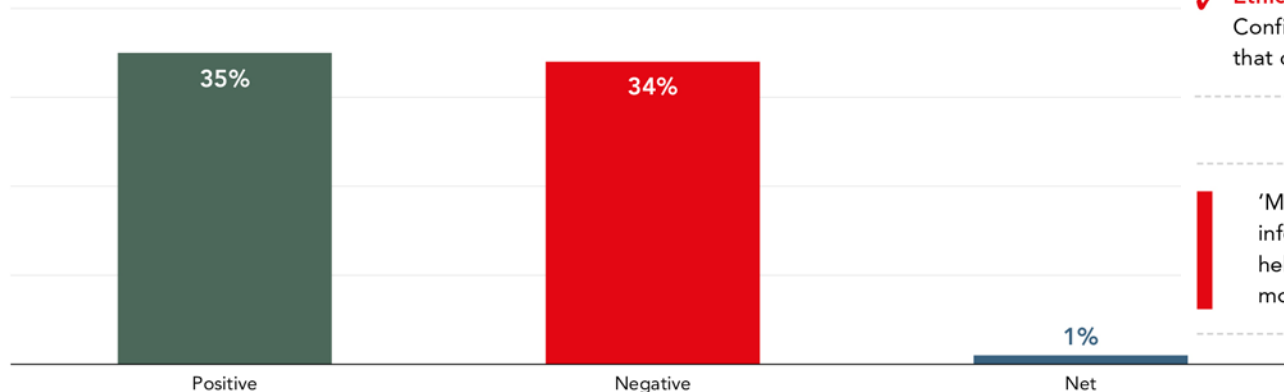
✓ **Ethics for accountancy and finance professionals:** Integrity is essential in transparently representing when AI is being used and not marketing other software as AI.

✓ **Ethics for accountancy and finance professionals:** Confidentiality of customer data is essential to ensure that customers are being treated fairly.

'My rights as a consumer are infringed, with information collected being processed somewhere to help interested parties plan their business and make money'. **ODG participant**
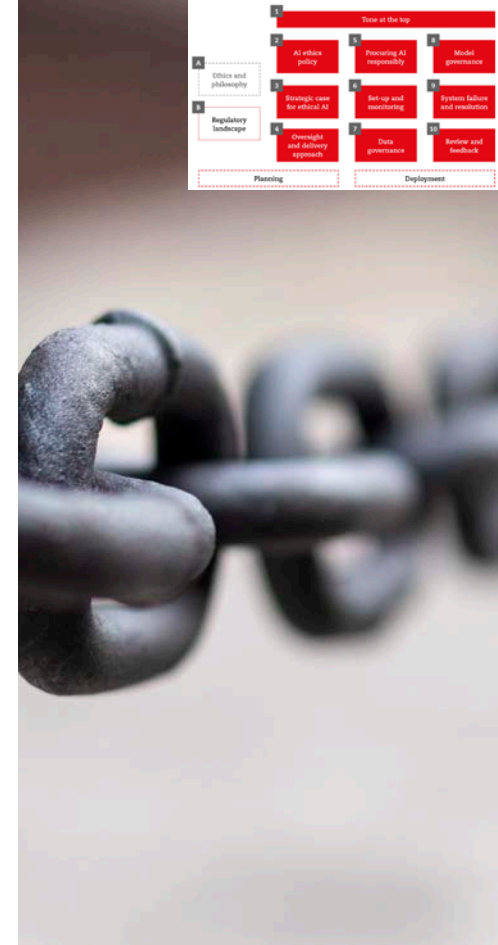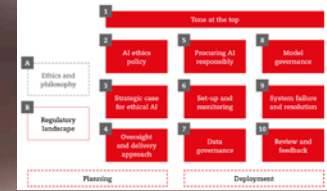
AI and governance (1/14)

1	Tone at the top

A Ethics and philosophy

B Regulatory landscape

2 AI ethics policy	**5** Procuring AI responsibly	**8** Model governance
3 Strategic case for ethical AI	**6** Set-up and monitoring	**9** System failure and resolution
4 Oversight and delivery approach	**7** Data governance	**10** Review and feedback

Planning — Deployment

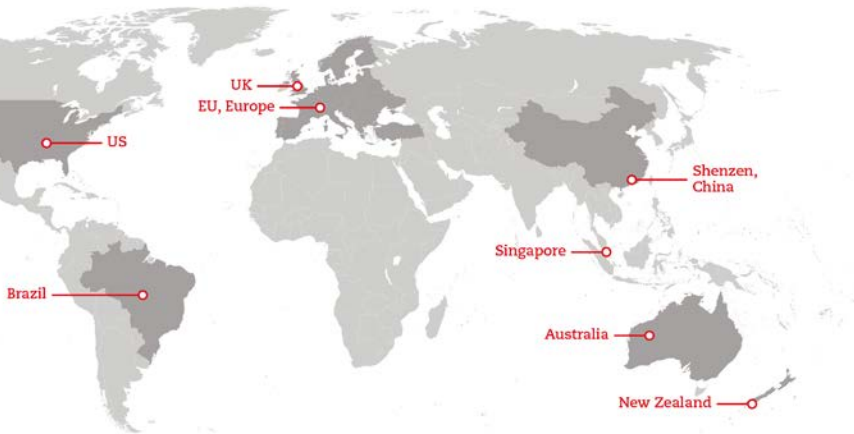# AI and governance (2/14): right and wrong

✓ **Ethics for accountancy and other finance professionals:** professional judgement cannot be replaced by a compliance-based checklist.

'I fear sometimes in the future when AI is at its full capacity, whether the human being could be forced to conform to one set of values'. **ODG participant**

HOW ALGORITHMS ARE DEVELOPED AND DEPLOYED IS THE NEW BATTLEGROUND OF IDEAS, CULTURES, AND VALUES.

AI and governance (3/14): regulation

✓ **Ethics for accountancy and finance professionals:** Professional standards for compliance will change with the evolving regulatory landscape of AI.

AI needs to be regulated...like with most things when there are laws/ guides then there are rules to adhere to. **ODG participant**

UK — **EU, Europe** — **US** — **Shenzen, China** — **Singapore** — **Brazil** — **Australia** — **New Zealand**

EU, Europe (Apr, 2021)
The aim is to establish a framework that provides the legal certainty to facilitate innovation and investment in AI, while also safeguarding fundamental rights and ensuring that AI applications are used safely (Eur-Lex 2021; Norton Rose Fulbright 2021).

Shenzen, China (Jun, 2021)
Regulations on the Promotion of Artificial Intelligence Industry of Shenzhen Special Economic Zone. China's first general AI regulation. <https://www.nortonrosefulbright.com/en/knowledge/publications/fdfc4c27/eu-to-propose-new-artificial-intelligence-regulation>

US (Jan, 2021)
National AI Initiative Act became law in January 2021. Provides for a coordinated program across the entire Federal government to accelerate AI research and application for the nation's economic prosperity and national security (National Artificial Intelligence Initiative 2021).

New Zealand (Jul, 2020)
Algorithm Charter. Principles-based as opposed to a regulatory approach. Part of a wider ecosystem around responsible AI. Voluntary and aims to improve government transparency and accountability without stifling innovation or causing undue compliance burden (data.govt.nz 2021).

UK (Mar, 2021)
No AI-specific legislation. Laws must be technology agnostic to ensure that future technology will still be subject to an overarching legal framework. (DCMS n.d.).

Australia (Jun, 2021)
Australia does not have specific laws regulating AI, big data or algorithmic decision making. However, the Australian government has issued its AI ethics framework (Australian Government n.d.).
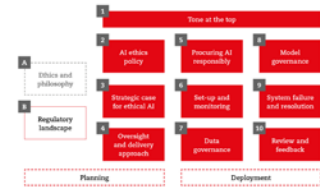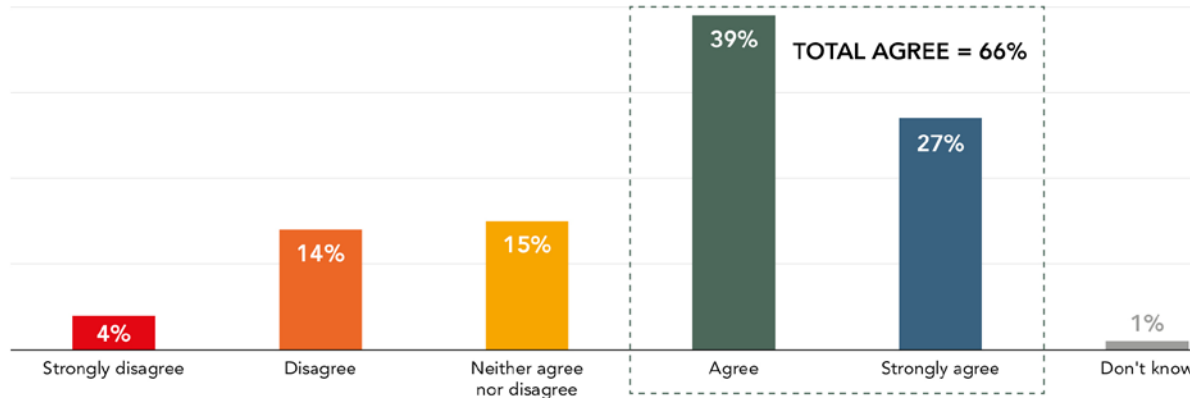
Singapore (Jan, 2019)
Model AI Governance Framework. Introduced at World Economic Forum (WEF) in Davos in 2019, with updates a year later at the same event. (SG:D, IM and PDPC 2020).

Brazil (Apr, 2021)
Aims to balance ethical use of the technology with boosting research and innovation in the sector (Mari 2021).

AI and governance (4/14): tone at the top

Leaders prioritise ethics as highly as profits

Strongly disagree: 4%
Disagree: 14%
Neither agree nor disagree: 15%
Agree: 39%
Strongly agree: 27%
Don't know: 1%

TOTAL AGREE = 66%

'The attitude toward AI from the CEO/Leadership team…is to sell anything remotely close to it for as much money as possible'. **ODG participant**

'I think it depends on the top-down leadership approach towards AI adoption. Once the leadership is committed to transforming the organisation, opportunities keep arising day by day. We started using AI for forecasting, then RPA, Live Chat, Chatbot, and the journey continues at pace'. **ODG participant**

AI and governance (5/14): implemented ethical framework for AI
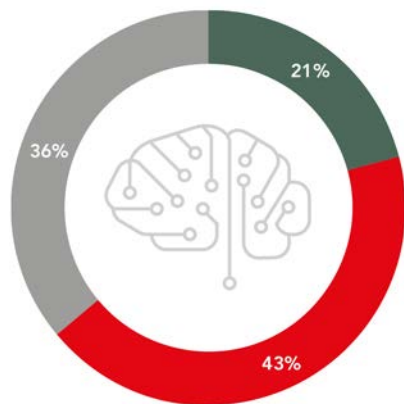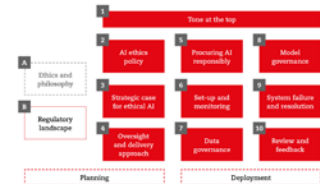
- Yes, **21%**
- No, **43%**
- Don't know, **36%**

1. Fairness
- Avoid unfair bias and discrimination against individuals or groups
- Be inclusive and incorporate diverse perspectives in design and deployment

2. Accountability
- Provide clarity on who is responsible for the decision
- Provide a process for challenging a decision and seeking redress

3. Sustainability
- Human-centred AI supports flourishing of, and avoids harms to, individuals and societies
- Consider long-term impact on people and planet

4. Transparency
- Appropriate disclosures when AI is used
- Explain how a decision is reached

5. Human oversight
- Humans have visibility and ability to monitor
- Humans can step in and remedy if needed

6. Ethical use of data
- Embed data privacy and confidentiality mechanisms
- Consider the needs of subjects whose data is used by the AI system

7. Safety and robustness:
- Ensure security and reliable operation, as intended, through the life cycle
- AI should be resilient, with a fall-back plan for managing system failure
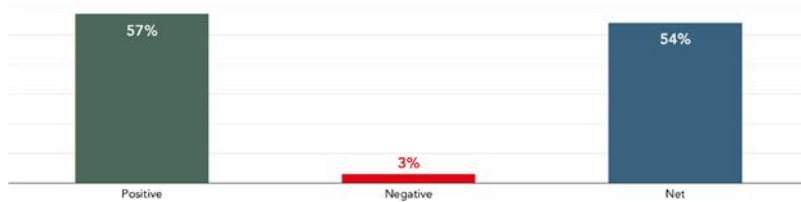
8. Standards and law
- Act within legal and regulatory requirements
- Ensure continuing compliance as AI regulation matures

AI and governance (6/14): strategic case for ethical AI

Impact of AI on the integrity of financial information produced

Bar chart: Positive 57%, Negative 3%, Net 54%

✓ **Ethics for accountancy and finance professionals:** Objectivity is essential in recognising fully loaded costs and long-term value.

'The organisation provides a customised server/storage business model to its customers, thereby reducing the cost for the customer and reducing waste of space and resources. We use AI-based reports to produce/pull data, which cuts the time by 70% compared with pulling the financial data manually'. **ODG participant**

FOR AN ETHICAL AND SUSTAINABLE APPROACH, THE BUSINESS CASE FOR AI IMPLEMENTATION MUST CONSIDER LONG-TERM TRENDS RATHER THAN SEEKING THE LATEST TOOL SIMPLY FOR FEAR OF MISSING OUT

AI and governance (7/14): oversight and delivery

'Finance leaders have a mix of strategic, financial, operational and governance skills that make them ideal for driving the adoption of ethical practices when using AI in their organisations'. **Karen Smith FCCA, Partner, IBM**
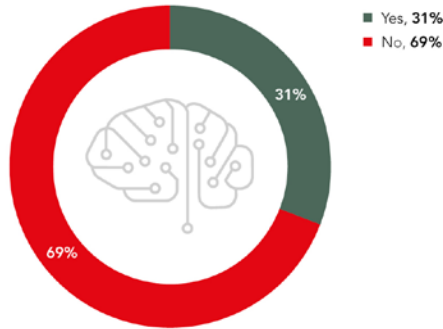
✓ **Ethics for accountancy and finance professionals:**
Professional competence and due care are essential in enabling appropriate oversight and delivery mechanisms.

AI IS A STRATEGIC DECISION AND SHOULD NOT BE SEEN PURELY FROM THE PERSPECTIVE OF AN INDIVIDUAL PROJECT DELIVERED DEEP WITHIN A BUSINESS UNIT. IT MAY USE DATA FROM VARIOUS PARTS OF THE ORGANISATION AND FROM EXTERNAL SOURCES, AND NEED COORDINATION ACROSS SILOES, SPEARHEADED BY SENIOR LEADERS.

AI and governance (8/14): procuring responsibly

I am aware of AI use within my industry

- Yes, **31%**
- No, **69%**

✓ **Ethics for accountancy and finance professionals:** Professional competence and due care are essential in engaging with and interrogating the offer from AI vendors in the context of the business need.

> 'I run the organisation and am very interested in use of AI to make better managerial decisions'.
> **ODG participant**

AI and governance (9/14): set-up and monitoring

- **Documentation**

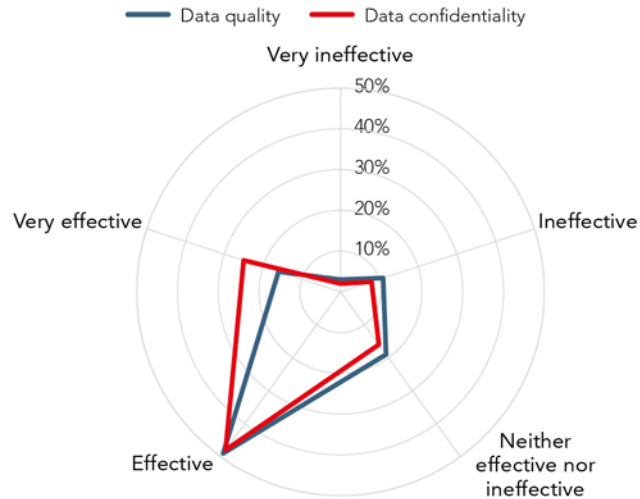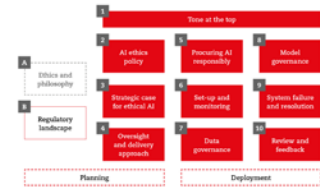- **Access controls**

- **Transparency**

- **Evaluations**

✓ **Ethics for accountancy and finance professionals:**
Professional competence and due care are essential in operationalising control and monitoring mechanisms.

'I feel implementation won't be easy as the models will need to factor various control points, for instance to analyse the transactions in general ledger, bifurcate and label transactions in buckets as per the risk level to accurately determine which transactions are high risk and low risk'. **ODG participant**
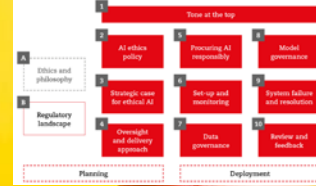
AI and governance (10/14): effectiveness in data quality and confidentiality

— Data quality   — Data confidentiality

Very ineffective

50%
40%
30%
20%
10%

Very effective

Ineffective

Effective
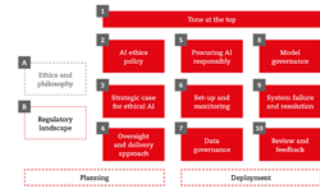
Neither effective nor ineffective
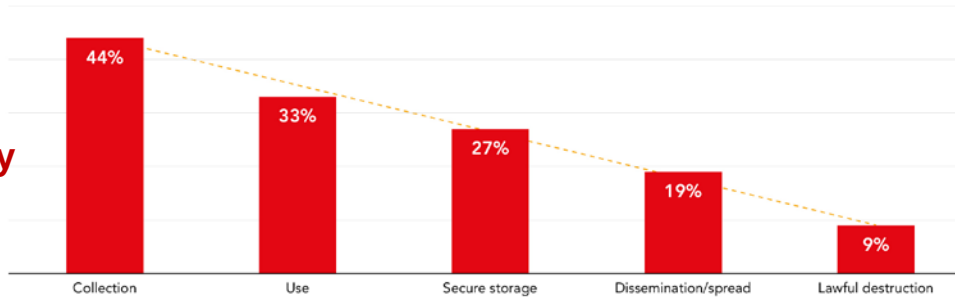
Note: Excludes 'Don't know'

'I feel implementation won't be easy as the models will need to factor various control points, for instance to analyse the transactions in general ledger, bifurcate and label transactions in buckets as per the risk level to accurately determine which transactions are high risk and low risk'. **ODG participant**

'We are using AI in Live Chat…[the] benefit is highly personalised service and to maximise organisational efficiencies. Data privacy is the biggest concern about using AI'. **ODG participant**

# AI and governance (11/14): biggest challenge in data life cycle

Data quality

44%	33%	27%	19%	9%
Collection	Use	Secure storage	Dissemination/spread	Lawful destruction

Data privacy

16%	23%	46%	26%	17%
Collection	Use	Secure storage	Dissemination/spread	Lawful destruction

✓ **Ethics for accountancy and finance professionals:** Confidentiality and professional standards are essential to ensure that data is handled in a compliant manner.
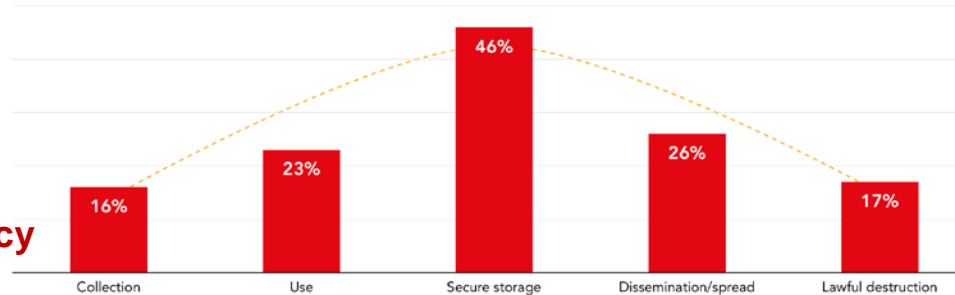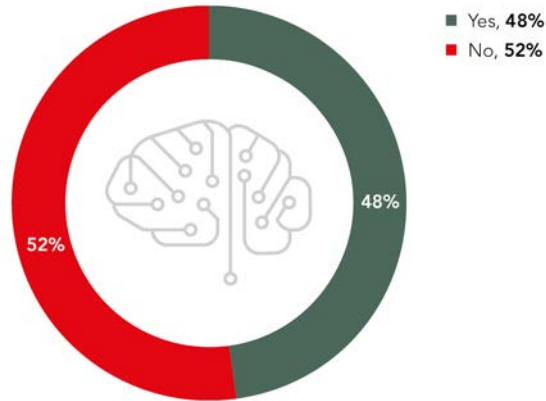
AI and governance (12/14): managing bias

YOU WILL FIND ONLY IN PLACES WHERE YOU SEARCH. IF YOU ONLY SEARCH WITHIN A CERTAIN DEMOGRAPHIC, YOU WILL FIND GOOD CANDIDATES ONLY FROM WITHIN THAT DEMOGRAPHIC.

AI and governance (13/14): model management

I have a basic understanding of how an AI algorithm works

- Yes, **48%**
- No, **52%**

52%   48%

- Partnering

- Explainability

- Model drift

- Distributed delivery

'If an organisation uses AI unethically, it would likely be hard to get them to admit it or be able to get access to find out...at the moment, once an AI algorithm has been built, I don't think it's very easy to take apart to find out how it's working'. **ODG participant**
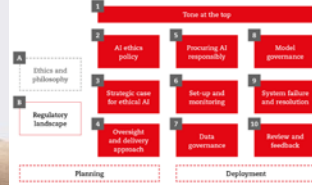
AI and governance (14/14)

✓ **Ethics for accountancy and finance professionals:**
Integrity is essential in setting up mechanisms for protection and redress in respect of wrongdoing.

- Complaints and redress

- Securing the AI system

System failure and resolution

✓ **Ethics for accountancy and finance professionals:**
There is a professional competence-related obligation for continuous learning and development.

- AI and ethics training

- Lessons learned

Review and feedback

Driving ethical AI for sustainable adoption (1/4)

1

Set tone at the top

- **Organisational values** – diversity and inclusion (eg consider the impact of AI on under-represented groups), fairness (eg when using AI for recruitment or surveillance of employees), and transparency (eg appropriately disclosing AI use to customers).

2

Deliver sustainable value

- **Long-term value** and alignment with strategy, beyond immediate use case

- Consider **reputational risk** from mishandling adoption, and the public interest, in addition to immediate costs

- Align 'value' to Sustainable Development Goals (**SDGs**)

Driving ethical AI for sustainable adoption (2/4)

3

Exercise professional judgement

- AI can throw up previously unseen situations; **avoid over-reliance on simplistic checklist**-based approaches which don't give the full picture or leave room for unintended consequences.

4

Challenge greenwashing

- Seek insights from **AI data-driven analysis** to aid professional scepticism in examining whether claims about sustainability, eg on net zero requirements, are matched by its performance; and challenge suspect claims ('greenwashing')

5

Comply with regulation and ethics policies

- Push for **regulatory requirements and AI-specific ethics policies to be adhered** to, recognising the challenge of not always being the direct owners of the AI in the organisation

Driving ethical AI for sustainable adoption (3/4)

6

Prioritise data management

- Recognise the fundamental role of data as the raw material that feeds AI

- Focus on data **confidentiality** and the improvement of data **quality**

7

Take a strategic approach to oversight and delivery

- Embed **collaboration across siloes with cross-functional teams** to ensure that a breadth of perspectives is represented in the approach

- Establish mechanisms for **contesting** decisions made via AI, and for whistleblowing on inappropriate use of AI

Driving ethical AI for sustainable adoption (4/4)

8

Understand vendor landscape

- Build **awareness** of how AI is used within the industry and of the providers of AI solutions

- Work with vendors who demonstrate a responsible approach, eg who have credible mechanisms for correcting for unfair bias or unintended consequences and/or who recognise and mitigate the energy consumption of complex algorithms

9

Build knowledge and skills

- Create avenues (eg **training** courses, on-the-job opportunities) to build awareness and understanding of issues pertaining to AI ethics and sustainability

- Establish processes to **document** and share **lessons learned** from AI adoption

Questions

Thank you