Deloitte

State of Ethics and Trust in Technology

Annual report

Third edition

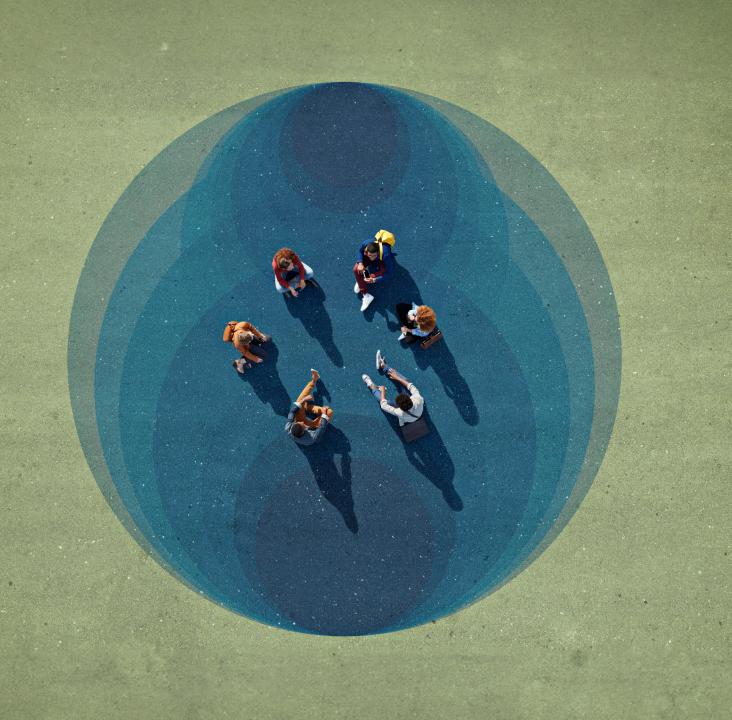


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Foreword

The rapid integration of Generative Artificial Intelligence and other emerging technologies brings unparalleled opportunities to drive efficiency, improve automation, and enhance how humans and machines work together. Many of us are energized by the chance to be on the ground floor of shaping this tech-driven future. However, these technologies also pose complex risks with pervasive impacts to organizations and society at large. This dualism underscores the need for a balanced approach—embracing innovation while upholding an unwavering commitment to ethical standards.

The third edition of the State of Ethics and Trust in Technology report illustrates the vital relationship between technological transformation and ethical responsibility. This report shares valuable, actionable insights for leaders to keep trust and ethics at the forefront when building a blueprint for the deployment and governance of technology. Leaders can, and should, ask probing questions to evaluate impacts and set strategic priorities to navigate them, which will often require an agile, multi-disciplinary approach guided by a diversity of experiences and perspectives. By infusing this mindset into our decision making, we lay the groundwork to harness technological capabilities, deliver value, and advance a trustworthy future.

We are at a pivotal moment in the history of human invention. Future generations will undoubtedly look back on the decisions we make today. As leaders, policymakers, and stakeholders, it is critical to reflect on the legacy we are creating. Our decisions should not only address the immediate benefits of technological advancement but also safeguard principles to uphold a sustainable and equitable future for the next generation. It is up to us to honor our collective responsibility to those who will inherit the world we shape.



Lara Abrash ChairDeloitte US

Executive summary

The accelerated rise in adoption of Artificial Intelligence (AI) technologies since the release of last year's Report increases the importance for organizations to consider the ethical dimensions and implications of emerging technologies.

Generative AI (GenAI) offers organizations both the opportunity to improve efficiency and transform customer engagement, and the potential to expose organizations to reputational and financial risk. Similar potential for good and harm exists across all emerging technologies. By establishing ethical standards for the development and use of technology, organizations can improve their relationships with customers and employees, demonstrate a commitment to trust and responsible technology use, and differentiate themselves from competitors. Leaders who drive their organizations to adopt trustworthy and ethical principles for the use of emerging technologies

can create social, reputational, and financial value for their organizations, which can help build the confidence of their customers and increase employee engagement.

In this third edition Technology Trust and Ethics (TTE) Report, we investigate how organizations set ethical standards for emerging technologies and the implications of GenAl for the establishment of those standards. We explore the role of Chief Ethics Officers and their potential power to inspire ethical behavior at organizations. We examine the possible divide between employers and employees on issues of ethical technology use and how organizational practices can create stronger, more aligned teams. Finally, we look at the role government regulation can play in promoting ethical technology standards and supporting organizations in implementing their own guidelines.





















Important takeaways

Safety first

"Safe and secure" was marked as the most important ethical technology principle by respondents.

Organizations developing or operationalizing their ethical technology standards may consider using safety and security as the best entry point to bring leaders and workforce on board to implement ethical standards at scale.

Reputation is important

Respondents show concern for reputational damage to an organization associated with misuse of technology and failure to adhere to ethical standards. More than financial penalties, respondents point to an organization's perceived ability to honor ethical commitments as important to long-term success.

Al Is a powerful tool, but it requires guardrails

Cognitive technologies such as AI are recognized as having both the highest potential to benefit society and the highest risk of misuse. The accelerated adoption of GenAI may be outpacing organizations' capacity to govern the technology. Companies should prioritize both the implementation of ethical standards for GenAI and meaningful selection of use cases to which GenAI tools are applied.

Leaders can inspire ethical engagement

Chief Ethics Officer roles are increasingly common. In most organizations the position is viewed as enforcing compliance, driving adherence to standards, and championing individual responsibility for ethical issues. Yet, where a Chief Ethics Officer is in place, executive leaders should be involved to help define and implement ethical tech processes.

Organizations should strive for consensus, followed by enhanced processes

Increasing ethics-based trainings and issue reporting practices may be successful at building consensus to adopting trustworthy behaviors. Organizations should next consider enhancing processes and actions in technology development to address ethical risks and putting knowledge from trainings to action.

Organizations should shore up alignment with their employees on ethics

Employers face a challenge coordinating with their workforces on embedding trust in professional ecosystems. Trust in one's organization and its emerging technologies may be declining and more pronounced in younger generations, with concerns about user data privacy and security alongside the current state of GenAl. Organizations proactive in following through on ethical technology standards may stay aligned to employee's expectations, leading to higher engagement and potentially better outcomes from technology adoption.























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Goals of the survey

Last year's 2023 State of Ethics and Trust in Technology report reflected the watershed moment of GenAI, its rapid adoption, and the new ways in which it demanded organizations to prepare for its safe and responsible use. In this 2024 edition, the concerns surrounding GenAI have grown, from its capacity to widen the digital divide to its potential to increase the spread of misinformation and harmful content. Despite awareness of these potential harms, the opportunities afforded by GenAl are clear, compelling organizations to balance the benefits of adopting GenAI and related emerging technologies with the need to mitigate their potential harms.

The research to support this report started by reviewing takeaways from last year's report and identifying how shifts in the technology landscape could alter those findings. We launched a 61-question survey to over 1,800 business and technical professionals globally. The survey addressed how organizations place value on ethical principles for emerging technologies, the impact of GenAI on ethical technology learning and process changes within organizations in the first full year of its larger scale adoption, and how organizations implement practices that support ethical use and development of technology. We also interviewed 15 specialists and leaders across industries and 11 Deloitte leaders to gather insights in support of the survey's findings.

Using findings from the survey and interviews, our report was designed to provide insight into how organizations are addressing the ethics of emerging technologies alongside implementation. In this report, we analyze how organizations are changing processes to align with ethical standards, and how organizations are collaborating with the government and commercial entities in their establishment of ethical standards. The report emphasizes why organizations should approach internal technology operations, strategy, and decisionmaking from a framework of trust, and how organizations can benefit and derive business value from embedding trust and ethics in their use of emerging technologies.

Emerging technologies under consideration

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"Emerging technologies" refers to digitally enabled tools representing new and significant developments within a field. These technologies can be grouped into the following categories:



Cognitive Technologies

including general Artificial Intelligence (AI), GenAI, Large Language Models (LLMs), machine learning (ML), neural networks, bots, natural language processing, neural nets, and more.



Digital Reality

including augmented reality (AR), virtual reality (VR), mixed reality (MR), voice interfaces, speech recognition, ambient computing, 360° video, immersive technologies, computer vision, and more.



Ambient Experiences

including AI/ML assisted wearables, voice assistants, and in-environment devices.



Autonomous Vehicles

including automotive, aerial, and maritime.



Quantum Computing

including quantum simulation, quantum linear algebra for Al/ML, quantum optimization and search, and quantum factorization.

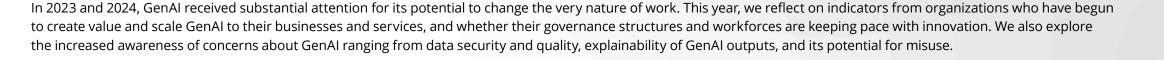


Distributed Ledger Technology (DLT)

including blockchain, crypto, non-fungible token (NFT), and more.



ding blockchain, including robotic o, non-fungible process automation.



Ethical standards

Today, many organizations have ethical standards and are committing more resources to train their teams to use, develop, deploy, and scale technology safely and responsibly. At the same time, many organizations are missing out on these potential business benefits by focusing on the risk mitigation or compliance aspects of ethical technology standards.

While having standards in place can reduce risk, businesses that invest the minimum to ensure legal compliance or mitigate obvious harms may not experience longer term benefits and advantages of richer customer relationships, improved market reputation, and greater employee engagement. As one executive interviewed explained, "the challenge is establishing systems to make sure organizations are thinking about the long term, without taking shortcuts. It is hard, because we are bad at estimating long-term risks as people and weighing that in proportion to short-term gains. Yet even in the terms of corporate self-interest, in the long view, it is better to be ethical."

Technology leaders seem to respect an intrinsic value in having ethical guardrails baked into all stages of technology development—from research to product launch. Bill Briggs, Chief Technology Officer and principal, Deloitte Consulting LLP, posits that organizations who apply ethical checks solely as an extra step to meet compliance requirements are missing their full purpose and impact. Embedding ethical principles early and repeatedly in the technology development life cycle can help demonstrate a fuller commitment to trust in organizations and keep ethics at the front of your workforce's priorities and processes.²



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Are ethical technology standards in place?

Fifty-three percent of respondents answered "no" or "unsure" to whether their organization had ethical technology standards. In this context, "unsure" responses suggest where standards do exist, insufficient communication and facilitating education may be common. Response rates are similar to previous years' surveys, suggesting this remains an area for optimization in organizations to be addressed sooner rather than later.

Organizations should consider taking steps to increase the impact and awareness of their ethical technology principles, including:

- Increasing investments in technology ethics teams, assessments, operationalization of standards, and learning resources.
- Dedicating resources to research emerging technologies and associated risks and appropriate use cases.
- Prioritizing communications to socialize standards and research findings to their workforce.

Organizations without ethical technology standards may be not have them for a variety of reasons, including:

- A lack of sponsorship from leaders to operationalize standards.
- An under-appreciation of the risk associated with emerging technologies.
- A desire to lead with technologies before ensuring readiness with sufficient research, infrastructure.
- An absence of a strong business case to understand how investing in ethical standards could translate into positive returns.

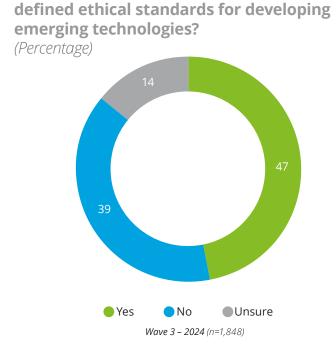


Figure 1. Does your company have

Source: 2024 Deloitte Technology Trust Ethics Survey

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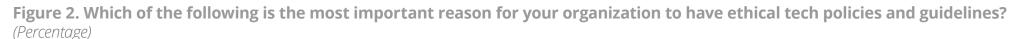


How do ethical technology standards function within an organization?

Most respondents shared their organizations use ethical technology policies to manage risks, follow regulatory compliance, and align workforces, more so than as an opportunity to create direct business value. When asked the primary reason their organization employed ethical technology standards, the most common responses were compliance with regulations (34%), enforcing standards of conduct (22%), and supporting

company culture (20%). Reputation and brand protection (15%), adding value to society (7%) and revenue growth (3%) followed, indicating these as secondary or tertiary boons to leveraging ethical principles (percentages sum to 101 due to rounding). Respondents may emphasize the potential consequences to non-compliance with policy and company conduct as more significant than the benefits gained by proactively

advancing an ethical standard. This reflects a more reactive approach to why standards are important. Organizations may also lack evidence of how ethical practices translate into positive business outcomes. Sharing leading practices and achievements between organizations may help them learn from what others have achieved through their own adoption of ethical imperatives.



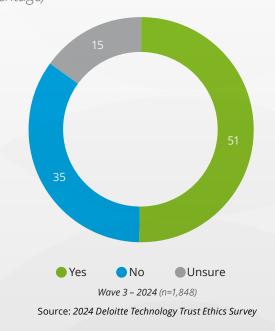


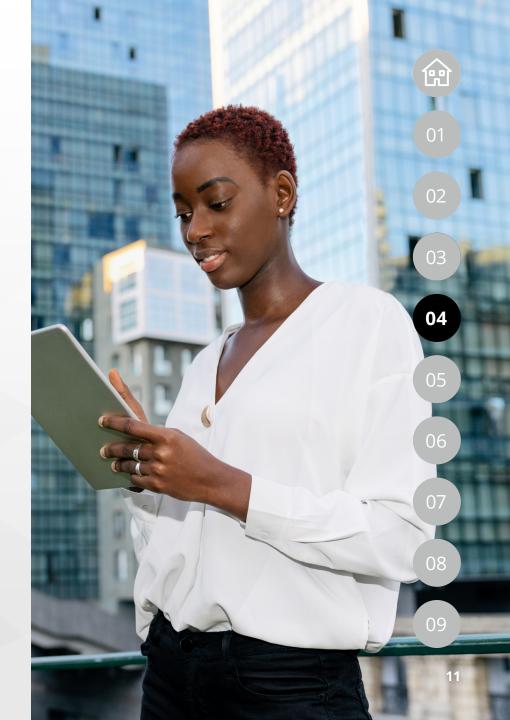
Source: 2024 Deloitte Technology Trust Ethics Survey

Ethical standards

One year-over-year indicator is explainability statements continue to be utilized across organizations as a means of communicating accountability and informed purpose for the use of technology to customers and internal end-users. Fifty-one percent of organizations use explainability statements—non-technical explanations of a technology's purpose, how it was designed, and how it operates—to support transparency in technology deployments.

Figure 3. Does your organization utilize Explainability Statements providing users with information on how the technology works, including when, how, and why it is used? (Percentage)





Trustworthy and ethical principles of emerging technologies

Deloitte's proprietary Technology Trust Ethics (TTE) Framework can serve as a first step in diagnosing the ethical dimensions of a company's emerging technology products. Deloitte first published the TTE Framework in its 2022 report and defines technology as trustworthy and ethical by adhering to the following principles.³

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Safe and secure

Users of the technology are protected from risks that may cause individual and/or collective physical, emotional, environmental, and/or digital harm.

Robust and reliable

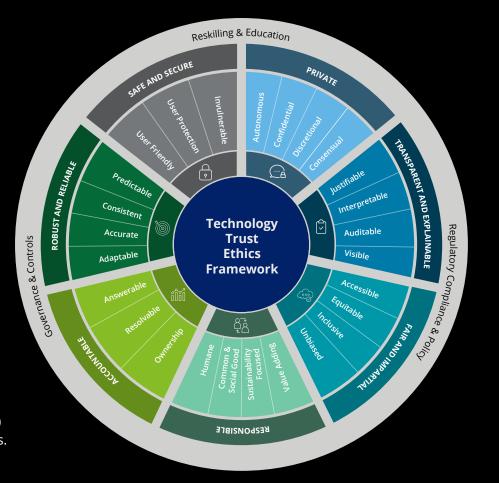
The technology produces consistent and accurate outputs, withstands errors, and recovers quickly from unforeseen disruptions and misuse.

Accountable

Policies are in place to determine who is responsible for the decisions made or derived with the use of technology.

Responsible

The technology is created and operated in a socially responsible manner. Technology's benefits (e.g., quality, speed, safety, and/or price) are evaluated in comparison to potential misuses.



Private

User privacy is respected, and data is not used or stored beyond its intended and stated use and duration; users are able to opt-in /out of sharing their data.

Transparent and explainable

Users understand how technology is being leveraged, particularly in making decisions; these decisions are easy to understand, auditable, and open to inspection.

Fair and impartial

The technology is designed and operated inclusively to ensure equitable application, access, and outcomes.

Ethical standards



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Consensus on "safe and secure"

The imperative for safety and security is one area of consensus among most respondents and may indicate an entry point into broader ethical considerations for organizations, including those without established guardrails. In 2024's survey, 78% of respondents selected "safe and secure" as one of the top 3 ethical technology principles, a 37% increase over the previous year's survey. Isolating responses for 2024 demonstrates the signal on "safe and secure" as the leading principle is strong, with 36% of respondents indicating it is their number one ethical principle, more than twice the next most common rank 1 choice, "responsible" (Figure 4). Individuals building a case for their organizations to adopt ethical technology standards may find "safe and secure" resonates with stakeholders and can act as the centerpiece of an ethical technology strategy.

Executives interviewed noted cybersecurity domains have well-established standards that most organizations follow. While maintaining and monitoring the safety and security of technology systems is not a new problem or unique to AI, this increased focus may indicate AI made a wider audience aware of the importance of cybersecurity and user protections. As one executive stated, "access to advanced technologies opened a new ballgame. It is no longer in the hands of experts, and we have to account for bad actors who can do things with as little as an internet connection."⁴

Sean Page, Managing Director, Risk and Brand Protection, Deloitte LLP, also explains, "We now have the ability to share whatever data we want across the globe, [but] in some cases controls are not in place to manage sharing. We need to challenge the notion that all data is freely available and to appropriately segregate internal and customer data, because the likelihood of incidents is significant. Contractual protections are needed to ensure organizations can use the data. While cybersecurity and privacy measures are important, those have longer standing regulations, policies, and standards in place. With GenAl, additional emphasis on data governance and on bias detection and mitigation is needed."5

Ethical standards











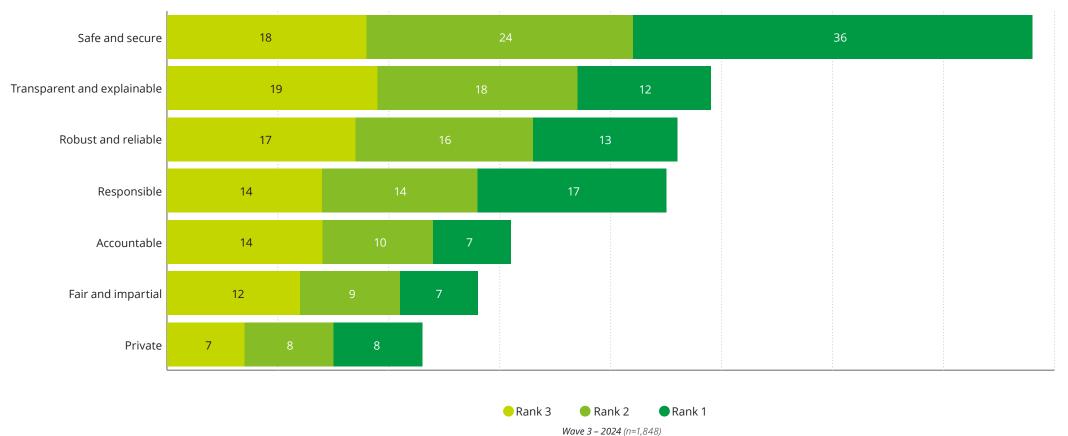








Figure 4: Using the following list of technology-focused ethical principles, rank the top 3 by their relative importance to your organization. (Percentage)

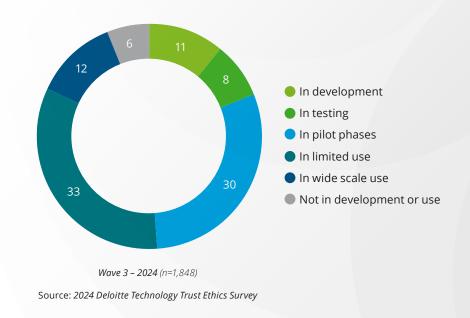


Note: Percentages shown only include ethical principles included in all three years of the survey to align with Deloitte's TTE framework dimensions.

Use of Generative AI is growing rapidly

GenAI has been embraced by organizations, with most respondents having exposure to GenAI applications. Ninety-four percent of respondents indicated GenAI is in use at their organizations, though most respondents indicated their organizations are piloting GenAI, with 12% of respondents indicating their organizations have GenAI in wide scale use.

Figure 5. Which of the following most closely aligns to your organization's stage of adopting Generative AI technologies? (*Percentage*)























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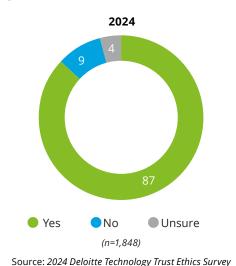
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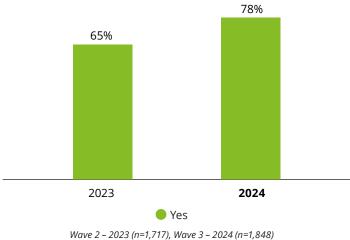
Adoption of GenAI is becoming universal, with 87% of respondents indicating their organizations are increasing their use of GenAI.

Figure 6. In the past year, has your organization increased its use of Generative AI overall? (Percentage)



Internal use of GenAl increased significantly from 2023. Employees have begun to adopt productivity tools, and organizations reported using GenAl to streamline processes and reduce the cost and effort of operations. Seventy-eight percent of respondents reported using GenAl internally, compared to 65% in last year's survey (a 20% increase).

Figure 7. Is your organization using Generative AI technologies internally? (Percentage)



Wave 2 - 2023 (n=1,717), Wave 3 - 2024 (n=1,848)

Source: 2024 Deloitte Technology Trust Ethics Survey

Figure 8. Is your organization using Generative AI technologies for external-facing applications? (Percentage)

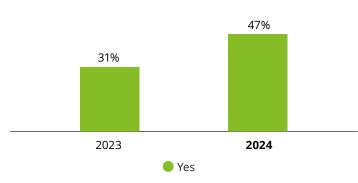
GenAl use cases for customer engagement and

marketing are rising, with 47% of respondents

reporting their organizations are using GenAl

externally, compared to 31% in the previous

year's survey (a 52% increase).

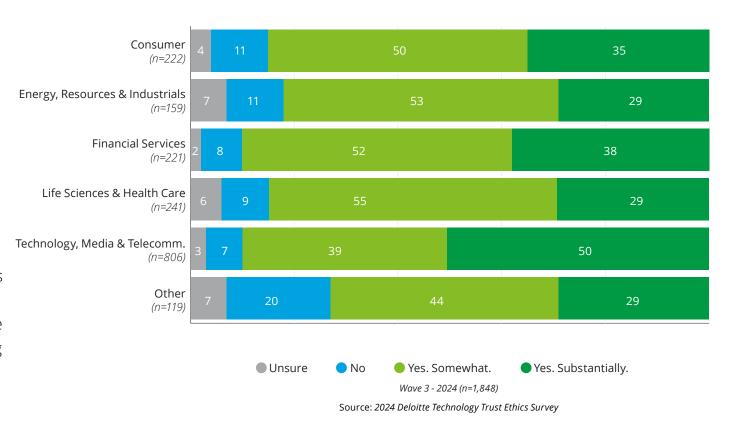


Wave 2 – 2023 (n=1,717), Wave 3 – 2024 (n=1,848)
Source: 2024 Deloitte Technology Trust Ethics Survey

Technology, media, and telecommunications (TMT) companies lead the adoption of GenAl relative to other industries. Fifty percent of respondents from TMT companies said their organizations increased their use of GenAl.

Amidst this period of growth, executives acknowledge the potential of GenAl and the imperative to retain accountability for its proper use. Chris Griffin, Managing Partner - Transformation & Technology, Deloitte & Touch LLP, states, "GenAl is a significant technological advancement, which offers generational opportunities for innovation and efficiencies across industries and organizations. However, as organizations look to harness the potential of GenAl, it's critical that they prioritize responsible development and ethical use to sustain trust with stakeholders. This means investing in robust governance frameworks that provide transparency and foster a culture of learning—while also building out the systems of controls that allow organizations to mitigate risks and maximize benefits."

Figure 9: In the past year, has your organization increased its use of Generative AI overall? (Percentage)























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Risks of increasing Generative AI adoption

As more companies experiment with GenAl, pilots will progress into real-world implementations. During this transition, organizations have a chance to assess how existing ethical technology standards can be adapted to meet GenAl deployments. While excitement around GenAl and competitive pressure accelerates the pace of adoption, companies can potentially run the risk of employees overstepping around the use of data, customer privacy, system security, appropriate use of tools, and other areas. This may create risks, straining controls that may be insufficient for emerging technologies. As Sachin Kulkarni, Managing Director, Risk and Brand Protection, Deloitte LLP, explains, "GenAl collapses the 'expertise barrier': more people can get more out of data, with less technical knowledge needed. While a benefit, the potential for data leakage may also increase as a result."7

Debbie Rheder, Deloitte Global Chief Ethics
Officer, offers, "GenAl tools are beginning to offer
the ability to analyze and interpret tone, also
known as sentiment analysis, with algorithms
improving at assessing human interactions.
While such advanced capabilities offer a new
opportunity for insights, it is another example
where bias may be introduced in an algorithm
and unfairly affect the accuracy of its outputs to
certain users if they are not represented in the
data used in training stages."⁸

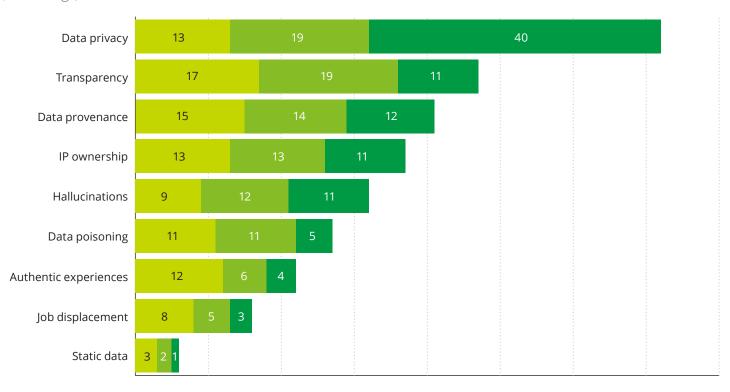
the most significant concern with the use of GenAl. Seventy-two percent of respondents ranked data privacy as their number 1, 2, or 3 concern, and 40% ranked it as their top concern, over 3 times more than the next top concern (data provenance, 12%, rank 1). This may indicate personal unease about the protection of one's data as well as awareness of the potential harms—to both individuals and organizations from violations of customer and employee privacy and misuse of data. Individuals today also have greater awareness of existing regulations such as the European Union General Data Protection Regulation (GDPR)9 or the California Consumer Privacy Act (CCPA)¹⁰ in the U.S. and how regulations can influence global economies and other pending regulations.

Respondents highlighted data privacy as

The next highest ethical concerns respondents reported were transparency (47%, rank 1, 2, or 3) and data provenance (40%, rank 1, 2, or 3). This suggests individuals are seeking clarity for how GenAl operates and how it collects and manages data. Users of GenAl tools should be able to trust the reliability and veracity of its outputs and may harbor concerns about the potential theft, replication, or misuse of the intellectual property and creative outputs of individuals.

Bagrat Bayburtian, Technology Leader, Risk and Financial Advisory, Deloitte Transactions and Business Analytics LLP, suggests, "organizations need to know models are being trained the way they want them to be. This is not trivial, and as users of their models, organizations should understand responsibility rests squarely with them."¹¹

Figure 10: For Generative AI, which of the following do you consider the top three most pressing ethical concerns? (Percentage)





Source: 2024 Deloitte Technology Trust Ethics Survey

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Al risks and rewards

Respondents perceive cognitive technologies such as AI as having the most significant benefits and risks of any emerging technology. Fifty-four percent of respondents indicated cognitive technologies posed the most severe ethical risks of emerging technologies, while 46% indicated they potentially offer the most social good (Figures 12 and 13). The responses indicating AI could cause severe risks are down slightly year-overyear, while the responses indicating Al's potential use for good increased. The widespread adoption of GenAI may have increased respondents' familiarity with practical applications, providing positive experiences through use of the technology. Will Bible, Digital Transformation and Innovation Leader, Audit & Assurance Partner, Deloitte & Touche LLP, cites data analytics assistive tools powered by AI as an example and potential benefit across businesses

and industries. Assistive tools in use today can help analysts more quickly and accurately parse through data, prioritize and render judgment on outliers, and extract insights from their datasets.¹²

Only 4% of respondents thought distributed ledger technologies would contribute the most social good, down from 9% in 2022, and digital

autonomous vehicles, and digital reality devices offer examples as to how enthusiasm for emerging technology can decline if limited practical use cases exist. Furthermore, if prominent use cases are problematic and lack ownership of issues, trust in these technologies can experience a quick decline.

reality technologies similarly declined from 14% to

9% since 2022. Distributed ledger technologies,

Figure 11: Emerging technologies with the most potential for ethical risk and social good



(Percentage)

Figure 12: Which of the following emerging technologies do you

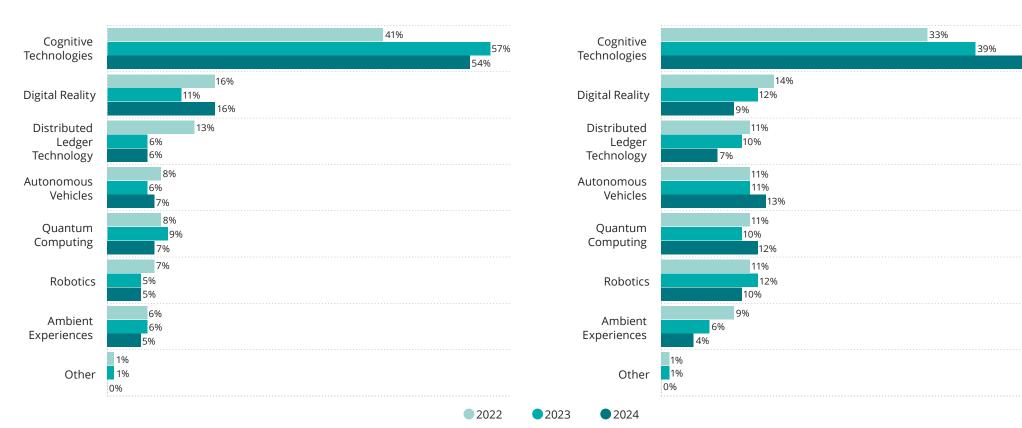
think could potentially pose the most severe ethical risks?

Figure 13: Which of the following emerging technologies do you think will drive the most social good?









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Wave 1 - 2022 (n=1,794), Wave 2 - 2023 (n=1,717), Wave 3 - 2024 (n=1,848)

Organizations may consider taking a more cautious, patient, and informed approach to selecting use cases to apply AI tools to meet business needs. As one executive indicated, applying AI to every use case may expose an organization unnecessarily to excessive risks or result in damage to their brand reputation and trust. Use cases which provide known and meaningful purpose to individuals, such as using Al algorithms to better detect and diagnose diseases using patient symptom data, can motivate organizations to leverage and prioritize such technologies. Yet these use cases also require large volumes of sensitive data which come with concerns of bias, transparency, and reliability in how it operates. They should therefore follow strict controls and conduct thorough testing to be used in a safe and responsible manner. Alternatively, beginning with less complex use cases in pilot phases for AI may reduce the severity of risks to an organization.¹³

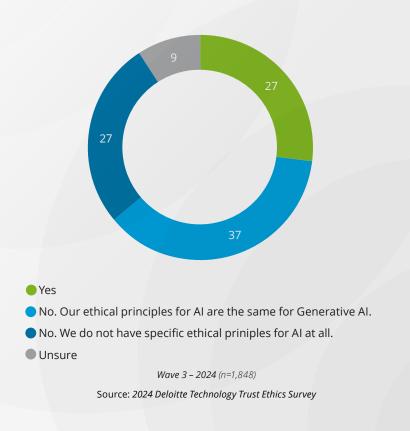
Additionally, organizations should know when to do nothing. As noted by Bill Briggs, Chief Technology Officer and principal, Deloitte Consulting LLP, organizations should invest in research to understand a technology and the purpose it can serve before deciding whether and how to use a technology. A successful organization should take measures to have confidence their technologies will afford its users positive impact. In short, at times the right decision is to wait to act on a technology or not act at all, particularly in cases where its risks are not yet researched as it may do more harm than good to an organization's reputation.



Companies are beginning to create standards for GenAl, with 27% of respondents reporting their organizations have standards for GenAl. Given the recency of GenAl's broad adoption, this suggests organizations aim to be proactive in responsibly regulating its use at the onset of its wide scale debut. Organizations may be concerned about unsanctioned use or individuals who are not trained to use GenAl tools appropriately. As Bagrat Bayburtian, Technology Leader, Risk and Financial Advisory, Deloitte LLP, notes, "[Ensuring the trustworthy use of Al tools] requires patience from organizations to not

act on a new tool or feature before ready and appropriately skilled. There is also the concern things are developing too fast."¹⁵ Organizations that do not have distinct standards for GenAl should consider being proactive in doing so to maintain employee alignment with company strategy, minimize risk and exposure, and ensure its use supports desirable business outcomes.

Figure 14. Does your organization have specific and distinct ethical principles guiding the use of Generative AI? (Percentage)

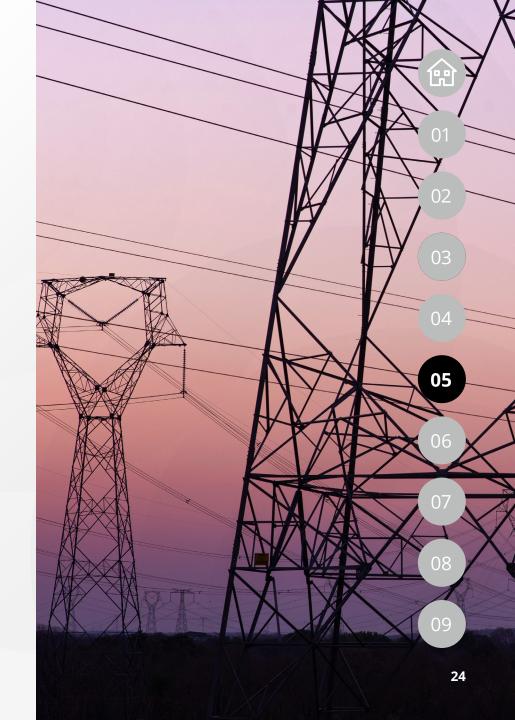


Organizations may be concerned about unsanctioned use or individuals who are not trained to use GenAl tools appropriately.

Sustainability and energy concerns with AI infrastructure and data centers

Organizations should consider the environmental and sustainability impacts of AI and other emerging technologies. As Laura Bradford, Technology Managing Director, Deloitte Services LP, explains, "Organizations should have sustainability arms that understand the consumption required by data centers and physical technology components. The environmental cost and impact of these technologies is complex to measure and may be underreported. Organizations should optimize processes and minimize factors such as power and water consumption associated with GenAI technologies."¹⁶

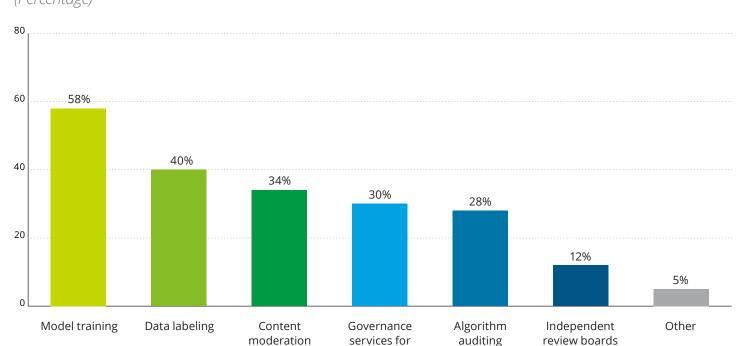
Several recent reports explore the high volume of electricity consumed by modern AI infrastructure, with some predictions comparing the electricity consumption of data centers to entire nations. Globally, the International Energy Agency predicts electricity consumption from data centers, AI and the cryptocurrency sector could double by 2026.¹⁷ According to a 2024 study released by the Electric Power Research Institute, national data center load growth may consume 4.6% (low estimate) to 9.1% (high estimate) of U.S. electricity generation annually by 2030 versus an estimated 4% today, posing potential near term challenges to clean energy supplies.¹⁸



Organizations are catching up to the need to govern Al and hire Al talent

While organizations are prioritizing model training, more investment may be needed in supporting services to uphold trust. While 58% of respondents indicated their organizations were investing in training AI models, 30% indicated their organizations were investing in governance services for AI, and fewer reported investments in related tools and services such as algorithm auditing services and independent review boards (IRBs). These supporting services provide tools to ensure model training and data labeling are done in an appropriate way that helps lead to trustworthy outcomes.

Figure 15. Which of the following tech-related services is your organization prioritizing in its acquisitions? (Percentage)



Wave 3 - 2024 (n=1,848)

services

Source: 2024 Deloitte Technology Trust Ethics Survey

technology ethics

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Organizations are preparing their workforces to adopt GenAl. Sixty-seven percent of respondents indicated their organizations are investing in internal tools to help employees become familiar with GenAl, while 42% are hiring talent with GenAl skills. This finding may be suppressed because of the demand for Al talent in the market. When hiring technical talent, organizations should consider looking to individuals with awareness of relevant laws and compliance standards for Al ethics. These individuals may understand how Al systems might affect business and society.

Organizational intentions to acquire GenAl points to the importance of collaboration and cross-business alignment on standards. Twenty-one percent of respondents indicated their organization plans to build GenAl capabilities in-house. Conversely, more respondents indicate their organization's intentions to partner with major platform developers to develop new capabilities (49%), use public/open-source capabilities (46%), or obtain private-instance capabilities (44%) as their means of GenAl acquisitions. This overlap in responses may point to a tendency for companies to pursue more than one means of acquisition as a representation of both enthusiasm and haste.

Figure 16. What has your organization done to educate and prepare your workforce for Generative AI and its applications? (Percentage)

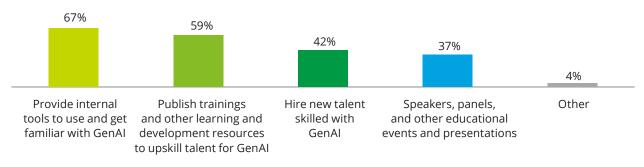
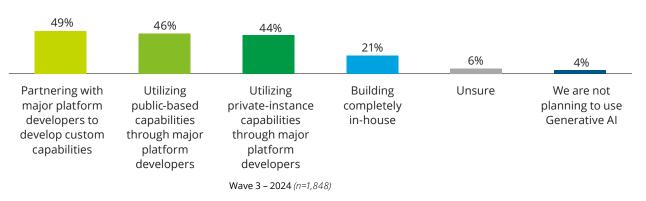


Figure 17. How is your organization acquiring, or planning to acquire, Generative AI capabilities?

(Percentage)



Source: 2024 Deloitte Technology Trust Ethics Survey

















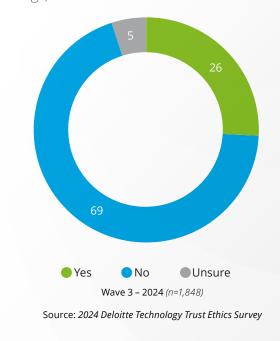


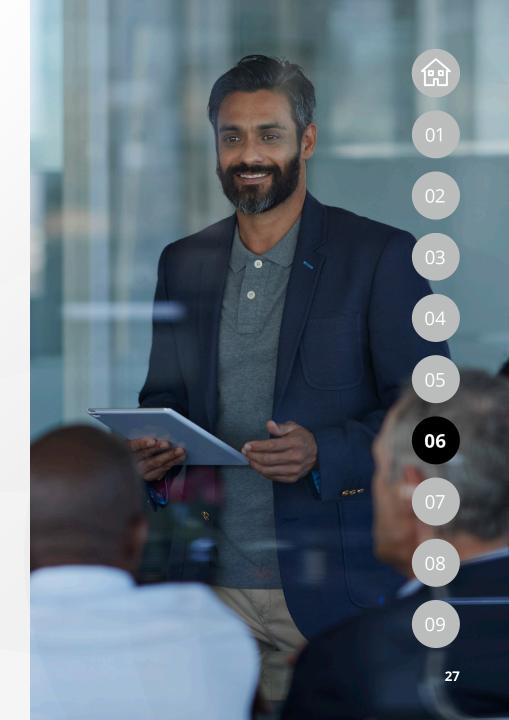
Role of the Chief Ethics Officer

Chief Ethics Officers inspire ethical engagement

The importance of Chief Ethics Officer roles is increasingly apparent as their prevalence remains consistent: twenty-six percent of respondents indicate their organization has a chief ethics officer or similar role, nearly the same response rate as in 2022 (25%) and 2023 (26%). As described by Debbie Rheder, Deloitte Global Chief Ethics Officer, "The role of Chief Ethics Officers is still evolving around ethical tech. They appreciate the importance of balancing innovation with ethical risks that could impact the business, addressing ethical tech concerns raised through traditional reporting channels, and communicating to the workforce the policies and rules for the responsible use of technology. Ethics Officers provide the framework and infrastructure through their ethics program to surface and triage concerns raised by employees, thereby fostering ethical use of Al systems."19

Figure 18. Does your organization have a Chief Ethics Officer or similar role? (Percentage)





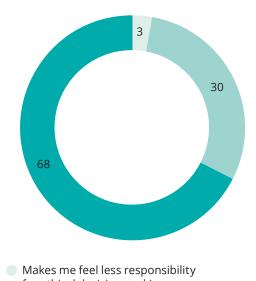
Role of the Chief Ethics Officer

Chief Ethics Officers can help create accountability at all levels of an organization. Sixty-eight percent of respondents with a chief ethics officer in their organization indicated the role made them feel more personal responsibility for their own ethical decision-making. This implies having a dedicated leader for ethics could draw attention to the importance of personal accountability and ethics overall. A Chief Ethics Officer can act as a centralized source of empowerment for individuals with ethical concerns and validation that their company values doing the right thing. Rheder adds: "People want guidance employees want to do the right thing and to avoid mistakes." It is reasonable to assume people want to contribute to social good; having a Chief Ethics Officer affords employees visibility to a leader with a clear directive and articulation of what the "right thing to do" is and how to follow it.

Chief Ethics Officers are also supported in their functions. Eighty-one percent of respondents with a Chief Ethics Officer in their organization indicated the leader is appropriately supported in their role.

Figure 19. How does having a Chief **Ethics Officer (or similar role)** change the way you feel about your responsibility for ethical tech decision-making?

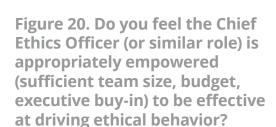
(Percentage)



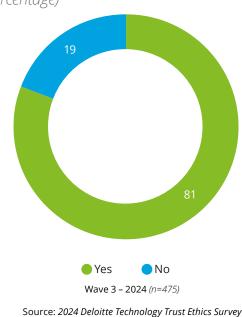
- for ethical decision-making
- No change
- Makes me feel more responsibility for ethical decision-making

Wave 3 - 2024 (n=475)

Source: 2024 Deloitte Technology Trust Ethics Survey



(Percentage)

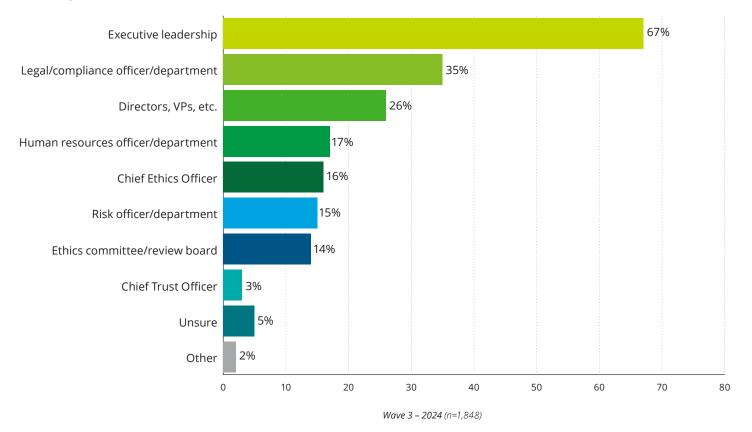


Role of the Chief Ethics Officer

Even when a Chief Ethics Officer is present, other senior executives share responsibility for setting and operationalizing standards.

Sixty-seven percent of respondents indicated executive leadership is responsible for setting ethical standards in their organization, while 35% expected ownership from legal and compliance departments and 26% assigned responsibility to leaders at director/VP levels. Sixteen percent indicated responsibility is retained by the Chief Ethics Officer. The Chief Ethics Officer is not viewed by respondents as solely responsible for setting ethical standards, which indicates the role exists to help enforce ethical principles at all levels of the organization, inspire ethical commitment, and communicate how ethical concerns can be addressed to a workforce.

Figure 21: Who is responsible for setting ethical standards within your organization? (Percentage)



Source: 2024 Deloitte Technology Trust Ethics Survey

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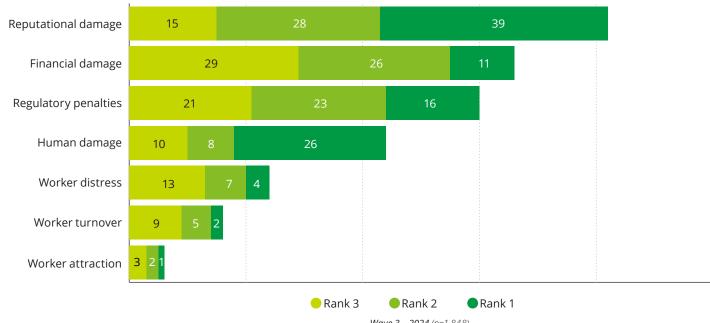
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Companies focus on reputational impacts

When asked to rank the potential negative outcomes to their organization if ethical standards are not followed for emerging technologies, respondents rated reputational damage, financial damage, and regulatory penalties as the highest concerns. Eightytwo percent of respondents listed reputational damage as their number 1,2, or 3 concern, with the next highest being financial damage (66%, rank 1, 2, 3). Thirty-nine percent of respondents selected reputational damage as their top concern, 13 percentage points above human damage as the next top ranked concern (26%, rank 1). This may indicate reputation is viewed as the more important indicator for organizational long-term success over more immediate consequences such as financial penalties. Furthermore, respondents recognize possessing and following ethical standards as consequential to a company's prolonged success.

Figure 22: Using the following list of potential negative outcomes if ethical tech standards are not followed, rank the top 3 by their relative severity to your organization. (*Percentage*)



Wave 3 - 2024 (n=1,848)

Source: 2024 Deloitte Technology Trust Ethics Survey

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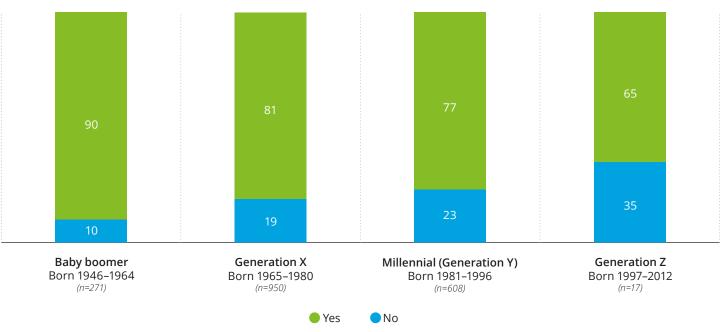


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Respondents are less aligned with employers on ethical standards

Younger generations report lower rates of alignment with their organization's messaging compared to previous years' surveys. In 2023, 87% of Millennial and 81% of Gen Z respondents reported buy-in to their organization's ethical messaging; in 2024 those figures decreased to 77% and 65% respectively. Overall buy-in fell from 89% to 81%, indicating employees of all ages are aligned with their organizations but may decline if left unaddressed. For GenAl, Deloitte's Q2 2024 report on the state of GenAI in the Enterprise notes "organizational trust is essential for successful scaling," and "organizations need to ramp up efforts around transparency, familiarity, responsibility, and practical guardrails" to establish trust in their workforce and move forward with confidence in its use.²⁰

Figure 23: Overall, do you buy-in to your organization's messaging about ethical standards for emerging technologies?²¹
(Percentage)



Sources: 2024 Deloitte Technology Trust Ethics Survey
This report defines generations as outlined in the 2023 Deloitte Diversity, Equity, and Inclusion (DEI) Transparency Report:
Baby boomer (1946–1964); Generation X (1965–1980); Millennial (1981–1996); Generation Z (1997–2012).







Unsure

Wave 3 - 2024 (n=1,848) Source: 2024 Deloitte Technology Trust Ethics Survey

The benefit of diverse focus groups

Diverse focus groups appear to be underutilized in enacting ethical technology standards. Thirtysix percent of respondents indicated their organizations used diverse focus groups in the development of ethical technology standards, the same response rate as the previous year. Organizations should consider including more individuals from a range of backgrounds to help improve the responsible and fair development of emerging technologies. Increasing diversity of

considerations are difficult to identify without the opportunity to observe how potential customers react to the product or a prototype. Including stakeholders in the process of establishing ethical standards can make the implications of ethical decisions clearer, as it provides support for the business case behind investing in the implementation of a feature or function.²²

Figure 24. Do you use diverse focus feedback is important in how organizations engage groups at your organization to review stakeholders. As one executive pointed out, ethical emerging technology to identify potential ethical issues? (Percentage)

Organizations should consider including more individuals from a range of background to help improve the responsible and fair development of emerging technologies.



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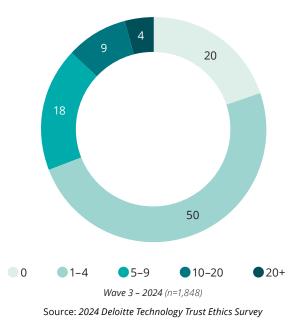
Ethics trainings can make an impact

Emphasized across executive interviews and survey findings, learning and communication are important components to effectively operationalize ethical technology standards within an organization. In the past year, GenAl tools came into common use at a relatively fast pace for nascent technologies. Individuals are demonstrably eager to harness their potential, and they are also eager to know they are doing so safely and responsibly.

Investment in technology ethics training is increasing, with 80% of respondents required to complete mandatory technology ethics training, an increase of 7 percentage points since 2022. A minority of organizations surveyed have no ethics training in place.

Ethics trainings appear to positively affect employee behavior. Seventy percent of respondents indicate ethics trainings changed their behavior when working on technology. An increase from 65% in 2023 indicates positive change resulting from focused learning curriculums.

Figure 25. How many hours per year do you spend in your organization's mandatory ethics-focused training specifically related to the development of new or existing technologies? (Percentage)



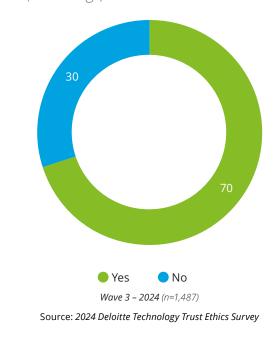


Figure 26. Do you find your

technologies?

(Percentage)

organization's training changes

your ethical behavior during the

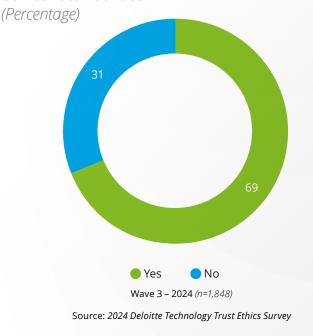
development of new or existing

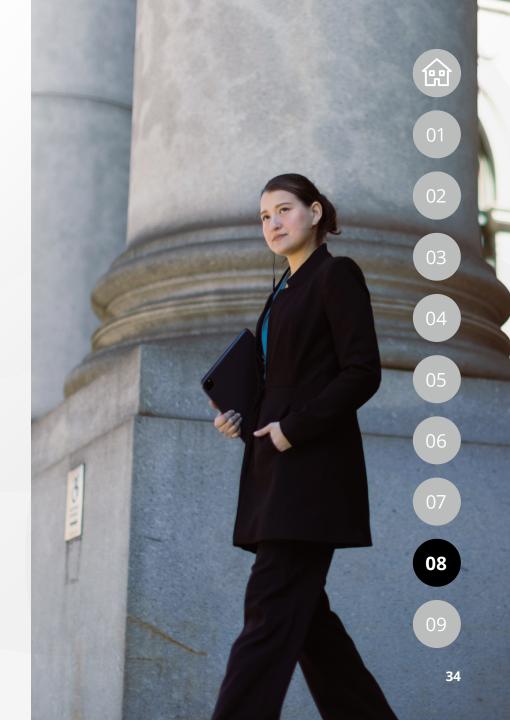
Government can play a larger role

Organizations often look to the public sector to define high-level rules before developing their own standards, and participants in the survey indicate sustained interest in governments setting policy for the responsible development and use of technology. Sixty-nine percent of respondents indicated governments should have a larger role in setting ethical standards for emerging technology.

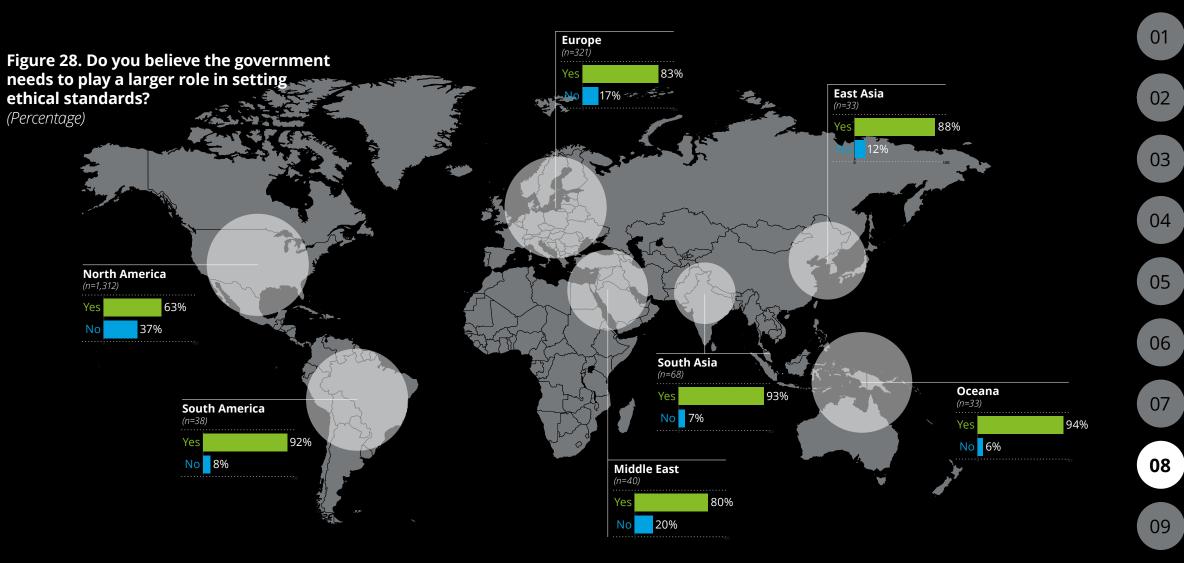
North American respondents were less supportive of increasing government's role in setting ethical standards for emerging technology, but support has increased over time. In 2024's survey, 63% of North American respondents indicated they would like government to have a larger role in setting ethical standards (up 10 percentage points from 2022), compared to an average support of 86% for other surveyed regions (Figure 28).

Figure 27. Do you believe the government needs to play a larger role in setting ethical standards?





Government's role









Most respondents are supportive of collaboration between businesses and governments in setting ethical technology standards, and a majority support regulation. Seventy-four percent of respondents want collaboration between business and government on defining ethical standards (up 5 percentage points from 2023), while 60% of respondents expect governments to set further regulations for emerging technology.

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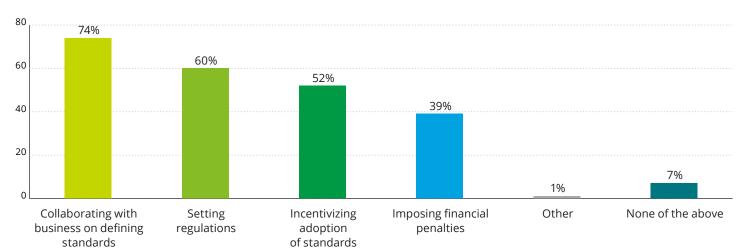
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Figure 29. What role do you believe federal governments should have in setting ethical standards for technology?

(Percentage)



While there is a desire for effective, precise, and informed government regulation, the onus is currently on organizations to understand how they regulate themselves safely and comprehensively. This may consist of collaboration between private organizations at the onset, and it could lead to better practices and help inform future government regulation. As one leader explained, if effective ethical regulation can be achieved at an organization, it can be done "across the board in the market." with technology players sharing information based on a standardized protocol that doesn't break any regulatory system. That kind of evolution will help manage or mitigate regulatory risks. It will also help regulations to evolve, because today we are still trying to fit old laws with new emerging technologies."23

Wave 3 - 2024 (n=1,848)

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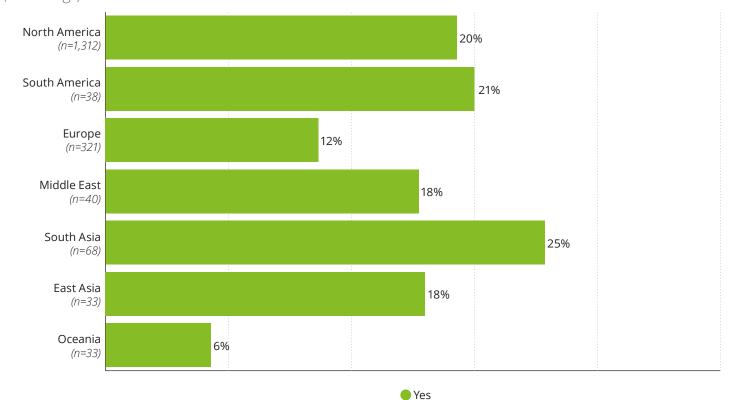


US and EU policy has a global impact

Notable public policy action on AI technologies by the United States and Europe have impacted businesses globally. Twenty-five percent of respondents in South Asia, 21% in South America, and 12% in Europe indicated their organizations made changes to the use of AI in the past year in response to the United States Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence issued in October 2023.²⁴ Twenty percent of US respondents indicated their companies are making changes in response to the Executive Order.

Figure 30: Has your organization made any changes to its use of AI in response to the US Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (October 2023)?

(Percentage)

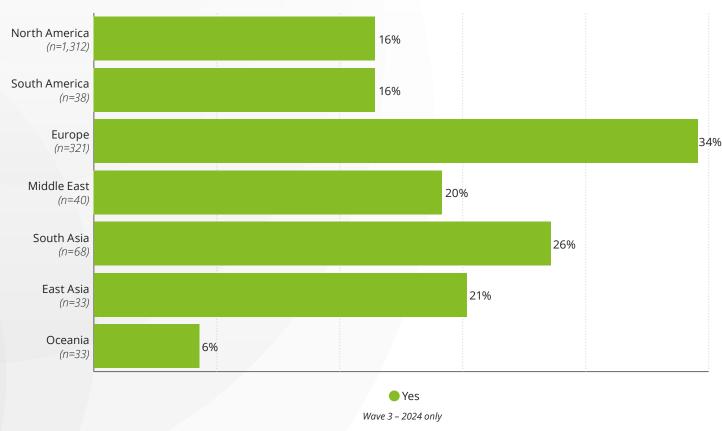


Wave 3 – 2024 only

Source: 2024 Deloitte Technology Trust Ethics Survey

Similarly, the European Union's AI Act²⁵ shows impact outside of its borders. Twenty-six percent of South Asian respondents and 16% of respondents in both North and South America indicated their organizations made changes in response to the Act. The influence of the Act is most pronounced in Europe itself, with 34% of surveyed companies making changes in the past year. The Act was passed in Parliament in March 2024 and approved by the EU Council in May 2024. The US Order and the European Act are recent, so their influence may increase as organizations consider adapting technology processes to accommodate global regulatory implications.

Figure 31: Has your organization made any changes to its use of Al in response to the European Union Al Act? (Percentage)



Source: 2024 Deloitte Technology Trust Ethics Survey





















Promoting trust and ethics in technology: the way forward

The increasing scale of GenAl adoption may increase the ethical risks of emerging technologies, and the potential harm of failing to manage those risks could include reputational, organizational, financial, and human damage. To retain trust from stakeholders, protect long-term sustainability, and maintain employee engagement, organizations should take a socially responsible stance by proactively and collaboratively establishing ethical principles throughout their acquisitions, development, and implementation of emerging technologies.

Careful consideration of these steps can help position an organization to be a trustworthy and ethical leader in the emerging technology space. We are at a crucial turning point in the advancement of technology. Organizations can use this opportunity to refine their mission and purpose, connect the long-term value of their business with the future of technology, spread awareness of the importance of trust and ethics to their people, and leverage emerging technologies to return value to society. Through commitment and action, all of us can help achieve a technologically robust future to be proud of.



To work towards being ethical technology leaders, companies should consider and be able to answer the following:





Define how your organization approaches trust and ethics with consideration to its stakeholders and workforce.

- Is there alignment between the company's culture, Standards of Conduct, and compliance and regulatory standards?
- Do you know which ethical principles are most important to your organization, its products/ services, and users?
- Have open conversations with internal and external stakeholders to validate the chosen principles accurately reflect goals and values?
- Are participants representative of larger affected populations?



Embed and clearly communicate trustworthy and ethical principles within your workforce.

- How are ethical considerations messaged within your organization?
- Do you have appropriate channels to gather feedback?
- Is your workforce afforded transparency into follow-up actions when reporting ethical technology concerns?



Invest in leaders and workforce to bring change to technology development processes.

- Does the Chief Ethics Officer and other leaders have appropriate resources and authority to influence product design, go/ no-go decisions, and individual accountability to manage ethical risks?
- Are employees learning meaningful information about technology ethics via trainings?
- Are changes being implemented to organizational processes, and is the workforce ready to handle those changes?



Establish collaborative relationships both within and outside your company.

- Are cross-business leaders and specialists included in the oversight of emerging technologies?
- Are middle managers and individuals empowered and encouraged to escalate or respond to issues?
- Has the organization collaborated with other companies, standards organizations, academia, and government entities?



Scale existing ethical standards to emerging technologies and new use cases, and remain cognizant of existing and pending government regulations.

- Is the organization current with technological regulations, both domestic and abroad?
- Are decisions to apply a technology to a new use researched to be safe and appropriate?
- Do ethical standards track and measure adherence to all dimensions of an ethical tech framework?



















About the survey

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Research methodology

To obtain a global view of the state of ethical and trustworthy standards and the impact on organization's processes, leadership, and workforces, Deloitte conducted a multiple-step study between April and May 2024. The study consisted of the following:

- Review of survey questions and results, executive interviews, insights, and secondary research obtained for the reports published in 2022 and 2023.
- Updated and executed a 61-question survey to reflect past years' findings and the current state of emerging technologies and ethical standards and principles in 2024.
- Conducted a survey of 1,848 respondents between 4/2/24 and 5/14/24.

- Validated, analyzed, and synthesized quantitative survey findings in conjunction with qualitative insights derived from 26 in-depth interviews with executives familiar with how ethical standards are implemented in the development and use of emerging technologies. Interviewees consisted of:
 - 15 global leaders and subject matter specialists external to Deloitte representing technology, media, and telecommunications (TMT); life sciences and health care (LSHC); pharma; energy, resources, and industrials (ERI); financial services; and consumer industries.
 - 11 Deloitte leaders representing the Technology Trust Ethics (TTE)
 Steering Committee to capture market observations on trustworthy and ethical technology.

Respondent profile

Respondents were primarily full-time employees of companies greater than \$100M in annual revenue, split evenly between business and technical roles. All survey respondents are actively involved in either developing, consuming, or managing emerging technologies, including AI, machine learning, blockchain, augmented reality, virtual reality, quantum computing, computer vision, robotics, and more. Respondents could be either full-time or part-time employees. The survey represented respondents from: North America (n = 1,312), Europe (n=321), South Asia (n=68), East Asia (n=33), South America (n=38), Middle East (n=40), Oceania (n=33), and other regions (n=3). A plurality of respondents (44%) came from the technology, media, and telecommunications verticals, but strong representation was obtained from the life sciences and health care, consumer, financial services, and energy, resources and industrials sectors. Respondents were split evenly across five functions: IT, general management, product development/R&D, sales/marketing/customer service, and other (including finance, operations, and HR).

About the survey







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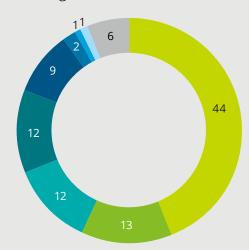
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Figure 32: Primary industry (Percentage)



- Technology, Media, & Telecommunications
- Life Sciences & Health Care
- Consumer
- Financial Services
- Energy, Resources & Industrials
- Academia
- Non-Profit
- Government & Public Services
- Other

Figure 33: Function (Percentage)

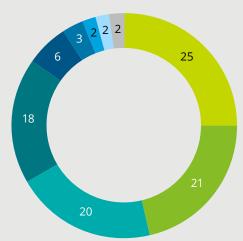




Figure 34: Type

(Percentage)



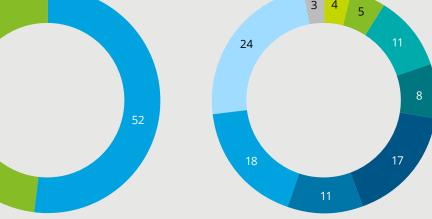




- Sales, Marketing, Customer Service
- Operations, Sourcing, Procurement
- Governance, Compliance, Legal, Regulatory, etc.
- Finance, Forecasting, Accounting, etc.
- HR, Communications
- Other

IT

Wave 3 - 2024 (n=1,848)



(Percentage)

More than \$200 billion

Figure 35: Annual revenue

- \$50-\$200 billion
- \$49.9-\$10 billion
- \$9.9-\$5 billion
- \$4.9-\$1 billion
- \$500 million-\$0.9 million
- \$100-\$499 million
- Less than \$100 million
- Prefer not to answer

Source: 2024 Deloitte Technology Trust Ethics Survey

Authorship and acknowledgements





















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To find out more about Technology Trust Ethics at Deloitte, please visit

https://www2.deloitte.com/us/en/pages/about-deloitte/articles/technology-trust-ethics.html.

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