STRATEGIC PILLARS FOR AI GOVERNANCE

Introduction

In the past decade, Artificial intelligence (AI) has made extraordinary progress across global sectors and has evolved from a niche scientific pursuit to a fundamental "coming wave" comparable to the transformative impact that fire, electricity or nuclear power had on society.[1] However, just like nuclear power, AI is not intrinsically beneficial or harmful. It has the potential to accelerate economic growth and inclusive development, and at the same time, its probabilistic, generative, agentic, and adaptive characteristics mean that AI can intensify existing societal harms or introduce entirely new forms of risk if left inadequately governed.[2]

Large language models and agentic AI systems are actively being embedded in the infrastructure and functioning of healthcare, finance, public administration etc. They offer unprecedented efficiency and innovation while also introducing profound systemic risks.[3] These risks, ranging from algorithmic bias, lack of transparency to unanticipated harmful impacts, have catalyzed a global shift in focus from abstract ethical debates to the urgent development of enforceablze AI governance.[4]

Current global AI governance generally follows a "Three Worlds" framework. The Global West focuses on a liberal, market-driven approach; the Global East led by China, adopted a state-centric model; and the Global South emphasizes an inclusivity-focused, society-centric strategy.[5] As these paradigms compete, the central challenge for policymakers is to strike a balanced, agile, and pro-innovation approach that advances technical progress while mitigating risks.[6] To navigate this moving horizon, a robust governance framework must be built upon specific strategic pillars that

[1] Matthijs M Maas, *Architectures of Global AI Governance: From Technological Change to Human Choice* (Oxford University Press 2025) 1.
[2] Press Information Bureau, Government of India, *India AI Governance Guidelines* (2 November 2025) 4.
[3] Saurabh Pahune and others, 'The Importance of AI Data Governance in Large Language Models' (2025) 9 *Big Data and Cognitive Computing* 147, 1–2.
[4] Amna Batool, Didar Zowghi and Muneera Bano, 'AI governance: a systematic literature review' (2025) 5 AI and Ethics 3265, 3265.
[5] Anulekha Nandi, Basu Chandola and Anirban Sarma (eds), *India's AI Imperative: Building National Competencies in a New World Order* (Observer Research Foundation 2025) 11.
[6] Press Information Bureau, Government of India, *India AI Governance Guidelines* (2 November 2025) 2.

ensure AI remains safe, trusted, and beneficial. These pillars typically span three key domains as given in the India AI Governance Guidelines i.e., enablement, regulation, and oversight.[7]

AI Governance- From abstract ethical principles to enforceable AI governance

AI governance refers to the collection of regulatory frameworks, institutional practices, operational processes, and technological mechanisms through which organizations ensure that the design, development, and deployment of AI systems are consistent with their strategic objectives, ethical commitments, and organizational values. In recognition of the growing influence of AI systems, a wide range of governmental and international bodies have articulated AI governance principles and frameworks. These include initiatives by the European Union through the EU AI Act, the Organisation for Economic Co-operation and Development (OECD) AI principles, the National Institute of Standards and Technology (NIST) AI risk management framework, the International Organization for Standardization (ISO) standard for AI governance etc. Collectively, these efforts reflect an emerging global consensus on the need for structured ethical and governance frameworks to guide the responsible use of AI technologies.[8]

While the last decade saw a proliferation of ethical guidelines and responsible AI statements, practitioners often find themselves left with truisms rather than actionable practices.[9] The shift toward governance architectures aims to bridge this governance gap by creating institutional designs and regulatory frameworks that turn principles into reality.[10] Ethical guidelines are treated as mere suggestions with no enforceable regulations to ensure compliance, leading to these principles being overlooked in competitive markets where profitability and time-to-market are prioritized.[11]

Strategic Pillars for AI governance

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[7] Ibid 1.
[8] Amna Batool, Didar Zowghi and Muneera Bano, 'AI governance: a systematic literature review' (2025) 5 *AI and Ethics* 3265, 3265-3266.
[9] Qinghua Lu and others, 'Responsible AI Pattern Catalogue: A Collection of Best Practices for AI Governance and Engineering' (2024) 56 ACM Computing Surveys 173.
[10] Stefaan G Verhulst, "The 2025 Canon: Themes Emerging from 85 Books on Technology, Innovation & Governance" (*Medium*, November 29, 2025) <https://sverhulst.medium.com/the-2025-canon-themes-emerging-from-85-books-on-technology-innovation-governance-7136c156a66a> accessed February 5, 2026.
[11] Amna Batool, Didar Zowghi and Muneera Bano, 'AI governance: a systematic literature review' (2025) 5 *AI and Ethics* 3265, 3274-3275.

Strong AI governance delivers clear organizational benefits. It strengthens brand credibility and trust, helping attract customers and retain talent. It reduces exposure to legal, regulatory and compliance costs by addressing risks early. By improving the reliability and accuracy of AI-driven insights, it leads to better decisions, while also ensuring that AI systems contribute positively to society through responsible and ethical deployment.[12]

Policy and Regulation

The Policy and Regulation pillar aims at reconciling the rapid pace of technological innovation with the necessity of ethical oversight and public safety. This strategic pillar focuses on developing balanced, agile frameworks that are not static but instead evolve alongside the technology they are designed to oversee. [13] AI systems are inherently dynamic, non-deterministic, and context-sensitive. Therefore, static or one-size-fits-all regulations are insufficient and risk becoming obsolete before they are even fully implemented.[14] To address this, regulators are encouraged to preserve flexibility by developing policies that can be regularly updated as AI capabilities advance.[15]

Globally, nations are experimenting with various regulatory archetypes to find an equilibrium between safety and growth. The European Union's risk-based approach, through the EU AI Act, categorizes systems by potential harm i.e., unacceptable, high, limited, or minimal risk and imposes mandatory transparency and safety requirements on the higher tiers.[16] India and other emerging economies are increasingly adopting a hybrid model, utilizing existing statutory laws

[12] Christine Davine, "Strategic Governance of AI: A Roadmap for the Future" (*The Harvard Law School Forum on Corporate Governance*, April 24, 2025) <https://corpgov.law.harvard.edu/2025/04/24/strategic-governance-of-ai-a-roadmap-for-the-future/> accessed February 5, 2026.
[13] Press Information Bureau, Government of India, *India AI Governance Guidelines* (2 November 2025) 8.
[14] James Coringrato, "Global Approaches to Artificial Intelligence Regulation" (*The Henry M. Jackson School of International Studies*, July 10, 2025) <https://jsis.washington.edu/news/global-approaches-to-artificial-intelligence-regulation/> accessed February 5, 2026.
[15] Owen J Daniels and Dewey Murdick, 'Enabling Principles for AI Governance' (Policy Brief, Center for Security and Emerging Technology 2024) 2 <https://cset.georgetown.edu/wp-content/uploads/CSET-Enabling-Principles-for-AI-Governance.pdf/> accessed 5 February 2026.
[16] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) [2024] OJ L1689, arts 5, 6 and 50 ; Rakesh, 'Why We Need Data Protection Laws for AI in India' (2025) 1(1) *De Facto Law Journal* 1, 8.

such as those governing data protection, consumer rights, and information technology, while identifying specific regulatory gaps that require targeted legal amendments.[17]

As AI is a transboundary technology, the Policy and Regulation pillar seeks to prevent a regulatory race to the bottom by fostering global interoperability. The OECD AI Principles serve as a global benchmark for this effort, promoting shared values such as transparency, robustness, and accountability across different legal jurisdictions. By aligning national policies with international technical standards, governments can reduce cross-border regulatory friction, ensuring that responsible AI progress is shared rather than fragmented.[18]

Risk management and safety

As AI increasingly transforms sectors like healthcare, finance, and critical infrastructure, robust governance mechanisms are required to identify, assess, and mitigate different types of risks to prevent irreversible societal disruption. [19] This architecture ensures that as AI systems become more autonomous, they remain reliable, transparent, and subject to human intent.

For effective risk management frameworks such as the NIST AI Risk Management Framework (RMF) can be adopted, which utilizes four key functions.

- Govern: establishing policies and roles,
- Map: understanding context and identifying risks,
- Measure: quantifying and testing risks
- Manage: prioritizing and implementing mitigations.[20]

AI actors should adopt a continuous and systematic risk management approach at every stage of the AI system lifecycle. Acting within the scope of their roles and capacities, they are to follow responsible business practices and, where necessary, cooperate with other AI actors, knowledge

[17] Press Information Bureau, Government of India, *India AI Governance Guidelines* (2 November 2025) 10.
[18] Anecdotes team, "AI Regulations in 2025: US, EU, UK, Japan, China and More" (*anecdotes*, January 28, 2026) <https://www.anecdotes.ai/learn/ai-regulations-in-2025-us-eu-uk-japan-china-and-more> accessed February 5, 2026.
[19] Amna Batool, Didar Zowghi and Muneera Bano, 'AI governance: a systematic literature review' (2025) 5 *AI and Ethics* 3265.
[20] "Responsible AI Transparency Report" (*Corporate Responsibility*, May 20, 2025) <https://www.microsoft.com/en-us/corporate-responsibility/responsible-ai-transparency-report/> accessed February 5, 2026.

providers, system users and relevant stakeholders. Such risk management should address concerns relating to harmful bias, human rights, safety, security and privacy, as well as labour and intellectual property rights, ensuring that AI systems are developed and deployed in a responsible and accountable manner.[21] From a strategic perspective, boards of directors must define an organization's "risk appetite" and ensure that AI initiatives are vetted for safety and business impact through formal oversight committees.[22]

Requirements for safety include Technical Robustness which involves building AI systems that are proactive in damage prevention. This includes Accuracy with the ability of the system to make correct judgments and classifications, Reliability ensuring the system works properly across a range of inputs and situational contexts and Resilience in protecting the system against threats such as hacking or data poisoning.[23] Governance must evolve to manage novel threats such as hallucinations in large language models, AI-powered phishing, and deepfakes that erode social trust.[24]

Accountability and Human Oversight

Accountability in AI systems is difficult to implement because many AI models function as "black boxes," making their decision-making processes hard to explain or evaluate. This creates challenges in identifying who is responsible for an AI-driven decision. For example, when AI systems are used to screen job applications, it is unclear whether responsibility lies with the developer, the organization, or the system itself. Several organizations have faced criticism for failing to clearly assign responsibility or provide transparent auditing of such systems. These cases

[21] OECD, 'Recommendation of the Council on Artificial Intelligence' (OECD/LEGAL/0449, 2019) https://legalinstruments.oecd.org/en/instruments/oecd-legal-0449 accessed February 5, 2026.

[22] Andrew Wells, "Why Effective AI Governance Is Becoming a Growth Strategy" *World Economic Forum* (January 16, 2026) <https://www.weforum.org/stories/2026/01/why-effective-ai-governance-is-becoming-a-growth-strategy/> accessed February 5, 2026 ; Christine Davine, "Strategic Governance of AI: A Roadmap for the Future" (*The Harvard Law School Forum on Corporate Governance*, April 24, 2025) <https://corpgov.law.harvard.edu/2025/04/24/strategic-governance-of-ai-a-roadmap-for-the-future/> accessed February 5, 2026.

[23] Emmanouil Papagiannidis, Patrick Mikalef and Kieran Conboy, 'Responsible Artificial Intelligence Governance: A Review and Research Framework' (2025) 34(2) *Journal of Strategic Information Systems* 101885, 8.

[24] Saurabh Pahune and others, 'The Importance of AI Data Governance in Large Language Models' (2025) 9 *Big Data and Cognitive Computing* 147, 1–2 ; Mike Olumide, Elijah William and Abas Kadar, *AI-Powered Phishing, Deepfakes, and the New Data Governance Imperative* (January 2026) https://www.researchgate.net/publication/399985234_AI_Powered_Phishing_Deepfakes_and_the_New_Data_Governance_Imperative accessed February 6, 2026.

highlight the importance of clearly defining accountability and ensuring that AI systems can be reviewed and evaluated in a transparent manner.[25]

Together, these pillars ensure that AI systems are not merely autonomous "black boxes" but are instead responsible entities governed by human values and legal frameworks.[26] Accountability in AI governance ensures that those who develop, deploy, and operate AI systems are answerable for their impacts, whether intentional or accidental.[27] It involves establishing clear roles and responsibilities across an organization so that individuals can be held responsible for AI outcomes.[28] Accountability is maintained through mechanisms such as transparency reports, where firms publish risk mitigation steps, and third-party audits to validate system results.[29] A system cannot be held accountable if its logic is not understood. Governance frameworks increasingly mandate that AI be "Understandable by Design," providing clear disclosures and explanations so that users and regulators can understand likely outcomes.[30]

Human oversight refers to the involvement of humans in AI decision-making processes. Common oversight mechanisms include planning oversight, continuous monitoring, and retrospective analysis after failures or harmful outcomes. Planning oversight involves evaluating AI systems before deployment to assess the chosen technologies and understand their potential impact in a given context. Continuous monitoring ensures that systems behave as expected over time, while retrospective analysis helps identify causes of failure and prevent similar issues in the future.[31]

Capacity Building

A primary focus of capacity building is ensuring that individuals at all levels of society, from public officials and corporate boards to the general public, possess the necessary skills to navigate

[25] Emmanouil Papagiannidis, Patrick Mikalef and Kieran Conboy, 'Responsible Artificial Intelligence Governance: A Review and Research Framework' (2025) 34 *Journal of Strategic Information Systems* 101885, 7.
[26] IISPPR, 'AI and Data Protection: Challenges in Automated Decision-Making' (18 December 2024) https://iisppr.org.in/ai-and-data-protection-challenges-in-automated-decision-making/ accessed February 6, 2026.
[27] Anecdotes team, "AI Regulations in 2025: US, EU, UK, Japan, China and More" (*anecdotes*, January 28, 2026) <https://www.anecdotes.ai/learn/ai-regulations-in-2025-us-eu-uk-japan-china-and-more> accessed February 5, 2026.
[28] Andrew Wells, "Why Effective AI Governance Is Becoming a Growth Strategy" *World Economic Forum* (January 16, 2026) <https://www.weforum.org/stories/2026/01/why-effective-ai-governance-is-becoming-a-growth-strategy/> accessed February 5, 2026
[29] Press Information Bureau, Government of India, *India AI Governance Guidelines* (2 November 2025) 31.
[30] Ibid 13.
[31] Emmanouil Papagiannidis, Patrick Mikalef and Kieran Conboy, 'Responsible Artificial Intelligence Governance: A Review and Research Framework' (2025) 34 *Journal of Strategic Information Systems* 101885, 7-8.

an AI-driven world. Whether AI technologies are developed locally or adopted from elsewhere, there must be enough skilled people to understand how AI works, what its limits are, and how it can be used responsibly. Building this human capacity is especially important in the public sector, but it also matters in academia, business, and civil society. Strong human expertise improves how AI strategies are designed and implemented across different sectors. It also helps protect cultural and linguistic diversity and supports the creation of high-quality data for future AI systems. Overall, this form of capacity-building is essential for developing AI that serves the public interest.[32]

At its core, this pillar involves initiating comprehensive education, skilling, and training programs designed to empower individuals, build societal trust, and heighten awareness regarding the inherent risks and vast opportunities presented by artificial intelligence.[33] The availability of a well-trained and contemporary workforce is recognized as the essential key to establishing a sustainable AI ecosystem within a nation. However, the current shortage of AI experts and the lack of adequate skilling opportunities for existing workers remain significant barriers to widespread AI adoption.[34] To address these challenges, India has launched various initiatives such as India AI FutureSkills and FutureSkills PRIME, which currently support hundreds of PhD fellows and thousands of undergraduate and postgraduate students. These efforts must be significantly expanded to ensure inclusive development and to address existing inequalities, which are primary goals of the national AI governance framework.[35]

Implementing large-scale reskilling programs is necessary to prepare the entire workforce for the job transformations triggered by AI, which requires integrating AI education into curricula at all levels.[36] On the policy front, measures should focus on providing scholarships to incentivize graduates to pursue AI and machine learning while ensuring that experts are retained within academic institutions through competitive remuneration.[37] Ensuring effective AI governance also

[32] OECD, 'Recommendation of the Council on Artificial Intelligence' (OECD/LEGAL/0449, 2019) https://legalinstruments.oecd.org/en/instruments/oecd-legal-0449 accessed February 5, 2026.
[33] Press Information Bureau, Government of India, *India AI Governance Guidelines* (2 November 2025) 6.
[34] "India's National Strategy for Artificial Intelligence" (*Digital Watch Observatory*, June 2018) <https://dig.watch/resource/indias-national-strategy-for-artificial-intelligence> accessed February 6, 2026.
[35] Press Information Bureau, Government of India, *India AI Governance Guidelines* (2 November 2025) 17.
[36] "India's National Strategy for Artificial Intelligence" (*Digital Watch Observatory*, June 2018) <https://dig.watch/resource/indias-national-strategy-for-artificial-intelligence> accessed February 6, 2026.
[37] Ministry of Electronics & Information Technology, Government of India, Report of Committee - A on Platforms and Data on Artificial Intelligence (2019) https://www.meity.gov.in/documents/reports/report-of-committee-

requires equipping the general public with the right awareness and tools through targeted education and outreach campaigns. Skill-building is officially recognized as one of the seven critical pillars of the IndiaAI Mission, emphasizing its role in democratizing the benefits of AI across various sectors.[38]

Conclusion

Ultimately, the "governance gap" between rapid technical advancement and institutional logic remains one of the greatest challenges of the twenty-first century. Bridging this gap requires an inclusively networked and agile approach that engages diverse stakeholders. These pillars act as a "steering wheel" for executives, allowing for the rapid scaling of technologies like large language models and agentic systems while proactively mitigating risks such as algorithmic bias, privacy violations, and security breaches

AI governance is not a constraint on innovation, rather, it is a catalyst for sustainable growth. When embedded early, AI governance prevents fragmentation, duplication and unmanaged risk, allowing AI initiatives to scale faster and more reliably across the organization. Clear accountability, transparency and ethical oversight built into system design and everyday workflows create consistency and trust, rather than slowing down the progress. It strengthens customer confidence, improves regulatory readiness and ensures efficient use of data and resources. In this sense, governance is not a speed bump but the traction that keeps AI development focused, scalable and competitive, making it a strategic growth driver rather than a burdensome compliance exercise.[39]

gN0YTNtQWa accessed February 6, 2026.

[38] Press Information Bureau, Government of India, 'UNESCO and the Ministry of Electronics and Information Technology, Host Multi-Stakeholder Consultation on Safety and Ethics in Artificial Intelligence (AI)' (Press Release, 16 November 2024) https://pib.gov.in/PressReleasePage.aspx?PRID=2073920 accessed February 6, 2026.
[39] Andrew Wells, "Why Effective AI Governance Is Becoming a Growth Strategy" *World Economic Forum* (January 16, 2026) <https://www.weforum.org/stories/2026/01/why-effective-ai-governance-is-becoming-a-growth-strategy/> accessed February 5, 2026.