Bangladesh
National AI Policy
2026-2030

Draft v2

February 9, 2026

Acknowledgement

We extend our deepest gratitude to Faiz Ahmed Taiyeb, Special Assistant to the Chief Advisor, for his visionary leadership and strategic guidance, which were instrumental in shaping the direction and priorities of this draft policy.

We also convey our sincere thanks to Shish Haider Chowdhury, NDC, MCIPS, Secretary of the Information and Communication Technology (ICT) Division, for his unwavering support and leadership.

A special note of appreciation goes to Sadman Rahman and Tamanna I. Urmi for their role in research, writing, editing and coordinating the initiative. We also acknowledge the significant efforts of Quazi Adibur Rahman Adib, Asif Shahriyar Sushmit, Mohammad Mamun Or Rashid, Tarik Moon, Md. Azhaher Uddin Anik, Arefin Mizan, Faisal F Rafat, Tanveer Ali, Shahir Chowdhury, and Dr. Nazam Laila for their dedicated editorial contributions, insights and coordination throughout the development process.

We are particularly grateful to the ICT Division for their institutional support and to the National AI Policy Steering Committee of experts for their valuable insights and comments throughout the drafting process.

Finally, we thank the subject matter experts, stakeholders and team members who shared their time, knowledge and ideas through consultations and feedback sessions that informed this policy.

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Disclaimer: *The members of the committee provided their invaluable time and expertise on a voluntary basis. No government funds were utilized for compensation or otherwise to get member input. No artificial intelligence tools were used in formulating the policy.*

Acronyms

AAAI — Association for the Advancement of Artificial Intelligence

ACL — Association for Computational Linguistics

AI — Artificial Intelligence

AIA — Algorithmic Impact Assessment

API — Application Programming Interface

ASEAN — Association of Southeast Asian Nations

BDT — Bangladeshi Taka

BIMSTEC — Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation

BPO — Business Process Outsourcing

CoE — Council of Europe

DPI — Digital Public Infrastructure

DSTAR — Digital Skills and Training for Advancement and Resilience (World Bank project)

e-GP — Electronic Government Procurement

EMNLP — Empirical Methods in Natural Language Processing

FRT — Facial Recognition Technology

GenAI — Generative Artificial Intelligence

GIS — Geographic Information Systems

GPU — Graphics Processing Unit

GRS — Grievance Redressal Mechanism

ICLR — International Conference on Learning Representations

ICML — International Conference on Machine Learning

ICT — Information and Communication Technology

IEEE — Institute of Electrical and Electronics Engineers

ISO — International Organization for Standardization

IEC — International Electrotechnical Commission

LLM — Large Language Model

mHealth — Mobile Health

NDGA —National Data Governance Authority

NDGO — National Data Governance Ordinance

NID — National Identification

NLP — Natural Language Processing

NRDEX — National Responsible Data Exchange

OECD — Organisation for Economic Co-operation and Development

PDPO — Personal Data Protection Ordinance

RTI — Right to Information

SAARC — South Asian Association for Regional Cooperation

SDG / SDGs — Sustainable Development Goal(s)

SME / SMEs — Small and Medium-sized Enterprise(s)

STEM — Science, Technology, Engineering, and Mathematics

tfGBV — Technology-Facilitated Gender-Based Violence

TRL — Technology Readiness Levels

UDHR — Universal Declaration of Human Rights

UGC — University Grants Commission

UN — United Nations

UNESCO — United Nations Educational, Scientific and Cultural Organization

USD — United States Dollar

WHO — World Health Organization

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1. Introduction

1.1 National Context

Bangladesh stands at a pivotal moment in its development journey, following the transformative, student-led July Revolution of 2024. This socio-political shift has opened new avenues for inclusive governance, economic reform, and technological progress. With a growing young population, a resilient industrial sector, and a government committed to continued digital transformation, Bangladesh now has a unique opportunity to harness Artificial Intelligence (AI) as a strategic driver of sustainable economic growth, governance modernization, and regional leadership.

The interim government led by Professor Muhammad Yunus has emphasized integrating AI into the national development agenda, aligning it with the Sustainable Development Goals (SDGs). This vision reflects a broader global trend where AI is increasingly recognized as a general-purpose technology capable of transforming industries, public services, governance systems, and national competitiveness.

To fulfill this ambition, Bangladesh must overcome a series of economic, developmental, and political challenges—including infrastructure gaps, talent shortages, and fragmented policy execution. However, the opportunities far outweigh the obstacles. With the right strategy, Bangladesh can leapfrog into a leadership position in South Asia's AI landscape. This goal is not only aspirational but also achievable, given the country's recent economic rebound, which signals readiness for AI-driven productivity, resource optimization, and market expansion. A centralized governmental body, shall coordinate policies across government, academia, and industry, ensuring ethical standards, data protection, and cybersecurity frameworks are in place while promoting human-centric digital innovation and scientific development. Clear policy guidance will unify AI initiatives and establish Bangladesh as a competitive player in regional and global AI governance. To fully realize this potential, the government shall first address regulatory and structural gaps by creating a unified national AI plan. Through coordinated action, inclusive planning, and global partnerships, the country can transform these challenges into steppingstones toward regional AI leadership.

As per the Bangladesh Bureau of Statistics in 2025, 54.8 percent of households in Bangladesh have internet access and are growing., Bangladesh is the 6th largest group of internet users in the world. Smartphone users have also risen by 72.8 percent in 2025, from 63 percent in 2023. However, the digital divide persists mainly between urban and rural areas. The proportion of individuals using the internet reveals a wider urban-rural gap, with less than 38% of rural residents accessing the internet compared to over 68% in urban areas.

1.2 Why Bangladesh Needs an AI Policy

At this stage, the majority of the world, including Bangladesh, is a consumer of AI products rather than producers. The production of AI products is concentrated in the US and China, primarily as well as in some other countries in Europe and Asia. With more than half the population having access to the internet through smartphones and a stronger connectivity infrastructure, people in Bangladesh are already

exposed to and using AI products, mainly Generative AI chatbots like ChatGPT. The country must have an AI policy that ensures this use of AI is ethical, responsible, and aligned with the country's democratic and human rights values. Such a policy should also promote transparency, fairness, and adherence to the rule of law in all AI-related decision-making processes.

AI presents a transformative opportunity for Bangladesh to accelerate economic growth, modernize governance, and strengthen its position as a regional leader. It has the potential to enhance productivity across manufacturing, agriculture, logistics, and various services, while enabling smarter infrastructure, personalized public services, and data-driven governance. However, currently, AI adoption in Bangladesh is nascent and largely concentrated in isolated pilot projects within fintech, e-commerce, and academic research (Mainly in the STEM fields). There is no centralized policy, institutional framework, or national coordination mechanism to guide AI development. While some universities and startups are exploring AI applications, the lack of computer infrastructure, skilled talent, and regulatory clarity has hindered scale and impact for production.

AI literacy and skills development represent another critical priority. Awareness and technical expertise remain limited among youth, professionals, and policymakers, undermining the creation of an AI-ready workforce. By investing in sovereign high-performance computing systems, national data centers, secure cloud platforms, and 5G connectivity, the semiconductor industry in Bangladesh can build the foundations for large-scale AI innovation, protect its digital autonomy, and position itself as a responsible and competitive player in the global AI landscape. Bangladesh's greatest strength lies in its people. To harness the potential of AI and protect from its harms, the country must build an AI-ready population through improved education, vocational training, and development. This includes integrating AI, data science, and digital ethics into school and university curricula, establishing centers of excellence to foster expertise, and ensuring inclusive access for women, children, and underrepresented groups. By investing in its people, Bangladesh can drive domestic innovation and strengthen its position in the global digital economy.

Moreover, the absence of a comprehensive regulatory framework for ethical AI, data protection, algorithmic accountability, and cybersecurity exposes Bangladesh to serious risks—ranging from bias, disinformation, and privacy violations to systemic vulnerabilities that could threaten national resilience.

Furthermore, Bangladesh's engagement in global AI governance is important, and the policy outlines the area of international cooperation. As a rising middle power in South Asia, Bangladesh shall aim to expand its regional and global footprint in AI diplomacy and international alignment for future knowledge exchange, upholding global values and trade. Strengthening participation in international forums, advancing South–South cooperation, and forging strategic partnerships through multilateral arrangements as well as bilateral relationships with countries of shared interests will be essential. Partnering with technologically advanced and emerging economies, alongside leading global tech companies, will help to accelerate and effectively achieve national AI development objectives. By leveraging its strategic location, skilled workforce, vibrant youth population, and growing innovation

ecosystem, the country shall accelerate sustainable economic growth, assert digital sovereignty, and enhance its diplomatic influence.

A forward-looking National AI Policy is essential for regulating current AI use, managing future development, planning long-term investment in people and infrastructure, and fostering international cooperation. With consistent leadership and implementation, Bangladesh has the potential to turn its challenges into opportunities and establish itself as a regional AI leader in South Asia. The current AI policy will focus on regulating consumption to the benefit of people, protecting them from harm, and creating the conditions for AI innovation in the future. The policy is intended to be flexible and adaptable to the accelerated growth and unknowns of AI and will be built to evolve.

1.3 Digital Sovereignty and Development

This National AI Policy is anchored in Bangladesh's broader national development objectives and aligned with international cooperation agendas. Artificial Intelligence is recognized as a general-purpose and transformative technology capable of accelerating inclusive economic growth, improving productivity, modernizing public services, and strengthening evidence-based governance across sectors. A core principle of this policy is the assertion of digital sovereignty, ensuring that Bangladesh retains effective governance and control over critical data, digital infrastructure, and AI systems in order to protect national security, citizen rights, and data privacy. At the same time, the policy affirms Bangladesh's commitment to responsible international cooperation, interoperability, and global knowledge exchange. AI adoption shall therefore be pursued in a manner that balances economic competitiveness with national resilience, safeguards public trust, and ensures that the development and deployment of AI systems serve the public interest while adhering to global ethical standards.

This policy recognizes linguistic and cultural diversity as integral to Bangladesh's social fabric and digital future, with particular consideration for the Bangladeshi languages and the country's multilingual context. Consistent with internationally recognized ethical frameworks, including those advanced by UNESCO, AI systems developed or deployed within the country are expected to account for cultural context, support local languages, and mitigate risks of linguistic or cultural marginalization. The policy acknowledges that meaningful language access underpins equity, public trust, and inclusive participation in the digital sphere. Accordingly, the design and deployment of AI models, datasets, and digital public services shall place appropriate emphasis on Bangla and other nationally relevant languages, ensuring that emerging technologies—such as large language models and automated public-service applications—are usable, inclusive, and contextually appropriate for diverse population groups. This approach is intended to inform public investment, research priorities, and national AI infrastructure development, contributing to social cohesion and cultural continuity in an AI-enabled society.

2. Policy Vision and Objectives

2.1 Vision:

Our vision is to develop an ethical and innovative environment for the use and development of AI to accelerate Bangladesh's path towards a middle-income country, as outlined in the Vision 2041 master plan and aligned with the UN's Sustainable Development Goals (SDGs).

2.2 Objectives: Short, Medium, and Long-term

The objective of the National AI Policy is to create a national plan to govern and incorporate artificial intelligence for the good of the people of Bangladesh by minimizing risks and maximizing benefits.

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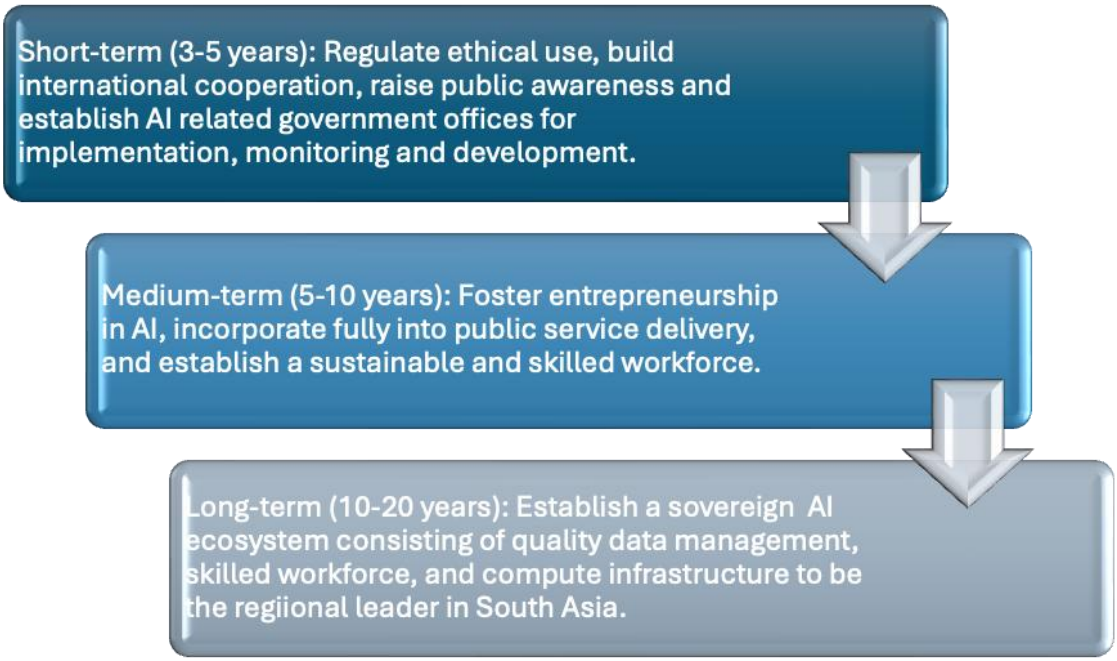


3. Bangladesh AI Principles

The Principles of AI in Bangladesh are rooted in the national and cultural context, in alignment with commitments to international norms and standards. The principles reflect the country's values for ethical and innovative use of AI. Thus, they are intended to guide priorities and instruments for implementations through a set of values as follows:

1. **Ethical:** The government shall govern the use and development of AI to improve the quality of life and distribute benefits equitably across all segments of society. It will ensure that AI consumption and production are aligned with ethical standards, human rights, the rule of law and democratic values.

2. **Pro-innovation:** The government shall promote innovation through an enabling legal, regulatory, and fiscal environment that supports research and development, startups, and responsible experimentation. This shall include targeted tax incentives, public funding mechanisms, and pilot and sandbox frameworks to test and scale solutions addressing social, environmental, and economic priorities.

3. **Human-centric:** The government shall prioritize the development and deployment of AI systems that are aligned with human rights standards. AI systems shall be designed and governed to ensure augmenting and not replacing human intelligence.

4. **Inclusive and non-discriminatory:** The government shall govern the use of AI to avoid discrimination that can emerge through algorithmic bias, flawed data structures, and human errors.

5. **Subject to oversight and accountability:** The government shall enforce strict human accountability measures for the benefits and harms of AI. While recognizing that a degree of technical opacity may be inherent in certain advanced AI models, the government shall require mandatory explainability and accountability mechanisms for high-impact decisions. Individuals affected by such decisions shall have the right to clear, accessible explanations of outcomes, contestability, and human review, ensuring that AI systems do not operate in ways that cause unjustified harm or undermine fundamental rights.

6. **Transparent and responsible:** The government shall establish transparency measures in the use of AI, decision-making processes, and establish mechanisms to understand, interpret, and explain how an AI system functions, makes decisions, and utilizes data.

4. Setting Foundation

The AI policy will contribute to the ICT National Digital Transformation Strategy. A key component of this is developing a Digital Public Infrastructure (DPI), in which AI will be integrated. Bangladesh needs to establish a robust foundation that balances regulation, innovation, and capacity-building to make full use of its potential. This includes implementing clear standards and regulatory frameworks for AI products—especially those developed by foreign firms—focusing on safety, privacy, fairness, and transparency, while monitoring compliance and mitigating risks such as algorithmic bias and opaque systems. At the same time, the government shall strengthen domestic AI capacity by investing in infrastructure, research, and startups, and by building skills within the civil service to oversee and evaluate AI technologies. A national AI risk management framework, complemented by regulatory sandboxes and pilot programmes, will ensure safe experimentation and scalable solutions. Public awareness campaigns and stakeholder consultations will align AI adoption with societal values, while multi-year strategic plans will prioritize high-impact sectors such as health, education, and agriculture. Clear agency responsibilities, measurable performance indicators, and continuous monitoring will ensure accountability and enable policies to

adapt as technologies and risks evolve, creating a foundation for ethical, human-centric, and innovation-driven AI governance in Bangladesh.

4.1 Regulatory Framework

A regulatory framework for AI shall serve to protect people from harm from AI, provide the pathway to interoperability in government, and pursue government goals to enhance service delivery. The government currently has existing ordinances and policies that will complement the AI policy. The Personal Data Protection Ordinance (PDPO) 2025, for example, can now empower people by giving them the right to object or consent to the use of private data by AI actors. The National Data Governance Ordinance (NDGO) 2025, on the other hand, shall provide the basis for data sharing, interoperability, and governance by the government for using AI. The newly enacted Cyber Safety Ordinance 2025 will also enforce regulations that protect people from harmful AI use by holding humans accountable for AI-driven mal-intent. These ordinances shall set the foundation for more responsible AI development and consumption.

To ensure proportional and effective regulation, the government shall adopt a risk-based classification framework for AI systems. AI applications shall be categorized into prohibited (unacceptable risk), high-risk, limited-risk, and low-risk systems, with regulatory obligations calibrated to the level of risk posed to individuals, society, and the State. High-risk AI systems—such as those used in law enforcement, biometric identification, creditworthiness, welfare allocation, employment, or access to essential public services—shall be subject to enhanced safeguards, including data quality requirements, risk management measures, human oversight, and transparency obligations. Low-risk AI systems shall be subject to minimal compliance requirements to encourage innovation while maintaining baseline safety standards.

Furthermore, the government shall ensure transparency and accountability in the use of law enforcement and national security purposes, including preventing images from being taken without consent to train Facial Recognition Technology (FRT), as well as from automated predictive policing and mass surveillance. With the increasing prevalence and use of Generative AI Chatbots, the government shall ensure that both domestic and foreign AI products and companies comply with established baseline safety standards, as outlined in the PDPO. The government shall also prohibit AI companies from collecting data of children under the age of 16 without parental or legal guardian consent. AI-generated targeted advertising directed at minors, profiling, and behavioural tracking of children shall be prohibited. There shall be a prohibition on the collection and use of children's data (under 12) for commercial purposes and a prohibition on using children's data for training AI models.

The government shall establish clear legal safeguards by explicitly prohibiting certain AI uses that pose unacceptable risks to fundamental rights, democratic processes, and public trust. Prohibited practices shall include AI-enabled social scoring, indiscriminate biometric mass surveillance in public spaces without lawful authorization, and manipulative or deceptive AI systems that exploit vulnerabilities of individuals or groups. The use of AI for large-scale surveillance, facial recognition, or predictive law enforcement shall require explicit legal basis, necessity and proportionality assessments, and, where applicable, prior judicial

authorization. The government shall also prohibit the use of AI systems for digital election interference, including the creation or dissemination of AI-generated disinformation, deepfakes, or targeted manipulation intended to undermine electoral integrity or democratic participation.

AI poses both a threat and a potential to employment markets, depending on how it is used. The common differentiation between AI *augmentation vs. automation* drives the argument as to whether it will increase productivity and efficiency or replace workers. The government shall thus ensure that AI laws present an opportunity and not a threat to employment. With the second largest gig economy, the government shall invest in upskilling gig economy workers to be able to use AI to increase their productivity. The adoption of a rights-based approach should ensure that AI systems are developed and deployed in a manner consistent with the protection of human dignity and the fundamental rights of all individuals. The government shall use Algorithmic Impact Assessments (AIA) as a risk management tool for automated decision-making.

To strengthen accountability and risk management, the government shall mandate Algorithmic Impact Assessments (AIA) for all significant AI systems deployed by public authorities and for high-risk AI systems deployed by private actors. AIAs shall assess potential impacts on privacy, non-discrimination, safety, employment, and other fundamental rights, and shall identify mitigation measures prior to deployment. Documentation from AIAs shall be made available to relevant regulators and, where appropriate, to the public to enhance transparency and trust. The use of AI systems without completing required impact assessments shall be subject to regulatory enforcement measures.

The world is yet to be fully informed about the full potential of AI and much remains speculative. Use-cases of AI integration and existing regulations have produced mixed results worldwide and therefore Bangladesh must take a flexible and iterative approach. The government shall utilize regulatory *sandboxes,* i.e. provide a structure in which innovators can test technologies under regulatory supervision without immediate need for full compliance. Sandboxes also reduce information gaps between regulators and firms, allow for iterative learning and help craft adaptive policy. For the startups, they will provide a channel to engage directly with regulators, lowering uncertainty before rules are finalized. For the government, sandboxing will offer insight into emerging risks before technologies scale up. The government shall provide AI startups and companies with temporary waivers from certain rules to test AI products, services, or development methods without full regulatory compliance. Applications must identify potential risks to health, safety, and consumers, and include mitigation plans. Waivers can last for one year, with possible renewals, and will require written agreements mandating transparency and incident reporting.

The government shall designate the National Data Governance Authority (NDGA) as the central coordinating and regulatory body for AI governance across government. In addition to its role in data governance and interoperability, NDGA shall be empowered to issue technical standards, certify compliance for high-risk AI systems, oversee Algorithmic Impact Assessments, and coordinate AI policy implementation across ministries, regulators, and public agencies. NDGA shall also serve as the focal point

for international cooperation on AI governance to ensure interoperability with global regulatory frameworks and best practices.

The government shall also ensure that people's voices are heard through existing channels such as the Grievance Redressal Mechanism (GRS) under the Cabinet Division and the 33 national helpline.

4.2 Data: Use, Management, and Governance

Without data, there is no AI, as that is the basis of its functionality. The national data governance ordinance provides a landmark and timely foundation for AI development in Bangladesh in the immediate and long run. The policies, mandates, and laws incorporated through the ordinance will provide a safe and equitable ecosystem to produce AI and protect people from harm caused by data misuse. The current lack of diversified data sets and data-sharing frameworks provides a foundational challenge to producing AI, and the new frameworks for data governance and interoperability will improve the public sector through AI significantly. In the long run, the government wants to ensure national sovereignty over AI by allowing companies to train AI models abroad but conduct inference testing locally.

To safeguard data sovereignty and national security, the government shall require that sensitive and critical datasets—including health, biometric, financial, children, and national security–related data—be stored and processed within Bangladesh or in jurisdictions explicitly designated as trusted under applicable law. Cross-border transfer of such data shall be permitted only where adequate data protection standards, contractual safeguards, and oversight mechanisms are in place, in accordance with the National Data Governance Ordinance. Clear rules and technical standards for cross-border data access, processing, and auditability shall be issued to ensure that international collaboration in AI development does not compromise national control over strategic data assets.

To give full effect to the right to erasure under applicable data protection law, the government shall interpret such right as extending to AI systems trained on personal data. Where an AI system has been trained using data that was unlawfully obtained, processed without valid consent, or subject to a lawful withdrawal of consent, the deploying entity shall be required to implement algorithmic disgorgement measures. This shall include technically feasible methods for removing the influence of such data from trained models through model unlearning or equivalent techniques. Where effective unlearning is not technically feasible or verifiable, the model shall be withdrawn from use and retrained without the affected data. The burden of demonstrating that the influence of the data has been adequately removed shall rest with the deploying entity, and individuals shall not be required to prove the technical feasibility of such measures.

The government shall develop a data-sharing framework that outlines the processes, policies, regulations, and standards that organizations should follow when managing their data assets. The data-sharing framework will be two-fold- one for intergovernmental work and the other to be enforced on private organizations.

To prevent vendor lock-in and strengthen digital sovereignty, all public-sector AI systems and data infrastructures shall adopt open standards, interoperable data formats, and standardized Application Programming Interfaces (APIs). Procurement and system design requirements shall prioritize portability, transparency, and reusability of data and AI models across government entities. Private-sector entities engaging in government AI projects shall be required to comply with these interoperability standards to ensure seamless data exchange, long-term sustainability, and accountability in AI-enabled public service delivery.

A dedicated government office will be established to operationalize, monitor, and sustain data governance work. A National Data Governance Authority (NDGA) will play the central role in protecting citizen data across the country. In alignment with the Source Code Policy, the government shall also maintain all source codes through the National Source Code Repository, reducing vendor dependency. A newly established National Responsible Data Exchange (NRDEX) platform will be responsible for enabling secure data transfers.

Building on the National Responsible Data Exchange (NRDEX), the government shall establish a dedicated AI Data Exchange managed by National Data Governance Authority to facilitate responsible access to high-quality datasets for AI research, innovation, and public-interest applications. The AI Data Exchange shall incorporate privacy-preserving mechanisms such as anonymization, aggregation, and consent management, and shall define clear access controls for researchers, startups, academia, and government agencies. Priority shall be given to enabling local AI development while ensuring compliance with data protection, purpose limitation, and security requirements.

Interoperability is a pillar for AI-enabled public service and data sharing. As such, the government is working to establish an Application Programming Interface (API) to facilitate information exchange between line ministries through a central hub that is regulated by the National Data Governance Ordinance, 2025. This shall promote purpose-based sharing within API routing, with deep learning, for cross-database assessments to reduce corruption and increase efficiency of services. Alongside a framework for classifying datasets based on sensitivity levels for factors such as health and age, data minimization principles will be implemented.

To be in line with the realm of AI, the government has also developed a Right to Information (RTI) Ordinance 2025 and the Cyber Safety Ordinance (2025). Government policies on data classification, standards, sharing, and government cloud usage will be incorporated as part of the process of incorporating AI use under existing laws.

4.3 Infrastructure

Infrastructure for AI in government use shall be purpose-built and aligned with national priorities on ICT development, and beyond. As such, the goal of the government is to procure relevant hardware like GPUs and invest in secure cloud data storage. To prioritize efficiency, the government shall procure centralized

GPUs for all agencies to share resources. For data sharing, the NDGA will facilitate safe and secure information handling and cloud storage for keeping data. The GPUs will be hosted with existing resources at the National Data Center.

To ensure sustained and secure access to advanced computing capabilities, the government shall adopt a National AI Compute Strategy that outlines a multi-year plan for the development, expansion, and modernization of high-performance computing (HPC) infrastructure at the National Data Center. This strategy shall include phased upgrades of GPU clusters, scalable accelerator architectures, and emerging compute capabilities to support public-sector AI deployment, national security needs, academic research, and domestic innovation. The strategy shall also promote regional compute collaboration, including participation in shared Asia–Pacific AI and research computing initiatives, to optimize resource utilization and accelerate joint research and development.

To balance data sovereignty, operational resilience, and scalability, the government shall mandate a hybrid cloud deployment model for AI infrastructure. Critical and sensitive government AI systems shall be hosted on secure, domestically controlled infrastructure, while non-sensitive or high-demand workloads may leverage vetted international cloud service providers under defined security, compliance, and audit conditions. Infrastructure design shall incorporate redundancy, geographic failover, and workload portability to ensure continuity of services in the event of system failures, cyber incidents, or external disruptions.

The Government shall prioritize the development of green AI infrastructure, ensuring that all systems are designed to maintain a low carbon footprint, operate with energy efficiency, and adhere to environmentally responsible standards. A comprehensive disaster-management and service-continuity plan shall be developed to ensure infrastructure resilience under natural disasters, cyber incidents, or other national emergencies. The government shall institute a national shared computing and infrastructure resource scheme, enabling universities, research institutes, private companies, and government agencies to access common high-performance computing resources. In parallel, the Government shall pursue secure infrastructure-sharing and compute-collaboration agreements with countries in the Asia-Pacific region to strengthen regional AI capabilities, avail cost-efficient resource use models, and accelerate joint innovation. All AI infrastructure shall conform to international technical and cybersecurity standards and be designed with the agility required to remain competitive with global advancements in artificial intelligence. This includes standardized protocols for AI and digital technologies, such as the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC).

4.4 Procurement

While traditional public procurement guidelines prioritize financial and operational aspects, the procurement of AI systems warrants additional frameworks that address ethical compliance, responsible and safe use, and compensation provisions. Therefore, the government shall update the Public Procurement Rules 2008 to embed additional policies for the procurement of AI systems administered by

the Bangladesh Public Procurement Authority. The e-GP platform used for managing the government procurement process shall be extended to encompass AI procurement. The government shall enforce robust and mandatory certification programmes for AI vendors, which incorporate both technical standards and ethical considerations.

To reduce barriers to AI adoption and accelerate domestic capability building, the government shall introduce targeted tax and customs incentives for the procurement of AI-related hardware and infrastructure. This shall include duty-free or reduced-duty import of critical AI equipment such as GPUs, servers, accelerators, and high-speed networking components, as well as zero or reduced value-added tax for AI research and development purposes. The government shall also consider accelerated depreciation allowances and research and development tax credits for qualified AI investments by universities, research institutions, startups, and private enterprises, in alignment with national innovation and industrial development objectives.

Public officials need to be trained on basic language around AI hardware to be able to make informed decisions around procurement and negotiations. Tax incentives need to be implemented to promote access and growth of AI in the country among institutions, start-ups, large companies, government offices, and individuals with specific knowledge. Along with these, regulations for the use of the budget, evaluations of productive use of the budget, and monitoring of effective use of procured equipment need to be pre-approved.

To ensure timely adoption of AI technologies while maintaining accountability, the government shall establish streamlined procurement mechanisms for AI systems, including fast-track or pilot procurement pathways for time-sensitive and experimental AI projects. Such mechanisms may include limited waivers, simplified tendering procedures, or framework agreements for pre-certified AI solutions. The e-Government Procurement (e-GP) platform shall be enhanced to support these mechanisms, including the maintenance of a pre-approved registry of certified AI vendors administered by the Bangladesh Public Procurement Authority. Procurement officials shall receive specialized training in AI technologies, hardware specifications, and contractual risk management to ensure value-for-money, transparency, and effective oversight.

4.5 Digital and Social Media: Disinformation, Safety, and Accountability

The government shall introduce accountability measures to prevent disinformation, online harassment, humiliation, and cybercrimes. AI can be used to generate Deepfakes, i.e., seemingly real but AI-manipulated images and videos, easily using free online and publicly available generative AI products. This has led to increased AI-generated content intended for malicious use, such as technology-facilitated Gender Based Violence (tfGBV), widespread transnational political disinformation campaigns, and cybercrimes. The Cyber Safety Ordinance made provisions for sextortion, blackmail, and revenge porn, all of which encompass the use of AI to commit the same crimes.

The government shall introduce digital stamps for AI-generated videos to inform and educate the public that an image is manipulated. It shall conduct digital awareness programs that increase awareness on how to spot AI and protect online privacy. The government shall work with local vendors to develop digital tools for managing and preventing disinformation on social media.

The government shall promote and regulate the responsible use of AI media, including audio and video. The regulation shall protect women and minors from harmful or exploitative uses of AI-generated or AI-manipulated audio, images, and video, and deepfakes while ensuring freedom of expression, due process, and protection from state misuse. AI-Generated Media means audio, image, or video created or substantially altered using artificial intelligence. Harmful AI content means AI-generated or manipulated media that:

- Sexualizes or depicts nudity of persons, including women or minors, without consent,
- Fabricates compromising or violent scenarios involving persons, including women or minors,
- Uses a person's resemblance or similarity, or likeness, to maliciously harass, threaten, extort, or criminally defame.

Individuals under 18 years and women of all ages fall under this regulation. All social media, internet storage drives, cloud-based storage and distribution, person-to-person text and image transmission shall fall under this as well.

The following actions are to be strictly prohibited when conducted against anyone, but particularly women and minors:

- Creating, sharing, or distributing sexualized, abusive, or compromising AI-generated media without explicit written or recorded consent.
- Producing AI deepfakes portraying minors in any sexual or exploitative form.
- Using AI media to harass, blackmail, or intimidate women or minors.

The legal provisions regarding these should follow the Personal Data Protection and Cyber Safety laws of the country. Consent must be freely given, specific, revocable, and documented. Minors cannot legally consent to any sexualized AI use. To prevent political misuse or censorship, no content shall be removed or blocked without the following premise:

- A court order from a designated Digital Rights Court
- Clear evidence that the content fits the definition in Section 3.
- Government agencies cannot label political speech, criticism, satire, or journalism as "AI-harmful content."
- Emergency takedowns require judicial review within 48 hours, or the restriction expires automatically.
- Individuals have the right to appeal, request evidence, and seek independent oversight.

Platforms must implement:

- AI-generated content labeling
- Notice-and-action mechanisms
- Fast-track reporting for victims
- Remove verified harmful content within 24 hours of a lawful court order.
- Not be required to use general monitoring or surveillance of users.

4.6 Rights and Freedoms

To safeguard individual rights and address the growing use of automated decision-making systems, the government shall establish a rights-based framework governing the deployment of AI systems that make or materially influence decisions with legal or significant effects on individuals. This framework shall apply to both public-sector and private-sector AI systems used in contexts including, but not limited to, employment, credit and financial services, social protection and welfare, healthcare, education, justice, and access to essential services.

No individual shall be subject to a decision producing legal or similarly significant effects solely based on automated processing without meaningful safeguards. Where AI systems are used to support or inform such decisions, individuals shall have the right to understand, contest, and seek human review of outcomes that affect their rights, livelihoods, or opportunities. These protections shall apply not only to intentional misuse of AI systems but also to unintentional, circumstantial, or systemic harms arising from automated decision-making.

For high-stakes automated or AI-assisted decisions, individuals shall be entitled to a right to counterfactual explanation, whereby the decision-maker must provide clear, accessible information on the key factors that influenced the outcome and explain what changes in relevant inputs could have led to a different result. This obligation shall focus on outcome-based and actionable explanations rather than disclosure of proprietary algorithms or technical model architectures.

Individuals shall also have a right to human review and intervention. No automated decision with a legal or significant impact on an individual's livelihood or rights shall be final without access to review by a qualified human decision-maker with the authority to reassess, modify, or override the automated outcome. Procedures for requesting human review shall be transparent, timely, and free from undue burden on affected individuals.

To address risks of discrimination and bias inherent in automated systems, the government shall adopt a burden-shifting approach for discrimination claims arising from AI-driven decisions. Where an individual establishes a prima facie case that an automated decision may have resulted in discriminatory or unfair treatment, the deploying entity shall bear the burden of demonstrating that the system was designed, trained, and operated in a non-discriminatory manner and that appropriate safeguards were in place.

The government shall ensure that these rights are supported through regulatory guidance, enforcement mechanisms, and alignment with data protection, consumer protection, labor, and administrative law

frameworks. Automated decision-making systems shall be subject to oversight, documentation, and audit requirements proportionate to their risk, ensuring that innovation in AI does not come at the expense of fundamental rights, fairness, or human dignity.

4.7 Public Awareness

Public awareness of AI in Bangladesh may be limited mostly to popular Generative AI and social media-relevant applications. Education on the potential of AI, the harms of AI, and being able to detect AI is low but necessary. Disinformation and AI-generated digital material can be indistinguishable if not properly identified and can lead to cybercrimes and harassment. As such, in the short run, the government shall immediately conduct programmes to educate the public and build trust in AI for public service. As the government plans to integrate AI into decision-making, trust building, digital literacy of AI, and public acceptance of these systems is critical. Campaigns shall focus on promoting transparency and accountability, educating about biases and online harms of AI.

Lack of public empowerment and understanding about how the government uses AI can lead to exaggerated fears about its capabilities and whether governments are using it in a trustworthy manner. This could potentially result in outcomes such as disinformation about the government's use of AI in policymaking or in service delivery. As such, the government shall introduce mechanisms to promote accountability of AI in public service delivery and decision-making.

4.8 Capacity Building in Civil Service

AI can also empower the Bangladesh civil service and can contribute to learning development, enhance knowledge creation, and optimize learning platforms for upskilling public servants. This includes having civil service skill development plans, designing tailored training courses for using AI in service delivery and administration, and implementing tools for data interoperability. AI can help ensure that public servants are equipped with the latest knowledge and skills necessary to meet the evolving demands of their roles, fostering a more responsive public administration. The government shall deploy learning in materials in the following ways:

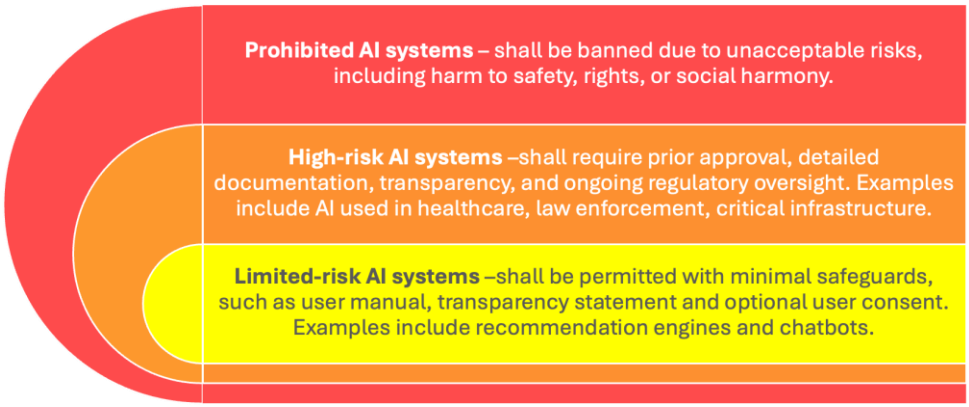
- Developing learning material for civil servants: AI can create learning content (such as modules and course materials) from source documents and integrate diverse information into effective resources. It can also design, structure, and deploy online learning courses.
- Personalizing material and learning routes for civil servants: AI can tailor educational content and learning pathways to meet the specific needs of line ministries and relevant government agencies, providing certifications to improve AI literacy standards across the government. government responsiveness.
- Identifying and cataloging learning resources: AI tools can identify, describe, and catalog multiple learning resources, picking out the best examples globally and designing courses. For example, integrating AI into digital platforms can enhance organization, cataloging, and search functions.
- Responsible GenAI use guide for public servants.

4.9 Risk Management Framework

From the outset, it is important to manage current and predicted AI risks, known and unknown. AI consumption is already active in Bangladesh, and cases of harm to the public, primarily through widely available Chatbots, have been reported around the world. As such, the government shall immediately study and develop a risk management framework for existing AI use and further development. The goal is to minimize risks while maximizing the potential of AI for the public good. This risk management framework will lead in drafting new laws and legal frameworks for AI use and risks soon after the release of this national AI policy document. The following categories of risks as identified by a 2025 study from the OECD on AI in government, provide a useful starting point:

- *Ethical risks*: These include AI uses that undermine the free exercise of human rights and freedoms, including privacy, potentially infringing on human-centered values either deliberately or inadvertently. AI algorithms can introduce ethical risks from the digital realm to the physical world through biased algorithms and unethical behaviors like invasive surveillance. Key concerns include threats to trust, fairness, freedom, dignity, individual autonomy, and labor rights.
- *Operational risks*: These include technical and operational failures that might affect data privacy, the quality of AI outcomes, and internal government operations due to cyber threats, unintended consequences, hallucinations, systematic errors, and overreliance on AI systems.
- *Exclusion risks*: These risks relate to gaps that arise when citizens without access to technology or digital literacy can be left behind and unable to benefit from AI advancements in public services. In the design and access to AI tools and technology, any risk of excluding the commonly marginalized population in Bangladesh, such as women and non-binary people, elderly, economically disadvantaged, religious or social minorities, linguistic minorities and disabled people will be thoroughly examined and prevented. risk of excluding marginalized population: women, elderly, social and religious minorities, economically disadvantaged, linguistic minorities
- *Public resistance risks:* These include public resistance to government use of AI. This can be driven by distrust in government AI systems or processes, or by the spread of false or misleading information about how AI is implemented in public administrations and its potential impacts.
- *Other:* In addition, the government will also address unacceptable risks through clear red lines that limit processes immediately through a standard threshold. This will include banning high-risk AI applications that lack scientific validity or undermine human rights, such as predictive profiling, mass surveillance, biometric categorization, and unitary scoring.

AI systems shall be subject to a risk-based classification framework, under which differentiated regulatory, technical, and oversight requirements shall apply to each category of risk, without limitation to the categories set out herein:



4.10 International Alignment and Cooperation

As a relatively new policy objective, it is strategically important for Bangladesh to foster international relations to build trust and credibility and conduct diplomacy for economic cooperation. International alignments help to build safe and trustworthy AI systems rooted in international law and human rights. They also promote interoperability between different countries by aligning rules and reducing barriers.

The government shall actively learn, promote, and build relationships across the region, in international forums, and with bilateral partners to foster knowledge exchange, resource sharing, and access to global markets that create jobs and economic growth.

The alignment with the following international frameworks shall promote further cooperation on economic activity, help conduct knowledge exchange, and promote further collaboration that is necessary for the country to develop AI in the long term:

- The policy is aligned with the United Nations Sustainable Development Goals (SDG) 2030.
- The policy shall ensure a human-rights-based approach to AI consumption and production by adhering to the Universal Declaration of Human Rights (UDHR).
- The government shall also adopt the OECD AI Principles as a non-member state.
- The government adopts the values as outlined in the Recommendation on AI Ethics by development partners.
- It shall ratify the global, rights-based Council of Europe (CoE) AI Framework Convention.
- At the regional level, Bangladesh shall also engage with the ASEAN AI Governance Framework, revitalize SAARC, and BIMSTEC to foster regional AI cooperation.

4.11 Liability, Insurance, and Redress

To address harms arising from the deployment of artificial intelligence systems and to ensure effective remedies for affected individuals, the government shall establish a clear liability and redress framework for AI-related harms. This framework shall apply to both public and private actors and shall complement

existing tort, consumer protection, labor, and administrative law regimes, while recognizing the unique risks posed by AI systems.

For high-risk AI systems, including those deployed in healthcare, financial services, employment and labor management, justice and law enforcement, social protection and welfare, education, and critical infrastructure, the government shall adopt a strict liability approach. Where harm results from the operation or deployment of a high-risk AI system, the deploying entity shall be liable for such harm regardless of fault, negligence, or intent. This approach reflects the elevated risk associated with these systems and is analogous to principles applied in product liability for inherently hazardous activities. Liability shall extend to material, economic, and non-material harms, including discrimination, wrongful denial of services, loss of livelihood, or physical or psychological injury.

To enable effective investigation, adjudication, and redress, deployers of high-risk AI systems shall be subject to evidence preservation obligations. Relevant technical documentation—including model versions, training and inference logs, decision records, and system parameters—shall be retained for a minimum period of five years or for the duration of any related legal proceedings, whichever is longer. Failure to preserve such evidence, or its intentional destruction or alteration, shall give rise to a rebuttable presumption of liability in favor of the affected individual.

Individuals who suffer harm from AI-driven decisions or system failures shall have access to timely, affordable, and effective complaint and redress mechanisms, including administrative remedies, judicial review, and compensation where appropriate. These remedies shall operate without prejudice to existing rights under data protection, labor, consumer protection, or anti-discrimination laws.

Recognizing the evolving nature of AI technologies and associated risks, the government shall treat this liability framework as an interim regime operating under existing tort and administrative law principles. The Ministry of Law, Justice and Parliamentary Affairs shall be mandated to develop and propose comprehensive AI liability legislation, including provisions on insurance, apportionment of liability across the AI value chain, and cross-border harms, by 2028. Until such legislation is enacted, courts and regulators shall interpret and apply existing legal principles in a manner consistent with the objectives of safety, accountability, and effective redress articulated in this policy.

5. Sector-specific Priorities for Bangladesh

5.1 Public Service Delivery

Many public services are becoming digital, creating electronic footprints of the business processes in operation. The use of *process mining*, a technology that uses timestamps to identify workflows, can be used to understand the flows of citizens through public services. This can help understand where there are bottlenecks, where processes are going awry, and where digital services are failing. Combined with user feedback, process mining creates a fuller picture of the issues faced by users and indicates how to make the service more efficient.

The Government shall undertake a comprehensive assessment of existing digital public services to identify inefficiencies, operational bottlenecks, and gaps that limit service quality and scale. Based on this

assessment, administrative processes, data flows, and inter-agency coordination mechanisms shall be restructured to establish the foundational conditions required for effective AI integration. As Bangladesh advances toward AI-enabled public administration, AI-powered chatbots will be introduced to support citizens with service navigation, form-filling, and query resolution in Bangla. AI will also be applied to core governance functions such as corruption prevention, fraud detection, anomaly monitoring, and predictive analytics to enhance planning and responsiveness. The national Bangla-language Learning Model currently under development shall be deployed to support civil servants in analysis, summarization, research, and document processing. Furthermore, AI will be used to automate repetitive internal tasks, reduce error rates, optimize workflows, and enable civil servants to focus on judgment-oriented and citizen-facing responsibilities. Over time, personalized service delivery will be strengthened through interoperable citizen profiles, pre-filled forms, tailored guidance, and targeted service offerings that reflect the unique needs and circumstances of each individual.

Risk Management and Accountability Measures:

- All public-sector AI systems shall comply with a national AI governance framework grounded in transparency, fairness, data protection, and mandatory human oversight.
- To promote efficiency, interoperability, and cost-effectiveness, AI application development for public service delivery shall be centrally coordinated by the ICT Division. Line ministries and public agencies are encouraged to utilize shared AI platforms and standardized Application Programming Interfaces (APIs) provided by the ICT Division and shall align any sector-specific AI initiatives with ICT Division guidance to avoid duplication of systems, costs, and technical effort.
- The Government shall restrict the use of unsecured, API-dependent foreign AI systems and prioritize the development and domestic hosting of secure, Bangladesh-specific language models and analytical tools.
- All datasets used for model training must be inclusive and representative, ensuring that AI systems reflect Bangladesh's demographic diversity and avoid algorithmic bias or discriminatory outcomes.
- A unified national data-policy framework shall define data ownership, licensing, access permissions, retention requirements, and deletion protocols, safeguarding citizens' personal information.
- A dedicated AI Testing and Evaluation Unit in SHQTC, BCC shall audit all public-sector AI deployments for accuracy, security vulnerabilities, bias, and alignment with national values and human-rights standards.
- Civil-service capacity-building programs shall include mandatory training on ethics, privacy, integrity, anti-corruption, and responsible AI use, strengthening human competence across government.
- Continuous monitoring and public reporting shall be required for all deployed AI systems, ensuring transparency in performance, risks, and societal impacts.
- Mechanisms for citizen redress shall be established, allowing individuals to challenge, appeal, or seek correction for AI-driven decisions that affect their rights or access to services.

Further details regarding the usage and impact of AI in this sector is in Appendix 1.1.

5.2 Education, Research, and Development

Risk Management and Accountability Measures:

- AI ethics shall be embedded across all levels of education, with updated curricula and teacher training emphasizing fairness, responsibility, and safe AI use.
- Academic integrity frameworks shall be modernized to prevent generative-AI misuse, including AI-resistant assessments, strengthened examination security, and legal safeguards against academic fraud.
- Education systems shall limit over-reliance on AI tools, ensuring students continue to develop core skills such as reasoning, writing, and problem-solving.
- Student data, examinations, and academic records shall be protected by strict data-privacy and governance standards, including secure storage, limited access, and clear accountability.
- All AI research shall undergo institutional ethics review to verify compliance with national safety, privacy, and human-rights standards prior to approval or funding.
- Research involving sensitive, biometric, or health data shall meet elevated security requirements, including anonymization, encryption, restricted access, and controlled data handling.
- Dual-use and high-risk AI research shall be subject to mandatory risk classification, mitigation planning, and controlled access to prevent misuse in surveillance, cyber, biosecurity, or information harms.
- Publicly funded AI models and research outputs shall follow controlled-release and documentation requirements, including disclosure of risks, biases, failure modes, and misuse scenarios.
- AI research funded or conducted through international collaboration shall comply with national data-sovereignty, intellectual-property, and security requirements, including limits on cross-border transfer of sensitive data or model weights.
- Funding agencies shall require documented risk-mitigation and monitoring plans as a condition of AI-related grants, covering anticipated harms, safeguards, and responsible downstream deployment.

Further details regarding the usage and impact of AI in this sector is in Appendix 1.2.

5.3 Labour and Employment

Risk Management and Accountability Measures:

- Immediate measures shall be taken to protect vulnerable groups—such as garment and IT workers—from AI-driven job displacement, including targeted upskilling, retraining, and transition support.
- A national safety-net strategy shall be developed to support populations at high risk of AI-related unemployment, ensuring they can be reskilled and reintegrated into the labor force.

- A public communication and engagement plan shall be established to address fear, misinformation, and social unrest related to AI and job loss, promoting transparency, trust, and awareness of government mitigation efforts.

Further details regarding the usage and impact of AI in this sector is in Appendix 1.3.

5.4 Investments

Risk Management and Accountability Measures:

- AI-related investments shall be subject to safeguards ensuring alignment with national development priorities, public interest objectives, and strategic sovereignty, preventing undue foreign control or misalignment with national goals.
- Public and publicly supported AI investments shall be protected against financial misuse, speculative behavior, and capital extraction, with enforceable transparency, performance obligations, and recovery mechanisms for public funds.
- National data assets generated or used through AI investments shall be governed under strict data-sovereignty, privacy, and security controls, preventing unauthorized transfer, exploitation, or commercial misuse.
- AI investments shall not enable or amplify discriminatory, exclusionary, or harmful outcomes, and shall be subject to mandatory impact assessments and corrective measures where risks to human rights or social equity are identified.
- Market-distorting AI investments shall be regulated to prevent monopolization, unfair competitive advantage, or suppression of domestic innovation, particularly in foundational digital and AI infrastructure.
- AI investments with significant labor or economic impact shall include enforceable commitments to workforce protection, skills development, and inclusive participation in the benefits of AI-driven growth.
- AI systems financed or deployed through investment frameworks shall meet defined security, resilience, and risk-mitigation standards, particularly where failures could impact critical services, public safety, or national security.

Further details regarding the usage and impact of AI in this sector is in Appendix 1.4.

5.5 National Security

Risk Management and Accountability Measures:

- Classified government and national-security information shall be protected with the highest levels of AI-related privacy and security controls, preventing unauthorized access, inference attacks, or model-extraction risks.

- AI shall not be used for illegal or harmful public-impact activities, including excessive surveillance, suppression of free speech, incitement of violence, or disproportionate government control over citizens.
- Clear legal limits shall be established on how the Government may deploy AI for surveillance, including scope, duration, purpose, data retention, independent oversight, and audit requirements.
- Laws shall define strict boundaries on the use of AI in political activities, including campaigning, micro-targeting, voter profiling, and manipulation of public opinion, ensuring democratic integrity.
- Diplomatic partnerships shall be pursued with neighboring and peer countries to exchange knowledge, create AI-safety agreements, and coordinate on cross-border risks and technological challenges.
- Transparency standards shall require public disclosure when AI systems are used for decisions impacting citizens' rights, ensuring individuals are aware of when and how automated systems influence governance.
- Independent oversight bodies shall be empowered to investigate, audit, and report misuse of AI, including wrongful surveillance, discriminatory practices, or political manipulation.

Further details regarding the usage and impact of AI in this sector is in Appendix 1.5.

5.6 Agriculture and Consumer Goods

Risk Management and Accountability Measures:

- Risk management in agricultural AI shall prioritize preventing misinformation and disinformation, particularly in areas that directly affect crop yield, farmer decision-making, and economic stability.
- Safeguards shall be implemented to prevent the spread of incorrect advice on pesticide and herbicide use, ensuring farmers receive scientifically validated and locally appropriate guidance.
- AI systems shall be monitored to prevent fearmongering or false narratives about crop demand, market volatility, or food security, which could destabilize production or pricing.
- Mechanisms shall ensure the accuracy of AI-generated weather and climate predictions, with human expert validation to prevent harmful reliance on incorrect forecasts.
- Government-appointed, country-specific agricultural experts shall oversee the curation and verification of all AI-generated agricultural information, ensuring alignment with national needs and local farming practices.

Further details regarding the usage and impact of AI in this sector is in Appendix 1.6.

5.7 Healthcare

Risk Management and Accountability Measures:

- A separate dedicated policy note shall address the specific uses of AI for biotechnology and nanotechnology in health and pharmaceuticals, assessing and regulating Bangladesh's current capabilities and risks in local, regional and global contexts.
- Strict safeguards shall prevent leakage of sensitive health information, including genomic data, medical records, and diagnostic histories, through enforced data-protection and encryption standards.
- AI-enabled health systems shall be prohibited from independently making life-altering clinical decisions; all high-risk, invasive, or life-critical treatments must be regulated and approved by licensed medical practitioners.
- Clear legal boundaries shall define where AI may support—but not replace—clinical judgment, ensuring that final medical authority remains with doctors, nurses, and certified healthcare professionals.
- Regulatory frameworks shall address telehealth misinformation, with penalties for negligent or deliberate dissemination of harmful medical content on apps, AI tools, or social media.
- Oversight systems shall monitor AI-generated diagnoses and treatment recommendations, ensuring accuracy, traceability, and human verification before clinical deployment.
- All AI health applications shall undergo mandatory safety testing, validation, and post-deployment monitoring, particularly in pharmaceuticals, diagnostics, and remote care.
- Ethical review boards shall be empowered to evaluate AI use in biotechnology and nanotechnology, including risk to human subjects, biosecurity implications, and unintended biological effects.
- Data-sharing agreements with foreign entities or vendors shall require explicit government approval, ensure national health data sovereignty and preventing exploitation.

Further details regarding the usage and impact of AI in this sector is in Appendix 1.7.

5.8 Transportation

Risk Management and Accountability Measures:

- Laws shall define strict limits and due-process requirements for the use of AI-generated road and traffic data, ensuring that individuals are protected from false accusations of roadside crimes.
- Clear evidentiary standards shall be established for when AI-enabled surveillance, sensors, or vehicle data may be used in legal or administrative proceedings, preventing misuse or overreach.
- AI-assisted traffic monitoring shall prioritize accuracy, human verification, and chain-of-custody protocols, ensuring that any evidence used for prosecution is reliable and tamper-resistant.
- Oversight mechanisms shall be created to audit AI traffic systems for bias, error rates, and wrongful enforcement, safeguarding citizens against discriminatory or unjust outcomes.

- Human review shall remain mandatory for all AI-flagged incidents, preventing automated fines, wrongful detentions, or system-generated accusations without human judgment.
- Data privacy protections shall govern the collection, storage, and sharing of vehicle and roadside data, ensuring personal information is not abused or used without consent.
- Emergency override and fail-safe mechanisms shall be required for AI traffic systems, preventing malfunctioning sensors or false alerts from causing accidents or enforcement errors.
- Transport authorities shall maintain transparent public reporting on AI system performance, including false positives, system failures, and actions taken to correct them.
- AI systems used in transportation shall be tested in diverse real-world conditions, ensuring they perform reliably across weather, congestion, and infrastructure variations common in Bangladesh.
- Accountability frameworks shall specify which agencies, operators, or vendors are responsible for system errors, wrongful actions, or data misuse, ensuring clear liability pathways.

Further details regarding the usage and impact of AI in this sector are in Appendix 1.8.

5.9 Disaster Risk Reduction and Management

- AI-powered early warning systems shall be deployed for floods, earthquakes, and landslides, using real-time sensor data, satellite imagery, and predictive modelling to detect hazards before they escalate.
- Machine-learning models shall analyze hydrological, rainfall, and river-level data to forecast flood severity, inundation zones, and likely overflow points, enabling timely evacuation and resource mobilization.
- Seismic AI models shall process vibration patterns, ground-motion signals, and microtremor data to detect earthquake precursors and provide rapid post-event damage assessments.
- AI-driven geospatial analysis shall identify landslide-prone areas by integrating soil composition data, slope stability, rainfall intensity, and historical events, allowing for targeted mitigation measures.
- Automated risk-mapping tools shall be developed to visualize high-risk regions and dynamically update hazard zones based on new data or environmental changes.
- AI-supported emergency alert platforms and response coordination systems shall optimize rescue routes, shelter allocation, and resource distribution, ensuring efficient deployment of personnel and supplies.
- Government agencies shall use AI to simulate disaster scenarios for planning, training, and improving preparedness strategies across communities.
- Citizen alert platforms shall be enhanced with AI, delivering personalized warnings, evacuation instructions, and impact forecasts through SMS, apps, and public broadcast systems.
- Data integration frameworks shall unify meteorological, geological, urban, and demographic data, enabling AI systems to produce context-aware and location-specific disaster insights.

6. Implementation

6.1 Independent Oversight Committee:

To ensure accountability, transparency, and public trust, the government shall establish an Independent Oversight Committee to monitor and evaluate AI-related developments. This body will operate at arm's length from both government and industry, with a multi-stakeholder composition including interdisciplinary professionals, scientists, ethicists, legal experts, industry representatives, civil society actors, labour unions, and accessibility advocates. Representation from marginalised communities (to address bias, digital divide, and discrimination) needs to be ensured. The Committee shall be formed within the Executive Council of the quasi-judicial body of the NDGIA.

The committee's mandate shall include:

- Conduct initial assessments of AI pilot projects to ensure they uphold ethical standards, human rights norms, and data protection rules. governance standards.
- Produce an annual report on the state of AI in Bangladesh for stakeholders.
- Evaluate outcomes of AI projects in sectors to measure effectiveness, equity of access, and societal impact.
- Monitor AI deployments across sectors for safety, fairness, equity, accessibility, and discriminatory impacts.
- Evaluate algorithmic performance periodically, including bias audits, error rate analysis, and red-teaming results.
- Review FRT deployments, predictive policing, intelligence AI systems, and data access by security agencies to ensure they comply with privacy, necessity, and proportionality standards.
- Enforce authority to recommend suspending, revising, or withdrawing unsafe or unethical systems.
- Establish public reporting mechanisms to ensure transparency and maintain trust in AI.
- Conduct a mandatory review of the project implementation cell every three years.

The committee shall have the legal authority to:

- 1. Recommend suspension, revision, or withdrawal of unsafe, illegal, or unethical AI systems.
- 2. Require companies and government agencies to provide algorithmic documentation, training data sources, risk assessments, and audit results.
- 3. Mandate compliance deadlines and penalties for non-compliance.

The committee will publish an Annual State of AI Report in Bangladesh, assessing sectoral uses, risks, harms, and progress. It shall make all audit summaries publicly accessible to promote transparency.

6.2 AI Innovation Fund

The purpose of an immediate AI Innovation Fund would be to dedicate resources for research and development and technology commercialization. This fund would be established within the ICT Innovation Fund under the ICT Division.

- Research and development: Targeted grants to academics and researchers producing cutting-edge knowledge at local universities.
- AI technology commercialization: Identifying and funding innovative digital and AI technologies for commercialization by advancement through Technology Readiness Levels (TRL) and building local capacity.

6.3 Project Implementation Cell

An AI project implementation cell will be established within the ICT Division to manage pilot projects as well as to establish regulatory sandbox programs. This office will work across the government with different line ministries and consist of government officials and non-civil servants with expertise in project management, bureaucracy, digital transformation, and data science. For the first project, a national Bangla language model will be developed as a government-led initiative under the country's AI policy. The project shall be managed in coordination with the existing aspire to innovate (a2i) project in leading AI initiatives. This project will digitize and curate archives of history, events, literature, and knowledge bases to create a comprehensive cultural and linguistic resource. Embedding the effort within a state-driven framework ensures data sovereignty, protects intellectual heritage, and establishes clear standards for accuracy, ethics, and inclusivity. The initiative will advance natural language technologies in Bangla while simultaneously strengthening cultural preservation, research capacity, and innovation ecosystems.

To ensure clarity of responsibility and avoid duplication of effort, the government shall designate Bangladesh Computer Council (BCC) as the lead implementing agency for the development of the locally deployed open source national LLM under the oversight of the AI Project Implementation Cell. This initiative shall coordinate closely with public universities, research institutions, government institutions, development partners, and qualified private-sector laboratories to support model development, evaluation, and deployment. This collaborative, cross-sector approach shall promote knowledge sharing, strengthen research capacity, and ensure that the Bangladeshi languages model reflects public interest objectives, cultural diversity, and technical excellence.

7. Monitoring, Evaluation, and Review

To ensure that this National AI Policy remains effective, adaptive, and aligned with technological, legal, and societal developments, the government shall establish structured mechanisms for monitoring, evaluation, and periodic review. Recognizing the rapid evolution of artificial intelligence and its impacts, this Policy shall be subject to continuous oversight and timely revision to prevent regulatory obsolescence.

7.1 Sunset Provision

This National AI Policy shall remain in force until 31 December 2030, unless earlier renewed, amended, or replaced by a comprehensive artificial intelligence law enacted by Parliament. Upon expiry, the Policy shall cease to have effect unless explicitly reaffirmed by the Cabinet or superseded by statutory legislation. This sunset provision is intended to ensure active reconsideration, democratic accountability, and policy relevance in light of technological and societal change.

7.2 Mid-Term Comprehensive Review (2028)

A comprehensive mid-term review of the Policy shall be conducted in 2028. This review shall assess the effectiveness of the Policy across sectors, including its impact on innovation, public service delivery, economic development, protection of fundamental rights, risk mitigation, and international interoperability. The review process shall include structured public consultation with stakeholders from government, industry, academia, civil society, and affected communities. Findings and proposed amendments shall be submitted to the Cabinet for consideration and, where appropriate, policy revision.

7.3 Annual Monitoring and Reporting

An annual monitoring mechanism shall be established to track the implementation and outcomes of this Policy. The designated AI Oversight Committee shall publish a detailed annual report by 31 March of each year, covering, at a minimum:

- Registration and deployment of AI systems within government;
- Approvals, conditional authorizations, or denials of high-risk AI systems;
- Reported AI-related incidents, harms, or system failures;
- Enforcement actions, remedial measures, and sanctions imposed;
- Emerging sectoral trends and systemic risks.
- The annual report shall be submitted to Parliament and made publicly available to promote transparency, accountability, and informed public debate.

7.4 Ad Hoc and Triggered Reviews

In addition to scheduled reviews, the government shall conduct expedited ad hoc reviews of this policy were triggered by significant developments. Such triggers may include major AI-related incidents causing widespread harm, the emergence of transformative or frontier AI capabilities, substantial changes in international AI regulatory frameworks, or constitutional or statutory rulings by the Supreme Court with implications for AI governance. In such cases, the NDGA shall convene an accelerated review process and recommend interim or permanent policy adjustments.

7.5 Legislative Pathway

To transition from policy guidance to a comprehensive statutory framework, the Ministry of Law, Justice, and Parliamentary Affairs shall initiate the drafting of a comprehensive Artificial Intelligence Act by 2028. This legislation shall incorporate lessons learned from the implementation of this Policy, international best practices, judicial developments, and stakeholder feedback. The proposed law shall provide a clear

statutory basis for AI oversight bodies, liability and redress mechanisms, and harmonization with existing legal frameworks, including data protection, cyber safety, labor, and consumer protection laws.

Appendix

1.1 Public Service Delivery

Impact:

AI stands to substantially enhance the efficiency, accuracy, and responsiveness of Bangladesh's public administration. International evidence suggests that up to 41% of public-sector work activities could be supported or augmented by generative AI systems in administrative contexts similar to Bangladesh Link. Governments that have adopted data-driven and AI-enabled service models report 24% improvements in cost-efficiency, 27% gains in citizen experience, and 26% enhancements in monitoring and evaluation capacity, demonstrating clear productivity and governance benefits Link. Globally, sectors with high AI integration have achieved a 4.3% productivity growth rate, compared to just 0.9% in less AI-intensive sectors—an indication of the transformative efficiency gains Bangladesh could unlock through AI-augmented administration Link. Within government institutions, the Bangla LLM will significantly accelerate the analysis of long documents, unstructured text, policy drafts, and regulatory material, thereby reduce administrative delays and improving decision-making quality. As these capabilities scale, AI will enable faster service delivery, stronger accountability, improved public trust, and better outcomes for citizens across the country Link

1.2 Education

Usage:

AI can play a transformative role in education and skill development by enabling personalized, accessible, and future-ready learning ecosystems. Generative AI can be harnessed to create interactive content, automate assessments, and serve as intelligent teaching assistants that guide students through customized learning goals based on their pace and interests. However, its integration requires balancing productive use—such as enhancing understanding and creativity—with preventing destructive behaviors like plagiarism and excessive dependence on AI outputs. AI-driven tools can also support large-scale upskilling initiatives, particularly in data science, machine learning, and digital literacy, ensuring that learners across all levels—from school to university—are prepared for emerging job markets. Social media and digital platforms should incorporate AI-based modules for privacy, safety, and critical thinking education to promote responsible use among all age groups. At the institutional level, the formation of research groups dedicated to AI-centric studies and the establishment of new, accessible funding streams at tertiary education institutions are essential to foster innovation, democratize research participation, and accelerate the development of indigenous AI solutions tailored to national needs.

Systematic digitalization of textbooks and academic content can serve as a critical enabler for the development of trustworthy AI systems in education by providing high-quality, structured, and locally relevant training and reference data. Converting NCTB textbooks, supplementary materials, and publicly funded academic resources into machine-readable formats would support the development of curriculum-aligned AI tutors, assessment tools, accessibility services, and multilingual learning applications. Digital-first academic content can also enable continuous curriculum updates, consistency across platforms, and teacher-led adaptation, while reducing reliance on static print materials. To

maximize public value, such digitalization should follow open technical standards, appropriate licensing and copyright safeguards, and child-safe design principles, with support for offline and low-bandwidth use cases to ensure inclusivity across regions.

To prepare the workforce for an AI-driven future, the government shall mandate the integration of AI education across secondary, tertiary, and technical institutions. The University Grants Commission (UGC) is critical to establish standardized AI curricula that balance theory with hands-on skills. This will include faculty development programs, continuous capacity building for teachers, and infrastructure support for rural and under-resourced institutions. Research-centric institutions need to be built, and computing clusters will be set up in existing institutions. A meritocratic environment will be fostered, part of which will include proper recognition for high-impact publications at venues like NeurIPS, ICLR, ICML, AAAI, ACL, EMNLP, etc., and providing financial support for registration and travel expenses.

Policies will address AI in education as well as education for AI, ensuring that students understand both utility and ethics. Training modules will cover bias, integrity, plagiarism, and responsible AI use, helping to mitigate misuse and overdependence. To close the skills gap between theoretical knowledge and practical application, universities will partner with industry and ministries to promote flexible learning models and experiential training. Incentivizing AI tutors, creative problem-solving programs, and adaptive learning platforms can foster critical thinking, while capacity development in communication and negotiation can make graduates more globally competitive.

Impact:

The expansion of digital education platforms in Bangladesh has brought forward tools such as multimedia classrooms, e-learning portals, and mobile applications designed to modernize teaching and learning. However, access and quality remain uneven across regions, with urban schools benefiting disproportionately compared to their rural counterparts. A persistent digital divide continues to limit equitable learning opportunities—only about 37% of households in Bangladesh have internet access, leaving rural and low-income students at a significant disadvantage. Despite these gaps, online content consumption has grown rapidly, with platforms such as YouTube, Facebook,*Shikho, and 10 Minute School* becoming integral to student learning. Surveys show that over 60% of secondary and higher secondary students now use YouTube for educational purposes, often more frequently than formal government-supported digital platforms.

The COVID-19 pandemic exposed deep systemic weaknesses in online education, including low device ownership, poor connectivity, and limited institutional preparedness, all of which contributed to learning losses and reduced student engagement. Furthermore, both teachers and students continue to face challenges in digital literacy, leading to underutilization of existing technologies and fewer opportunities for interactive or inquiry-based learning. To address these challenges and build long-term digital capacity, Bangladesh will introduce structured AI and computational thinking education from grades 8–9 onwards—moving toward foundational skills in mathematics, programming, and machine learning. This shift is essential to cultivate a generation capable of innovating, not just consuming, within the global AI ecosystem.

1.3 Labor and Employment

Usage:
AI presents a unique opportunity for Bangladesh to build a globally employable youth workforce equipped for the digital age. By integrating AI across key sectors, the country can modernize traditional industries and create high-value employment pathways. The garment sector, for instance, can evolve into an AI-driven manufacturing hub through the adoption of predictive maintenance, smart logistics, and automated quality control systems. In agriculture, AI-educated farming practices—such as precision irrigation, pest detection, and yield forecasting—can enhance productivity and climate resilience. Rapid, accessible AI education and short-term upskilling programs can prepare workers and students alike to adapt to new technologies and emerging job roles. To fully leverage these opportunities, Bangladesh will also phase out or reform obsolete degrees, training programs, and schools, redirecting educational investments toward data literacy, machine learning, and applied AI disciplines that align with the demands of the future workforce.

Impact:
AI can profoundly reshape Bangladesh's employment landscape in the coming decade, introducing both transformative opportunities and significant risks. The garment industry—currently employing over 4 million workers—stands at the frontline of this potential disruption. Automation technologies such as robotic sewing, predictive maintenance, and AI-driven quality control could substantially improve productivity, yet the International Labour Organization warns that up to 60.8% of jobs in this sector are at high risk of automation, potentially affecting 2.7 million workers. If not managed through proactive policy and retraining, as many as 5.38 million low-skilled jobs could be displaced by 2041, with the furniture, agro-processing, tourism, and leather sectors also vulnerable. The country's business process outsourcing (BPO) industry, which generated roughly US $500 million in 2023 and employs over 70,000 professionals, could also be transformed as AI tools automate data entry, transcription, and routine back-office operations. Similar trends may emerge in agriculture, retail, and transport, where repetitive tasks are susceptible to automation. Without robust national upskilling initiatives and lifelong learning systems, Bangladesh risks widening the gap between technology-driven productivity and human employability.

The implications of this potential transformation extend far beyond the economy, with implications on gender equity, education, and social stability. Women, who make up the majority of workers in garments and clerical roles, could face disproportionate displacement if gender-sensitive AI transition policies are not implemented. Bangladesh's current education and vocational systems remain insufficiently aligned with the needs of an AI-enabled economy, leaving many young workers unprepared for the digital labor market. However, with strategic investment, AI can also create new pathways for employment—from data annotation and model labeling to AI ethics, creative industries, and innovation entrepreneurship. Building adaptive education systems, accessible computing infrastructure, and targeted research funding for AI skill development will be essential to ensure that Bangladesh's large labor force becomes a global asset in the emerging intelligent economy rather than a casualty of automation.

1.4 Investments

Impact:

Small and medium-sized enterprises (SMEs) form the backbone of Bangladesh's economy, representing nearly 90% of all businesses, yet they remain significantly under-digitized and less attractive to modern investors. The lack of digital infrastructure limits scalability, transparency, and integration into formal financial systems, thereby constraining growth potential and competitiveness. The banking sector reflects a similar gap—only about 29% of Bangladeshi banks currently deploy AI for risk management, automation, or fraud detection, which diminishes operational efficiency and investor confidence in digital-first financial ecosystems. Payment infrastructure, although improved through mobile money services, still suffers from slow interbank settlements and inconsistent connectivity—especially in rural regions—creating friction for investors seeking a reliable digital economy.

The absence of AI-driven credit scoring further exacerbates financing barriers for small businesses, leaving many credit-invisible and unable to access affordable loans or growth capital. Without predictive analytics to assess borrower risk, traditional lending remains cautious and exclusionary, limiting the financial inclusion of SMEs and micro-entrepreneurs. At the same time, weak cybersecurity measures and the absence of comprehensive data protection policies have raised red flags among domestic and foreign investors alike. High-profile breaches—such as the National ID (NID) database leak—have exposed millions of citizens' personal information, eroding trust in Bangladesh's digital governance capacity. To attract sustainable investment and foster innovation, Bangladesh must prioritize digital transformation across SMEs, strengthen AI integration in finance, and establish clear, enforceable cybersecurity and data governance frameworks that protect both citizens and investors.

1.5 National Security

Usage:

AI can play a transformative role in safeguarding national security by providing governments with intelligent, proactive, and data-driven systems for prevention, response, and accountability. In public spaces, AI-powered surveillance systems—integrating computer vision, facial recognition, and anomaly detection—can identify acts of violence, track suspicious movement, and alert law enforcement in real time, enhancing deterrence and rapid intervention. In the financial sector, AI-driven fraud detection models can analyze millions of transactions simultaneously to uncover Ponzi schemes, phishing attempts, and crypto or mobile-banking scams before they escalate. Using natural language processing (NLP) and network graph analysis, regulators can trace the origin and evolution of online investment fraud or disinformation campaigns, enabling faster legal and policy responses while maintaining data privacy. Likewise, AI can combat gender-based and minority violence through automated early-warning systems that analyze police records, helpline data, and social media content to identify regions or communities at heightened risk, supporting timely protection measures and policy enforcement.
At the digital frontier, AI can significantly enhance cybersecurity resilience and intelligence coordination. Machine-learning models trained on network telemetry can detect zero-day exploits and insider threats

across large financial institutions, preventing breaches like those previously suffered in the banking sector. In the realm of online harassment and cyberbullying, AI-based sentiment analysis and image recognition tools can flag abusive content, enabling social media platforms to take down harmful posts and prevent reputational or psychological harm. AI-assisted border and intelligence security systems—combining biometric screening, predictive analytics, and satellite imagery—can detect trafficking networks, illegal crossings, and smuggling routes while optimizing patrol resource allocation. Finally, in disaster management, machine learning and GIS-integrated forecasting tools such as *FloodGuard* and Google's AI flood models are already demonstrating the potential to predict floods, cyclones, and landslides days in advance, improving early-warning accuracy and life-saving responses.

Impact:

Bangladesh continues to grapple with widespread public-space violence, gender-based assault, and emerging digital safety threats that collectively undermine social stability and public trust. Around 93% of women report experiencing some form of violence in either public or private spaces, while 58% of young adults express fear of violence in public areas, underscoring pervasive insecurity in everyday environments. At the same time, financial and marketing scams are proliferating, often preying on mobile-banking users and small investors through Ponzi and cryptocurrency schemes. Notable incidents include OGS Bangladesh's fraudulent operations and phishing scams impersonating finance officials or credible media outlets. Cyberattacks on financial institutions remain a major concern, with 52% of banks classified as high-risk in 2022 and an estimated 630 attempted intrusions daily. The legacy of the 2016 Bangladesh Bank heist continues to serve as a stark reminder of vulnerabilities within national digital infrastructure.

Simultaneously, online bullying and harassment are escalating, particularly among university students. Research shows high rates of cyberbullying victimization among female students, often linked to broader patterns of peer aggression and digital anonymity. These intersecting forms of online and offline violence reveal the need for a national digital safety strategy that integrates social protection, legal reform, and AI-enabled monitoring. Encouragingly, the same AI technologies that present risks are also being deployed for resilience-building—AI-driven disaster management tools like *FloodGuard* and Google's flood forecasting systems use rainfall, GIS, and machine learning to enhance early warning and resource allocation, improving national disaster response capacity. This dual role of AI—both as a threat vector and a tool for protection—underscores the importance of governance frameworks that ensure safety, accountability, and equitable technological progress.

1.6 Agriculture and Consumer Goods

Usage:

AI needs to be used for enhanced agricultural growth in the country. It can be done by creating comprehensive databases on crop yield, seed quality, market economics, farmers' educational enrichment, weather prediction, and crop safety. In each of the areas, rapid and effective use of AI should be ensured by educating practitioners and making tools accessible to them.

Impact:

Over 16 million farming households in Bangladesh stand to benefit from the integration of artificial intelligence into agriculture. AI-driven systems for localized weather forecasting, soil condition analysis, and crop yield prediction can empower farmers to make informed decisions about what crops to cultivate, when to plant or harvest, and where to sell for optimal profit. Such precision in decision-making can remove many of the barriers that currently hinder smallholder productivity and profitability. Moreover, improved agricultural intelligence directly strengthens the nation's food security, enhancing both the stability of rural livelihoods and the resilience of the broader economy to climate variability.

Bangladesh currently loses an estimated 2.11 crore tonnes (~21 million) of food annually due to post-harvest inefficiencies such as inadequate storage, transportation, and handling—equating to major losses across cereals (12.9%), fruits and vegetables (40.2%), and tubers (36.9%). Post-harvest losses by crop type are estimated at 12% for rice, 20% for potatoes, 25% for vegetables, and 15% for pulses and oilseeds, diminishing food availability and inflating prices for producers and consumers alike. Limited access to formal agricultural knowledge further constrains progress, with many farmers relying on traditional methods or informal advice instead of adopting modern pest management and climate-smart technologies. Inaccurate or delayed weather information compounds these challenges, leaving farmers vulnerable to extreme events such as the 2024 monsoon floods, which destroyed 1.1 million tonnes of rice and caused losses of approximately Tk 45 billion (~US$380 million). Together, these factors underscore the urgency of developing AI-based agricultural intelligence and predictive tools to optimize farming practices, reduce post-harvest losses, and safeguard Bangladesh's food systems.

1.7 Healthcare

Usage:

AI offers immediate opportunities to strengthen national health systems through the creation of integrated public health databases, the prediction of large-scale health crises, and the rapid design and dissemination of interventions such as vaccination campaigns, chronic disease management programs, maternal and child health services, and education on sexually transmitted diseases. AI-driven tools can optimize resource allocation in public hospitals, enhance emergency response, and support the management of national blood and plasma banks. In parallel, widespread deployment of telehealth can expand access to basic care, while data-driven monitoring systems reduce the overuse and misuse of pharmaceuticals, ensuring safer and more efficient healthcare delivery.

Impact:

Bangladesh faces significant healthcare challenges, including high population density, limited infrastructure, and shortages of skilled health professionals—there are only six doctors and three nurses per 10,000 people, far below WHO standards. Access to quality healthcare remains highly unequal, as over 70% of the population lives in rural areas while most hospitals, specialists, and diagnostic services

are concentrated in urban centers. This imbalance contributes to delayed treatment, high maternal and child mortality, and limited capacity for disease prevention and early detection.

Digitization presents a transformative opportunity to bridge these healthcare gaps through telemedicine, mobile health (mHealth), and digital health records. National initiatives such as the *Digital Health Strategy 2021–2026* and the *Access to Information (a2i)* program have already piloted e-health services in rural clinics. With rising mobile and internet penetration, private sector platforms like *Jeeon*, *Praava Health*, and *Doctorola* are expanding access to online consultations, prescriptions, and appointment scheduling for underserved populations. Yet affordability remains a critical issue—Bangladesh spends only US$26.60 per capita on health, with 64% of total expenditure coming from out-of-pocket payments, one of the highest rates in South Asia. This financial strain underscores the need for low-cost, AI-driven healthcare systems and strategic budget allocations to enhance efficiency, expand access, and ensure equitable service delivery nationwide.

1.8 Transportation

Usage:

Accident prevention and care, route management, traffic predictions (overkill given Google already does it), systems to ensure higher street safety for bikers and bus/trucks. AI can help through street-wide warning systems for wrong-side driving, excessive speeding, missing helmets, prediction of drunk driving.

Impact:

Bangladesh faces a severe road safety crisis, with approximately 32,000 road-related deaths in 2021—equivalent to 1% of all deaths in the country—according to the World Health Organization. The nation records one of the highest road fatality rates globally, with about 67 deaths per thousand kilometers of road. Alarmingly, only 2% of roads have a three-star or better safety rating for pedestrians and 5% for cyclists, compared to much higher regional averages. Vehicle occupants fare slightly better, with 20% of roads rated at three stars or higher, while only 11% of roads meet this safety threshold for motorcyclists. Bangladesh records about 641 fatalities per 100,000 registered vehicles, the highest in the Asia-Pacific region, highlighting the urgency of comprehensive safety reforms. Moreover, only 50.6% of road users in urban Bangladesh adhere to basic traffic rules, while 23.4% exhibit poor compliance; major cities like Dhaka and Chattogram face particularly severe violations among pedestrians and motorcyclists. The situation has worsened in recent years—Bangladesh recorded 8,589 road traffic fatalities in 2024, with over 61% of deaths in Dhaka involving pedestrians, reflecting both weak enforcement and poor infrastructure.

Traffic congestion further compounds the country's transport challenges. In Dhaka alone, commuters lose an average of 276 hours annually in traffic, resulting in the loss of over 8 million working hours each day and significantly reducing economic productivity. Urban traffic speeds in the capital have dropped to an average of just 4.8 km/h—comparable to walking speed—down from 21 km/h a decade ago. Meanwhile, over 90% of public transport services remain dependent on non-digitized ticketing systems, leading to delays, revenue leakage, and inefficient crowd management. The limited adoption of e-ticketing platforms

such as Rapid Pass and BDTickets has hindered potential efficiency gains and transparency in the sector. Together, these conditions underscore an urgent need for data-driven transport policy, digital mobility systems, and AI-based road safety analytics to prevent fatalities, improve compliance, and optimize urban mobility across Bangladesh.