



CONTINENTAL ARTIFICIAL INTELLIGENCE STRATEGY

Harnessing AI for Africa's
Development and
Prosperity



Continental Artificial Intelligence Strategy

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and Prosperity*

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FOREWORD

The advancements of Artificial Intelligence (AI) are profoundly changing our economies and societies, AI is integrating into most aspects of life, producing new efficiencies and enhancing human capacities.

For Africa, AI has the potential to significantly impact the attainment of Agenda 2063 Aspirations and the Sustainable Development Goals (SDGs). It is seen as a driving force for positive change, socio-economic transformation and cultural renaissance.

AI can stimulate economic growth, create new industries, drive innovation, generate employment opportunities, generate new businesses for women and youth, support the preservation of Africa's cultural heritage and help solve some of Africa's most complex and urgent challenges in healthcare, agriculture, education, finance, public service delivery and so much more.

The African Union (AU) Continental AI Strategy aligns with AU's inclusive development aspirations as well as its core values. Guided by the principles of ethics, inclusion and diversity, human rights and human dignity, people's well-being, peace and prosperity, it prioritises the development and adaptation of AI systems to Africa's context.

This strategy puts forward an Africa-centric, development-oriented and inclusive approach around five focus areas notably: harnessing AI's benefits, building AI capabilities, minimising risks, stimulating investment and fostering cooperation. It sets out a common vision for our Continent and identifies key policy interventions to enable the continent to harness the huge potential of AI while addressing the societal, ethical, security and legal challenges associated with AI-driven transformations.

With the Continental AI Strategy, Africa is laying the necessary foundations to become an integral participant in the AI revolution by optimising the benefits of AI and unlocking its vast potential to empower citizens. Africa's young and tech-savvy population is well-positioned to embrace innovative technologies and leverage them for economic and social transformation.

The timely adoption of this Strategy illustrates the African Union and its Member States' resolve to harness AI's immense potential for socioeconomic transformation and place the continent on an innovative growth trajectory. I urge African countries to accelerate the domestication of the strategy and implement its imperatives for the greater good of our continent and of our people.

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AU Commissioner for Infrastructure and Energy

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The AU Strategy on Artificial Intelligence (AI) was adopted by the AU Executive Council during its 45th Ordinary Session held on 18th – 19th July 2024, in Accra, The Republic of Ghana.

Executive Summary

Artificial intelligence (AI) has great potential for Africa's socio-economic transformation and cultural renaissance. It will contribute to the attainment of the African Union Agenda 2063 and Sustainable Development Goals. It presents huge opportunities for inclusive development - creating jobs, improving the delivery of public services, advancing agriculture, education and health, promoting access to information, and protecting the environment and natural resources, among others. However, these benefits are accompanied by AI risks and harms, ranging from bias due to the way data were collected and trained on AI applications, potential discrimination of women and vulnerable persons (migrants, children, persons with disabilities), to job displacement, effect on indigenous knowledge and liability issues due to AI overtaking certain human operations. The risks are being deepened by Generative AI, which include disinformation, infringement of data privacy, surveillance, and copyright violations.

AI systems may perpetuate or amplify biases contained in datasets that they are trained on because, more often, data are not equitably sourced - data are usually sourced from developed countries and from non-diverse and inclusive developers' teams. Besides, AI systems may not yet be fully able to explain their decision-making. AI also present concerns for the overall protection and promotion of human rights and poses safety and security issues in civil and military settings. This ranges from cyber threats to AI applications in disinformation for manipulation of political systems and societies to Generative AI-produced and distributed information, which can be fully automated through untraceable deepfakes.

There is also an AI divide between and within countries and globally. These and other emerging risks exacerbated by advanced AI systems making them more complex to address, require the adoption and implementation of principles, frameworks and adaptable regulations on how to design, train and operate AI systems in a trusted and ethical manner, respecting the rights, culture and values of the African population.

To realise AI's positive and transformative potential for African development and mitigate potential risks, it is imperative to build the necessary capabilities. These range from sustained investment in infrastructure (reliable and efficient electricity, broadband connectivity, data infrastructure like data centre and cloud, and computing power) to huge sets of quality data, education and skills in AI, media and information literacy (MIL), research and innovation. Africa also needs to build a vibrant and inclusive AI start-up enterprise ecosystem that develops and implements social and economic applications and systems.

Regional coordination and international partnerships are also needed to help Africa build the capacity to leverage AI in a manner that promotes social and economic development and preserves its peace and security. Finally, African AI systems require concerted investment by governments and the private sector in the region.

The Continental AI Strategy proposes a people-centric, development-oriented and inclusive approach around five focus areas and fifteen policy recommendations. The five focus areas are:

- Harnessing AI's benefits for African people, institutions, the private sector and countries, in line with Agenda 2063 (i.e., improving people's livelihoods, leaving no one and no place behind, with a focus on AI applications in agriculture, education,

healthcare, public service delivery, climate change, and peace and security) and promoting the competitiveness of the African private sector.

- Addressing the risks associated with the increasing use of AI, with attention to governance, inclusion and diversity, human rights, gender equality, dignity, safety, peace and security, information integrity, and sustainable environment and ecosystem, considering African contexts, cultures, and values.
- Accelerating AU Member States' capabilities in infrastructure (energy, broadband, computing capabilities, data centres, cloud, IoT), AI talent and skills, datasets, innovation and research that underpin AI development,
- Fostering regional & international cooperation and partnerships to develop national and regional AI capabilities and advance Africa's position on a global stage.
- Stimulating public and private investment in AI at national and regional levels.

As outlined in below diagram, the Strategy proposes fifteen action areas:

- The first action area provides for the establishment of an appropriate AI governance system and regulations at regional and national levels.
- The second action focuses on promoting the adoption of AI in the public sector, with a view to delivering efficient services to citizens, businesses and others.
- The third area of action aims to accelerate the adoption of AI in the core sectors outlined in Agenda 2063 and the Sustainable Development Goals (SDGs). Sectors with high social and economic value include agriculture, education, health, culture, climate change and adaptation.
- The fourth area of action will be the adoption of AI by the private sector, including small and medium enterprises.
- The fifth area of action focuses on creating an enabling environment for a vibrant and inclusive AI startup ecosystem.
- The sixth area of action aims to ensure the availability of high-quality and diverse datasets for AI. Data in an open format or through regulatory sandboxes is critical for the development of social and economic solutions. This action area also focuses on building the underlying infrastructure for AI, like computing platforms such as high-performance computing, data centres and cloud services.
- The seventh area of action focuses on information integrity, media and information literacy.
- The eighth action area focuses on promoting AI skills and talent in schools, colleges, workplaces and among the population, including the provision of upskilling and reskilling programmes and requirements for jobs at risk.
- The ninth action area promotes research and innovation in AI through partnerships between academia and the private and public sectors. This action line promotes the development of challenge-driven AI research in priority areas through collaboration between the research community and the public and private sectors.
- The tenth area of action provides for the adoption and implementation of ethical principles for AI that respect:
 - a. Human rights and dignity within the framework of regional and international human rights law.

- b. Diversity, inclusivity and African culture and values (e.g. the inclusion of women as well as vulnerable persons including migrants and people with disabilities and values such as Ubuntu, which respects collective community over individuality).
 - c. Promotion of the protection of children in the face of AI as Africa is fast becoming a young continent.
 - d. Responsible and unbiased use of AI, respecting intellectual property rights, and addressing potential societal and legal implications.
- The eleventh area of action provides for the adoption and implementation of technical standards to ensure the safety and security of AI systems across the Continent.
- The twelfth action area aims at accelerating public and private investment in AI in Africa.
- The thirteenth action area focuses on promoting regional cooperation and coordination with the participation of relevant stakeholders from academia, civil society, media, governments, and the private sector to maximise the benefits and minimise the risks of AI in Africa.
- The fourteenth area of action provides for accelerated African participation in global AI governance.
- The fifteenth area of action promotes AI-related partnerships between Africa and the rest of the world, with a view to mobilising financial and technical resources for AI development in Africa.

AI Governance and Regulations	Maximising AI Benefits	AI for Development	AI adoption by the public sector
			AI in priority sectors
			Adoption of AI by the private sector
			Building vibrant AI startup ecosystem
	Building Capabilities for AI	Core AI Capabilities	Datasets and computing platforms
			AI skills and talent
			Information integrity, media and information literacy
			Research and innovation
	Minimising AI Risks	Ethical, Safe and Secure AI	Gender, equality, inclusion and diversity in AI
			AI safety and security
	African Public and Private Sector Investment in AI	Public and Private Partnership	African public sector investment in AI
			African private sector investment in AI
	Regional and International Cooperation and Partnerships	Coordination and Cooperation	Intra-African coordination and cooperation
			African participation in global AI governance
			AI-related cooperation and partnerships between Africa and the rest of the world

A Call for Action

The development of AI and the societal and economic changes it will bring are just beginning. Africa should be well prepared for the AI Revolution, not only to address the challenges of AI but also to become a key player in harnessing it. The Strategy calls upon:

The African Union Commission to:

- Develop a 5 Year Implementation Plan of the Continental AI Strategy that considers the variations and disparities between AU Member States in key capabilities that underpin AI development as well as different levels of development and digital readiness.
- Conduct African-led research to assess the short-, medium-, and long-term risks of AI to African people, societies, economies, labour market, value systems, and their futures.
- Engage multistakeholder and multidisciplinary policy dialogues on diverse issues of AI in Africa and reinforce cooperation among African countries towards developing a consolidated AI ecosystem.

- Integrate AI as a key area of focus in the AU development agenda and strategic partnerships at the multilateral level.
- Host an Annual Conference on AI Safety and Security in Africa and establish an Expert Group to assess AI's impact on peace and security on the continent.
- Develop innovative financing mechanisms and mobilize financial resources to support the development of AI capabilities, R&D projects and build AI skills at all levels;
- Conduct an inventory of existing Centers of Excellence, Research Centers and Think Tanks dealing with AI across the continent and facilitate cooperation among AU Member States in the field of AI research and innovation.

AU Member States to:

- Develop national AI strategies and governance mechanisms that emphasise building necessary capabilities to address the risks of AI and maximise its benefits.
- Prioritize the development of a national pool of AI talent (computer scientists, data scientists, robotics and AI researchers) and promote public policies that attract and retain AI talents within Africa.
- Declare AI as a national priority and mobilise domestic resources by engaging the private sector and making AI a focus area of public private partnership.
- Promote AI startups as engines of AI growth, and invest in youth digital skills in general and AI skills in particular to create a critical mass of innovators who will lay the foundation for Africa's competitiveness in the global AI Market.
- Develop innovative and agile regulatory instruments and frameworks to the address safety and security challenges of advanced and complex AI Systems.

Private Sector to:

- Work closely with innovators and invest in AI solutions to improve productivity and innovations,
- Support Africa's effort to build its datasets, computing capabilities, AI skills and research and innovation capabilities.

Development Partners:

- Support Africa's effort to accelerate AI use for solving its development challenges in alignment with Agenda 2063, especially in addressing challenges related to agriculture food and security, health, education, climate change adaptation,
- Support AU Member States effort to build their datasets, compute capabilities, skills and research and innovation capabilities that underpin AI development and adoption for sustainable development and reduction of its risks to the society.

The successful implementation of the above actions will require prioritisation, coordination, resource mobilisation and knowledge sharing at the level of the AU, Regional Economic Communities (RECs) and Member States. The African Union will, therefore, endeavour to equip itself, its Member States and regional organisations with the necessary capacities and tools to optimise AI's benefits for African people.

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Abbreviations

Term	Description
ACHPR	African Commission on Human and People's Rights
AI	Artificial Intelligence
AI4D	Artificial Intelligence for Development
AMMI	African Masters in Machine Intelligence
APET	African High-Level Panel on Emerging Technology
ARCAI	African Research Centre of AI
AU	African Union
AUC	African Union Commission
AUDA-NEPAD	African Union Development Agency
CAIR	Centre for Artificial Intelligence Research
CESA	Continental Education Strategy for Africa
DIT	Digital Innovation Hub
DPF	Data Policy Framework
DTSfA	Digital Transformation Strategy for Africa
EIA	Ethical Impact Assessment
G7	Group of 7
G20	Group of 20
GenAI	Generative AI
GDP	Gross Domestic Product
GIZ	German International Development Agency
GPAI	Global Partnership for AI
GPT	General Purpose Technology
ICT	Information and Communication Technology
IDRC	International Development Research Centre
IoT	Internet of Things
ITU	International Telecommunications Union
OCR	Optical Character Recognition
OECD	Organisation for Economic Cooperation and Development
R&D	Research and Development
RAM	Readiness Assessment Methodology
REC	Regional Economic Community
RIA	Research ICT Africa
PwC	Price Waterhouse and Coopers
SDG	Sustainable Development Goals
SIDA	Swedish International; Development Agency
STI	Science, Technology and Innovation
STISA	Science Technology and Innovation Strategy for Africa
ToC	Theory of Change

TVET	Technical Vocational Education and Training
UN	United Nations
UNECA	United Nations Economic Commission for Africa
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WEF	World Economic Forum

1. Introduction and Context

1.1 Introduction

The unprecedented speed and reach of Artificial Intelligence (AI) in recent years have sparked international debates and raised important questions about its impact and implications on global economies and societies. AI is already becoming a reality as an increasing number of industries and government institutions are integrating this technology, and an increasing number of users of AI applications are recorded every day across the world.

There is no universal definition of Artificial Intelligence. Within the framework of this Strategy, AI refers to computer systems that can simulate the processes of natural intelligence exhibited by humans where machines use technologies that enable them to learn and adapt, sense and interact, predict and recommend reason and plan, optimise procedures and parameters, operate autonomously, be creative and extract knowledge from large amounts of data to make decisions and recommendations for the purpose of achieving a set of objectives identified by humans.

While countries did not reach a global consensus on the AI definition, many are seizing the opportunities for AI development, as between 2017 and 2023, sixty-seven countries developed national AI strategies. These strategies largely focus on building private sector capabilities, enhancing national competitiveness, advancing research and innovation in AI, and developing AI-related education and skills at all levels.

On the other hand, AI's impact on the global economy is impressive, according to Price Waterhouse and Coopers (PwC), AI automation has the potential to add \$15.7 trillion to the world economy by 2030 and double economic growth rates by 2035 via productivity gains and transformation of how the government and business operate.¹ This is equivalent to a 14% gain in global GDP.

Businesses and governments have realised AI's potential, and investment in AI has increased manyfold. Global corporate investment in AI increased from 2019 to 2020 by 40% to \$67.9 billion. Governments' spending and focus on AI have also increased. For instance, China's investment in AI is estimated to reach \$38.1 billion in 2027, OECD analysis shows that the United States investment in AI increased seventeen-fold between 2001 and 2019, and Europe's AI Watch data shows investments in the European Union are expected to reach €22.4 billion by 2025.²

The international policy debate on Artificial Intelligence has also gained significant momentum with a myriad of initiatives and declarations on ethical and responsible AI. In March 2024, the UN General Assembly adopted its first resolution on AI, encouraging countries to safeguard human rights and monitor AI risks. The UN has also established a Multi-stakeholder High-level Advisory Body on Artificial Intelligence with the aim of advancing

¹ PwC (2017). Sizing the Prize. PwC's Global Artificial Intelligence Study: Exploiting the AI Revolution. <https://www.pwc.com/gx/en/issues/data-and-analytics/publications/artificial-intelligence-study.html>

² <https://futurium.ec.europa.eu/en/european-ai-alliance/blog/new-ai-watch-report-2020-eu-ai-investments>

recommendations for the international governance of AI. In early 2024, the Advisory Body published its Interim report for public input³, and the final report is expected by August 2024.

The International Telecommunication Union (ITU) and 36 other UN agencies collaborated under the ITU's AI for Good Global Summit processes in 2023. In 2021 UNESCO's Member States unanimously adopted the Recommendation on the Ethics of AI as the first universal normative framework for the ethics of Artificial Intelligence where recommendations outline ten principles for responsible AI development, covering transparency, non-discrimination, human autonomy, prevention of harm, responsibility, privacy, social benefit, sustainability, accountability, and inclusion and include six areas of policy action. These principles and policies provide a global regulatory framework to assist countries in establishing their own ethical guidelines for AI deployment.

At the regional level, the European Parliament enacted an AI Act in 2024 that adopts a risk-based approach to the deployment and use of AI systems. The EU AI Act is part of a package of policy measures to support the development of trustworthy AI in the Eurozone, which also includes the AI Innovation Package and the Coordinated Plan on AI. In 2024, the Association of East Asian Nations (ASEAN) adopted a Guide on AI Governance and Ethics aiming at establishing common AI principles among its members. In Latin America and the Caribbean, an important initiative resulted in the development of the Santiago Declaration in 2023. Representing 20 nations from across the region and drawing from the UNESCO Recommendation on the Ethics of AI, the Santiago Declaration seeks to advance regional cooperation on AI governance and regulation and improve regional capacity to ensure beneficial AI.

At the plurilateral level, the G7 and G20 have also produced principles and guidelines or set up international alliances or bodies to promote the ethical and responsible application of AI. The Organization for Economic Co-operation and Development (OECD) has published its Recommendation on AI as a set of intergovernmental standards for trustworthy AI and launched the AI Policy Observatory in February 2020 to help countries develop and monitor the responsible development of AI.

For Africa, Artificial Intelligence presents enormous opportunities. It is a driving force for positive change as well as economic growth, social progress and cultural renaissance. Evidence on the social and economic impact of AI on Africa is lacking. A study by McKinsey estimates Generative AI could increase productivity by 40% and add between US\$2.2 to US\$4.4 trillion a year to the global economy.⁴ If Africa is able to recoup 5% of this opportunity, generative AI could add between US\$110 to US\$220 billion to African GDP a year, thus the marginal economic benefit will be very high. If applied judiciously, AI could also play a critical role in fostering industrialisation, accelerating access to jobs, better government services, health and education, and more importantly, in managing climate crises, saving lives and reducing the cost of drought, cyclones and wildfires.

³ United Nations, UN AI Advisory Board, Interim Report: Governing AI for Humanity, https://www.un.org/sites/un2.un.org/files/un_ai_advisory_body_governing_ai_for_humanity_interim_report.pdf

⁴ McKinsey Digital, 2023, The Economic Potential of Generative AI: The Next Productivity Frontier, <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier>

Even though the benefits of AI remain high for the continent, recent developments indicate a growing concern about the AI divide between Africa and the rest of the world due to the lack of high-quality and large datasets, lack of high-performance computers (HPC), and talent capabilities that are critical for AI development and use.

It's within this context that , the Third Ordinary Session of the Specialized Technical Committees on Communication and ICT (STC-CICT) held in 2019 in Sharm El Sheikh , Egypt requested AU Member States to establish a working group on Artificial Intelligence (AI) based on existing initiatives and in collaboration with African Institutions to study: (a) the creation of a common African stance on AI, (b) the development of an Africa wide capacity building framework, (c) the establishment of an AI think tank to assess and recommend projects to collaborate on in line with Agenda 2063 and SDGs.

The Fifth Specialized Technical Committee on ICT and Communication (STC-CICT) held in November 2023 in Addis Ababa, Ethiopia examined and approved a Conceptual Framework on AI that defines key elements of the Continental AI Strategy.

The 44th Ordinary Session of the African Union Executive Council endorsed the Conceptual Framework on AI and tasked the AU Commission with expediting the development of a comprehensive, forward-looking, and action-oriented Continental AI Strategy to effectively harness AI's potential to transform the African economy and society in line with the AU Agenda 2063 goals while managing associated risks and harms.

Against this background and building on the Conceptual Framework and outcome of the virtual multi-stakeholder consultations held in April 2024 on 4 topics, namely: (i) Maximising the Benefit of AI for Africa; (ii) Addressing and Mitigating AI Risks and Fostering the Ethical Governance of AI in Africa; (iii) Building Capabilities for AI in Africa, and (iv) Fostering Regional and International Cooperation on AI, the AU Commission, developed a Continental AI Strategy that reflects the aspirations of African people and stakeholders.

The strategy is informed by previous initiatives and AU strategic frameworks and benefited from the guidance and support of a Task Force composed of experts from AUC Departments, AUDA-NEPAD, AU Specialized Institutions, the AU Working Group on AI, Regional Economic Communities, Regional and Pan-African Organizations, and UN Agencies dealing with AI in Africa, namely UNESCO and UNECA.

The Strategy is structured as follows: An overview of the global development of AI, including a definition of AI presented above. Once the definition is established, the strategy presents the impact of AI on the global economy, followed by an overview of the current AI landscape in Africa. This is followed by the identification of strategic objectives and action areas, namely: developing governance and ethical frameworks to contain the risks of AI; maximising the benefits of AI by integrating AI into economic sectors; and building capabilities such as infrastructure, competence, skills, research and innovation, and data needed to harness AI for competitiveness and cultural renaissance. This is followed by areas for regional and international cooperation and investment in AI. The final section presents an implementation roadmap and recommendations on capacity building.

1.2 Situation Analysis of AI Development in Africa

In recent years, there has been growing momentum and interest in using AI for social and economic development in Africa. The impact of AI on Africa's social and economic

development is enormous. Price Waterhouse Coopers (PwC) estimates that AI could contribute up to \$1.5 trillion to the African economy or 6% of the continent's GDP. Therefore, the marginal return on investment in AI is high.⁵

The AI industry is also growing across Africa – Data from the Center of Intellectual Property and Information Technology Law (CIPIT) shows that Africa has more than 2,400 organisations working on AI innovation, 41% of which are startups operating in various industries, including health, agriculture, education, law, and insurance.

Source: Centre of Intellectual Property and Information Technology Law

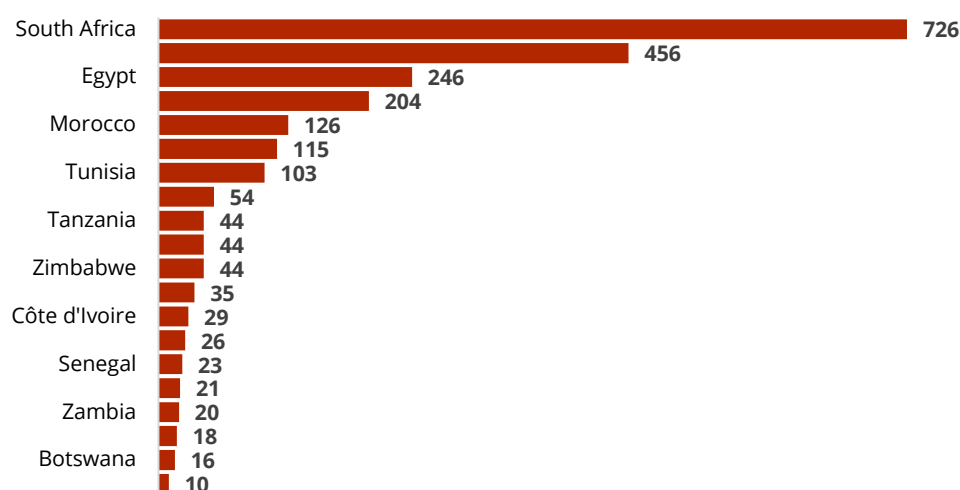


Figure 1: Number of organisations working on AI innovations across Africa

Furthermore, Research conducted on African contributions to GitHub shows an overall increase in the share of GitHub users, from 0.5% in 2010 to around 2.7% in 2020. The share of actual total contributions from African authors also increased from 0.3% in 2010 to about 2.3% in 2020.

The EU Joint Research Centre's (JRC) comparison of Africa's AI economic players, such as research institutes (including universities), firms and governmental institutions, with the other regions in 2021 indicates that the region's contribution to AI remains small as the United States, China, the EU, the UK and India still dominate global AI development⁶.

Source: EU JRC, AI Watch Index 2021

⁵ PwC (2017). Sizing the Prize. PwC's Global Artificial Intelligence Study: Exploiting the AI Revolution. <https://www.pwc.com/gx/en/issues/data-and-analytics/publications/artificial-intelligence-study.html>

⁶ EU, Joint Research Centre, AI Watch Index 2021, <https://publications.jrc.ec.europa.eu/repository/handle/JRC128744>

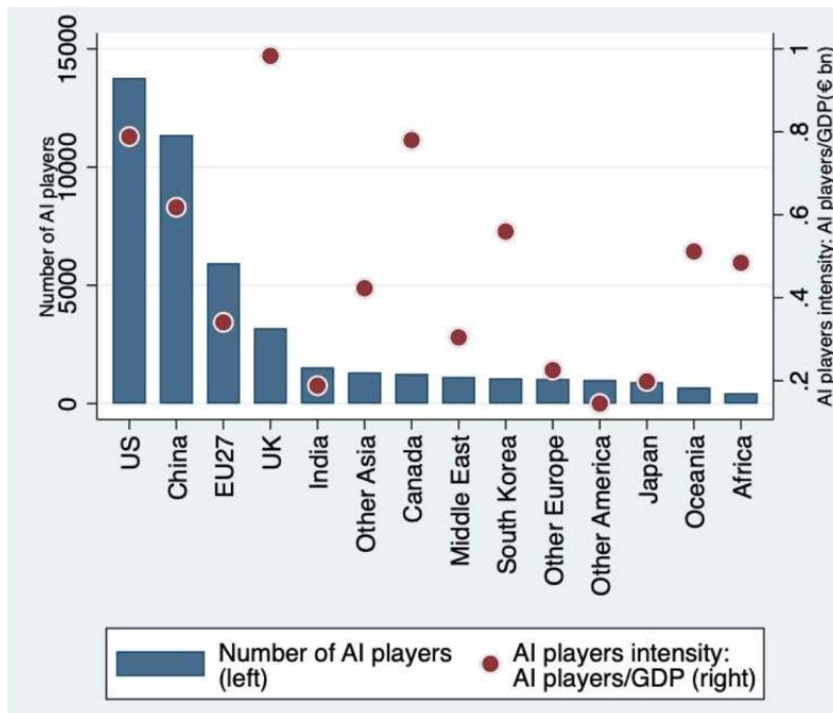


Figure 2. Global AI Economy Players and AI Intensity

Oxford Insight's Global AI Index,⁷ places African countries among 'waking up' and 'nascent' nations in terms of AI investment, innovation, and implementation with Mauritius leading the region with AI readiness with a score of 53.27, followed by South Africa, Rwanda, Senegal and Benin in the 2023

To address this, several initiatives engaging countries with partners are also well advanced on the continent.

- In 2022, UNESCO convened a Southern African sub-regional forum on Artificial Intelligence, attended by seven Southern African countries, which agreed to the Windhoek Statement on AI in Southern Africa Region, which recommends actions on data, education and governance across the region.⁸ UNESCO has also developed two methodologies to help countries implement the Recommendations on the Ethics of AI: the Readiness Assessment Methodology (RAM),⁹ which assesses a country's readiness for an ethical AI ecosystem in line with the UNESCO Ethics Recommendation, and the Ethical Impact Assessment,¹⁰ which helps project teams assess the potential ethical impacts of the AI systems they are developing.
- The International Development Research Centre (IDRC) and Swedish International Development Agency (SIDA) have been supporting an African Observatory on Responsible Artificial Intelligence since 2022. The Observatory focuses on policy engagement, science communication, capacity development, network convening and

⁷ <https://oxfordinsights.com/ai-readiness/ai-readiness-index/>

⁸ <https://unesdoc.unesco.org/ark:/48223/pf0000383197>

⁹ <https://www.unesco.org/ethics-ai/en/ram>

¹⁰ <https://www.unesco.org/ethics-ai/en/eia>

research and knowledge generation.¹¹ The IDRC and SIDA are also supporting an Artificial Intelligence for Development (AI4D) programme, which promotes inter-university collaboration for research and development of AI solutions to address development challenges.

- The FAIR Forward programme,¹² implemented by the German Development Agency (Deutsche Gesellschaft für Internationale Zusammenarbeit) GIZ, in collaboration with various partners, aims to make AI more inclusive and sustainable through training and advisory services.
- The United Nations Economic Commission for Africa (UNECA) also played a key role in the establishment of the African Research Centre for Artificial Intelligence (ARCAI) in the Republic of Congo in 2022. ARCAI's main objectives are to provide technical training and skills, foster job creation, bridge the digital divide, promote inclusive economic growth and ensure Africa's sovereignty over modern digital tools.

At the regional level, efforts have been made to develop strategies and frameworks to build African countries' AI capabilities.

- In 2018, the African Development Bank reviewed the implication of emerging technologies to its core focus areas, such as energy supply, industry manufacturing, regional integration, and well-being (including financial inclusion, smart cities, education and healthcare). The report, among others, recommends a coordinated regional vision to seize the opportunities provided by emerging technologies, build human resources capacity, develop adaptive and collaborative regulations and nurture the adoption of emerging technologies in the key sectors.¹³
- In 2021, the African Commission on Human and Peoples' Rights (ACHPR)¹⁴ adopted Resolution 473 on AI, robotics, and other new and emerging technologies. The resolution calls on Member States to ensure that the development and use of such technologies are compatible with the rights enshrined in the African Charter. It calls on AU Member States to maintain human control over AI and notes that this requirement should be codified as a human rights principle. The resolution commits to undertake a study to develop standards to address the challenges posed.
- The Smart Africa Alliance, together with several partners, has also developed an AI for Africa Blueprint,¹⁵ which emphasizes human capital development, AI adoption (from lab to market), networking, infrastructure, and regulation.
- The African Union High-Level Panel on Emerging Technologies (APET) and the African Union Development Agency (AUDA-NEPAD) published a 2021 report “AI For Africa: Artificial Intelligence For Africa’s Socio-Economic Development” focusing on continental challenges in line with the AU Agenda 2063.¹⁶ The report seeks to address

¹¹ <https://www.africanobservatory.ai/about>

¹² <https://www.giz.de/expertise/html/61982.html>

¹³ African Development Bank, Unlocking the Potential of 4th Industrial Revolution in Africa, https://4irpotential.afdb.org/wp-content/uploads/2019/10/AFDB_4IRreport_Main.pdf,

¹⁴ <https://achpr.au.int/en>

¹⁵ Smart Africa, AI for Africa Blueprint, <https://smartafrica.org/knowledge/artificial-intelligence-for-africa/>

¹⁶ <https://www.nepad.org/news/artificial-intelligence-core-of-discussions-rwanda-au-high-level-panel-emerging>

concerns about job losses and the need to enhance job creation opportunities through the integration of AI in various sectors such as agriculture, healthcare, finance, telecommunications, transport, water management, and mining. Emphasis has also been placed on skills, infrastructure, research and innovation, regulation and partnerships.

- AI is also increasingly becoming a focus for regional economic communities (RECs). REC digital strategies focus on ensuring that the foundations for AI, such as infrastructure, skills and regulations, are in place.

The integration of AI into national development plans is also gaining momentum as some African countries have already established AI institutes that are driving applications in key sectors such as agriculture, health and education.

There has also been progress in addressing data issues across Africa. The number of countries with a data protection law has more than doubled in the last decade, and a third of these laws have been passed in the last five years. Data compiled by Mutuku and Tinto in 2019¹⁷ shows that a third of African countries (25 countries) have made open data available through national open data portals, with almost all of these countries adopting open data policies, strategies and plans.

¹⁷ Leo Mutuku and Teg-wende Tinto, State of Open Data in Sub Saharan Africa, <https://stateofopendata.od4d.net/chapters/regions/sub-saharan-africa#fnref:2>

(i) strengthen multistakeholder-driven policy initiatives for AI governance at the national level; (ii) foster legal and regulatory frameworks for AI governance (iii) enhance capacities among public administrations, judiciary and parliamentarians for AI governance and use, and (iv) facilitate cooperation between countries around some of the common priorities like personal data protection and data governance, leveraging AI for economic growth, development and digital transformation, updating education, skills and training systems, supporting AI research and development.

1.3 Regional Policy Context for AI in Africa

This AI Strategy is in line with the African Union's Agenda 2063 and strategies for digital transformation, science, technology and innovation. The AU Agenda 2063 envisions "an integrated, prosperous and peaceful Africa, driven by its own citizens, representing a dynamic force in the international arena".¹⁸ Through Agenda 2063, African countries have committed to seven aspirations, and AI will contribute to deliver on them as per the below table:

Table 1. AI Alignment with African Aspirations/Agenda 2063

AU Agenda 2063	Key Focus Areas and Sectors	Artificial Intelligence Alignment
A prosperous Africa based on inclusive growth and sustainable development,	Social and economic transformations, prosperity, employment, housing, education, agriculture, science and technology, natural resources and mitigation of the impact of climate change	- AI across Africa's economic growth and social progress through supporting individuals to improve quality of life - Mainstreaming AI in priority sectors - agriculture, education, health, public service delivery, climate change and natural resources, media and culture, peace and security, regional trade, justice and law and order - Private sector use of AI and innovation in the industry to increase productivity and efficiency.
An integrated continent, politically united based on the ideals of Pan-Africanism and the vision of Africa's Renaissance,	Integrated infrastructure, regional cooperation, trade and data movement across borders	- AI in priority sectors (infrastructure and trade) - Development of a consolidated AI Ecosystem and AI Market.
An Africa of good governance, democracy, respect for human rights, justice and the rule of law,	Leadership, democratic values, culture, universal principles of human rights, gender equality, justice and the rule of law, justice, public service	- AI digital transformation of government, - Transformation of the justice, law and order sector - Inclusive AI that supports human rights of vulnerable groups including the diversity of persons with disability in Africa - AI use in the public Sector
A peaceful and secure Africa,	Conflict resolution, safety	Africa's Role in Global Security and

¹⁸ African Union, Agenda 2063, The Africa We Want, https://au.int/sites/default/files/documents/36204-doc-agenda2063_popular_version_en.pdf

AU Agenda 2063	Key Focus Areas and Sectors	Artificial Intelligence Alignment
	and security, human security, reduction of violent crimes	AI-driven Modern Warfare, AI and disinformation
An Africa with a strong cultural identity, common heritage, values and ethics,	Identity, heritage, culture, values such as Ubuntu folklore, languages, film, music, theatre, literature, religions and spirituality	- Inclusive and ethical AI respecting and protecting heritage, folklore, languages, film, music, theatre, literature, festivals, religions and spirituality - priority sector – media and culture
An Africa whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children and	Inclusion of children, women and youth Participation in decision making Education, training and skills, jobs and economic opportunities Innovation and creativity	- AI skills, AI in education, - Inclusive AI - AI research and innovation - AI for economic opportunities and employment
Africa is a strong, unified, resilient and influential global player and partner.	Participation in global governance regional cooperation financing African development	- Regional cooperation and international engagement - AI Governance - AI investment

The AU Science, Technology and Innovation Strategy for Africa (STISA) 2024 places science, technology and innovation at the heart of Africa's socioeconomic development and growth.¹⁹ Its priority areas include eradicating hunger, ensuring nutrition and food security, preventing and controlling disease and ensuring well-being, communication (physical and intellectual mobility), natural resource management and climate change, urban management and waste management, peace and security, and wealth creation. These priority areas are relevant to harnessing AI for Africa's development, which is in line with Agenda 2063.

Furthermore, the AI strategy is in line with the Digital Transformation Strategy for Africa (DTSfA), which was endorsed at the 36th Ordinary Session of the African Union Executive Council in Addis Ababa, Ethiopia, in 2020. The DTSfA aims to harness digital and emerging technologies and innovation to transform Africa's societies and economies, promote Africa's integration, generate inclusive economic growth, stimulate job creation and secure the benefits of the digital revolution for socio-economic development. Other important policy frameworks include:

- The AU Convention on Cybersecurity and Personal Data Protection (Malabo Convention), adopted in 2014 and entering into force on 8 June 2023,
- The AU Data Policy Framework (DPF) serves as a blueprint to guide African countries' efforts to establish effective data governance systems and harness data for innovation, private sector competitiveness and social and economic development.

¹⁹ African Union, Science, Technology and Innovation Strategy for Africa 2024, https://au.int/sites/default/files/newsevents/workingdocuments/33178-wd-stisa-english_-_final.pdf

- The Continental Education Strategy for Africa' (CESA 16-25) aims to revitalise the teaching profession, build education infrastructure, improve learning and completion rates, accelerate science and mathematics education, and expand Technical and Vocational Education (TVET) and higher education opportunities.²⁰
- The Continental Strategy for Technical and Vocational Education and Training²¹ emphasises the importance of ensuring the relevance of education and training to meet the demand of social and economic development; the TVET Strategy places emphasis on promoting employability, sustainable livelihoods and responsible citizenship. There is also an emphasis on building capacity for creation and innovation, anchored in the framework of entrepreneurship.
- AU Child Online Safety and Empowerment Policy. The policy promotes safe online conduct and behaviours among children and recommends empowering children with digital literacy and skills, increasing awareness of risks and safeguards among children, parents, educators, and other stakeholders, and strengthening legal and regulatory frameworks.
- AU Strategy for Gender Equality and Women's Empowerment 2018-2028.
- African Space Policy and African Strategy for Social, Political and Economic Integration
- African Continental Free Trade Area (AfCFTA) refers to a trade agreement bringing together all AU Member States with the aim of creating an African Single Market of 1.3 billion people and a combined GDP of approximately 3.4 trillion USD.
- The Action Plan for the Accelerated Industrial Development of Africa (AIDA) which aims to mobilise resources and enhance Africa's industrial performance.

1.4 Drivers, Risks, Enablers and Inhibitors of AI Uptake in Africa

1.4.1 Drivers

The potential surge of AI in Africa is underpinned by several pivotal drivers. Firstly, the continuous improvement in the continent's digital landscape sets the foundation for tech advancements. Coupled with this is the view of AI as a catalyst for sustainable development, emphasising its relevance and necessity. Africa's nascent digitalisation process of its heritage and culture is making it less vulnerable to AI misuse and presents opportunities for the effective protection of its identity online as well as Africa's demographic makeup, characterised by a youthful population that largely consists of digital natives, further accentuates this trajectory.

Africa's younger generation perceives AI as an opportunity to address the unique challenges intrinsic to the continent. Additional factors such as the increasing mobile penetration and the growth of financial inclusion facilitated by fintech innovations also play significant roles in accelerating AI adoption in Africa. Moreover, there's an upswing in government support and policies that foster a conducive environment for AI-based solutions and applications. The

²⁰ African Union, Continental Education Strategy for Africa, <https://edu-au.org/strategies/185-cesa16-25>

²¹ African Union, Continental Strategy for TVET, <https://au.int/en/documents/20181022/continental-strategy-technical-and-vocational-educational-and-training-tvet>

emergence of entrepreneurial spirit in Africa, exemplified by the rise of innovation hubs, adds to Africa's preparedness to adopt and implement AI technologies.

1.4.2 Risks

The risks associated with AI development and deployment in African contexts span various dimensions, including environmental impact, social inequalities, democratic values, and the preservation of cultural heritage and indigenous knowledge. The main risks are:

Environmental Risks:

- AI systems, particularly those requiring extensive energy consumption for training and operation, contribute to increased CO2 emissions and exacerbate climate change. Additionally, the high demand for fresh water to cool data centers poses a threat to regions already facing water scarcity. With AI comes the massive introduction of electronic waste, which will also affect the environment.

System-Level Risks:

- **Bias and Discrimination:** AI systems trained on biased data or deployed in contexts with systemic discrimination can perpetuate and exacerbate social inequalities. Algorithmic biases, discriminations, and human biases influencing AI design are significant concerns.
- **Privacy and Personal Data Protection:** AI systems collecting and processing vast amounts of personal data raise concerns about privacy breaches and unauthorised use of sensitive information, which impacts individuals' rights and freedoms, especially among children who currently are already at the receiving end of cybercrime and also women and girls, mostly as scams.

Structural Risks:

- **Gender Equality:** AI technologies risk widening gender disparities, including the gender digital divide, affecting job opportunities and reinforcing existing gender biases and discriminations, especially amongst vulnerable women, youth and persons with disabilities as they are already disadvantaged.
- **Job Displacement:** Automation driven by AI may lead to job displacement, particularly in industries vulnerable to AI disruption, potentially exacerbating unemployment and income inequality.
- **The AI Divide:** Disparities in digital literacy and access to AI technologies could deepen existing inequalities between men and women, affect already unconnected people, limit opportunities for some populations, and hinder Africa's competitiveness in the global AI landscape.
- **Intellectual Property:** generative AI technologies, in particular, raise concerns about risks to intellectual property rights in their appropriation and use of digital material.

Risks to African Values:

- Societal cohesion: Spread and manipulation of AI-generated misinformation, disinformation and hate speech
- Democracy and Human Rights: External influence from AI technologies developed outside Africa may undermine national sovereignty, Pan-Africanism values and civil liberties. AI-enabled election manipulation and dissemination of disinformation pose threats to the integrity of democratic processes, as does the unlawful surveillance of citizens that AI can facilitate.
- Subversion of Indigenous Knowledge and African Cultural Heritage: AI systems risk appropriating and misrepresenting indigenous knowledge, potentially eroding cultural heritage and perpetuating cultural exploitation. Additionally, inadequate representation of indigenous practices in AI models may lead to the marginalisation of indigenous communities and their knowledge systems that have always been part and parcel of African norms and values.

Addressing these risks requires a multifaceted approach involving policymakers, technologists, and civil society to ensure the responsible development and deployment of AI technologies in Africa.

1.4.3 Enablers

The Internet, together with the availability of data and computing capabilities, is the core infrastructure of the ecosystem in which AI thrives. In Africa, the rapid adoption of smartphones and increased use of the Internet, which has jumped from 20% in 2015 to 40% in 2023,²² is driving data and the use of various applications. The adoption of smartphones and increased use of social media are also driving user experience with AI solutions.

The emergence of African-led AI communities and networks has also led to the development of local AI-based applications and solutions.

1.4.4 Inhibitors

Africa faces a number of challenges and barriers limiting AI uptake, notably gaps in Internet usage, a lack of computing platforms, limited data availability for training AI models, and a scarce supply of AI skills, which inhibit the use of AI for social and economic development.

Although internet usage is increasing, it is still not high enough to support AI development due to a number of factors, including affordability, limited skills and a lack of content that appeals to users.

Lack of data is a barrier to developing solutions that use language understanding or speech recognition in different African languages. Limited data infrastructure, such as data centres, storage facilities and high-performance computers, is also critical to the development of AI solutions.

While AI skills are improving, the continent lacks developers with the right AI skills and also faces challenges in attracting and retaining AI talent in a context of high global demand for AI professionals.

²² International Telecommunication Union, Measuring Digital Development: Facts and Figure 2023, <https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx>

Limited awareness of AI among the workforce is the biggest barrier to AI adoption in the public and private sectors. There is still relatively little research and development in AI in Africa. This means that AI applications developed in other regions are likely to lack contextual relevance, particularly in terms of cultural and infrastructural factors, and will not be fit for purpose in Africa.

Investment in digital technologies in general and AI in particular remains low within African countries. The absence of powerful computers to train large-scale models is one of the main barriers to Africa. As of 2023, 100% of the world's supercomputers reside in only 30 nations. There are no mechanisms for collaboration and knowledge exchange between researchers, academia and innovators. There are few centers of digital innovation which inhibit the value and impact of African innovation.

Due to limited infrastructure and skills, Africa's AI ecosystem is still in its infancy in most countries. The ingredients for a successful startups' ecosystem include the availability of capital and Digital Innovation Hubs (DIHs), government support and incentives, strong universities that produce breakthrough ideas and tools that can be readily commercialised and scaled, and an educated population that produces entrepreneurs and engages in debates about AI.

2. Continental AI Strategy

2.1 Vision and Mission

The Continental AI Strategy supports the AU Agenda 2063's vision. It is rooted in Africa's unique challenges and opportunities, as the continent can leverage its youth's digital native talent, natural resources, huge market and geopolitical position to develop and promote an ethical, responsible and inclusive AI that empowers people and contributes to the continent's economic growth, social progress and cultural renaissance.

Vision

A prosperous and integrated Africa where responsible, ethical and African-centric AI is the axes of inclusive growth, resilience, socio-economic development, people empowerment and positioning the continent as a key player in the global AI landscape.

Mission

The Mission of the AI Strategy is to harness AI for accelerating social and economic transformation and promoting cultural renaissance in Africa in line with the AU Agenda 2063 and the Sustainable Development Goals, to minimise the risks that AI poses to African people and countries, and to accelerate the development of the necessary AI capabilities of the AU Member States.

2.2 Guiding Principles

The following high-level principles guide the AI Strategy:

Local First - The production, development, use and assessment of AI in Africa will be foremost to address African challenges like healthcare delivery, food security, clean energy, climate change and water management and opportunities with African solutions. The growth of local talent and ecosystems is considered paramount to advancing AI solutions that are of public value and interest, serving the Continent's needs and priorities, and respecting and preserving cultural values and customs.

People-centred- AI should promote inclusive growth, sustainable development, well-being and cultural renaissance. The production, development, use and assessment of AI in Africa will be foremost to address African challenges and opportunities with African solutions. AI solutions will address rural and remote areas specific challenges, such as agriculture, climate change (droughts and floods) and healthcare needs.

Human Rights and Human Dignity—The production, development, use and assessment of AI systems in Africa will always uphold human dignity, gender equality and respect and promote all the human rights set out under the African Charter on Human and Peoples' Rights and its subsidiary instruments, as well as the Universal Declaration on Human Rights and related instruments of international human rights law.

Peace and Prosperity - The production, development, use and assessment of AI systems in Africa shall advance peaceful and prosperous African societies, where safety and security are enjoyed by all who live in them and where the natural environment is preserved and protected.

Inclusion and Diversity - The production, development, use and assessment of AI in Africa will be inclusive, non-discriminatory, leaving no one and no place behind and benefiting everyone, and respectful of the diversity of African people, cultures, languages, gender dimensions and nations. AI will not discriminate against anyone on the basis of sex, gender, race, ethnic origin, pregnancy status, economic status, age, any form of disability, language, religion, political opinion, or any other ground as contemplated under the regional and international human rights canons. In particular, the opportunities of the AI revolution will be harnessed to empower African women.

Ethics and Transparency: The Strategy should provide guidance and recommendations to enable member States to embrace a responsible AI concept. Biasness, widening inequalities, marginalisation of certain groups who are not ready to embrace AI, loss of culture and identity, and widening of social and technological gaps should all be avoided.

Cooperation and Integration—The Continental Strategy will promote regionally integrated governance approaches and mechanisms and foster regional cooperation in advancing inclusive African AI capacities and ecosystems. **Member States, AUC, AU Organs, RECs, African Institutions, and International Organisations** shall cooperate to create capacity to enable African countries to self-manage their data and AI and take advantage of regional initiatives and regulated data flows to govern data appropriately.

Skills Development, Public Awareness and Education: AI solutions will be supported by formal and informal AI education to equip the African population with the necessary skills for the AI-driven future.

2.3 Overall Strategic Objectives

The Strategic Objectives foreseen to be reached by 2030 comprise the following:

- i. Implement robust AI governance, regulations, standards, codes of conduct and best practices to manage AI risks and promote its growth.
- ii. Promote the adoption of AI in the public sector, with a view to delivering efficient services to all citizens, businesses and others.
- iii. Accelerate the integration of AI in the core sectors outlined in the Digital Transformation Strategy, notably sectors with high social and economic value, including agriculture, education, health, climate change and natural resource management, and regional peace and security.
- iv. Accelerate the adoption of AI by the private sector, including small and medium-sized enterprises.
- v. Create an enabling environment for a vibrant and inclusive AI start-up ecosystem focused on solving development problems.
- vi. Ensure the availability of high-quality and diverse datasets to underpin AI development and ensure the availability of AI infrastructure, such as data centres, computing platforms, and IoTs, is available for data storage and management.
- vii. Promote information integrity, media and information literacy
- viii. Promote diversity in AI skills and AI talent to prepare Africa's workforce of tomorrow, with particular attention to women and girls.
- ix. Encourage research and innovation in AI through partnerships between academia and the private and public sectors.
- x. Adopt and implement AI ethical principles that respect human rights, gender equality and African people's dignity, respect diversity, inclusivity and African culture and values.
- xi. Adopt and implement safety and security in the design, development and use of AI systems.
- xii. Accelerate public and private investment in AI in Africa.
- xiii. Promote regional cooperation and solidarity among AU Member States to maximise the benefits of AI, minimise its risks and share capabilities and resources.
- xiv. Promote African participation in shaping the global AI governance system.
- xv. Stimulate AI-related partnerships between Africa and the rest of the world.

2.4 Focus Areas

The Focus Areas of the AI Strategy are:

- i. Maximising the benefits of AI for social and economic development and cultural renaissance.
- ii. Minimising risks and safeguarding AI development and adoption from harm to African people, societies and environments.
- iii. Building capabilities in infrastructure, datasets, computing, skills and education, research and innovation, and specialised AI platforms.
- iv. Fostering regional and international cooperation; and
- v. Accelerating AI investment.
- vi. Creating an inclusive governance and regulatory framework

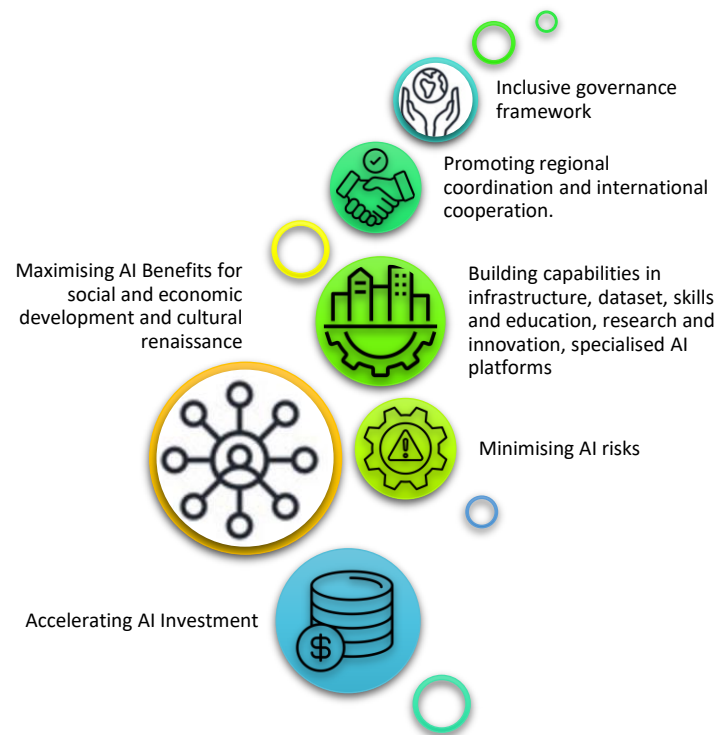


Figure 4: AI Strategy Focus Areas

Figure 5 presents the sections that elaborate on the strategic objectives and priority areas.

AI Governance and Regulations	Maximising AI Benefits	AI for Development	AI adoption by the public sector
			AI in priority sectors
			Adoption of AI by the private sector
			Building vibrant AI startup ecosystem
	Building Capabilities for AI	Core AI Capabilities	Datasets and computing platforms
			AI skills and talent
			Information integrity, media and information literacy
			Research and innovation
	Minimising AI Risks	Ethical, Safe and Secure AI	Gender, equality, inclusion and diversity in AI
			AI safety and security
	African Public and Private Sector Investment in AI	Public and Private Partnership	African public sector investment in AI
			African private sector investment in AI
	Regional and International Cooperation and Partnerships	Coordination and Cooperation	Intra-African coordination and cooperation
			African participation in global AI governance
			AI-related cooperation and partnerships between Africa and the rest of the world

Figure 5: Focus areas and action areas for the AI Strategy

The remainder of this section sets out the policy recommendations and strategic actions to be undertaken to achieve each strategic objective.

2.4.1 AI Governance and Regulation

Effective governance is a key mechanism for ensuring that the use and development of AI are inclusive of diverse populations, serve African agendas, and do not harm African people, societies or environments. Developing robust governance regimes for AI that are founded in ethical principles, democratic values, human rights and the rule of law, in line with Agenda 2063, should be a major priority for continental, regional and national actors.

As evidenced worldwide and described in the AI risks sections, even AI systems designed for the most legitimate purposes can harm individuals and societies. Mechanisms are needed throughout the AI lifecycle to mitigate the risks of harm these technologies pose and promote a culture of responsible AI development and use across the Continent.

A multi-tiered governance approach will be needed to ensure that responsible AI ecosystems are enabled, the benefits of AI are equally distributed, risks are mitigated and harms addressed, and that the development and use of AI across Africa is transparent and accountable to its people. African AI governance will consider emerging best practices both within the region and globally on AI policy and regulation (e.g., EU AI Act, Canadian AI and Data Act, UK Artificial Intelligence Regulation, etc.) and consider the different levels of AI use and adoption by diverse actors within African AI ecosystems. A robust governance regime for Africa will align with existing relevant national legislation and continental frameworks, augmenting them and addressing regulatory gaps and policy areas. Such an approach will consist of the following activities:

Amendment and application of existing laws and frameworks: There are a number of legal frameworks that lay important foundations for the responsible and just use and development of AI in Africa. These include:

- Intellectual Property laws
- Electronic Communications and Transactions laws
- Whistleblowing and protected disclosure laws
- Access to information laws
- Personal data protection laws
- Cybersecurity laws
- Consumer protection laws
- Antitrust and competition laws
- Laws and policies pertaining to inclusion and empowerment of different groups (women, girls, people with disabilities, youth, children, rural population, etc.)

Ensuring these laws are enacted and fully implemented is a crucial first step to governing AI in Africa. Member states will need to review whether existing laws can be amended to safeguard AI-related harms.

Identification of regulatory gaps: Governments, with the support of the African Union and REC, will then need to consider what regulatory gaps exist to safeguard the development and use of AI and ensure the rule of law in its adoption across the Continent. Such gaps may include labour protections for gig and platform workers, standards for the public procurement

of AI systems, and regulatory approval of AI for use as medical devices within health systems. Regulations related to social media, content generators and content distributors should be aligned with international normative frameworks and standards.

Establishment of enabling policy frameworks: National AI strategies and Policies are important starting points for governing AI. They should align with existing developmental priorities, identifying where AI can make a positive contribution to the realisation of key priority areas like job creation, sustainable livelihoods, health, gender equality and wellbeing, education and financial services. The design of national AI strategies will be based on open public consultations involving a wide range of stakeholders, including the public and private sectors, academia and civil society.

Development and roll-out of AI assessment and evaluation tools and institutional mechanisms: Recent research has highlighted the importance of independent review mechanisms in mitigating the risk of harm associated with AI research and the rollout of AI systems. In particular, impact assessments, including UNESCO's Ethical Impact Assessment, have been developed as best practices in the field for evaluating and measuring the real and potential impact of AI systems on individuals and societies. These tools are important instruments for understanding and redressing the actual impact of an AI system in different societal contexts and can draw on a range of methodologies to generate evidence of impact, including consultation with affected communities.

Continuous research and evaluation- Research is a crucial pillar of emerging governance frameworks. Ongoing African-led research is needed to:

- Assess new risks arising from AI development and use in Africa;
- Evaluate the efficacy of governance tools to promote the development and use of AI systems that are inclusive, fair, sustainable and just;
- Review best practices in AI governance coming out of similar country contexts worldwide;
- Co-develop policy innovations with policy-makers and stress test them in a safe environment; and
- Support regulatory sandboxing initiatives.

In addition, African-led research is needed to assess the short-, medium—and long-term ethical risks of AI to African people, societies, value systems, and their futures. African organisations already working on AI governance and ethics, including the African Observatory on Responsible AI, should be leveraged to support the implementation of the AI Continental Strategy.

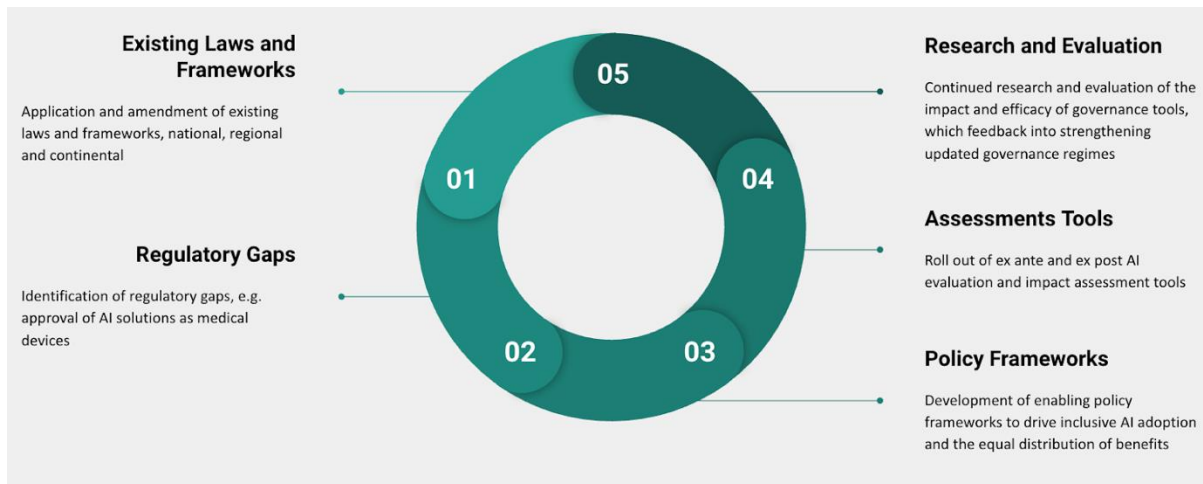


Figure 6. Tiers of AI Governance

The UNESCO ethical guidelines call on governments worldwide to establish the necessary institutional and legal frameworks to govern AI technologies and ensure they contribute to the public good.²³ Regional evidence and risk-based regulation is important to spur AI innovation, research and development while also reducing the risk it poses to rights, dignity, safety and security, among other things.

High-Level Recommendations for AI Governance and Regulation

- Support AU Member States to advance a multi-tiered governance approach grounded in AI ethics and geared toward advancing the equal distribution of AI's benefits for development, ensuring transparency and accountability in the use of AI, fostering innovation and enabling inclusive, diverse, vibrant and sustainable AI ecosystems.
- Support Member States to develop National AI Strategies in line with the Continental AI Strategy.
- Promote agile, forward-looking and risk-based regulations at national and regional levels that foster accountability and transparency in the design and deployment of AI Systems.
- Promote cooperation and experiences sharing on AI regulations including regulatory frameworks and their implementation at national levels.

Associated Actions

- Establish bodies/councils and institutional frameworks& mechanisms at national and regional levels comprising all stakeholders to lay down the foundations of national AI strategies and to oversee the development of national and regional AI governance frameworks.
- Support Member States to establish independent institutions to conduct oversight on the use of AI, enforce compliance with standards as they emerge, and provide access to redress and remedy where violations occur.

²³ UNESCO, Ethics of Artificial Intelligence, <https://www.unesco.org/en/artificial-intelligence/recommendation-ethics>

- Establish a regional independent AI Ethics Board, which reviews applications from AI research groups seeking to develop novel, large-scale AI systems with the potential to impact African societies significantly.
- Support Member States in integrating AI in National Development Plans and developing AI strategies through peer learning, readiness assessment and knowledge exchange.
- Develop Guidelines on the Ethics of AI that are adapted to Africa context
- Assess AI regulations in Africa and promote cooperation in sharing experience on AI regulatory frameworks and their implementation at national levels.
- Develop flexible and adaptable AI regulation and legislation models by drawing on global and regional experiences, which Member States can adapt to their settings and needs.
- Create regulatory sandboxes for AI innovation to facilitate the availability of diverse and inclusive AI use cases and share experience in designing and implementing regulatory sandboxes.
- Establish regulatory standards for the public procurement of AI systems in Member States to promote fair, just and inclusive AI development and deployment.
- Establish an Advisory Board on AI to support the African Union and Member States, including research on AI governance approaches, technical assistance and capacity strengthening for policy-makers.
- Invest in African-led research on the short, medium and long-term risks of AI to African societies, including through research funding, fellowships and the establishment of research chairs.
- Provide incentives for citizen-led solutions that identify and mitigate AI biases and high-risk issues within AI systems, such as AI Bounty Contests and Red-Teaming efforts.
- Adopt algorithmic or AI transparency registers to publicly list AI systems being used in Member States, the groups and individuals that may be affected, any incidents that occur from their use, and details on how to submit complaints or inquiries.
- Put in place practical tools and standards to guide the development and deployment of AI systems in Africa
- Ensure explainability of AI systems, protecting personal data, consider privacy by designing and by default and reinforce accountability in the design and development of AI solutions and products in Africa.

2.4.2 Maximising AI Benefits for Socioeconomic Development and Cultural Renaissance

To maximise the benefits of AI, Africa will focus on people-centred development; AI will be used to create employment opportunities, improve quality of life and ensure its informed use by Africans. The Strategy envisions the transformation of the public sector, the mainstreaming of AI in high-impact sectors such as healthcare, agriculture, education, and climate change

and the development of the capacity of the private sector to benefit from AI and address its risks.

AI has the potential to significantly impact all sectors and the lives of everyone in Africa. Estimates suggest that capturing just 10% of the global AI market could generate substantial economic growth for the continent. However, the actual effects of AI on employment and socio-cultural well-being are not well understood in the African context.

It is crucial to balance leveraging AI's benefits for economic development and social progress with addressing potential challenges and ensuring inclusivity, ethics, and cultural preservation. Continuous analysis, monitoring, and stakeholder engagement are essential to navigating the evolving landscape of AI and maximising its positive impact in Africa.

Data collection, analysis, and policymaking are needed to maximize AI's benefits and mitigate potential risks. This includes efforts to understand AI's impact on employment, gender equality, quality of life, and social well-being in Africa. An advisory board proposed above will be important to facilitate ongoing research and analysis of AI's socio-economic impacts. The board will identify key challenges, and provide guidance relevant to various sectors.

2.4.2.1 Public Sector's Adoption of AI

AI has significant potential to improve the delivery of public services - such as safety net payments to citizens, tax collection, policing, utilities and traffic management. AI can play a role in improved resource allocation, better decision-making, real-time tracking, anomaly detection, multilingual service delivery, cost savings and allowing public service officers to focus on more critical tasks. Data collected from IoTs can enable better transport planning, crime prevention and utility maintenance. AI can also provide language translation services and extend required assistance to the diverse constituency of people with disabilities, thus enabling them towards meaningful and impactful participation to enable illiterate people to access public services.

The public sector can also play a major role in ensuring the availability of data for training AI algorithms. Government-led digital datasets can be generated from various databases and made available to the public through national open data portals. Public sector data infrastructure and exchange frameworks like Enterprise Service Bus, digital government specifications like GovStack²⁹, and spatial data frameworks that promote free flow and use of geospatial data are also crucial to accelerate data availability for training AI algorithms. Academia and the private sector can then use such data to develop AI solutions that enable better delivery of public services.

Governments worldwide are adopting AI solutions to deliver better services. In Europe, for example, a study by the Joint Research Centre (JRC) has compiled a database of 686 AI programmes being used in the EU public sector.²⁴ In Africa, however, the adoption of AI for public service delivery is still in its early stages.

²⁴ European Commission, Joint Research Centre (JRC) (2021): Selected AI cases in the public sector (JRC129301). European Commission, Joint Research Centre (JRC) [Dataset] PID: <http://data.europa.eu/89h/7342ea15-fd4f-4184-9603-98bd87d8239a>

First, the public sector needs to be aware of the potential of AI and related emerging technologies to deliver better services to citizens. This requires capacity building of the civil servants. Second, it is important to encourage the development of digital government strategies that integrate AI. Third, there is a need to establish a triple helix between research and civil society as they present the voices of the ordinary citizens, the private sector and the public sector in the design and implementation of AI solutions for public services in Africa.

High-Level Recommendations

- Promote the use of AI in the public sector by collecting information, sharing current AI use cases in governments and conducting research and analysis.
- Promote the capacity of civil servants and decision-makers on the implementation and management of AI solutions;
- Forge partnerships between the public and private sectors and research institutions on AI innovations.

Associated Actions

- Build capacity of AU Member States on how to leverage AI in the public sector,
- Create innovation-friendly procurement processes across Africa.
- Collaborate with development partners and the private sector to implement AI for public service delivery use cases in selected countries and roll out across the continent. Start with small-scale and experimental projects to demonstrate the benefits of AI applications in different areas of public services.
- Establish a regional database of AI solutions and use cases in the public sector.
- Support research and analysis on AI integration in the public sector
- Enhance partnerships with private sector companies to access advanced AI technologies and expertise.

2.4.2.2 AI in Priority Sectors

All sectors of the economy in Africa can benefit from AI and be negatively affected by it. However, AI will have a greater impact in some sectors than in others. Among the most promising are agriculture and food security, health, education, environmental protection, climate change mitigation, adaptation and building resilience. These priority sectors are also in line with Agenda 2063 and the SDGs.

Africa is based on an agrarian economy. Therefore, agriculture and food security are important sectors for all countries on the continent. The health and education sectors are highlighted in the SDGs and Agenda 2063. As such, agriculture, health and education are the top three sectors to focus on for AI adoption in Africa. Global attention to climate change and the increasing impact of climate change on Africa, including wildfires in North Africa, drought in the Horn of Africa and the Southern Region and tropical cyclones in coastal regions. There is, therefore, a need to use advanced technologies such as AI to predict and analyse heat waves, heavy rainfall, floods, tropical cyclones and prolonged droughts and to mitigate and establish a robust adaptive capacity to the risks to the economy and society.

i. Expanding AI Adoption in Agriculture in Africa

AI has significant potential to advance agriculture in Africa. AI technologies cut across various agricultural functions such as crop yield, irrigation, soil content sensing, crop monitoring, planting and weeding. AI technologies, in combination with space observation and geospatial technologies, play a critical role in weather forecasting and soil monitoring, such as soil fertility, over-fertilisation, precision agriculture, early warning systems in weather forecast, greenhouse farming, automated irrigation, pest, disease and weed prediction.

There are already a number of small-scale use cases of AI in Africa, including tools for identifying and diagnosing crop diseases and pests, predicting the price of agricultural produce, providing expert advice and giving farmers access to financial services, so there is a need to document and share AI solutions in the sector.

High-level Recommendations for AI Adoption in Agriculture in Africa

- Promote the widespread adoption of AI in the agriculture sector in Africa through the exchange of experience in deploying AI in agriculture use cases.
- Designate a centre of excellence to conduct research and build a knowledge base on use cases in agriculture on the continent to facilitate the sharing of experiences and solutions.

Associated Actions

- Designate centres of excellence in Africa to conduct analysis on AI in agriculture and build a knowledge base on use cases on the continent.
- Support AU Member States' efforts to adopt AI in the agriculture sector and promote an exchange of knowledge and experience on user cases.
- Raise awareness of the potential benefits and risks of AI in agriculture.

ii. Expanding AI Adoption in the African Health Sector in Africa

Innovations in AI underpin modern diagnosis, disease detection, treatment and the search for a cure. AI is also being used for diagnostic prediction and early cure or treatment of health challenges such as cancer, malaria and Tuberculosis. AI-enabled robots can support the autonomy and quality of life of the elderly and/or dependents and a diverse constituency of persons with disabilities. AI-powered systems can speed up the retrieval, processing, triage, diagnosis and follow-up of patient information. AI can help in the analysis of medical images and assist in the diagnosis process and provision of information to the public and healthcare providers.

African healthcare is one of the key sectors that has seen extensive use of AI solutions during the COVID-19 pandemic. The sector has a wide range of AI use cases, from integrated oncology management systems that track cancer patients to solutions that identify and distribute medical supplies. The diversity of AI applications raises privacy and ethical issues, such as the reliance on algorithms for patient care. There is, therefore, a need to raise awareness of the potential benefits and ethical aspects and share experiences on innovative use cases to promote affordable, better quality and accessible healthcare.

High-level Recommendation for AI Adoption in the Health Sector in Africa

- Promote the widespread adoption of AI in the health sector in Africa through the exchange of experience and by deploying AI use cases in the health sector.

- Designate a centre of excellence to conduct research and build a knowledge base on use cases in the health sector on the continent, facilitating the sharing of experiences and solutions.

Recommendations and Actions

- Develop AI algorithms and tools that highlight the specific healthcare needs and challenges faced by African countries, such as infectious diseases, maternal and child health, and non-communicable diseases.
- Support AU Member States' efforts to adopt AI in the health sector and promote an exchange of knowledge and experience on use cases,
- Raise awareness of the potential benefits and risks of AI in the health sector from grassroots to national and regional scale.
- Designate centres of excellence in Africa to conduct analysis on AI in health and build a knowledge base of use cases on the continent.

iii. Expanding AI Adoption in the Education Sector in Africa

While AI can help improve access, quality and affordability of education, it also poses a wide range of risks to the sector. The proliferation of Generative AI applications has already raised concerns in education. UNESCO's Beijing Consensus on AI and Education "AI and education: Guidance for policy-makers" and Guidance for Generative AI in education and research" proposes key steps to regulate GenAI tools, including mandating data protection and setting an age limit for independent conversations with GenAI platforms.²⁵ AI must also not threaten teachers' rights and undermine learners' thinking processes and creativity, which in turn negatively affect innovation. Africa is a young continent where innovation plays a central role in establishing an African-owned and African-driven solution.

Despite the risks, AI has the potential to facilitate higher-order thinking if guided by proper instructional design and support formative assessment of basic skills. AI is being integrated into Tutoring Systems (ITS), which tailor and present learning content and personalised learning pathways based on data-informed analytics and learning processes. There is also a potential to use AI for assisting students with disabilities, but the design and development of assistive algorithms and AI tools must be incentivized. Examples include voice assistants that allow students with reading difficulties to search for books using only voice commands, AI-powered screening tools that can help identify dyslexia at an early stage, and AI and augmented reality applications that can help children with hearing difficulties to read by translating text into sign language. AI applications have the potential to support administrative tasks for teachers, such as automating the recording of attendance, marking assignments and using chatbots to repeatedly answer standardized questions.

The long-term investment in AI human capital needs to begin at the primary education level and continue in secondary and tertiary education and, more importantly, at the workplace. This demands the modernisation of curriculums and encourages a shift away from educating for specific jobs towards acquiring skills that allow graduates to adapt to evolving tasks arising from technological change. Reviewing the curricula in the education system, starting from early childhood learning and primary schools (e.g., introducing basic coding, foundational

²⁵ UNESCO, Guidance for Generative AI in Education and Research, <https://unesdoc.unesco.org/ark:/48223/pf0000386693>

mathematics, logical and critical thinking, and utilization of basic open source or robotics), could increase the skills necessary for the future study of AI. Secondary education should integrate coding and AI into the curriculum. Children should be taught computational thinking, coding, applied logic and creative approaches to problem-solving. Africa should also build AI skills in higher education. This requires integrating AI into computer science and mathematics education and establishing advanced research in various AI domains.

High-level Recommendation for AI Adoption in the Education Sector in Africa

- Formulate inclusive national policies or strategies related to AI in education based on a fundamental trade-off between forward-looking yet unproven values of AI for education versus the urgent needs.
- Support AU Member States to develop national AI competencies for teachers and students.
- Designate a centre of excellence to conduct research and build a knowledge base on AI use cases, policies and competency frameworks in education. Share evidence-based successful practices and AI in education use.
- Develop AI applications specialised to address specific challenges in African education, such as language diversity, access to quality education, and teacher shortages.
- Invest in capacity-building training educators and students in AI technologies, coding, and data science.

Associated Actions

- Support AU Member States' efforts to formulate and implement national policies on AI in education
- Support AU Member States to develop validation mechanisms to verify AI systems to be adopted in education
- Develop AI competency frameworks and appropriate training programmes in alignment with digital and/or general competency frameworks for teachers.
- Develop AI competency frameworks for students and enhance government-sanctioned curriculum or education programmes on AI.
- Assess skills requirements at basic, secondary and tertiary education levels to identify key challenges that Member States face in building AI skills.
- Support AU Member States to develop national AI competencies for teachers and students.
- Designate centres of excellence in Africa to conduct analysis on AI in education and build a knowledge base of policies, frameworks, indigenous educational AI tools, and use cases in the continent.
- Continuously review the trends of AI development and the long-term impact of AI on education, teaching and learning to provide a valid and robust evidence-based foundation for policy-making.
- Build national and institutional pre-emptive validation mechanisms for AI systems to be deployed in education and educational tools incorporating AI technology.

iv. Expanding AI Adoption for Climate Change Adaptation and Building Resilience in Africa

The use of AI can help address the adverse effects of climate change. Existing AI systems include tools that predict the weather, track heat waves and cyclones, and identify pollution. AI, satellite imagery and ecological expertise are often used to map the impact of deforestation on the climate crisis. According to the World Meteorological Organisations' State of the Climate in Africa 2022, more than 110 million people on the continent were directly affected by weather, climate and water-related hazards, causing more than US\$ 8.5 billion in economic damage.²⁶

Despite the negative impact of climate change on hundreds of millions of people and the potential use cases that can help predict and analyse heat waves, heavy rainfall, floods, tropical cyclones and prolonged droughts and mitigate the risks to the economy and society, there have been limited AI applications for climate change adaptation and building resilience in Africa. There is, therefore, a need to increase awareness and capacity of AI applications, public and private partnerships and international cooperation in developing AI solutions to mitigate and provide a robust adaptive capacity to the adverse effects of climate change in Africa, thus building resilience against the natural phenomenon.

High-Level Recommendations

- Promote the adoption of AI for climate change adaptation and resilience in Africa.
- Raise awareness among Member States of the potential benefits of adopting AI to mitigate, adapt to, and build resilience against the risks of climate change.
- Designate a centre of excellence to conduct research and build a knowledge base on use cases for mitigation, adaptation and resilience building against climate change on the continent. This will facilitate the sharing of experiences and solutions intra- and inter-regionally.

Associated Actions

- Designate centres of excellence in Africa to conduct analysis on AI for climate change adaptation and building resilience in Africa and build a knowledge base of use cases on the continent.
- Support AU Member States' efforts to adopt AI to address the challenges of climate change and promote an exchange of knowledge and experience on use cases,
- Raise awareness of the potential benefits and risks of AI in climate change adaptation and building resilience in Africa.
- Develop AI-powered early warning systems for extreme weather events, such as hurricanes, floods, and droughts, to enable timely response and preparedness measures.

²⁶ World Meteorological Organisation, State of the Climate in Africa Report, 2022. <https://reliefweb.int/report/world/state-climate-africa-2022>

2.4.2.3 Adoption of AI by the Private Sector

For the private sector, AI provides greater work productivity, logistics optimisation, automation of routine processes, faster business decisions and more accurate consumer market prediction. The private sector is also a partner in the adoption of AI because it is responsible for providing the required infrastructure, skills and computing resources.

The private sector across Africa is diverse in size and area of specialisation (industry) - typically involved in manufacturing (e.g., garment), creative industries, recycling, agri-food processing industries, hospitality, gaming/e-sport, media content, real estate, insurance, legal services. and health care service. AI adoption by the private sector should, therefore, align with the broad-based economic specialisation and industrialisation in the different AU Member States. In countries where construction and manufacturing, such as the garment industry, is dominant, AI can support such specialisation. In countries where the private sector is engaged in the service industry, AI adoption in the financial, tourism, food and beverage sectors will benefit the economy.

Different AI specialisation aligns with different industries; therefore, there is a need for building the capacities of AI enterprises to create solutions that align with industries in the AU Member States. For instance, robot automation-related AI innovation has strong connections to the manufacture of machinery, metal products, and chemicals. Image recognition and visual search favour industries like food processing.²⁷

The African private sector can also find niches in the AI computing industry, such as computer vision, natural language processing and semiconductor design.

It is crucial to raise the private sector's awareness and identify potential areas for AI adoption that align with the country's industries. Initiatives and platforms that engage the private sector in investing in AI and supporting national AI development are crucial for raising the portfolio of African private sector investment, creating an African AI market and attaining competitiveness at global levels.

High-Level Recommendations

- Conduct a survey of major economic, industrial clusters and specialisations of the private sector in AU Member States to integrate AI innovation with industry requirements,
- Establish a forum to bring the private sector together with AI innovators to raise awareness of AI opportunities and solutions in alignment with the broader economic specialisations,
- Encourage Member States to promote private sector AI readiness, create an enabling environment and provide guidance and policy actions, especially regarding enterprises' adoption of AI in the areas where the country has a comparative advantage.
- Conduct research and analysis to identify areas for the African private sector investment in the AI industry.

Associated Actions

²⁷ Misrah, Saurab, et.al, AI Can Help Developing Economies Diversify, <https://blogs.worldbank.org/en/trade/artificial-intelligence-ai-can-help-developing-economies-diversify>

- Launch regional forums that bring private sector players and innovators together to discuss the private sector's adoption of AI solutions in alignment with broad-based economic specialisation (e.g., manufacturing, construction, medical services, hospitality, etc.).
- Link the private sector involved in manufacturing creative industries, recycling, agri-food processing, hospitality, gaming/e-sport, media content, real estate, insurance, legal services, etc., with digital innovation hubs, AI startups and research institutions to foster investment in comparative and competitive AI solutions.
- Conduct an African AI industry specialisation study to provide recommendations in areas where Africa may have comparative advantages (e.g. computer vision/image recognition, automated driving, robotics, Natural Language Processing, etc.)

2.4.2.4 Building Vibrant, Inclusive and Diverse AI Start-up and Enterprise Ecosystem

The African start-up ecosystem is growing fast, and the potential for AI entrepreneurship is very high. Across the continent, Africa has a large market reach of 1.5 billion people and a growing tech-savvy middle class. The African Continental Free Trade Area (AfCFTA) envisages the establishment of one of the largest free-trade areas with the power to boost economic output by \$29 trillion by 2025.

However, more work needs to be done to create conducive environments for digital technology start-ups in general and AI start-ups and enterprises in particular.

Africa's start-ups need to be nurtured through funding, mentorship, training, conducive intellectual property regimes, capacity building and promotion of their interaction with their peers on other continents. Investing in Digital Innovation Hubs (DIH) can play an important role in creating platforms and an ecosystem for start-ups to grow. There is also a need for harmonising market access and taxation laws across the continent to create an economy of scale for AI solutions created in Africa.

AU Member States should promote AI startups as engines of economic growth, thus ensuring all incentives are in place to attract and retain talent and enterprises in the region. To further encourage spin-offs from AI research towards market readiness and retain talents and startups, African AI business incubators and accelerators should be created and should work closely with leading universities. Moreover, funding schemes can support more target-oriented research projects between academia and industry. Access to data is also critical for start-up innovation. The government should, therefore, encourage access to diverse sets of data through regulatory sandboxes that promote responsible AI innovation. Regulatory sandboxes provide for legislative amendments that allow for trials within a limited geographical area or time period and measures for close monitoring when supervision is required.

High-level Recommendations

- Promote AI startups as engines of inclusive growth in the AU Member States, thus ensuring all incentives are in place to attract and retain talent and enterprises in the region.

- Ensure regulatory and legislative harmonisation at regional levels regarding market access, taxation, and intellectual property laws to create an economy of scale for products designed in Africa and serve the needs of its population.
- Foster collaboration between the government, private sector, academia, civil society, and regional and international organisations to skill up and build startups' capacity to deploy inclusive and development-orientated AI solutions and systems in Africa.
- Promote women's participation and engagement in the AI startup ecosystem.

Associated Actions

- Develop a toolkit on the enabling environment (funding, incentives, networking, business and other skills, infrastructure access, intellectual property, etc..) for AI startups in Africa with a focus on attracting and retaining enterprises and talents in the region.
- Harmonise taxation and intellectual property laws to promote market access to development-oriented AI solutions in Africa,
- Establish the AI for development in Africa funding, host forums and award outstanding startups that develop Africa-challenge-oriented AI solutions.
- Establish a regional mechanism and engage in international dialogues to share best practices and expertise on vibrant AI startups ecosystems.
- Establish a mechanism to continuously review the existing AI startup ecosystems in African countries and develop recommendations for improvement.

2.4.3 Building Africa's Capabilities to Leverage AI for Development

AU Member States' infrastructure capabilities, particularly in the areas of energy, broadband connectivity, data centres and cloud computing, computing platforms such as high-performance computing and IoTs and quality data are key to the development of AI solutions and systems.

The development and deployment of AI necessitate the application and utilisation of advanced infrastructure – High Performance Computers and data infrastructure, such as data centres, that, in turn, use vast amounts of electricity. Access to reliable energy sources and broadband, storage, and computing infrastructure is therefore critical for promoting innovation and leveraging AI for social and economic development. Significant electricity is required to run networks and equipment, keep facilities at the appropriate temperature, enable security measures, and more. Power outages are common in most African countries, with generators and UPS systems often being relied on as primary power sources. Therefore, efforts that explore renewable energy sources to power broadband networks, computing platforms, data centre facilities, and IoT devices are critical for the deployment of AI solutions.

2.4.3.1 Datasets and Computing Platforms for AI Development in Africa

Data is foundational to AI innovation and development. AI works by identifying patterns in available data and then applying this knowledge to new data sets. A large number of datasets are therefore required to find patterns in the data. Data also need to be of high quality, diverse, inclusive and locally produced to address local problems effectively. However, there is a significant gap in the quality, inclusiveness and availability of data for AI models in Africa. Most data from the public and private sectors remain inaccessible. Public and private organisations often do not have sufficient infrastructure, resources, and data-management protocols in place to collect data and make it accessible for accelerating AI uptake.

On the other hand, most of the data on the African population is now available to a handful of companies. The AU Member States are aware that data has become an asset of the twenty-first century. On the one hand, there is a need to protect personal data; on the other, it is important to ensure open and secure data available to feed AI algorithms. The African Union Data Policy Framework provides the common vision and principles to collect, manage and make data available in a manner that respects the privacy of individuals. It provides recommendations to guide African countries in developing their national data systems and capabilities to effectively use and derive value from data, including the creation of datasets that underpin AI development.

There have been efforts to make open public sector data, including open government data, geo-data (e.g. maps) and transportation data, available for research and education, but with varying quality and consistency. Therefore, it is important to promote the creation of more openly available datasets to facilitate AI innovation and economic development across the continent.

Harnessing data for AI also requires computers with high computational and processing power because of the need to manipulate large data sets and scan all possibilities for every decision. Most African countries lack powerful computing resources with advanced graphics-processing units in their research institutions and universities. While international research and education networks provide opportunities for interconnecting to international compute resources, the lack of adequate bandwidth and data sovereignty regulations make it difficult to use such systems to experiment with AI solutions. It is therefore important to invest in compute resources and cloud computing resources for AI-related applications and research and development.

AI also requires extensive storage capacity, which can be provided through institutional, commercial, and carrier-neutral data centres. However, the number of reliable, high-tier data centres is limited in Africa. Statistics from the datacentre map²⁸ indicate the presence of 5364 larger data centres from 127 countries in 2023. Africa, which represents 15% of the global population, accounts only for 1.8% of these large-scale data centres in 2023.

About 10% of the data centre demand in Africa is currently served; therefore, there is a wider gap in accessing the required storage capacity to deploy AI solutions. The continent needs to build green data centres that meet environmental, sustainability and Governance (ESG) guidelines to address its deficits. There is also a need to deploy IoTs that can be used as a source of big data that, in turn, is crucial for training AI models. The African region is still in

²⁸ <https://www.datacentermap.com/countrymap.html>

the early deployment phases of IoT use in key sectors and cities. The development of AI should, therefore, ensure that IoT devices are widely available and quality data is gathered and stored for use in the development and deployment of AI solutions.

High-Level Recommendations for Data & Computing Platforms

- Develop data policies and strategies that facilitate access and sharing of non-personal data for AI within the context of the AU Data Policy Framework. The strategies need to promote the collection, management, and use of national datasets. They should address issues of localisation, data classification and cross-border data transfers, mechanisms for building data skills, public, private and research access to open data and research and innovation on data.
- Establish data governance frameworks, legal frameworks on personal data protection and protocols with standards for sharing data ethically, responsibly and securely based on the recommendations of the AU Data Policy Framework.
- Raise awareness of AI data needs and promote national and regional data pools and data markets (e.g., in areas such as climate change) to foster exchange and facilitate the development of AI models.
- Support analysis on the intersection between data infrastructure and AI in Africa. This will include IoT, green and energy-efficient data centres, computing platform requirements and related policy, regulatory and investment analysis to accelerate infrastructure availability for AI.

Associated Actions

- Accelerate the development of national and regional data strategies, legislations and policies, raise awareness and encourage accessibility of public and private data for AI models.
- Promote regional data pools that facilitate the deployment of development-oriented AI solutions.
- Promote access to globally available data sets that can contribute to designing AI tools for solving development problems. The aim is to enable the collection, sharing and analysis of data for AI development in Africa.
- Support research and analysis on data infrastructure requirements for AI in Africa and host public and private forums to raise awareness and encourage investment in data infrastructure for AI in Africa.
- Encourage cross-border data sharing among AU Member States to support the development and deployment of AI systems.

2.4.3.2 AI Skills and Talent

The long-term adoption of AI for sustainable development and cultural renaissance requires the building of twenty-first-century competencies in Africa. Schools should not be confined to teaching how to use digital technology but also enable students to use technology for coding, data analysis and modelling. At the higher end, specialised courses should allow college students to develop sophisticated programming using complex algorithms. The digital economy also demands soft skills like complex problem-solving, critical thinking, creativity

and design, collaboration and team-building, social intelligence, and cross-cultural competencies, including awareness of inclusion and working in a multicultural environment.

AI offerings in higher education should focus on technical and ethical aspects. Vocational education institutions, on their part, should teach the use of AI and its impacts on various work tasks to enable the creation of solid foundations for applying it in working life. There is also a need for reskilling teachers in the field of AI.

Further, there is a need to establish a package for unemployed youths who have left several educational institutions when they complete their studies. Several institutions do have a database for such groups of people. Henceforth, they have to be strategically positioned towards the adoption and embracing of AI as they job hunt or create jobs. This is in line with the key benefits of AI in establishing job opportunities, and thus, those who await job opportunities but are no longer within a formal or non-formal education system must be considered.

School dropouts who might not have the chance to return to the formal or informal education system also need to be considered. At the same time, they will need the required AI skills to harness the employment opportunities that will emanate from the economic benefits of AI. Thus, they need a specialised, tailor-made AI capacity-building initiative to bridge the gap.

People who are in the workplace will need to demonstrate that their skills are up to date. In addition to generic AI competencies in the workplace, there is a need to increase the skills of the judiciary and media. UNESCO has already launched Programme on and the Rule of Law²⁹ that aims to equip judicial operators to harness the benefits of AI while mitigating its risks. UNESCO also published a Handbook entitled “Reporting on Artificial Intelligence: A Handbook for Journalism Educators”,³⁰ that is aimed at increasing the awareness of journalists on AI and improving accurate reporting on the technology. Parliamentarians and diplomats also need specialised training on AI benefits, risks, capabilities and international governance and cooperation issues to ensure that they participate in fostering international coordination. Finally, there is a need for increasing AI awareness of the population. Widely available and resource-efficient formats, such as e-learning, can be used to reach large numbers of people.

High-Level Recommendations for Building AI Skills and Talent

- Raise public awareness on the opportunities and challenges stemming from AI
- Promote development skills to leverage AI for development and mitigate its risks at all levels.
- Promote equal access to AI enabled opportunities and equitable distribution of benefits at all levels.
- Support the development of AI curriculum Model for basic and higher education, the workforce and the public, looking at the diversified established positions that Member States adopt to their settings.

²⁹ <https://www.unesco.org/en/artificial-intelligence/rule-law/mooc-judges>

³⁰ UNESCO, Reporting on artificial intelligence: a handbook for journalism educators, <https://www.unesco.org/en/articles/reporting-artificial-intelligence?hub=67168>

- Promote the growth of AI expertise and develop public policies to attract and retain AI talents within Africa,

Associated Actions

- Assess the needs and key challenges that Member States face in building AI skills and competencies.
- Assess skills requirements in basic education, higher education, the workforce and special AI skills needed to build a critical mass of experts trained in machine learning, data sciences and AI ethics.
- Assess AI's implication on the African labour market, namely vulnerable groups, to avoid exacerbating socioeconomic inequalities and develop national policy to address labour transformations
- Establish training initiatives, workshops, and partnerships between universities, research institutions, and the private sector to equip individuals and organisations with the necessary skills.
- Promote the development of AI curriculums model and develop training toolkits (e.g., for educators, diplomats, parliamentarians, journalists, civil servants and the public).
- Provide trainings for parliamentarians and diplomats on the continent.
- Incorporate mechanisms for upskilling teachers and faculty in AI benefits and risks.
- Ensure AI training includes women and girls and vulnerable groups (people with disabilities, migrants, people with low income and people from remote and rural areas) to ensure they are not left out of the digital environment powered by AI.
- Promote trainings of trainers to ensure the effective transfer of AI knowledge to students and support the conduct of high-quality research in this field
- Invest in capacity building programs and promote sharing of experiences among AU Member States in developing necessary AI skills for the AI era.

2.4.3.3 Fostering AI Research and Innovation

Research and innovation are critical for optimising AI's benefits and minimising its risks to Africa. The AI field is one of the most researched and innovative areas of our time. Research on learning and reasoning, perception, representation, speech, and language modelling, as well as investigations on responsible AI and AI safety, is being conducted worldwide in different labs funded by the private and public sectors. Africa invests in AI research insignificantly, and it does not show up in citations in leading AI journals or in patents. The United States, China, India and Europe are global leaders in this area.

Africa needs to conduct its own research to establish its own localised position and support innovation to advance solutions that address challenges identified in Agenda 2063 and Sustainable development goals. Aspects such as the preservation of local languages, media and culture and how creative industries can be impacted positively and negatively need to be investigated. Thus, AI research and innovation that takes the African context is critical. Research is also needed to understand the ethical and legal, safety and security implications of AI on African people.

Research and innovation require the presence of highly trained and well-equipped researchers who dedicate their time and energy to investigating the different facets of AI and are open to collaborating globally. Researchers need centres of excellence that are equipped with state-of-the-art tools (GPUs, Cloud, HPC, etc.) and access to data sets to train algorithms. They need funding to participate in AI conferences irrespective of any gender dimensions and purchase and access to resources. Innovation requires creating a thriving AI ecosystem by supporting local entrepreneurship, fostering an academic scientific environment full of ideas, inventions, discoveries and innovation efforts and building partnerships between academia and enterprises. This implies research and innovation in AI will be resource incentives; thus, governments, the private sector and development partners must provide funding to facilitate responsible AI solutions that address Africa's social and economic challenges.

High-Level Recommendation for Facilitating AI Research and Innovation in Africa

- Support the mapping of AI research gaps in Africa to facilitate research and innovation and address the continent's unique challenges (e.g., the impact of Generative AI on media and information literacy)
- Strengthen regional and international collaboration by creating open science platforms and building an inclusive, interconnected, collaborative, and interdisciplinary research and innovation ecosystem.
- Mobilise technical and financial resources to facilitate researchers' and innovators' access to funding and testbed and connect with international partners.

Associated Actions

- Map AI research gaps in Africa to facilitate research and innovation and address the continent's unique challenges.
- Create mechanisms to facilitate collaboration between regional centres of excellence to increase collaboration and conduct responsible AI research and innovation.
- Raise AU Member States' awareness and engagement in responsible AI research and innovation.
- Stimulate and develop user-centred research on how users optimise the use of AI and Generative AI.
- Facilitate access for African researchers and innovators to global knowledge exchange and capacity-building programs through collaborations with the global academic and innovation ecosystems to address development challenges.

2.4.3.4 Information Integrity, Media and Information Literacy (MLI)

As Africa is embracing this revolutionary and very disruptive technology, there is a need to ensure the integrity of Information and sustain trust in the use of AI Systems and platforms. The responsible and ethical use of AI should also cover media and information literacy that stimulate critical thinking, lifelong learning, global citizenship, freedom and autonomy and cultural competencies.

There is a growing concern regarding risks stemming from the proliferation of illegal and harmful content online, which is being exasperated with the emergence of Generative AI

systems that contribute to the spread of misinformation, disinformation and hate speech that negatively impact people's well-being, social cohesion within countries, the right to access accurate information, and national economies and democracies.

AI is having a significant impact on people's engagement with information, digital technology, and media. It raises concerns about the type of information or content people want to see, what freedoms people are losing, and whether they are making decisions independently when engaging with AI, knowingly or unknowingly. This reality reinforces the urgency for stakeholders to ensure that all citizens or users have access to media and information literacy - competencies that enable them to access, analyse and evaluate information, as well as critically assess their use of digital technologies.

In the age of AI-powered digital platforms and technological devices, the need for media and information literacy is becoming increasingly important in equipping people with the necessary knowledge, skills, and attitude to not only mitigate risks but also capitalise on the opportunities that AI presents. Furthermore, media and information literacy empower people to participate in discussions about AI use in their daily lives, influencing AI development. However, there is a lack of wide-scale sustainable media and information literacy training for all. UNESCO has published recommendations in Policy Brief: User Empowerment through Media and Information Literacy Responses to the Evolution of Generative Artificial Intelligence (GAI). The Policy Brief addresses a wide range of concerns areas including:

- **Magnifying mis- and disinformation:** the potential for AI-driven platforms and technological devices to spread misinformation. Users must be media and information literate to verify the information obtained from AI platforms independently.
- **Source reliability:** While AI-driven digital platforms and technological devices utilise various sources for information, the reliability of those sources must be carefully assessed. Users should be trained to assess trusted sources for verification using media and information literacy.
- **Deepening of information silos:** AI-driven digital platforms and technological devices have the unintended consequence of reinforcing pre-existing beliefs and biases, potentially creating filter bubbles or echo chambers. A key aspect of media and information literacy is to provide techniques and empower users to seek alternative viewpoints, consult multiple sources, and actively see and dialogue from the informational perspective of others.
- **Loss of people's privacy and data rights:** People frequently, whether knowingly or unknowingly, sacrifice their privacy and data rights online to gain access to free products and services. When done correctly, promoting media and information literacy for all helps people understand how data and information are created, collected, stored and used, as well as the consequences.
- **Opportunities for lifelong learning:** People's participation and critical engagement in the sustainable development process are contingent on their having the necessary competencies and tools. Media and information literacy for all peoples in Africa is needed to show users how to use technology wisely and the benefits of AI for social and lifelong learning if deployed transparently.

High-Level Recommendations

- Encourage the development of national Media and Information Literacy Policies of AU Member States,
- Promote, implement and monitor model resources on Media and Information Literacy in line with international standards.
- Raise awareness of AI implications on the integrity of information and stimulate the integration of Media and Information Literacy in primary, secondary, and tertiary education (including teacher education) as well as outside of schools, such as in digital spaces.
- Develop a legal framework to regulate digital platforms and protect African people from misuse of emerging technologies.
- Develop strategies to address challenges posed by AI to the integrity of online information (misinformation, disinformation and hate speech) that may negatively affect the cohesion of African society and the wellbeing of its people.

Proposed Actions

- Finalise and operationalise the African Union Regional Media and Information Literacy Framework, which is being prepared with UNESCO's support.
- Facilitate Media and Information Literacy training for all government officials and policymakers, including through open-access tools like the UNESCO Deep Dive for Policymakers in Media and Information Literacy Online Course.
- Commemorate the annual Global Media and Information Literacy Week, incorporating the African Coding Week, to sustain policy dialogue and raise awareness of Media and Information Literacy and AI in African societies.
- Develop multistakeholder Media and Information Literacy programmes and campaigns for their constituencies so individuals are not inadvertently distributing, reacting to, or interacting with harmful generated false content.

2.4.4 Minimising the Risk for a Responsible, Safe and Secure AI in Africa

In contemporary African settings, both the benefits and risks of AI are readily apparent. To address the ethical, legal and societal implications of AI, safeguards, awareness raising and agile and comprehensive AI governance systems and regulations are needed.

For Africa to mitigate and manage the risks of AI on its economy and society, and ensure that AI respects human rights and dignity, inclusion, culture and values, safety, security, and environmental and ecosystem sustainability, government institutions, civil society, academia and industry should adopt a collaborative and balanced approach between innovation and security to promote AI for good and social benefits effectively.

2.4.4.1 Gender Equality, Inclusion and Diversity in AI

Current AI systems and practices demonstrate that the technology may pose serious risks to African society, particularly women, girls and the Continent's rich diversity of languages and cultures. The proliferation of generative AI models in the English language, which

demonstrate a kind of domination of advanced countries' worldviews, threatens African cultural systems and linguistic diversity.

Special efforts are needed from continental, regional and national agencies and governments to ensure that the development and adoption of AI are inclusive and benefit all Africans, empower women and girls, and underrepresented groups and respect Africa's cultural and linguistic diversity. AI must bring about equal benefits to everyone in Africa and bridge the AI divide. In particular, opportunities exist to develop AI solutions to support persons with disabilities in participating in social and economic activities and to encourage the development of AI solutions that can understand and interact in local languages, enhancing accessibility and usability for a wider population.

High-Level Recommendations

- Ensure that the adoption and development of AI across Africa are inclusive, benefit everyone, especially women and girls, and respect the continent's rich cultural and linguistic diversity.
- Develop AI technologies for the benefit of vulnerable persons and communities (persons with disabilities, migrants, people with low income, and people from unserved and underserved areas) and promote investment in natural language processing capabilities in local and indigenous African languages.
- Develop policies and regulatory measures to reduce gender, socio-economic and rural-urban gaps and ensure equity, justice and equal opportunities to all African citizens in the development and adoption of AI Systems.
- Develop policies to promote the use of AI to preserve Africa cultural heritage and indigenous languages.

Associated Actions

- Support the development of AI capabilities in local African languages, including supporting digitalisation efforts for low-resourced languages.
- Support the tailoring of AI applications to address the specific challenges of rural and remote areas and their people and communities, such as agriculture and healthcare needs.
- Explore the development of AI innovations for vulnerable persons to enable equal access to AI resources and opportunities. Support and prioritise AI R&D and adoption for persons with disabilities to enhance access and participation.
- Ensure that women are empowered by AI development, deployment and use, including incentivising women-led AI innovations and entrepreneurship.
- Adopt governance mechanisms that respect diversity and gender equality by conducting ex-ante and ex-post impact assessments to identify, measure, mitigate and

address any adverse impacts the rollout of an AI system may have or is having on these groups.

2.4.4.2 Addressing AI Safety and Security

It is imperative that AI systems developed and used within Africa are safe and secure. This means that non-authorised and maleficent actors cannot access them, that no data breaches occur, and that security breaches, when and where they do occur, are identified timeously, resolved and isolated to ensure no further incidents occur. Ensuring safe and secure AI systems is essential for building public trust in AI.

The safety and security of AI are important dimensions for Africa due to the unique challenges that it poses to African democracy, economy, day-to-day life and social welfare of the African people. AI can potentially be used to disseminate misinformation, fake news, hate speech and disinformation, multiple forms of technology-facilitated gender-based violence, as well as illegal surveillance, which threatens the credibility of democratic processes and increases violence in the continent. Machine learning and Deep Learning safety and security risks of AI in Africa must be assessed on an ongoing basis to allow AU member states to protect the population and national interests of African countries. Generative AI and Large Language Models (LLM) are advancing at a rapid pace and creating new sets of safety and security challenges and generating and disseminating harmful stereotypes that need to be mitigated through transparent AI systems and well-informed regulations and guidelines. Some of these threats include: ³¹

- Risks in the digital sphere (e.g., cyber-attacks, fraud, scams, impersonation, child sexual abuse images, technology-facilitated gender-based violence and illegal surveillance);
- Risks to political systems and societies – e.g., the proliferation of synthetic media eroding democratic engagement and public trust in the institutions of government and
- Physical security risks as Generative AI becomes embedded in more physical systems, including critical infrastructure and military systems.

Mitigating AI security and safety risks requires concerted global efforts, building regional and national capabilities to assess and identify, protect, detect, respond and recover from threats in digital space, political systems and societies and AI integration in physical systems and critical infrastructure.

Recent AU African Position on the Application of International Law to Use Information Communication Technologies in Cyberspace recognises the growing threat of cyberattacks to peace and security and urges upholding the fundamental rules of international law, respecting the sovereignty of states and ensuring open, secure, peaceful and accessible cyberspace that contribute to social and economic development,³² There is also a need for

³¹ United Kingdom, Department of Science and Technology of the UK, Safety and Security Risk of Generative Artificial Intelligence 2025, <https://www.gov.uk/government/publications/frontier-ai-capabilities-and-risks-discussion-paper/safety-and-security-risks-of-generative-artificial-intelligence-to-2025-annex-b>

³² African Union, Communique of Peace and Security Council 1196th Meeting, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4714756

upgrading national cybersecurity capabilities and strategies in line with the impending risks posed by AI solutions, capacity building and cooperation between AU Member States, partners, international organisations and private sector and developing toolboxes for analysing, auditing and protecting information systems.

Other risks in the military domain require attention, whether in the context of autonomous weapon systems or the broader weaponisation of AI. Complex AI systems could escalate conflicts by incorrectly predicting conflict, thus triggering a feedback loop in which each actor increases its threat posture in response to the increased threat posture of others.

Discussions on AI risks to peace and security are just beginning at the global level, for example, through the United Nations, countries have begun to develop national AI and defence strategies. However, African countries' participation in multilateral discussions and negotiations on AI and peace and security is limited. The impact of AI on Africa's peace and security requires more research.

High-Level Recommendations

- Ensure the highest standard of AI safety and security across the Continent, and coordinate to address AI's potential impact on and implications for peace and security.
- Assess AI's impact on peace and security on the continent, including enhancing Africa's participation in global discussions on AI's contribution to modern warfare.
- Strengthen and re-align the continental, regional and national legal and regulatory regimes related to child online safety to integrate risks posed by AI and build AI skills of law enforcement agencies and regulatory bodies dealing with child protection.

Associated Actions

- Establish an expert group to assess AI's impact on peace and security on the continent, including promoting and enhancing Africa's participation in global governance in this area.
- Raise awareness and build Member States' capacity on AI and peace and security.
- Designate a centre of excellence on AI safety and security that will conduct thorough analyses of risks within the digital space and to the political systems, democratic institutions and critical infrastructure in Africa.
- Review and upgrade national cybersecurity capabilities and strategies in accordance with data protection regulations and in line with the risks posed by AI.
- Host an Annual Conference on AI Safety and Security in Africa to build capacity, promote cooperation between AU Member States, partners, international organisations and the private sector, exchange experience, address different emerging themes in this area and discuss solutions.

2.4.5 Public Sector and Private Sector Investment in AI

While global investment is important, AI development in Africa should primarily rely on and depend on investment by African governments and the private sector within the continent to ensure sovereign AI capabilities. Some governments have already taken steps in financing AI by creating national AI institutes, establishing centres of excellence in universities and funding innovative startups AI solutions. Financing from the African private sector remains insignificant and, thus, needs to be improved.

Governments can also play a critical role in creating a conducive enabling environment for research and innovation opportunities to attract more AI actors and investment opportunities. A successful AI investment agenda could lead to a boom of African AI start-ups and innovation hubs. The availability of open government data can also fuel innovative solutions. Thus, the government should play a role in establishing policies on open data, taking practical steps in conducting data asset inventories and making a wide range of publicly held data available for innovation.

High-Level Recommendations

- Create an enabling policy and regulatory environment to attract Investments in AI
- Develop a toolkit for the government and private sector on their roles and responsibilities in driving AI in the continent.
- Declare AI as a national priority and encourage Member States to mobilise domestic resources by engaging their private sector and making AI a part of community social responsibility.

Associated Actions

- Conduct readiness assessments on AI investment
- Create a toolkit on AI investment that can be used by the public and private sectors to increase investment in AI at the national levels.
- Raise public and private sector awareness of AI investment at national and sub-regional levels. RECs can play a key role in encouraging the public and private sectors to increase financing for AI in their respective regions.

2.4.6 Regional and International Cooperation on AI

There are important rationales for regional and global cooperation in AI development and regulation. Collaboration and coordination among AU Member States, as well as international dialogues and partnerships, are important for sharing experiences, resources and capabilities in the field of AI.

AI has become a powerful force reshaping the landscape of international cooperation and international relations with emerging global crises such as food security, climate change, and Pandemics demand innovative solutions. AI is playing a pivotal role in addressing complex issues that transcend borders and require cooperation across various domains and actors.

2.4.6.1 Intra-Africa Coordination on AI

AI has a wide range of transnational challenges, including the flow of AI-dependent data and applications across borders. AI risks are also shared globally. Countries also benefit from economies of scale in building skills, sharing computing platforms and reaping the benefits of research and innovation. Regional cooperation and coordination are, therefore, important for maximising the benefit of AI for the population in Africa, reducing risks, sharing resources, and innovative applications for development.

There are wide ranges of areas for coordination and cooperation between AU Member States:

- **Exchange of experience in the development and implementation of AI Strategies –** AU Member States can benefit from the experience of countries that have already developed AI policies and strategies and those that have crafted their national data strategies that underpin AI development. Countries in the process of crafting their AI strategies can also benefit from a wide range of approaches to AI development in leading countries. Others can benefit from the experience of existing AI strategies and processes underway in several countries.
- **Data exchange—**Regional cooperation in open data can spur AI development, acknowledging data as a central input to AI solutions and the importance of data systems' interoperability to a flourishing African digital single market.
- **Synergies for innovation and impact:** AU Member States can connect AI capacity enhancement actions with Media and Information Literacy training, digital platform governance and digital transformation capacity initiatives, among others, to generate more sustainable impact and fuel innovation and cost-effectiveness.
- **Research and Development Collaboration –** Researchers in Africa need easier access to computing platforms, large data sets, and storage that may not readily be available in most countries. Regional cooperation and coordination in research and development are therefore important to share resources and benefit from research outcomes. AI solutions are characterised by collaboration; it is therefore important for countries to collaborate and compete.
- **Knowledge and expertise sharing –** Regional cooperation is essential to facilitating knowledge sharing in AI solutions and safety and security risks that have cross-border implications. Therefore, it is important to facilitate the exchange of knowledge among AU Member States in exchanging AI expertise and best practices within the continent and globally to accelerate innovation and avoid duplication of efforts.

High-Level Recommendations

- Establish multistakeholder and multidisciplinary policy dialogues on diverse issues of AI in Africa,
- Create platforms for the exchange of experience in the development and implementation of AI strategies and ethical guidelines that draw on international norms and standards.

Associated Actions

- Integrate AI into the agenda of major AU gatherings, including different ministerial meetings and the Summit of Heads of States.

- Organise sub regional forums that gather AU, RECs and other international partners, aiming to facilitate the exchange of ideas, the development of strategic frameworks and the encouragement of increased use of AI at the national and regional levels.
- Establish a regional instrument to guide data sharing and exchange and cross-border data transfers for AI in line with the Malabo Convention and AU Data Policy Framework.
- Organise workshops on sharing experiences and best practices on AI strategy formulation and implementation.
- Facilitate the creation of a virtual platform for the exchange of knowledge on different topics of AI in Africa.
- Promote the exchange of AI expertise across the Continent through dedicated programs and facilitating movement for persons with AI-related skills.
- Establish communities of practices on AI.
- Develop and implement joint programs and provide financial support for national and regional AI research and innovations projects.

2.4.6.2 Fostering Partnership between Africa and Other Regions and Countries

Africa's partnership with global actors, including the public and private sectors, is essential to ensure AI serves its people. Africa has over 1.46 billion people, 18% of the global population, half of whom are online and impacted by AI solutions at the global level. Thus, international cooperation and engagement are critical to ensure the safe use of AI solutions.

International cooperation between Africa and the rest of the regions and countries in the global north and global south is critical to:

- Address the ethical, safety and security risks of AI.
- Leverage experience and expertise and build multi-stakeholder collaborations in the development and implementation of AI solutions that have a positive impact on humanity.
- Exchange data (e.g. geospatial and satellite data that are critical for training climate change models,
- Increase interaction between research, academic institutions and startups in Africa and other regions to collaborate on the development of joint AI solutions that have positive implications for humanity and address ethical challenges.
- Mobilise international financial and technical assistance not only among government and development institutions but also from private sector players that often leverage data generated by African users of digital solutions.

Concerted efforts are needed to engage with multilateral, bilateral and private-sector institutions to facilitate the implementation of the Continental AI strategy. The strategy will engage global partners and mobilise funding for the actions outlined in it to facilitate the implementation of its member states' national AI strategies.

High-Level Recommendations

- Integrate Artificial Intelligence (AI) as an area of cooperation in the AU Strategic Partnerships at the Multilateral Level.
- Prepare strategic documents and proposals on engaging partners and financing AI for social and economic development in Africa.
- Mobilise funding for AI for social and economic development and implementation of the continental AI strategy.

Associated Actions

- Engage with multilateral and bilateral institutions and countries on AI issues on an ongoing basis. This may include seeking technical and financial assistance, coordinating AI solutions, and addressing data and governance issues.
- Engage with the global private sector on AI issues in Africa. This may involve r technical and financial assistance, coordinating AI solutions, and addressing data and governance issues.
- Develop AI Financing strategy to accelerate its Implementation and to support Member States' efforts to implement their national AI strategies.
- Mobilise regional and international development funds, with private and philanthropic funding, to create a regional fund for responsible AI development,
- Organise two forums on "Financing Responsible AI for Africa", between 2025 and 2030.

2.4.6.3 Strengthen African Participation in Global AI Governance

International cooperation and negotiations on AI are taking place in various bilateral, plurilateral and multilateral forums, including the United Nations, UNESCO, Council of Europe, the EU, the Global Partnership on AI (GPAI), the Group of Seven (G7), the Group of Twenty (G20), the Inter-American Development Bank (IDB), ASEAN, the International Telecommunications Union (ITU), the OECD and the World Bank.

However, it is worth noting that AI is being discussed in different forums hosted mainly by developed countries, and so far, Africa has a limited representation and presence in global AI governance discussions. A number of challenges limit Africa's participation in these global forums. Most meetings are held in cities in developed countries, where the cost of travel is high. Other challenges include a lack of information on the events that discuss AI issues that affect the lives of the majority of people on the continent. Some technical discussions are also inaccessible to experts in Africa due to a lack of capacity on AI technical and policy issues. Another challenge is the brain drain, as experts from Africa are found to be at the center of discussions during these international forums.

Initiatives that build the capacity of diplomats, Political leadership of AU organs and decision-makers will also contribute towards increasing Africa's participation in global governance. The AU will also endeavour that African institutions are represented in all forms of discussion on AI issues affecting the lives of people.

High-Level Recommendations

- The AU Commission to coordinate and lead Africa's participation in multilateral engagements and global debates around AI governance and future planetary and existential risks of AI,

- Advocate for more cohesive, inclusive, balanced, equitable and accessible global governance that increases the participation and contribution of African countries to the decisions that might affect millions on the continent.
- Build the capacity of potential participants in international discussions on AI governance issues from institutions like the Ministries of ICT, African diplomats, and the Political leadership of AU organs.
- Leverage AU Membership in G20 to establish strategic partnerships on AI and work towards bridging the technological and AI gap between Africa and other regions.
- Integrate AI as a tool and a topic in the National and Regional Foreign Policies.

Associated Actions

- Establish a high-level coordination mechanism on AI, where AUC will have an oversight and coordinating role and bring together representatives from Member States, RECs and AU organs to strengthen Africa's participation in Global AI debates, foster international cooperation and promote collective action on AI, raise awareness and support knowledge sharing among Member States.
- Build on the Continental AI Strategy to actively participate in international discussions on the global governance of AI to ensure African perspectives and interests are preserved.
- Build the capacities of African participants in the global AI discussions, including representatives from relevant Ministries, including the ministry of Foreign Affairs.
- Disseminate information on major AI events and ensure the participation of African stakeholders.
- Organise consultative and multistakeholder workshops to build Africa common positions prior to major global events.
- Create a portal for major events on AI relevant to Africa.
- Engage in discussions prior to major AI events that have implications for Africa. The discussions will enable Africans to agree on their position and gather input from all concerned stakeholders into those events.
- Ensure AU Member States bid for hosting global AI events to facilitate knowledge sharing and increased participation of African experts.

3. Implementation of AI Strategy

3.1 Building Capacity

The Continental AI Strategy underscores the importance of building capacity at all levels to release the benefits of AI. It places emphasis on the AU and its Implementing Agencies and Specialized Institutions, along with RECs, Regional Organizations and Development Partners, to play a central role in AI development, deployment and adoption across Africa. To conduct research and analysis on social, economic and cultural implications of AI as well as safety and security aspects, building a knowledge base on AI solutions for development, organising AI events, developing African AI risk profile and effectively monitoring the implementation of the key recommendations and Actions identified in the AI Strategy, there is a need to build

internal capacity at all levels, especially at the AU. The AU, RECs and regional organisations staff should have the necessary skills, resources and tools to implement the continental AI Strategy.

To play their role, the AU, its Implementing agencies and specialised institutions along with regional organisations are expected to be supported via dedicated training on AI and technical assistance that will support the implementation of the different areas of this Continental AI Strategy.,

The AU Member States will have the ultimate and critical responsibility in domesticating this Continental AI Strategy by developing and implementing their national AI strategies. Variations and disparities between AU Member States in key capabilities that underpin AI development, including access to electricity, broadband infrastructure, AI skills, computing platforms, data infrastructure, data legislation, and AI readiness, means that AU's support to its Member States will be tailored and adapted to these different contexts.

Further, as part of the implementation, the AU will facilitate coordination between AU Member States and international engagement with global partners on AI including mobilising financial and technical resources for priority AI projects.,

High-level Recommendations:

- Establish mechanisms and institutions within the African Union, or empower existing ones, to build capacity and render technical assistance to AU Member States to domesticate this Continental AI Strategy and accelerate its implementation.
- Build capacity within the institutions at the African Union to mainstream AI technologies and solutions in key sectors.

Associated actions:

- Develop and implement comprehensive capacity-building programs on AI for AU, its Implementing Agencies and Specialized Institutions.
- Develop and implement comprehensive capacity-building programs on AI for AU Member States
- Organize meetings and trainings on AI across AU Institutions and Organs to build the capacity of African Policymakers and Diplomats.

3.2 Implementation of the Continental AI Strategy

3.2.1 Timeframe for the Implementation of Strategy

The Continental AI strategy proposes a five-year timeframe between 2025 and 2030 for implementing the actions in the fifteen areas outlined above. After preparatory activities in 2024, the AI strategy will be implemented in two phases:

Phase 1, which will take place between 2025 and 2026, will focus on beginning of all the activities, especially, creating the necessary governance frameworks, national AI strategies and resource mobilisation activities and building the capacities at the AU, RECs, specialised agencies and Member States. This phase will also be dedicated to developing strategic documents, proposals, and toolkits and holding forums and workshops on diverse aspects of

social and economic benefits of AI, ethical, safety, security issues and skills, research and innovation and data requirements. The creation of AI advisory board and designation of other centres of excellence that gather data, exchange knowledge and conduct research on economic, social, ethical, safety and security aspects of AI will also take place between 2025 and 2026.

Phase II will commence in 2028 focus on implementing core projects and actions of the continental AI strategy, based on the review in 2027.

3.2.2 Resource mobilisation

To implement The Continental AI Strategy, the AU and its Member States will invest in and work with all partners to mobilise financing, technical assistance, data and knowledge to promote the harnessing of AI within the context of Agenda 2063. It will mobilise its Member States' efforts through well-articulated national AI strategies. It will accelerate its knowledge management and sharing, which will serve as a basis for engagement and monitoring progress.

3.2.3 Monitoring, Evaluation and Learning

A monitoring and implementation framework based on the tasks identified in this strategy, a portal dedicated to M&E will be set up to accelerate the implementation of the AI strategy. Monitoring and evaluation will also be coordinated with Member States, which will evaluate their progress in implementing their national AI strategies, including information such as budgets, funding, and specific targets. The African Union will also work closely with regional AI observatories that will gather and analyse data based on targets of the continental AI strategy.

Monitoring and evaluation of progress will be assured by:

- i. Developing an African AI readiness index with appropriate indicators to monitor the progress of Member States in all priority areas identified in their national AI strategies.
- ii. Integrating monitoring and evaluating in the implementation of all the actions outlined in this Strategy and Implementation Plan.
- iii. Develop adequate communication plan & strategy to ensure high level of engagement from AU Member States in the implementation of the AI Strategy and regularly report on progress made
- iv. Develop a normative governance framework to facilitate and guide an inclusive and effective implementation of the Continental AI Strategy based on a progressive approach that is adapted to the local context, transparent and collaborative, involving all the concerned parties and stakeholders;
- v. Conducting a midterm review of the continental AI strategy in 2027 to refine indicators and improve on implementation.

Based on data available from Member States, regional AI observatories, and ongoing studies, the AU will establish a web platform with a dashboard that shows progress in expanding AI benefits for African people, mitigating all its risks and building capabilities in skills, research and innovation, including progress in local development-oriented solutions deployed by start-ups in Africa.

Annex

National AI Strategies

To date, six countries, Algeria, Benin, Egypt, Mauritius, Rwanda and Senegal, have developed stand-alone AI strategies, while others, such as Kenya, South Africa and Uganda, are addressing AI in combination with other emerging technologies, such as blockchain or in the context of the Fourth Industrial Revolution.

- Algeria's AI Research and Innovation Strategy, adopted in 2021, emphasises the establishment of a centre of excellence in AI that conducts training, teaching and research, mainstreams AI in the industry, addresses ethical and security issues of AI and promotes international collaboration.³³ The strategy is being reviewed to consider recent advancement of AI Technologies.
- Benin's 2023 AI and big data strategy calls for laying the foundations for a robust, sustainable digital ecosystem. It focuses on building a national data infrastructure, promoting AI solutions, developing human capital, research and innovation, and implementing an AI governance framework.³⁴
- Egypt's National AI strategy, adopted in 2021, covers the adoption, implementation, and use of AI in government, national development, human capacity building, and participation in AI-related international activities.³⁵ Egypt focuses on building startup capacity by creating the necessary enabling environment and promoting R&D in AI; Natural language processing (NLP) is also among the priority areas in the national strategy.
- Mauritius' AI strategy was first published in 2018.³⁶ The strategy recognises the potential of AI and other emerging technologies to address a range of social and economic challenges and focus areas, including manufacturing, healthcare, fintech, agriculture, citizen and government services, smart ports and maritime traffic management. The regulatory approach is guided by accountability, ethics and inclusiveness to build public trust and create a robust AI ecosystem.
- Rwanda's AI policy, published in 2023,³⁷ serves as a roadmap to enable Rwanda to harness the benefits of AI and mitigate its risks. The policy focuses on positioning Rwanda as Africa's AI lab and responsible AI champion, building the skills, creating an open and secure data ecosystem, driving public sector transformation and accelerating responsible AI adoption. Rwanda further created the Centre of the Fourth Industrial Revolution (C4IR) dedicated to supporting the use of AI in the government.
- Senegal's AI strategy, published in 2023, aims to contribute to the country's national development plan. The strategy emphasises the need to develop human capacity in

³³ <https://www.lesoirdalgerie.com/beta/supplement-ia/l-algerie-s-engage-activement-dans-le-developpement-de-l-intelligence-artificielle-105177>

³⁴ Government of Benin, AI and Bigdata Strategy, <https://numerique.gouv.bj/assets/documents/national-artificial-intelligence-and-big-data-strategy-1682673348.pdf>

³⁵ Ministry of Communication and Innovation, Egypt National Artificial Intelligence Strategy, https://mcit.gov.eg/en/Publication/Publication_Summary/9283

³⁶ Government of Mauritius, 2018, Mauritius AI Strategy, <https://ncb.govmu.org/ncb/strategicplans/MauritiusAIStrategy2018.pdf>

³⁷ Government of Rwanda, National AI Policy, <https://www.minict.gov.rw/index.php?elD=dumpFile&t=f&f=67550&token=6195a53203e197efa47592f40ff4aaf24579640e>

AI, support solutions that solve development problems, foster partnerships between the public and private sectors and create an inclusive and trusted AI ecosystem.

Whereas other countries such as, Ethiopia, Ghana, Kenya, Mauritania, Morocco, Nigeria, South Africa, Tanzania, Tunisia, and Uganda have also taken significant steps to define AI policies and establish institutions to drive AI development.

For instance, Morocco established an International Centre on Artificial Intelligence "AI movement", affiliated to the Mohammed VI Polytechnic University in AI and Data Sciences, designated a UNESCO category II centre in November 2023. The Royal Institute for Strategic Studies of Morocco published a Summary Report on "Trusted Artificial Intelligence: a lever for change in favour of accelerated development in the Kingdom".