Mastering AI governance

Empowering organizations to lead with responsible AI

With AI adoption surging globally, organizations must adopt governance structures that direct ethical, transparent and responsible AI use. This guide provides a roadmap to implement effective AI governance, including an explanation of NTT DATA's own approach to AI governance, which is structured to support organizations at every stage of AI deployment.

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Overview of this guide

Empowering organizations to lead with responsible AI

With AI adoption surging globally, driven by advancements like generative AI (GenAI), there's an urgency to adopt governance structures that guide ethical, transparent and responsible AI use and compliance with emerging regulations such as the European Union's AI Act.

As AI technology becomes central to competitive positioning, organizations must address governance to mitigate risks relating to data-privacy issues, algorithmic biases and regulatory compliance, safeguarding both their reputation and stakeholder trust.

This guide provides a comprehensive approach for implementing effective AI governance.

We explore the current landscape of AI governance as well as its meaning and importance. We analyze various governance frameworks, examining global best practices and standards, including ISO, OECD principles and the UNESCO guidelines.

Given the absence of a universally recognized AI governance standard, we advocate for a flexible, modular approach that organizations can adapt to their unique requirements.

We explain NTT DATA's own approach to AI governance — a model structured to support organizations at every stage of AI deployment, from strategic planning and role definition to risk management and operational oversight. The approach emphasizes responsible AI development, compliance and risk management, all underpinned by a dedicated AI office that integrates cross-disciplinary expertise to drive ethical AI initiatives.

We present a roadmap for practical implementation, starting with our AI Maturity Assessment and progressing to customizable governance modules.

This structured approach enables organizations to adopt AI responsibly, aligning with industry standards, regulatory frameworks and organizational values while fostering both compliance and innovation for ongoing success.

1. Understanding AI governance

The AI governance journey

While the concept of AI governance has been around for more than a decade, it's been receiving a lot more attention recently. From our perspective, two factors have contributed significantly to this increase in focus.

The first factor is the **broad emergence of GenAI** in 2023, and its impact on all aspects of AI. This development captured the attention of both technology companies and the public — in 2024, organizations were starting to use this new technology effectively, generating substantial business value. This increase in interest has also highlighted a broader spectrum of AI capabilities.

NTT DATA's research shows that 97% of CEOs anticipate that GenAI alone will have a material impact on improving productivity levels — a view that demonstrates the growing confidence in AI's potential to transform business operations. And 44% of the C-suite strongly agree that the promise (and ROI) of GenAI outweighs the potential security and legal risks[1].

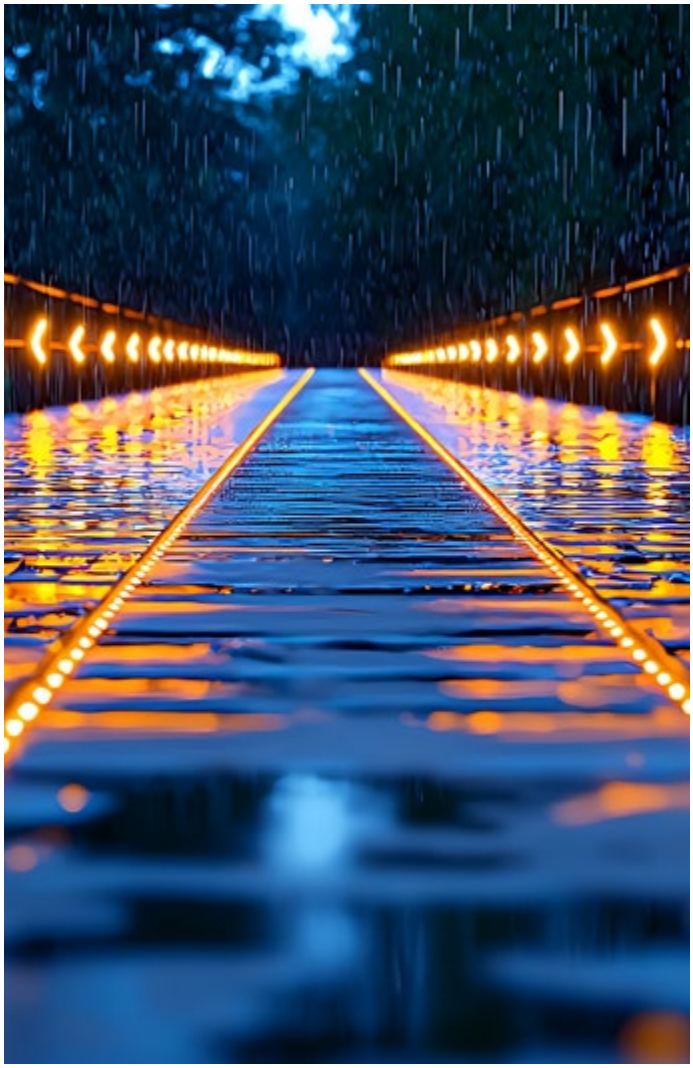
This growth in the adoption and development of AI requires the implementation of governance frameworks, policies and processes that guide the efficient oversight and management of its use.

The second factor is regulation. Globally, there have been significant efforts to establish legal frameworks that regulate and protect fundamental rights in the use of AI. Among these initiatives, the European Union's AI Act stands out as a landmark in AI regulation, placing a strong emphasis on the development of data-governance policies for high-risk systems and obligating organizations to implement appropriate governance frameworks.

As data-governance policies are being developed, now is the ideal time to establish AI governance policies.

Advancing responsible AI together

As organizations face increasing compliance costs, particularly in regions like the EU, industry-wide collaboration is essential to balance regulatory demands with innovation. NTT DATA Group calls on policymakers, industry leaders and visionaries to integrate responsible AI principles into governance frameworks.



By doing so, businesses can navigate complex regulations, mitigate risks and maintain competitiveness while creating long-term value for all stakeholders.

Although AI governance is not yet a legal requirement and may currently be viewed as a "nice to have," this perception will shift, and AI governance will become a fundamental necessity.

A global dialogue centered on a unified certification approach for AI governance is emerging, reflecting a pivotal moment in AI policy. Never before has the global community witnessed such a unified and concentrated effort among policymakers and international organizations, all focused on defining and establishing robust AI governance frameworks.

[1] NTT DATA. 2024. Global GenAI Report: How organizations around the world are mastering their GenAI destiny in 2025.

Definition and importance of AI governance

What is AI governance?

AI governance refers to a comprehensive framework of strategies, policies and processes designed to guide the development, deployment and oversight of AI systems within organizations.

It comprises two key dimensions:

1. Strategic focus: AI governance enables organizations to harness the potential of AI for exploring new opportunities, enhancing market positioning and increasing competitiveness. It supports the integration and scaling of AI across operations to align with and achieve broader strategic objectives.
2. Responsible AI development: AI governance guides and oversees how AI systems are built and managed, in accordance with ethical principles, legal standards and societal values. It addresses crucial aspects such as transparency, accountability, fairness and the implementation of risk-management processes. Ultimately, AI governance facilitates regulatory compliance and the long-term sustainability and responsible use of AI technologies.

Why AI governance matters now more than ever

Most organizations will not develop their own AI systems; instead, they will rely on procuring them from external vendors. This reality underscores the critical need for robust governance and control mechanisms in procurement, customization and implementation processes.

Organizations must ensure that the AI solutions they integrate into their operations adhere to ethical standards and regulatory requirements, and are aligned with organizational values. Governance frameworks play a key role in upholding transparency, accountability and fairness in selecting and using third-party AI technologies.

Failure to implement effective AI governance exposes organizations to significant legal and reputational harm.

Key challenges in AI adoption

As organizations increasingly turn to AI to enhance their operations and drive innovation, they encounter several challenges in the adoption and governance of AI systems.

Ungoverned AI use

Adopting AI capabilities without having established any form of governance framework commonly leads to fragmented efforts, with data silos, incomplete processes, inadequate monitoring, undefined roles, duplication of effort and inefficient resource use.

As organizations scale their AI capabilities, they quickly realize that their current approach is unsustainable.

The rapid pace of adoption we see with agentic AI highlights how ungoverned efforts can quickly shift from being beneficial to having significant, and potentially negative, consequences.

Without a well-defined governance structure, the risks associated with a lack of oversight, including inconsistent performance, noncompliance with regulations, and ethical concerns, are more pronounced.

At this stage, organizations typically recognize the need to lay a solid foundation for AI governance.

Lack of mature governance frameworks

Many organizations struggle with issues relating to data governance, ethical risk management, transparency and accountability in the deployment of AI technologies.

A robust governance framework is the only way to address these complexities and manage risks related to fairness, accountability and regulatory compliance.

To achieve comprehensive governance, organizations need to elevate their approach, going beyond the management of individual algorithms to adopt a framework that also governs AI systems and their real-world applications.

Barriers to entry

Another challenge arises for organizations with limited experience in AI that are often in the early stages of exploring AI options: **Where to begin?**

For these enterprises, defining an AI governance framework is essential to establishing a clear roadmap for AI adoption. It provides the necessary structure to guide experimentation, embed ethical considerations from the outset and create a robust foundation for future growth in AI capabilities.

The growing adoption of AI brings immense opportunities, but without the proper governance structures in place, organizations are at risk of undermining the very benefits they seek to achieve. It is imperative that they address these governance challenges early in their AI journey to ensure responsible and effective implementation.

The role of governance in responsible AI development

What does "responsible AI" mean?

According to the International Organization for Standardization (ISO), "Responsible AI is an approach to developing and deploying AI from both an ethical and legal standpoint. The goal is to employ AI in a safe, trustworthy and ethical way. Using AI responsibly should increase transparency while helping to reduce issues such as AI bias."[2]

When discussing responsibility and trust, the terms "responsible AI," "ethical AI" and "trustworthy AI" are often used interchangeably, but it is important to clarify the meaning of these terms and understand what each one means so that they can be used appropriately:

Responsible AI focuses on ensuring that AI systems are developed and deployed in ways that prevent harm to individuals and the broader environment. Responsibility means recognizing the impact of AI on society and taking proactive measures to protect human rights and freedoms and societal values.

Ethical AI refers to the principles and moral values that guide AI decisions. Because ethical standards can vary by organization or region, ethical AI is a more subjective concept. While ethical considerations are crucial, they are highly dependent on the cultural or institutional context, which can lead to different interpretations of what is "right" or "wrong." Organizations are encouraged to define AI ethics policies that reflect the values of their stakeholders and to make these policies transparent.

Trustworthy AI is about building trust in the technology itself through rigorous standards and testing, ensuring that systems work as intended and can be trusted to make fair and unbiased decisions.

While these terms overlap, the Responsible Artificial Intelligence Institute states that "responsible AI" is the most comprehensive, as it encompasses ethical principles and technical trustworthiness, but with a broader commitment to safeguarding human rights and societal wellbeing by ensuring that AI systems not only work correctly but also align with values that protect people and the planet. [3]

[2] ISO. 2023. Building a responsible AI: how to manage the AI ethics debate.

[3] Responsible Artificial Intelligence Institute. 2023. AI vs responsible AI: why is it important?

Why is responsible AI important?

AI is deeply embedded in almost every aspect of modern life, and its growth shows no signs of slowing down. Gartner® notes that: "In 2028, the market for artificial intelligence services will reach $609 billion with a five-year CAGR of 21.4% in constant U.S. dollars. Growth will be driven both by new generative AI capabilities and traditional AI technologies using predictive analytics and decision-making."[4] The market for GenAI services is experiencing unprecedented growth, with projections indicating an increase from $4.7 billion in 2023 to $221.8 billion in 2028. This growth is fueled by a 2023–28 CAGR for GenAI services of 115.9%, compared with a "classic" AI services CAGR of 11.3%.

Given this rapid expansion, it is crucial to recognize both the potential benefits and risks associated with AI. Improper or uncontrolled use of AI can lead to harmful consequences. These include perpetuating or even amplifying biases; creating false or misleading content at scale that can be used to spread misinformation and manipulate public opinion; privacy violations and more.

Most organizations are aware of the problem of algorithmic bias, yet not all have robust systems in place to track bias and address privacy risks. NTT DATA's research shows that only 86% of respondents agree that algorithm bias remains pervasive (96% of Chief Data Officers agree), but only 43% strongly agree that they have systems in place to track bias and privacy risks.[5]

The combination of AI's growing influence and the potential for negative outcomes requires organizations to implement responsible AI rather than simply adopting AI.

Ultimately, this means integrating responsibility, trustworthiness and ethics into the design process. For example, an AI system may be designed to analyze consumer data for ad personalization. The responsible design of that same AI system would include safeguards such as notifying users about how and when their data is used, explaining the rationale behind the AI system's implementation and providing mechanisms for redress in the event of a system malfunction.

[4] Gartner, Inc., Forecast Analysis: Artificial Intelligence Services, Worldwide, C. Graham, et al, 27 August 2024. GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved.

[5] NTT DATA. 2024. Global GenAI Report: How organizations around the world are mastering their GenAI destiny in 2025.

Operationalizing responsible AI through AI governance

As AI becomes deeply embedded in business and government operations, organizations face a dual challenge: fostering innovation while safeguarding fairness, privacy and compliance. This is where AI governance plays a critical role, bridging the gap between ethical principles and practical implementation.

Balancing innovation and accountability

At the heart of responsible AI development lies the need to address challenges such as bias, transparency, intellectual property and societal impact while fostering innovation. NTT DATA Group pioneered the organization's AI guidelines in 2019 and has promoted the guidelines in concert with the company's AI services business ever since. And in 2024, NTT, Inc. also announced the establishment of the **NTT AI Chapter.**

NTT DATA Group embodies this balance by adopting the Japanese business philosophy of "sanpō yoshi": "good for the buyer, good for the supplier and good for society." This principle underpins our commitment to AI systems that deliver value ethically and sustainably, adhering to the six foundational principles outlined in the **NTT AI Charter:**

1. **Sustainable development**
   AI should contribute positively to society, the environment and people.
2. **Human autonomy**
   Respect for individual rights and empowerment of human decision-making are paramount.
3. **Fairness and openness**
   Bias minimization and transparency are central to fostering trust.
4. **Security**
   AI systems must be safeguarded against threats throughout their lifecycle.
5. **Privacy**
   Strict data-management protocols build trust and protect personal information.
6. **Communication and cocreation**
   Engaging stakeholders ensures innovation aligns with societal values and human rights.

Turning principles into action:

To operationalize these principles, NTT DATA Group implements initiatives in four critical areas:

1. **Responsible-by-design innovation**
   Embedding ethics, security and sustainability into AI solutions from inception
2. **Upskilling at scale**
   Training hundreds of thousands of employees on AI technology and its ethical use to ensure responsible practices
3. **Multilayered governance**
   Establishing systematic risk-management frameworks to address compliance, safety and accountability
4. **Stakeholder collaboration**
   Partnering globally to create consistent AI standards and frameworks

AI governance guides the development and deployment of AI systems in line with societal values, mitigating risks and delivering measurable business value through trustworthy, responsible systems.

Responsible AI as a driver of ROI

Governance isn't just about mitigating risks; it's also about unlocking value.

Responsible AI practices can drive ROI by enhancing customer engagement, unlocking new revenue streams and supporting sustainable growth. Governance frameworks set out how AI initiatives are evaluated not only for safety and compliance but also for their potential business impact. This dual focus helps organizations move up the AI value chain, balancing ethical responsibilities with measurable outcomes.

Putting ethics into practice with responsible AI governance

Organizations can leverage AI governance and put AI ethics principles into practice by transforming the way AI is developed and implemented.

5 areas where AI ethics can be put into practice

1. **Accountability**
   Define roles and responsibilities as well as human supervision mechanisms to hold people accountable for AI outcomes.
2. **Fairness**
   Ensure that AI supports general wellbeing and inclusion by mitigating potential harmful bias, from design to deployment.
3. **Privacy**
   Reinforce data governance with tools and processes that prevent potential breaches of privacy and protect data integrity when gathering, using and sharing data through the AI lifecycle.
4. **Transparency**
   Ensure AI stakeholder communication, AI outcome interpretability and AI systems auditability.
5. **Integrity**
   Build reliable and secure AI by preventing potential misuse and enhancing validation practices that guarantee accurate outcomes through ongoing evaluation.

By adopting governance structures focused on responsible AI, organizations will not only mitigate legal and reputational risks but also foster trust, accountability and long-term success in the rapidly evolving AI landscape.

2. Frameworks and tools for effective AI governance

Numerous efforts have been made to establish guidelines, policies and codes for AI. However, there is no standardized framework for AI governance and no single solution has received certification from a global authority. While this lack of standardization provides flexibility, it also introduces uncertainty. Organizations are left to navigate multiple governance options without a clear, universally accepted path forward.

An interesting insight from our global GenAI research highlights the impact of this uncertainty: 81% of respondents strongly agree that unclear government regulation on AI stifles innovation and hinders investment in AI.[6] This "price of regulatory confusion" underscores the urgent need for clarity to unlock AI's full potential and drive progress in the field.

The lack of a standardized framework for AI governance presents both challenges and opportunities for organizations.

On the downside, the absence of a widely recognized standard can erode confidence, leaving organizations uncertain about compliance and accountability. This ambiguity often results in inconsistent implementation, with organizations interpreting best practices in ways that may not align with global ethical and regulatory standards.

On the upside, this lack of standardization offers flexibility, enabling organizations to tailor their governance frameworks to their unique needs and operational contexts. It also allows for adaptability, as rapidly evolving AI technologies require governance strategies that can keep pace with innovation. Additionally, organizations benefit from diverse approaches and the freedom to adopt market solutions, seek consulting expertise or develop custom frameworks that align with their strategic goals.

> "While the absence of a certified AI governance framework poses challenges, it also offers opportunities for customization and adaptability. Organizations can explore various options — from consultancy services to internal development — and leverage international guidelines to establish governance structures for responsible and sustainable AI use."

[6] NTT DATA. 2024. Global GenAI Report: How organizations around the world are mastering their GenAI destiny in 2025.

Products on the market

While AI governance tools are available on the market, many are still in their early stages. The solutions offered are new and may not yet provide the robust, comprehensive answers needed for effective governance.

GenAI has layers of complexity because of its dynamic and often unpredictable outputs. Governance tools tailored for GenAI need to address unique challenges such as managing intellectual property concerns, ensuring content authenticity and mitigating potential misuse. Moreover, tools alone cannot address the challenge of defining processes and responsibilities.

However, as the market matures, these AI governance tools are expected to become more reliable and widely adopted.

This will allow organizations to leverage automated, scalable solutions for monitoring and managing their AI systems. Just as we've seen with data governance, we expect organizations to have solid AI governance tools that support their AI oversight sooner rather than later.

In-house development

This path provides maximum customization and control but requires substantial resources and a deep understanding of AI risks and regulations.

Developing a proprietary AI governance framework internally may be a viable option if the organization has a high level of data-governance maturity and specialized AI teams that include legal, ethical and operational experts as well as technical resources. For these enterprises, the process is significantly easier, as established data practices provide a strong foundation for implementing effective AI governance.

Expert partners

Working with expert partners is often the best option for most organizations.

These partners bring extensive knowledge, networks and experience to the table. They can design tailored governance solutions that account for specific risks such as bias amplification, unintended misuse and copyright infringement while also aligning with compliance requirements and business objectives.

Expert partners can also help organizations stay up to date with evolving regulations and best practices, and navigate the complexities of GenAI, agentic AI, and other forms of AI.

Exploring available AI governance frameworks

AI governance is not a recent topic of concern. Discussions go back decades, when it became evident that, without robust safeguards, AI development could disproportionately disrupt livelihoods and exacerbate social inequalities.

In response, organizations began defining their own principles for AI adoption. This was followed by several initiatives focused on fostering AI development that serves societal interests, for example:

- OpenAI Institute (2015)
- Partnership on AI (PAI) (2016)
- Ethics and Governance of AI Initiative (2017)
- World Economic Forum's Centre for the Fourth Industrial Revolution (2017)

In 2019, the release of AI principles by significant global and regional bodies revealed existing gaps in implementation and catalyzed numerous efforts aimed at translating these principles into practical, actionable governance mechanisms.

By 2020, over 100 ethical guidelines had been published by governments, advocacy groups, international organizations and private companies.[7]

[7] Fjeld, J. 2020. Harvard Law School, Berkman Klein Center for Internet & Society. Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-based Approaches to Principles for AI.

Overview of key frameworks

Several existing frameworks and guidelines developed by international bodies such as the United Nations, the OECD and the European Union offer valuable insights into best practices for AI governance and can help organizations build their own frameworks.

Human-rights focus

United Nations Guiding Principles on Business and Human Rights (UNGPs) [8]

Although not exclusively about AI, the UNGPs provide a foundation for addressing human-rights risks, including those emerging from AI use. These principles urge companies to respect human rights by conducting impact assessments, following due diligence and establishing accountability mechanisms. They provide a ready-made means of assessing AI's impact on individuals and communities.

Responsible AI

OECD AI Principles [9]

Initially adopted in 2019 by 42 countries and updated in May 2024, the OECD AI Principles emphasize the responsible stewardship of trustworthy AI, covering human rights, transparency, accountability and robustness.

Trustworthiness-focused

Ethics Guidelines for Trustworthy AI by the European Commission's High-Level Expert Group on AI [10]

The guidelines establish seven key requirements that AI systems should meet in order to be deemed trustworthy. A specific assessment list aims to help verify the application of each of the key requirements. and communities.

Global ethical standards

UNESCO Recommendation on the Ethics of Artificial Intelligence [11]

This Recommendation, adopted in 2021, is the first global standard-setting instrument on the ethics of AI. It emphasizes principles such as transparency, accountability and fairness, advocating for human-rights protections and aiming to guide countries in building inclusive AI policies.

[8] United Nations. 2011. Guiding principles on business and human rights.

[9] OECD. 2024. OECD AI Principles overview.

[10] European Commission's High-Level Expert Group on AI. 2019. Ethics guidelines for trustworthy AI.

[11] UNESCO. 2024. Recommendation on the Ethics of Artificial Intelligence.

Practical implementation

Singapore's Model AI Governance Framework [12]

In 2019, the Personal Data Protection Commission (PDPC) of the Government of Singapore published the second edition of its Model AI Governance Framework. This framework is sector-, technology- and algorithm-neutral, translating ethical principles into practical applications for AI deployment, thus enabling organizations to implement these principles effectively. In 2020, they released a supplementary Assessment Guide to aid in this implementation. Additionally, the AI Verify tool was developed to offer a structured approach for assessing the trustworthiness of AI systems, focusing on key criteria such as fairness, transparency and accountability.

International standard

ISO/IEC 42001: 2023 Information technology — Artificial intelligence — Management system [13]

ISO/IEC 42001 is an international standard that specifies requirements for establishing, implementing, maintaining and continually improving an AI management system (AIMS). It is designed for entities providing or using AI-based products or services, and provides guidance for the responsible development and use of AI systems.

Regulatory oversight

EU AI Act [14]

While the AI Act is classified as a regulation rather than a governance framework, it introduces a risk-based regulatory approach to AI applications, establishing specific requirements for high-risk systems and aiming to set standards across the EU and beyond. This regulatory framework must be considered when defining governance structures for organizations operating within the EU.

[12] Personal Data Protection Commission Singapore (PDPC). 2020. Singapore's Approach to AI Governance.

[13] ISO. 2023. ISO/IEC 42001:2023: Information technology — Artificial intelligence — Management system.

[14] European Union. 2024. Regulation (EU) 2024/1689.

Key components of a robust AI governance framework

AI governance approaches may vary by industry and company size. However, there are several key components and principles that are universally applicable. A robust AI governance framework must:

1. **Encompass fundamental principles**
2. **Include a risk-management process**
3. **Adopt a human-in-the-loop (HITL) approach**

By integrating these components, organizations can start navigating the complexities of AI, ensuring that their systems are developed and implemented responsibly, ethically and in alignment with societal values.

1. Encompass fundamental principles

Hagendorff's (2020) analysis reveals that aspects such as accountability, privacy and fairness are present in approximately 80% of major AI guidelines[15]. The report, "Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-Based Approaches to Principles for AI," identifies areas of common concern that should be addressed in any governance framework.[16] These include:

Accountability

Clear lines of responsibility must be established for the development, deployment and outcomes of AI systems. This ensures that entities can be held responsible for their actions and decisions, fostering a sense of ethical stewardship.

Privacy

Protecting personal data is a foundational requirement, necessitating adherence to data protection laws and ethical standards. Effective AI governance frameworks must prioritize privacy safeguards to maintain public trust and regulatory compliance.

Fairness and nondiscrimination

AI systems should be designed to promote fairness and mitigate biases, supporting the equitable treatment of all individuals and groups.

Safety and security

AI systems must be engineered to operate reliably and securely, minimizing potential harm to users and society.

Transparency and explainability

Clear insights into how AI systems make decisions and operate are essential for building trust.

Promotion of human values

AI development must be consistent with fundamental human rights and values, for the benefit of human wellbeing and societies.

Professional responsibility

Defining a workforce-use policy in the context of AI equips AI professionals with the necessary technical skills to uphold the highest ethical standards in their work. Such a policy fosters a culture of responsibility, as AI experts are expected to remain informed about emerging regulations, contribute to the development of transparent and accountable AI systems, and consistently consider the broader societal impact of their work.

2. Risk management

A rigorous risk-management process should be part of any AI governance framework and is essential for identifying, assessing and mitigating risks associated with AI technologies.

The NIST AI Risk Management Framework, which emphasizes principles such as fairness, accountability and transparency, is a useful resource for building this component. This framework provides a voluntary yet structured approach to governance, enabling organizations to effectively manage AI-related risks.[17]

3. Human-in-the-loop (HITL)

Another component of AI governance that garners universal agreement is the HITL approach. It highlights the necessity of human supervision at every stage of AI model development and implementation.

By involving human oversight, organizations can integrate ethical concerns into decision-making processes and address potential risks proactively.

[15] Hagendorff, T. 2020. The Ethics of AI Ethics: An Evaluation of Guidelines.
[16] Fjeld, J; Achten, N; Hilligoss, H; Nagy, A and Srikumar, M. 2020. Mapping Consensus in Ethical and Rights-Based Approaches to Principles for AI.
[17] NIST. 2023. AI Risk Management Framework.

3. NTT DATA's approach to AI governance

Our AI governance approach provides comprehensive oversight across the entire AI lifecycle. It offers a structured model that organizations can apply holistically or modularly, adapting to different maturity levels and aligning with industry best practices. This approach facilitates agile, ongoing innovation and AI-driven initiatives that deliver business value.

Figure 1: NTT DATA's approach to AI governance

Strategy: Aligning business value with the corporate strategy

AI strategy is a cornerstone of AI governance. It enables organizations to align AI value with corporate goals by prioritizing impactful use cases, defining a clear roadmap and fostering active engagement from all stakeholders for project success.

Establishing AI strategy foundations

Organizations must begin by understanding the mission and strategic goals that drive the business, aiming to understand the "as-is" scenario of AI adoption.

We help our clients answer questions such as:

- What **objectives** do we have for AI?
- What **priorities** do we have for leveraging AI?
- What are the associated **risks** of AI implementation?

AI development must be consistent with fundamental human rights and values, for the benefit of human wellbeing and societies. Understanding how AI aligns with the overall business strategy is critical to fostering a shared vision and goals.

We leverage industry-specific insights and expertise to uncover opportunities and encourage AI and business teams to collaborate.

Unifying portfolio management

AI initiatives must be designed using a collaborative methodology and with regular input from business experts, including the ability to monitor their value creation. This approach facilitates consistent application across AI initiatives and helps build a portfolio of solutions that support strategic goals and deliver greater overall value.

AI use-cases roadmap

Identifying and evaluating potential AI use cases in line with strategic priorities allows organizations to prioritize initiatives by feasibility and impact.

After brainstorming to explore different use cases and define and prioritize initiatives, we define a customized roadmap to start developing AI. This roadmap acts as a strategic compass, providing clear direction and key milestones to support our clients' efforts in reaching their goals.

Strategic objectives

AI strategy foundations

Define the overarching vision, goals and strategic direction for AI.

Unified portfolio management

Oversee and coordinate AI initiatives, facilitating collaboration between business and technical teams for a unified AI portfolio.

AI use-case roadmap

Identify and assess AI initiatives that align with corporate goals, prioritizing them based on potential impact and feasibility.

Organization: A tailored organizational model for the successful long-term implementation of AI

Creating an AI-driven organization involves making AI available to all business areas and coordinate the teams and roles involved in AI development and industrialization. This enables good governance and promotes a culture of AI awareness.

Collaboration model

We help organizations define a team structure to drive AI initiatives forward in support of business goals. We work with them to set up efficient multidisciplinary teams, including data engineers, data leaders and data architects, that collaborate effectively with other business areas such as marketing, HR, logistics, procurement and sales.

Depending on the organization's maturity, size and needs, the model can be centralized, decentralized or federated, ensuring flexibility while maintaining a streamlined operational approach.

Roles and responsibilities

The first step is to define the role of each team member and their required competencies, responsibilities and skills. We then establish a common project methodology that aligns the different roles by defining the main activities within the project lifecycle.

Finally, a reporting structure is implemented. This includes high-level sponsorship, working teams and committees that collaborate across lines of business, and escalation mechanisms for potential risks.

AI talent and culture

AI governance should also include the development of training plans and programs that build AI literacy, boosting internal talent and analytical capabilities.

AI literacy practices and efforts should not focus only on defining AI talent and literacy needs but also on developing a shared AI innovation culture throughout the organization.

These practices support the spread of AI knowledge, making the organization better prepared to take advantage of upcoming market trends and technological advances. They also help to attract talent by establishing a reputation for innovation and experimentation.

Strategic objectives

Collaboration model

Implement an AI organizational model that fosters collaboration among teams and elevates AI talent capabilities.

Roles and responsibilities

Define actions, roles and responsibilities across the AI lifecycle, in line with change-management strategies.

AI talent and culture

Democratize AI capabilities and prepare employees for AI adoption.

Operations: Orchestrating the processes, tools and infrastructure powering the AI lifecycle

With standardized methods for managing operations across the AI initiative lifecycle, organizations can quickly respond to business opportunities and reduce time to market for AI applications.

AI lifecycle

To guarantee scalable AI implementation, we start by identifying and defining each stage of the AI lifecycle. We outline the specific actions and precise set of tools required at each stage, and clarify roles and responsibilities for effective execution. We also address potential risks with mitigation strategies.

This work serves as a backbone for developing and industrializing AI solutions to accelerate and scale the value generated.

AI governance tools

We recommend that organizations explore adaptable and scalable governance tools to support ongoing model evaluation so that AI systems remain compliant, transparent and aligned with strategic goals and regulatory standards.

Organizations can either develop in-house solutions for full control, though at higher costs and longer development times, or leverage existing internal tools, which may lack certain functionalities. Alternatively, market solutions offer cutting-edge technology with regular updates but may increase costs and raise data-privacy concerns.

Strategic objectives

Process orchestration

Swiftly translate and execute AI-driven initiatives in a production environment.

AI lifecycle management

Encapsulate the intended structure of processes, procedures and technical tools, and clarify roles and responsibilities.

AI governance tools

Enhance infrastructure and ensure technological enablement to scale AI initiatives for ongoing, agile innovation.

Building blocks for compliant and ethical AI deployment

Through collaboration, we cocreate thriving AI ecosystems that not only meet regulatory requirements but also champion ethical values. In a rapidly advancing technological landscape, building a solid understanding of ethical AI is as essential as adhering to legal frameworks.

What we do

Compliance assessment

We evaluate organizations' AI readiness by assessing their regulatory compliance and technological adoption. Using a readiness score, we measure maturity in operational and technical areas, highlighting feasibility, risk-management capabilities and actionable next steps to advance alignment with ethical and legal standards.

Risk management

We implement robust risk-management frameworks by conducting comprehensive assessments and designing mitigation strategies. These frameworks address technical and ethical risks through policies and protocols designed to minimize negative impacts throughout the AI lifecycle.

AI ethics guidelines

Our detailed guidelines help organizations and stakeholders understand AI tools, terminology and methodologies, building inclusivity and trustworthiness in system development and deployment.

AI model registry

We help centralize and document all information related to AI systems that are deployed or under development across the organization, creating a centralized AI model registry. This facilitates collaboration among stakeholders and supports informed decision-making.

Policies and procedures

To ensure systems operate within ethical and legal boundaries, we help establish policies and workflows to govern AI operations effectively. These include incident-management processes to address security breaches, ethical concerns or operational issues.

AI office

We recommend establishing a dedicated AI office to oversee and coordinate governance efforts. This office should integrate multidisciplinary expertise to ensure accountability, manage responsibilities and maintain compliance with ethical AI practices while mitigating reputational, economic and societal risks.

The value of our approach

Fostering responsible transformation

Our approach goes beyond compliance by embedding ethical literacy and cultivating a culture of responsible AI. This ensures systems are not only compliant but also beneficial to individuals and society, fostering trust and inclusivity.

Minimizing risk

Proactive risk assessments help to identify potential technical and ethical issues and mitigate risks early, reducing exposure to unforeseen challenges and protecting organizational integrity.

Building trust

Comprehensive guidelines empower stakeholders with a common knowledge base. This enhances collaboration, builds public confidence in AI systems, and promotes inclusivity and the ethical use of AI in diverse settings.

Enhancing transparency

A centralized AI registry offers a comprehensive overview of the AI ecosystem, supporting compliance, accountability and strategic decision-making. This centralized approach fosters better governance and simplifies regulatory reporting.

Strengthening governance

Policies and procedures equip organizations to operate AI systems within ethical and legal boundaries, helping them to prevent and respond quickly to issues while enabling ongoing compliance and operational stability.

Driving business value

Responsible AI practices not only ensure compliance but also unlock business value by enhancing customer trust, supporting sustainable growth and creating opportunities for innovation while minimizing reputational risks.

Our alignment with industry standards and best practices

Our approach is based on universal principles and best practices, drawing on leading industry guidelines and adapting to different organizational contexts.

Recognizing that governance approaches vary by industry, company size and specific needs, our methodology is designed to be flexible, allowing for full or modular integration. Clients can implement our approach in its entirety or select specific pillars, as needed, so they can adopt only the components that best support their immediate priorities. This adaptable structure allows organizations to develop, deploy and manage AI systems responsibly, and scale their governance efforts over time.

Centralized authority

Following widely accepted governance standards, we recommend establishing a centralized authority in the form of a dedicated AI office that owns AI oversight and syncs with frameworks such as ISO/IEC standards. This office promotes ethical, compliant and innovative AI by managing security, compliance and risk responsibilities. It serves as the hub for all AI-related governance activities, overseeing alignment with both organizational goals and industry regulations.

Minimized risk

We integrate robust risk-management protocols and conduct regular compliance assessments that align with industry best practices, such as those outlined by NIST. Through proactive risk assessments, incident-management policies and compliance evaluations, we help organizations minimize potential risks while meeting critical regulatory requirements, including GDPR and the EU AI Act. Our approach helps organizations maintain a secure and compliant environment throughout the AI lifecycle.

Optimized AI lifecycle

Our processes for managing the AI lifecycle are based on industry-leading practices like AIOps, ensuring standardized workflows that enable rapid and efficient GenAI implementation. These workflows not only support reliable operational efficiency but also reduce time to market for AI applications, helping organizations capitalize on AI opportunities.

Responsible AI development

Our focus on responsible AI aligns with frameworks such as the European Commission's Ethics Guidelines for Trustworthy AI and the OECD AI Principles. Through ethical literacy, centralized AI registries and comprehensive guidelines, we help organizations develop AI solutions with transparency and accountability, and in a way that benefits society. This approach fosters compliance with legal standards, mitigating reputational risks and building public trust.

AI literacy

We recognize the importance of fostering a culture of AI literacy and ongoing innovation. By supporting our clients in staying at the forefront of AI advancements, we help them remain competitive, attract top talent and drive long-term value. Our focus on education, talent development and a robust workforce-use policy equips organizations to evolve with the rapidly changing AI landscape and manage AI technology responsibly and ethically across their teams.

Our approach equips organizations to harness AI's full potential, responsibly, aligning each initiative with recognized standards while fostering growth and adaptability.

4. From blueprint to reality

Effective AI governance implementation

With the principles, frameworks and standards in place, the question remains: How do we translate this theory into actionable AI governance?

Our approach ensures that AI governance is not just theoretical but deeply integrated into the organization's operations. We begin by assessing the current AI maturity level, then move to creating tailored strategies and governance structures that align with business objectives, supporting sustainable growth and responsible AI deployment.

Structuring and executing AI governance projects: Our process

3 steps to comprehensive and effective AI governance

01

AI maturity assessment

We start by **evaluating the organization's current AI maturity** to understand its strengths, gaps, and readiness for governance adoption. This assessment provides a clear baseline for improvement and enables alignment with long-term goals.

02

Customized AI roadmap

Based on the assessment, we design a **customized AI roadmap**. This roadmap outlines the strategic initiatives, milestones and resources needed to build a robust AI framework that supports both current and future AI ambitions.

03

Governance implementation

This phase focuses on **embedding AI governance into everyday practices** by establishing structures, processes and policies that facilitate sustained oversight, continuous improvement and alignment with ethical, legal and organizational guidelines.

1. AI maturity

The foundation of any successful AI governance project is a comprehensive understanding of the organization's current AI maturity.

We have developed an AI Maturity Assessment to identify and define key domains of AI governance over a series of structured, in-depth sessions with stakeholders. The assessment process includes:

- **Three guided sessions of 2 to 3 hours each**
  These are held with cross-functional teams, including stakeholders from leadership, IT, compliance and data-science departments. A collaborative approach allows us to gather diverse insights into the organization's current capabilities, objectives and specific challenges related to AI.
- **A comprehensive analysis and report within 4 weeks**
  This report includes a maturity score across critical AI governance areas. Each area is evaluated against best practices and industry standards, providing a clear picture of the organization's current AI capabilities and areas for improvement. The final report is a comprehensive reference document that establishes the team as an authoritative voice on AI within the organization. It also supports budget allocation by outlining clear next steps and priority projects needed to improve the organization's analytical maturity and AI capabilities.

Our AI Maturity Assessment is versatile

Foundational tool for AI adoption

For organizations without a dedicated AI structure, the assessment serves as a roadmap for building AI capabilities and prioritizing governance initiatives that align with their strategic objectives.

Gaining AI maturity

For organizations with established AI labs or hubs, the assessment helps identify key governance initiatives that will help improve AI maturity.

2. Customized AI roadmap

Our approach begins by defining, implementing and managing governance practices and clarifying roles, responsibilities and processes across the organization. For each core governance pillar — strategy, organization, operations and responsible AI — we offer the following:

- **Core governance modules**
  A clear definition of each module, paired with essential tools such as templates, checklists and best practices to support effective implementation.
- **Actionable recommendations**
  Tailored actions for achieving short-, medium-and long-term goals that will facilitate a successful rollout and the ongoing improvement of AI governance practices.

3. Governance implementation

Once the assessment is complete and the roadmap has been delivered, we enter the implementation phase. During this phase, our team partners closely with the organization's stakeholders to embed the governance framework into existing workflows and systems, in line with the organization's operational and strategic goals.

How to get started

Leverage our service and engagement models for success.

- **A tailored governance model**
  We follow an iterative and participatory approach to developing a model that's suited to your organization's unique needs. Our approach includes collaborative workshops and stakeholder feedback sessions.
- **Flexibility and scalability**
  Because our approach to governance has a modular structure, it can be adapted as AI evolves and your priorities change.
- **Enhanced integration**
  We work with you to foster collaboration among multidisciplinary teams and embed governance practices effectively across functions, facilitating the smooth integration of AI governance within your organization.

5. Conclusion: AI governance is a strategic imperative

As organizations adopt AI — especially the transformative capabilities of GenAI and agentic AI — at an accelerated pace, establishing robust AI governance frameworks has become a strategic imperative. It is no longer just a proactive measure but a fundamental requirement for responsible and ethical AI use.

GenAI, for example, introduces unprecedented opportunities for creativity, efficiency and problem-solving, but also presents unique challenges in areas such as intellectual property, data integrity and bias mitigation.

Agentic AI delivers new efficiencies in tasking, management and decision making, yet unchecked agents can cause unknown security and process problems.

By integrating governance structures that balance strategic priorities with regulatory compliance and ethical considerations, organizations can harness AI's full potential while effectively managing associated risks.

NTT DATA's approach to AI governance provides a scalable and modular solution that's tailored to the complexities of GenAI, agentic AI and broader AI technologies.

This approach enables organizations to address immediate priorities while expanding their governance efforts as AI maturity evolves. It supports the alignment of AI initiatives with strategic goals, and helps establish clear roles and responsibilities while integrating ethical principles into each stage of the AI lifecycle.

By embedding responsible AI practices across the organization, organizations can foster a culture of innovation that's grounded in trust, accountability and ethical decision-making.

Adopting a comprehensive approach to AI governance positions you to lead responsibly in an AI-driven world. Prioritizing transparent, fair and reliable AI practices not only ensures compliance with current regulations but also paves the way for sustainable growth, competitiveness and long-term success in a world increasingly shaped by AI technology.

About NTT DATA

NTT DATA is a $30+ billion business and technology services leader, serving 75% of the Fortune Global 100. We are committed to accelerating client success and positively impacting society through responsible innovation. We are one of the world's leading AI and digital infrastructure providers, with unmatched capabilities in enterprise-scale AI, cloud, security, connectivity, data centers and application services. Our consulting and industry solutions help organizations and society move confidently and sustainably into the digital future. As a Global Top Employer, we have experts in more than 70 countries. We also offer clients access to a robust ecosystem of innovation centers as well as established and start-up partners. NTT DATA is part of NTT Group, which invests over $3 billion each year in R&D.

List of abbreviations

AIMS	artificial intelligence management system
AIOps	artificial intelligence for IT operations
CAGR	compound annual growth rate
GDPR	General Data Protection Regulation
HITL	human-in-the-loop
MLOps	machine learning operations
NIST	National Institute of Standards and Technology
PDPC	Personal Data Protection Commission
UNESCO	United Nations Educational, Scientific and Cultural Organization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