Zimbabwe National Artificial Intelligence (AI) Strategy

2026 – 2030

Zimbabwe National
Artificial Intelligence Strategy
2026 - 2030

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Foreword

From the President, His Excellency CDE, Dr. Emmerson Dambudzo Mnangagwa

We stand at the dawn of a new era, a time of unprecedented technological advancement that will reshape our world, where the 21st century is defined by the rapid pace of technological change and at its heart lies Artificial Intelligence (AI).

The coming in of AI is not merely another technological shift but a fundamental reordering of our societies and economies worldwide and more so in the Global South. For Zimbabwe, a nation defined by its unwavering spirit of innovation, this is a profound opportunity to leapfrog its development agenda. It is with immense technological pride that I introduce this National Artificial Intelligence Strategy for the Republic of Zimbabwe, a bold declaration of our intent to actively shape the future and harness the powerful currents of the Fourth Industrial Revolution in order to secure our rightful place as a leader in technological innovation on the African continent and beyond. Our vision is clear: to establish Zimbabwe as a beacon of "AI for Development" in Southern Africa, with this strategy firmly anchored in our philosophy of 'Nyika inovakwa nevene vayo'/'Ilizwe lakhiwa ngabanikazi balo' – a nation is built by its own citizens and rooted in the philosophy of national culture, recognizing our shared humanity and our interconnectedness. Our strategy is not about importing foreign solutions; it is about cultivating our own, building an AI that understands our values, speaks our own languages and addresses our unique challenges, leaving no one and no place behind. We will leverage AI to modernize our agriculture, unlock the full potential of our mineral wealth, deliver quality healthcare to the most remote corners of our nation and provide a world-class education for every Zimbabwean child. This will build a future where AI is a tool of empowerment and a catalyst for inclusive growth as well as a guardian of our cultural values and ethics. We approach this new frontier with great responsibility, to adopt and deploy AI ethically, with a steadfast commitment to human dignity, privacy and security. This strategy is therefore a call to action, to our innovative entrepreneurs, our dedicated public servants and our ambitious young people. The true engine of this transformation will be the creativity and hard work of the Zimbabwean people, particularly academia and the private sector. Together, we will build a future where Zimbabwe is not just a participant in this AI revolution, but a leader. May God bless Zimbabwe.

President

Preface

From the Hon Minister,
Hon. Tatenda A. Mavetera

As we stand on the brink of the Fourth Industrial Revolution, Zimbabwe's pursuit of Vision 2030 requires us to rise with courage, foresight, and conviction to shape the future rather than be shaped by it.

Artificial Intelligence is not just another wave of innovation; it is the very foundation of tomorrow's sovereignty, competitiveness, and resilience. It is the decisive frontier where nations either will lead or trail behind. This National Artificial Intelligence Strategy (2026–2030) demonstrates Zimbabwe's intention to be a bold innovator by integrating AI into agriculture, mining, health, education, climate resilience, and governance, while safeguarding our heritage, protecting our data, and upholding natural culture-based ethics that affirm the dignity of every citizen. It is a national pledge that affirms that the country will not be passive consumers of imported technologies, but creators of context-driven solutions that reflect our identity and aspirations. If executed with discipline, unity of purpose, and strategic vision, this strategy will transform Zimbabwe into the continental hub of "AI for Development," a nation where home grown ingenuity converges with global excellence to create prosperity for 2030 and beyond.

Acknowledgements

From the Permanent Secretary, Dr. Beaullah Chirume

Acronyms

AfCFTA	African Continental Free Trade Area
AI	Artificial Intelligence
AI4D	AI for Development
AISIO	AI Strategy Implementation Office
API	Application Programming Interface
AU	African Union
CZI	Confederation of Zimbabwe Industries
ECD	Early Childhood Development
GDP	Gross Domestic Product
HIT	Harare Institute of Technology
HPC	High-Performance Computing
ICT	Information and Communication Technologies
IMF	International Monetary Fund
IoT	Internet of Things
IP	Intellectual Property
IT	Information Technology
ITU	International Telecommunication Union
KPI	Key Performance Indicator
LLM	Large Language Model
M&E	Monitoring and Evaluation
MCAZ	Medicines Control Authority of Zimbabwe
ML	Machine Learning
MOU	Memorandum of Understanding
MSU	Midlands State University
NAIC	National AI Council
NAIS	National Artificial Intelligence Strategy
NDS1	National Development Strategy 1
NGO	Non-Governmental Organization
NUST	National University of Science and Technology

POTRAZ	Postal and Telecommunications Regulatory Authority of Zimbabwe
PPP	Public-Private Partnership
PUE	Power Usage Effectiveness
Q1	Quarter 1
Q2	Quarter 2
Q3	Quarter 3
Q4	Quarter 4
R&D	Research and Development
RBZ	Reserve Bank of Zimbabwe
SADC	Southern African Development Community
SAZ	Standards Association of Zimbabwe
SIRDC	Scientific and Industrial Research and Development Centre
SME	Small and Medium Enterprises
SOP	Standard Operating Procedures
STEM	Science, Technology, Engineering and Mathematics
SWOT	Strengths, Weaknesses, Opportunities and Threats
TWG	Technical Working Group
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America
USSD	Unstructured Supplementary Service Data
UZ	University of Zimbabwe
VC	Venture Capital
ZBC	Zimbabwe Broadcasting Corporation
ZCHPC	Zimbabwe Centre for High Performance Computing
ZIMSTAT	Zimbabwe National Statistics Agency
ZNCC	Zimbabwe National Chamber of Commerce

Executive Summary

The Zimbabwe National Artificial Intelligence (AI) Strategy (2026–2030) presents a bold, coordinated framework to harness AI as a driver of inclusive growth, innovation and national sovereignty, aligned with Vision 2030, the National Development Strategies (NDS1 & NDS2) and the Heritage-Based Education 5.0 philosophy.

It positions AI as a transformative force to propel Zimbabwe from a resource-dependent economy to a competitive, knowledge-driven nation. This is ensuring the country shapes, rather than be shaped by emerging technologies, embedding local values, protecting cultural heritage and addressing national priorities in economic diversification in key economic sectors. The strategy is anchored on six interconnected pillars**: AI Talent and Capacity Development** to cultivate a skilled, innovative workforce through AI literacy, research hubs, sector-specific academies and diaspora engagement; **National AI Infrastructure and Computational Sovereignty** to establish high-performance computing, sovereign data platforms, world-class data centres and secure inclusive connectivity; **AI Adoption and Service Transformation** to drive sector-wide adoption, improve service delivery, optimise industries and enhance citizen experiences while ensuring equitable access; and **Governance, Ethics and Regulatory Framework** to implement a natural culture–based, multi-level governance system with robust legislation, ethical safeguards and leadership in responsible AI; **AI Research, Development and Innovation** to promote scientific discovery, technological innovation and locally tailored intellectual property that meets national priorities and enriches global AI knowledge; and **AI International Collaboration and Diplomacy** to enhance Zimbabwe's role in the global AI landscape, amplify its influence in global AI governance and secure technology transfer while protecting digital sovereignty.

To accelerate momentum, five flagship initiatives namely; the Zimbabwean AI Grand Challenge, the National AI and Data Platform (Project "Pangolin"), the "Nzwisiso.ai" national literacy campaign, an AI Regulatory Sandbox ("Innovation Crucible") and the National AI Innovation Fund ("Mugove/Isabelo" Fund) will be rolled out. These will be supported by cross-cutting themes such as digital equity, cultural preservation, adaptive governance, environmental sustainability and sectoral integration. Implementation will follow three phases: Foundation Building (2025–2026), Scaling Core Applications (2027–2028) and Ecosystem Maturation and Leadership (2029–2030), with governance led by the AI Strategy Implementation Office, supported by the National Digital Regulatory Committee (ZNDC), technical working groups and inclusive stakeholder engagement.

A key determinant of success will be AI's capacity to enhance efficiency in industrial and economic processes, thereby improving productivity and competitiveness across sectors. Success will be measured through AI literacy rates, infrastructure capacity, economic gains, sectoral adoption metrics, public trust and international competitiveness. This will ultimately position Zimbabwe as the heart of inclusive and sustainable "AI for Development" in Southern Africa, igniting home grown innovation, safeguarding sovereignty and ensuring AI uplifts every Zimbabwean.

Introduction

The confluence of data, computational power and algorithmic innovation has given rise to Artificial Intelligence (AI), a technological force for socio-economic transformation. **Artificial Intelligence (AI)** is the ability of machines to learn intellectual processes and characteristics of humans, such as, reasoning, discovering meaning, generalising or learning from past experience[1]. This is not merely another technological cycle but a fundamental reordering of our world. The Republic of Zimbabwe must therefore take its place in this transformation. This National Artificial Intelligence Strategy (2026-2030) serves as the national compass in embracing AI to achieve Vision 2030 and targets beyond.

The Imperative for a National AI Strategy:
Charting Zimbabwe's Future

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1   https://www.britannica.com/technology/artificial-intelligence

The imperative for a national strategy is therefore a matter of national priority, rooted in three foundational pillars:

Economic Sovereignty and Competitiveness

Zimbabwe is aiming to transition from a resource-based economy to a knowledge-based powerhouse, leveraging on this National AI Strategy to innovate and create high-value industries, generating future-proof employment for its youth and transforming the global economy into an adaptable knowledge-based powerhouse.

Cultural and Social Self-Determination

The National AI Strategy in Zimbabwe aims to create AI that reflects the values of its creators, recognizing the richness of indigenous languages and societal complexities. The strategy aims to develop systems free from imported biases, aligning with the natural culture/Ubuntu philosophy, and facilitating a national dialogue on technology dictionaries and AI literature in vernacular languages.

Inclusive and Resilient Development

AI has the potential to solve many challenges, including predicting diseases, providing personalized learning paths, and bridging the digital gap between urban and rural areas. Zimbabwe is implementing this National AI Strategy to use the technology to create a more resilient and equitable society, utilizing appropriate infrastructure and innovations and with the goal of achieving upper middle-income status by 2030.

The Global and African AI Landscape: A New Era of Opportunity

The global AI landscape is becoming more multipolar, with nations leveraging their unique strengths to create excellent capabilities. Africa in general has its own context which can enhance AI development. The continent and the global south face challenges such as climate change, public health, and a natural resources-based economy. This makes Africa the world's most fertile ground for "AI for Development."

Zimbabwe in its quest for technological placement draws inspiration from the globe where AI strategies in the European Union, the United States of America and 16 African continental peers have already developed their AI strategies and provided key insights. Kenya's AI strategy for example emphasizes ethical, inclusive, and innovation-driven AI adoption, sustainable development, enhanced public services, and improved social and economic equity. Nigeria's AI strategy, focuses on building a knowledgeable talent pipeline and creating a premier destination for "AI for Emerging Economies." However, Zimbabwe's strategy is unique, premised on natural culture/Ubuntu heritage-based innovation and development. The country's rich history, high literacy rate, and strategic position in Southern Africa gives it a distinct advantage. Zimbabwe's ambition is not just to develop a strategy for the sake of it but to become a leading voice within it, pioneering ethical, context-aware, and citizen-centric AI solutions that are not only for Zimbabwe but also for the world.

Strategic Alignment: Synchronizing with Our National Vision

Zimbabwe's National AI Strategy aims to accelerate the country's national **Vision 2030** of becoming a prosperous, empowered upper-middle-income society. This strategy smoothly transcends from **National Development Strategy(NDS) 1 into NDS 2,** providing a technological pathway for economic growth, infrastructure development, social services, and governance. The strategy also supports the **Heritage-Based Education 5.0** policy framework, aiming to produce graduates capable of solving national problems through research, innovation, and industrialization. The strategy draws from the overarching **Zimbabwe National ICT Policy**, which aims to design and build intelligent and smart systems that will carry Zimbabwe's economy, public services, and society into the future.

Methodology: A Collaborative and Iterative Approach

The strategy, inspired by natural culture/Ubuntu, was developed through a collaborative process, fostering national co-creation and inclusivity, recognizing input of all stakeholders.

DEEP LISTENING AND ANALYSIS
Assessment of internal strengths and weaknesses and global Ai strategies

A NATIONAL DIALOGUE
Engagement with a diverse range of stakeholders

CO-CREATION AND ITERATION
Open forums for debating, challenging and refining ideas

VALIDATION AND NATIONAL COMPACT
Consolidated strategy presented for validation

Figure 1: Methodology

Situational Analysis: Zimbabwe's AI Readiness

Zimbabwe's National AI Strategy is grounded in local realities, addressing strategic challenges and emerging opportunities. Addressing AI presents an opportunity to mitigate existential threats, ensuring Zimbabwe becomes a contributor and shaper of AI technology.

SWOT Analysis: Zimbabwe's AI Readiness

Strengths vs. Weaknesses

Strengths	Weaknesses
Zimbabwe's Strengths for AI adoption:	**AI adoption Weaknesses in Zimbabwe:**
• High literacy rate and cultural value for education provide a strong foundation for AI skills development. • Heritage-Based Education 5.0 Framework aligns education with AI-driven economy needs. • Mobile-First Society: Rapid uptake of AI-poweredw services due to widespread mobile technology adoption. • Data Heritage: Ethical digitization and management of unique national data could train context-specific, globally competitive AI models.	• Brain Drain: Skilled professionals in tech, data, and science live abroad, creating a domestic talent shortage. • Under-resourced Institutions: Universities lack computational power and funding, limiting AI innovation. • Connectivity Gap: Urban-rural disparities create a "digital divide," exclusion of large population segments. • Data Silos: Fragmented, unshared data across institutions, lack of standardized national data governance, and clean interoperable datasets hinder AI's full potential.

Opportunities vs. Threats

Opportunities	Threats
Zimbabwe's Opportunities for AI Development	**Threats to AI adoption in Zimbabwe:**
• Leapfrogging Potential: Zimbabwe can build AI-ready infrastructure with minimal legacy ICT systems. • Global "AI for Good" Movement: International interest aligns with Zimbabwe's priorities in agriculture, mining, health, and climate resilience. Diaspora as Strategic Asset: Global Zimbabweans in leading institutions can promote "brain circulation." • Unified African Market: AfCFTA and SADC enable local AI solutions scaling and regional influence in global AI policy. AI as a Subject: Making AI compulsory in schools and colleges. • AI for Citizens: Developing capacity for underserved communities.	• Digital Colonialism: Foreign AI platforms pose risks of data extraction, profit repatriation, and cultural imposition. • Supply Chain Vulnerability: Geopolitical tensions threaten access to critical AI hardware, creating dependence risks. • AI-Driven Misinformation: Deepfakes and disinformation threaten social trust, stability, and democratic institutions. • Imported Bias Risks: Uncritical use of foreign AI can embed alien biases, harming fairness and social cohesion. • AI Safeguards and Guardrails: Strong safeguards for high-risk AI applications. • Digital Prisoners: Risks of digital isolation and "digital imprisonment."

Digital and AI Ecosystem Mapping: A Network Analysis

Zimbabwe's AI ecosystem is a dynamic network, that requires transformation into a vibrant, interconnected ecosystem.

AI Ecosystem Nodes in Zimbabwe

Ecosystem Node	Key Players & Assets (Current State)	Analysis of Ecosystem Nodes & Potential
1. Governance & Policy (The Conductor)	OPC, Ministry of ICT Postal and Courier Services, POTRAZ, RBZ, Ministry of Higher & Tertiary Education Innovation Science and Technology Development, ZIMCHE, Scientific and Industrial Research and Development Centre (SIRDC).	AI Policy and Innovation in Zimbabwe **Status:** • Acting in isolation with limited cross-ministerial synergy. • Potential to become the central "conductor" of the ecosystem.
2. Human Capital (The Talent Engine)	Universities Polytechnics, STEM initiatives, SIRDC, MOPSE, Ministry of Youth, PSC, MOSAD	**Status:** • Need for more cohesion between industry and institutions of higher learning. • Potential to co-create curricula with the private sector. • Underfunded laboratories and infrastructure. • Actively head-hunting AI talent and introducing incentives like "Open Visas."
3. Innovation & Research (The Idea Factory)	University R&D departments, Research Council of Zimbabwe, SIRDC	**Status:** • Need for more funding and cohesion with commercial requirements • Potential to become the nation's "idea factory."
4. Startups & Entrepreneurs (The Agile Vanguard)	Local tech hubs, emerging FinTech and AgriTech startups.	**Status:** • Need for support to have access to cheaper bespoke funding opportunities, important data, and high-performance computing. • Potential to be the "agile vanguard" of the AI economy.
5. Private Sector (The Engine Room)	Telecommunications, Banking, Mining and Agriculture sectors.	**Status:** • Cautious adopters, possessing capital and data but often risk-averse. • Potential to be the primary "engine room" of the ecosystem.
6. Capital & Investment (The Fuel)	Venture Capital (nascent), Angel Investors, Government Funds and Diaspora Remittances.	**Status:** • Fragmented and risk-averse, lacking early-stage "patient capital." • Potential to become the "fuel" for the ecosystem through government co-investment schemes and incentives.

Current Policy and Regulatory Landscape: A Strategic Review

With the rapid transformation caused by AI, the current policy environment in Zimbabwe needs to be reviewed in order to become "AI-ready."

Policy Alignment for AI-Readiness

Policy Domain	Existing Foundation	The "AI-Ready" Upgrade Required
National Vision	Vision 2030, NDS1 & 2	From Mention to Mandate: Zimbabwe's AI Strategy Elevating AI from peripheral technology to a central strategic pillar for national vision.
Data Governance	Cyber and Data Protection Act	From Protection to Empowerment: Transitioning from defensive data protection to offensive data empowerment.
Infrastructure	National ICT Policy	From Connectivity to Computation: Expanding focus from internet access to computational power for AI. From Availability to Accessibility: Expanding network infrastructure to rural and remote areas to bridge digital divide.
Intellectual Property	Copyright & Patent Laws	From Analog to Algorithmic: Modernizing IP laws to address unique challenges of AI.
Education	Heritage-Based Education 5.0 Science, Technology and Innovation Policy	From Theory to Practice: Bridge gap between Heritage-Based Education 5.0 vision and classroom reality. Implementing a national AI curriculum, teacher training, and "AI Centres of Excellence" at leading universities.

International Benchmarking: Strategic Insights for Zimbabwe

The analysis of regional and global AI strategies provides valuable lessons and actionable strategic insights that are directly applicable to Zimbabwe's context.

Strategic Insights and Moves for Zimbabwe's AI Journey

Insight	Description	Our Strategic Move
Insight 1: The "Talent-First" Imperative	"AI Sprinter" Success Factors Successful AI nations started with people, not technology.	National Talent Development Strategy: Prioritize investment in multi-tiered national talent development program.
Insight 2: Governance Precedes Technology	Clear, trustworthy, multi-stakeholder governance structure is crucial for large-scale AI deployment.	Establish National AI Council as a critical first step.
Insight 3: The Ecosystem is the Strategy	Focus on building connective tissue, partnerships, platforms, and policies for ecosystem thrive.	Council functions as "Chief Ecosystem Officer" for the nation.
Insight 4: Niche is the New Scale	Need to identify and dominate niches with natural advantages, like "AI for Agriculture in drought-prone regions," "AI for Mining Exploration," and "AI for talent development" etc.	Prioritize two or three "Grand Challenge" areas for national resources.
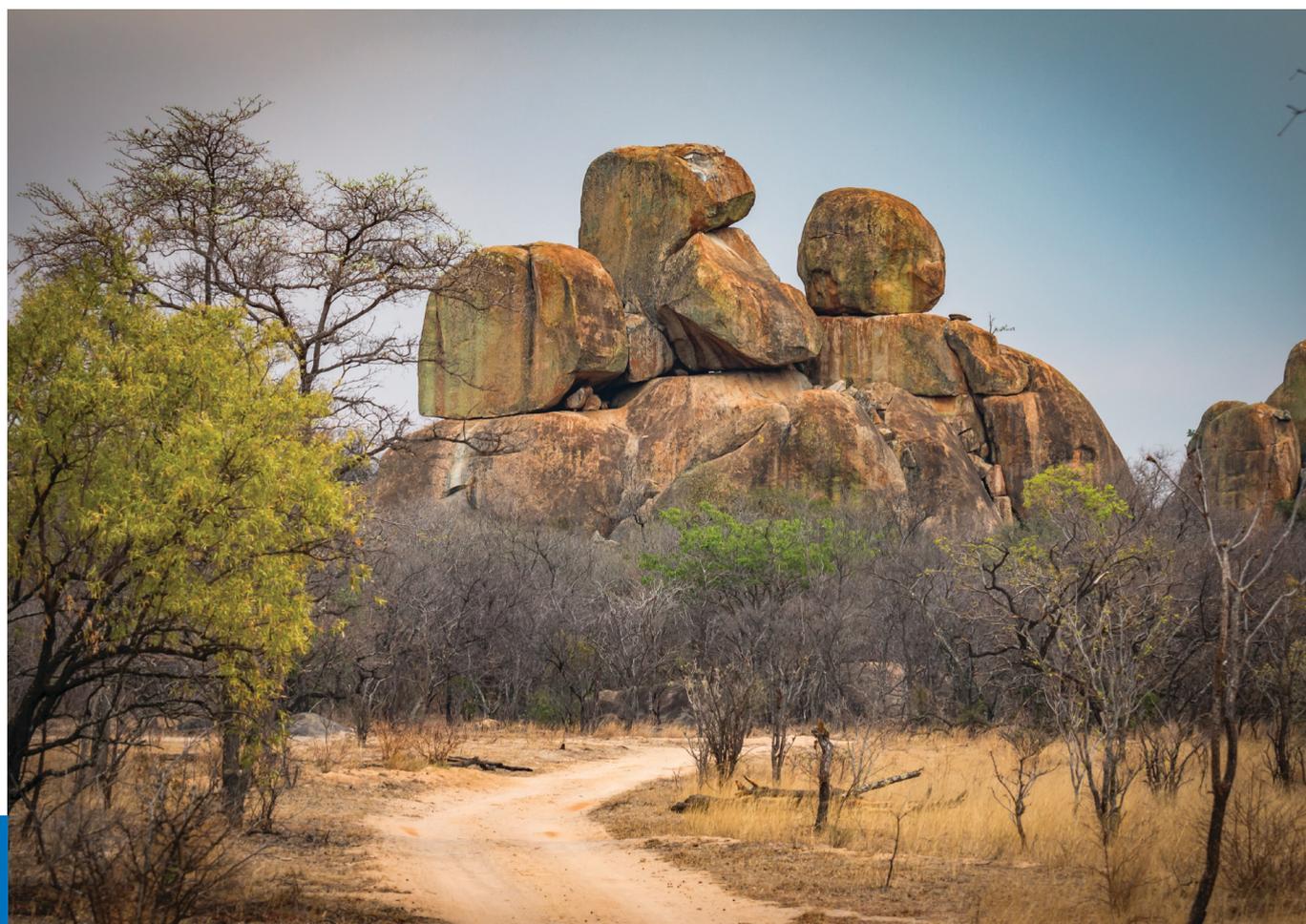
Vision and guiding principles

This section is the core of Zimbabwe's National AI Strategy, guiding the nation's digital future while preserving its essence and uniqueness as a nation.

National Vision: A Declaration of Our Future

Zimbabwe's vision is to establish itself as the **hub of inclusive and sustainable "AI for Development" in Southern Africa**, utilizing home-grown innovation to create a shared prosperity and elevate citizen dignity, a declaration of national will.
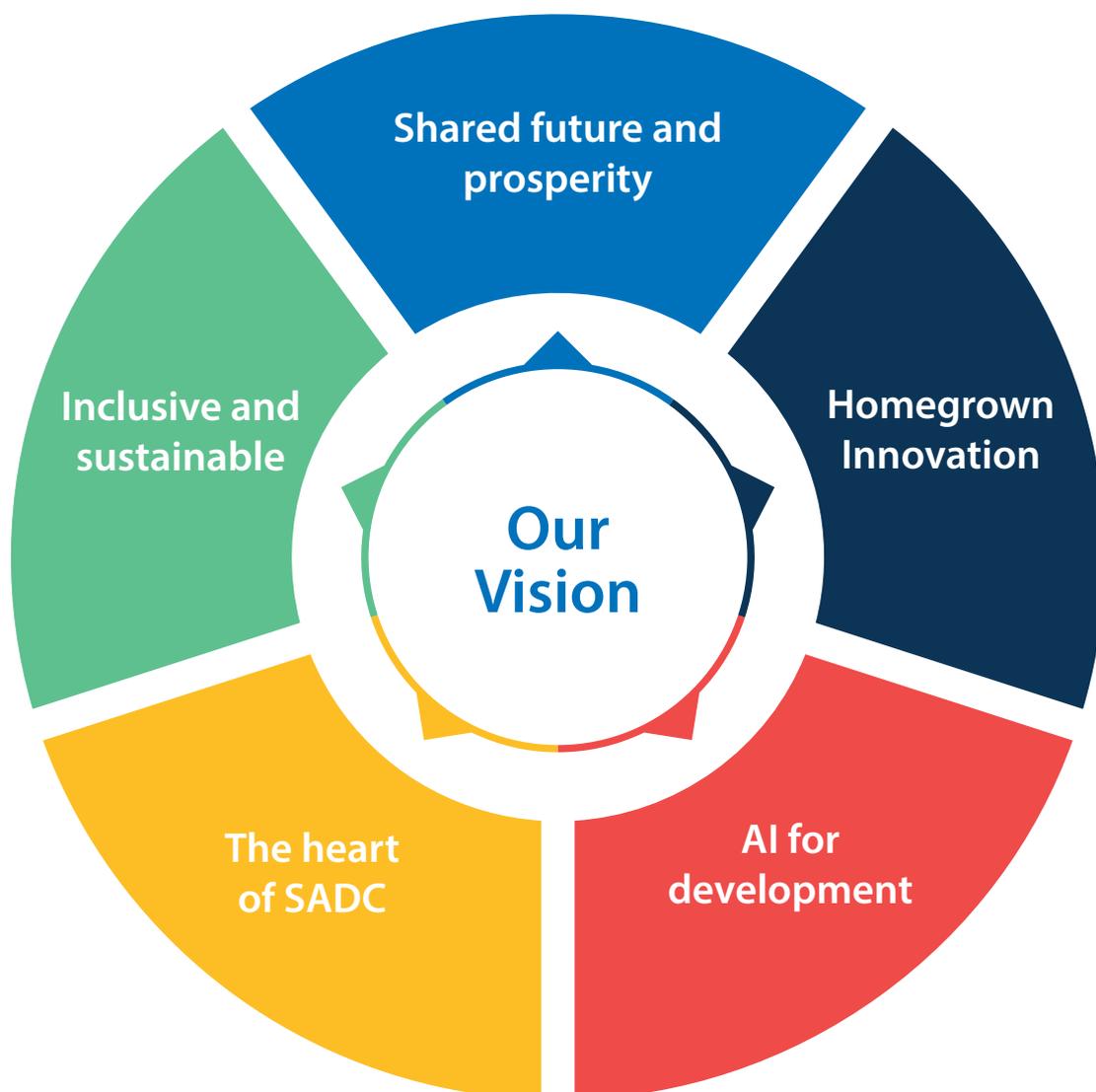
Figure 2: Our vision

Guiding Principles

The vision's eight principles serve as the foundation for the transition into an AI nation and guiding actions taken.

Figure 3: Guiding principles

Strategic Pillars: The Six Foundations of Zimbabwe's AI Transformation

The Zimbabwe National AI Strategy is based on four strategic pillars namely, technical, human, governance, and application dimensions. These interconnected foundations align with Zimbabwe's NDS 1&2 and the broader Vision 2030 objectives, ensuring a sustainable, inclusive, and transformative AI journey.

Zimbabwe National AI Strategy Pillars

- AI Talent and Capacity Development
- AI Infrastructure and Computational Sovereignty
- AI Adoption and Service Transformation
- AI Governance, Ethics and Regulatory Framework
- AI Research, Development and Innovation
- AI International Collaboration and Diplomacy
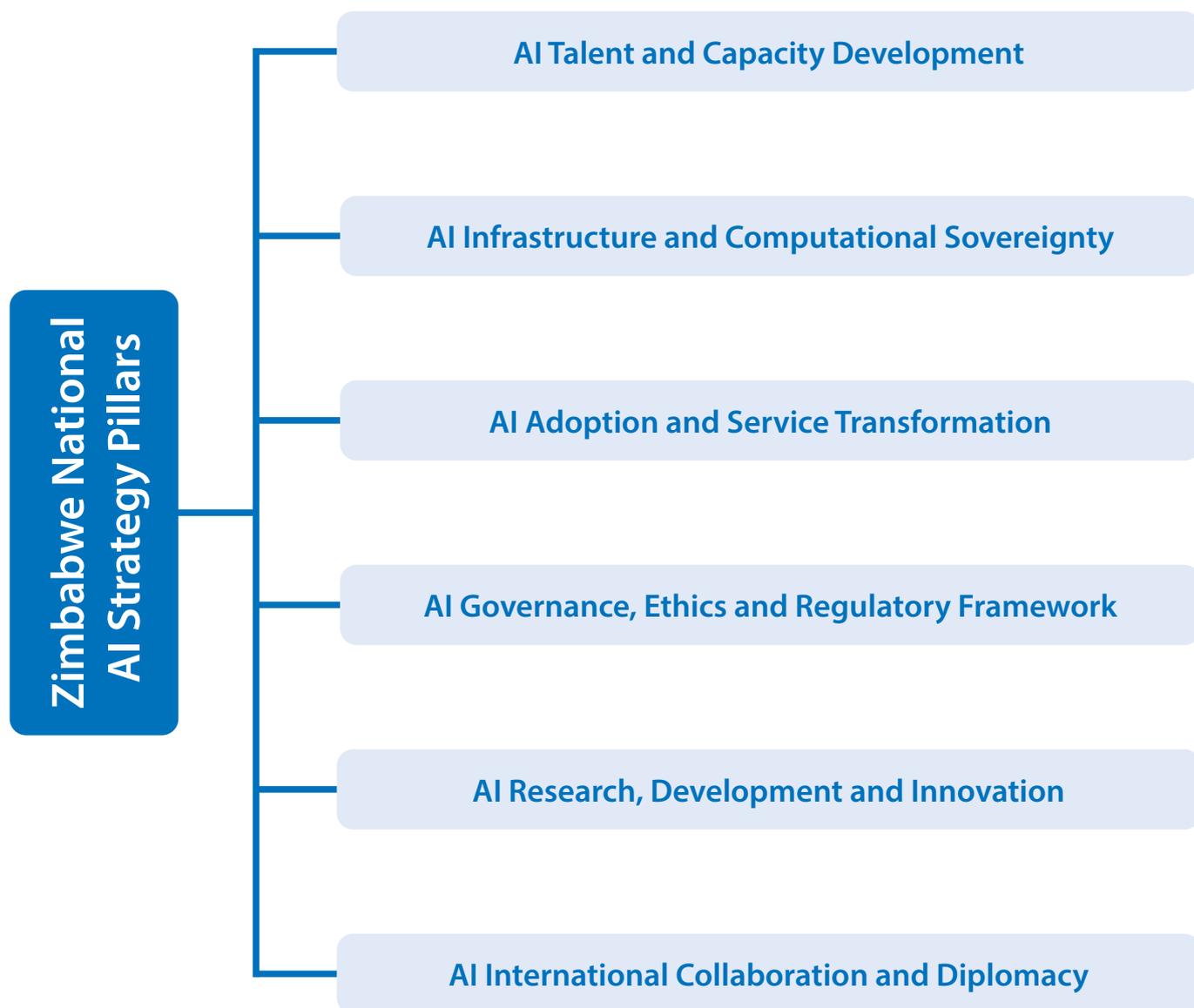
Figure 4: Strategic pillars

Pillar 1: AI Talent and Capacity Development

Zimbabwe aims to develop a world-class AI talent ecosystem, leveraging its high literacy rate and Heritage-Based Education 5.0 framework, to drive innovation, adapt to technological change, and strengthen institutional capacity.

Strategic Foundation and Rationale

Zimbabwe's success in AI transformation depends on the quality, quantity, and distribution of AI-capable talent. Utilizing the high literacy rate and Heritage-Based Education 5.0 philosophy, Zimbabwe can build an AI talent ecosystem, ensuring every citizen contributes meaningfully to the AI economy.

Strategic Framework

Education and AI Literacy Foundations

Zimbabwe's AI talent strategy aims to essentially integrate AI and data literacy at all educational levels. Primary and secondary schools will incorporate age-appropriate AI modules, while teacher-retraining programs will equip educators. Tertiary programs will include "AI and Society" courses, emphasizing social and behavioral change communication.

Tertiary and Research Capacity Excellence

Zimbabwe will establish two National AI Centres of Excellence by 2028, each hosting doctoral and post-doctoral studies, to become world-class AI R&D hubs. The initiative will also fund advanced researchers, link theoretical work to practical solutions, and strengthen Zimbabwe's research capacity. Zimbabwe will endeavor to make public universities pillars of specialisations in various sub-disciplines of AI.

Workforce Development and Lifelong Learning

Zimbabwe is endowed with a workforce that is eager to learn and innovate. This workforce will be transformed for the AI era through a nationwide approach, including Public Sector AI Academies offering tailored courses, strategic AI literacy, and practical AI training, and subsidizing access to world-class AI education through global learning platforms.

Talent Retention and Diaspora Engagement

Zimbabwe boosts of critical and skilled talent in the diaspora. However, this brain drain must be reduced and the country must also be able to attract and utilize diaspora expertise through innovative programs, including fractional appointment schemes, Presidential AI Scholarships, and incentives like tax breaks, housing support, and research funding.

Innovation, Entrepreneurship and Industry Linkages

AI skills' economic value requires strong links between education, research, and industry. Specialized AI incubators in Special Economic Zones offer resources, mentorship, funding, and market access, while formal university-industry collaboration platforms drive technology transfer.

Implementation Strategies and Mechanisms

Zimbabwe's AI Transformation Strategy is premised on the following:

Governance and Coordination

The Ministry of ICT, Postal and Courier Services and other relevant ministries such as the Ministry of Higher Education and the Ministry of Skills Audit will establish a dedicated AI Talent Development Coordination Office to streamline talent development activities.

Financing and Resource Mobilization

Diversified financing strategy: Government budget allocations, private sector contributions, international development partner funding, and innovative financing mechanisms.

Quality Assurance and Standards

Collaboration with industry partners and international organizations to develop national standards for AI education and training.

Key Performance Indicators and Monitoring Framework

AI literacy rates, AI-related graduates, public sector workforce with AI training, AI startups, research publications, and retention rate of AI-skilled diaspora professionals.

Cross-Cutting Integration

Integration with other pillars to provide human capital for AI infrastructure, governance frameworks, and adoption across sectors.

Pillar 2: AI Infrastructure and Computational Sovereignty

Strategic Objective: The Zimbabwean government aims to establish a robust, advanced AI infrastructure that combines high-performance computing, secure data systems, and nationwide connectivity for strategic autonomy.

Strategic Foundation and Vision

Zimbabwe is implementing a strategic approach to computing autonomy, focusing on high-performance computing, secure data systems, robust algorithms, and nationwide connectivity to ensure security, economic independence, and AI leadership.

Infrastructure Strategy

National High-Performance Computing Ecosystem

Zimbabwe has already established a Centre for High Performance Computing, a world-class facility, and a nationwide distributed computing architecture which ensures enhanced resilience, accessibility, and resource utilization. This facility is to be expanded to also introduce an open-source cloud platform for AI adoption.

Data Centre Excellence and Sovereignty

Zimbabwe has already put in place data centre infrastructure which will be upgraded to Tier IV-standard data centres to maintain national data security and support advanced AI. These facilities will incorporate renewable energy, energy-efficient hardware, and data localisation policies, ensuring business continuity during disruptions.

Connectivity and Network Infrastructure

AI requires robust connectivity in order to function properly. While Zimbabwe has in place solid network infrastructure including 5G, fibre optics and low earth orbit satellite the priority is to upgrade to in order to have the requisite capacity to support AI applications. There is need therefore to expand fibre backbone, invest in mobile broadband networks, and reduce the digital divide in underserved areas. This also includes enhanced international links and submarine cables.

Hardware Localization and Manufacturing

Zimbabwe has already set up a device assembly plant, ZITCO. This can be leveraged upon to develop indigenous capabilities in the AI hardware value chain, reducing reliance on foreign suppliers and building domestic industrial strength. This includes assembling AI hardware servers, networking equipment, manufacturing key components, and leveraging lithium reserves for battery production locally. Investing in local data centers and cloud infrastructure production will support computational sovereignty and digital independence. A National Public Digital Infrastructure will be established for data sharing and enabling seamless service delivery.

Implementation Strategies and Mechanisms

Public-Private Partnership Framework

To achieve computational sovereignty, strategic partnerships with technology firms, shared infrastructure models, and a targeted investment incentive, partnership frameworks are needed. These partnerships will ensure technology transfer, local capacity building, and national ownership of critical assets.

Regulatory and Policy Framework

Zimbabwe's AI infrastructure development will be guided by a robust regulatory framework, ensuring security, sustainability, and alignment with national priorities, while data sovereignty regulations balance protection with global collaboration. The current regulations in the form of the Cyber and Data Protection Act [Ch. 12.07] of 2021 and the Post and Telecommunications Act [Ch. 12.05] of 2010 are a good spring board for this

Financing and Investment Strategy

Given the high capital demands of AI infrastructure, Zimbabwe intends to finance AI infrastructure through a diversified strategy, including a National AI Infrastructure Fund, strategic partnerships, and innovative mechanisms like infrastructure bonds and revenue-sharing agreements, to efficiently mobilize capital and reduce public financial risk.

Security and Resilience Framework

Given the critical nature of AI infrastructure, Zimbabwe will enhance and implement robust cybersecurity and physical resilience measures for its AI infrastructure, including advanced threat intelligence, automated detection, skilled response teams, and compliance with international standards, along with physical protections and regular emergency response plans.

Performance Monitoring and Optimisation

Zimbabwe's AI infrastructure will undergo continuous monitoring and optimization to remain world-class and responsive to evolving needs. Real-time monitoring, benchmarking, demand forecasting, and technology refresh cycles will ensure performance improvements and global competitiveness.

Proposed Key Performance Indicators (KPIs)

- Employment outcomes linked to AI adoption.
- The number of AI-related research publications produced nationally.
- Job opportunities created through AI development and deployment.
- The emergence and adoption of quality assurance mechanisms and standards in AI applications.

Integration with National Development Objectives

Zimbabwe's AI infrastructure development aims to drive economic transformation and align with national development goals in the creation of jobs, facilitating technology transfer, and enhancing its regional position as a leader in the Southern African AI ecosystem.

Economic Application & Strategic Prioritization

Focusing on dominating niche areas based on national strengths rather than competing in every field. Key sectors identified include:

- **Agriculture AI:** For predictive analytics and smart farming.
- **Mining AI:** For mineral beneficiation, exploration, and predictive maintenance.
- **Tourism AI:** For destination marketing and personalized experiences.
- **MSME-Driven AI Adoption:** Prioritize making AI tools accessible and affordable for SMEs, as their adoption is key to widespread societal acceptance.
- **Additional Sectors:** These include Security & Defence sector, Social Services, and Real Estate.

Pillar 3: AI Adoption and Service Transformation

Strategic Objective: The goal is to promote AI adoption across Zimbabwe's economy, improve service delivery, enhance customer experiences, optimize operational efficiency, align with NDS 1 & 2, and enhance quality of life.

Strategic Foundation and Vision

Transforming Zimbabwe into an AI-powered nation requires adopting AI across all sectors to solve real problems, enhance services and drive economic and social development. Building on the 2025 AI Readiness Assessment Methodology (RAM) developed with the support of UNESCO, this pillar offers a framework aligned with NDS2 priorities, ensuring inclusive, sustainable adoption that leaves no sector or community behind while addressing Zimbabwe's unique challenges and opportunities.

Sectoral AI Adoption Framework

Agriculture and Food Security Transformation

Agriculture, the backbone of Zimbabwe's economy, will leverage AI to boost productivity, strengthen food security and build climate resilience for both smallholder and commercial farmers. Precision agriculture systems using satellites, drones and IoT sensors will optimise crop, irrigation and fertiliser management through real-time insights. AI-powered diagnostics will detect crop diseases and pests early via image analysis, with mobile applications offering instant treatment guidance. Market intelligence tools will deliver real-time prices, demand forecasts and sales timing advice. In addition, climate-smart agriculture will combine AI and climate data to guide drought-resistant crops, planting schedules and water use. AI-driven credit scoring and crop insurance, supported by satellite monitoring, will expand finance access and enable rapid, objective pay-outs for weather-related losses. AI enabled value chains using blockchain technology will support authenticating of sources of organic agriculture products.

Healthcare System Transformation

The transformation of Zimbabwe's healthcare system through AI will centre on improving access to quality services, strengthening diagnostics and optimising resource use while addressing the distinct challenges of both urban and rural healthcare delivery. AI will support disease detection, enhance remote healthcare capabilities, improve public health monitoring, streamline supply chains and expand access to mental health support. This approach aims to create a more efficient, equitable and responsive healthcare system that meets the needs of all citizens.

Education System Enhancement and Transformation

The integration of AI into Zimbabwe's education system will enhance learning, improve outcomes and align with the Education 5.0 philosophy, ensuring equitable access to quality education for all. AI will enable personalised learning, provide intelligent tutoring, localise educational content, analyse student performance for early intervention and improve administrative efficiency. This approach will create a more adaptive, inclusive and effective education system that meets diverse learner needs across the country.

Financial Services and Economic Inclusion Transformation

The integration of AI into Zimbabwe's financial services is aimed at promoting universal financial inclusion and economic empowerment for all citizens, especially the unbanked and underbanked. This will include alternative credit scoring, mobile money optimization, fraud detection, financial literacy programs, micro-lending platforms, and inclusive insurance products. The goal is to create accessible financial services through mobile platforms and tailor products to the needs of small-scale farmers, informal sector workers, and rural communities.

Mining Sector Optimization and Transformation

Zimbabwe's mining sector will apply AI to enhance safety, boost efficiency and optimise resource extraction while promoting environmental sustainability. AI will support predictive maintenance to reduce downtime, improve geological analysis for better resource assessment, strengthen safety and environmental monitoring and streamline supply chains from extraction to export, ensuring compliance, cost savings and responsible mining practices.

Manufacturing and Industrial Development Transformation

AI adoption will accelerate Zimbabwe's manufacturing sector by boosting productivity, quality and competitiveness while fostering local industry growth. AI will enable smart manufacturing to optimise processes, strengthen quality control, enhance supply chain management, support predictive maintenance and drive product design and innovation, positioning Zimbabwean manufacturers to meet market demands and compete globally.

Built Environment, Transportation and Logistics Transformation

AI will reshape Zimbabwe's built environment, transport and logistics sector by driving efficiency, lowering operational costs and enhancing connectivity to unlock economic growth and regional integration. Intelligent systems will optimize traffic flow, strengthen fleet management, streamline logistics and supply chains, improve public transport services and support faster, more compliant cross-border trade. Transit-Oriented Development will be advanced through the use of AI-enabled planning tools to integrate housing, businesses and services around transport hubs.

Energy Sector Transformation

AI will modernise Zimbabwe's energy sector by optimising production, distribution and consumption, supporting renewable energy adoption and expanding access. Smart grids will improve distribution and integrate renewables; demand forecasting will enable efficient planning and optimisation tools will maximise renewable output. AI will also enhance energy efficiency for businesses and households while strengthening grid resilience through predictive maintenance and rapid outage recovery.

Micro, Small and Medium Enterprises (MSMEs) Sector Transformation.

AI will be integrated into SME operations to boost productivity, reduce costs, and expand market reach. Tools like chatbots will modernize customer service, predictive analytics will refine marketing, and automated logistics will streamline supply chains. Women and youth-led enterprises will receive targeted support for inclusive growth, innovation, and job creation. AI will help SMEs adapt to pandemics, climate change, and currency fluctuations.

Water, Environment and Tourism Sector Transformation

AI-powered circular economy systems will promote tourism and environment sectors and ensure resource efficiency. Smart water grids and predictive analytics will optimize distribution, monitor usage, and anticipate risks in climate patterns. Geospatial intelligence will be applied to environmental monitoring, biodiversity protection, sustainable growth in water, waste water recycling and eco-tourism planning. Training programs will equip African scientists with GIS and Remote Sensing expertise.

Defence and Security Sector Transformation

AI integration in the defence and security services will focus on strengthening national security focusing on cybersecurity, logistics, border management, and forensic investigation, among other relevant application areas related to national security. Applications such as AI-driven threat detection, predictive analytics, and smart surveillance will be deployed in accordance with legal and ethical safeguards, ensuring compliance with the Constitution, the Cyber and Data Protection Act, international human rights standards, and other applicable regulations. To safeguard sovereignty and accountability, a Defence AI Innovation Hub will promote local solutions in collaboration with universities, security agencies, and the private sector. This strategy will position AI as a tool for national defence resilience and public safety while protecting privacy, dignity, and citizens' rights.

Publicity, Public Service Excellence and Digital Government Transformation

The transformation of public service delivery through AI will make government services more accessible, efficient and responsive to citizen needs while enhancing transparency and accountability. Intelligent service portals will understand and respond to citizen queries; automated processing will speed up transactions and engagement platforms will strengthen consultation and feedback. Personalised services will enhance the user experience, ensure targeted interventions and accessibility, while automation of document management, data-driven decision support, optimised resource allocation and performance monitoring will improve administrative efficiency and drive continuous improvement in public service delivery.

Implementation Strategy and Adoption Framework

Phased Implementation Approach

The AI implementation will begin with pilot projects in each sector to showcase value and build expertise, followed by scaling successful initiatives to wider applications and regions. Mature systems will then be integrated across sectors and continuously optimised for maximum impact and efficiency.

Media Publicity, Stakeholder Engagement and Change Management

Public awareness campaigns will inform citizens about AI's benefits and address adoption concerns, while extensive training programmes will equip government employees, business leaders and citizens with the skills to use AI effectively. Professional change management support will guide organisations in adopting AI technologies smoothly, minimising disruption to existing operations. Rolling out public awareness campaigns to demystify AI and promote societal readiness.

Quality Assurance and Standards

National AI system standards will set minimum requirements for performance, security and ethical operation, supported by thorough testing and validation before deployment. Continuous monitoring will ensure systems remain effective, safe and responsive to user needs over time.

Enabling Infrastructure and Support Systems

Data Infrastructure

An open data initiative will make government data accessible for AI development while safeguarding privacy and security. Common data standards will promote interoperability across sectors and robust data quality management will ensure AI systems rely on accurate, reliable information.

Technical Support and Maintenance

Dedicated AI system support centres will provide technical assistance and maintenance across sectors, while professional vendor management will ensure high-quality products and services. Specialised integration services will help organisations deploy AI solutions effectively and align them with existing systems.

Monitoring, Evaluation and Continuous Improvement

Performance Measurement

Sector-specific KPIs will track the impact of AI on service delivery, efficiency and outcomes, while regular cross-sector assessments will measure its broader effects on economic development, social progress and quality of life. Continuous user satisfaction monitoring will ensure AI systems meet the needs and expectations of citizens and businesses.

Adaptive Management

Systematic feedback loops will capture lessons from AI implementation to inform future deployments, while regular technology updates will keep systems aligned with the latest advances. Policy frameworks will be reviewed and adjusted to reflect implementation experience and evolving technological landscapes.

Integration with National Development Priorities

This pillar is specifically designed to support Zimbabwe's National Development Strategy priorities while ensuring that AI adoption contributes to the achievement of Vision 2030 objectives. The sectoral approach ensures that AI benefits reach all Zimbabweans while building the foundation for sustained economic growth and social development.

Pillar 4: AI Governance, Ethics and Regulatory Framework

Strategic Objective: The AI Strategy aims to establish a sustainable, pan-African-based AI governance framework in Zimbabwe, promoting ethical use, human rights protection, and public trust in AI technologies. It will audit existing governance systems, identify new regulations, and strengthen existing structures, positioning Zimbabwe as a leader in responsible AI governance.

Strategic Foundation and Governance Philosophy

Zimbabwe's governance framework, guided by natural culture/Ubuntu's ethos of collective responsibility and human dignity, aims to balance innovation with safeguarding human rights and societal values in the digital age. The framework will function at local, national, regional, and international levels, ensuring AI meets community needs, protects sovereignty, drives development, promotes regional collaboration, and positions Zimbabwe as a responsible global leader.

Multi-Level Governance Architecture

Local and Community-Level Governance

Zimbabwe envisions implementing AI governance at the community level, involving district-level Community AI Councils, local authorities, civil society, youth, women's groups, businesses, and technical experts. The framework will ensure local control over data use and local returns, while promoting Ubuntu, protecting indigenous knowledge, and promoting local languages and cultural heritage. A national reward system is also needed for digitizing indigenous knowledge systems. The proposed multi-level governance structure should be streamlined to avoid bureaucracy and integrate with existing bodies like the Data Protection Authority.

National Governance Framework

Zimbabwe's national AI governance framework will establish a multi-sectoral National AI Council (NAIC) to oversee AI research and development. AI Strategy Implementation Office (AISIO) will coordinate execution, while a Parliamentary Standing Committee on AI and emerging technologies will deliver legislative oversight. An autonomous National Data Agency will regulate data protection and data sharing, while an AI Ethics Board will set ethical guidelines. Sectoral AI governance bodies will manage AI deployment in their respective domains.

Regional Governance and Cooperation

Zimbabwe is establishing an AI governance framework through the SADC AI Governance Initiative, aiming to promote integration, harmonize regulations, and facilitate cross-border AI collaboration. The framework will align with the African Union AI Strategy, promoting pan-African governance approaches and collaborating on regional AI standards. It will support cross-border AI applications in trade, health, climate, and resource management, while strengthening collective governance capabilities through regional capacity-building initiatives.

International Governance and Diplomacy

Zimbabwe is an active participant in international ICT governance forums and will continue on the same trajectory for AI governance forums in order to protect national interests and advocate for fair AI development for developing countries. The country will contribute to the United Nations (UN), AU and SADC AI governance initiatives and participate in bilateral AI cooperation agreements. Zimbabwe will also lead in South-South cooperation and contribute to international AI standards development. The country aims to position itself as a global voice for ethical AI which prioritises human dignity, social justice, and sustainable development.

Regulatory Framework

AI-Specific Legislation and Regulation

Zimbabwe will establish a flexible policy for AI development, deployment, and use, focusing on system classification, risk assessment, compliance, and enforcement. The policy will also establish a clear liability framework, modernized IP laws, ethical procurement regulations, and data governance reforms. The policy will recommend revision of the National Cyber and Data Protection Act for AI-specific needs, implement an Open Data Directive, and establish secure data-sharing frameworks.

Cybersecurity and AI Safety

Zimbabwe will implement robust cybersecurity and AI safety strategies to mitigate risks from emerging technologies. National AI cybersecurity standards will be implemented in critical sectors like healthcare, transport, and finance, with mandatory safety requirements for AI systems. Enhanced protection measures and dedicated incident response frameworks will ensure coordinated action and effective recovery.

Ethical AI Framework and Implementation

Natural Culture/Ubuntu-Centred AI Ethics (Natural Culture AI)

- Adopting natural culture/Ubuntu-based principles for AI development and deployment.
- Ethical AI guidelines will focus on fairness, transparency, accountability, and human oversight.
- Mandatory bias testing and mitigation for high-stakes applications.
- Human rights frameworks to safeguard privacy, non-discrimination, due process, and dignity.

Inclusive AI Development

- Requiring participatory AI design processes that engage affected communities.
- Mandatory accessibility standards for people with disabilities.
- Gender equality measures for balanced development teams and gender impact assessments.
- Special provisions for youth and the elderly.
- Rural-urban equity measures to ensure AI benefits reach all communities.

Institutional Capacity and Implementation

Governance Institution Building

- Strengthening AI governance capacity through a National AI Governance Academy.
- Formal multi-stakeholder engagement platforms for ongoing collaboration.
- Regulatory sandboxes for controlled testing of innovative AI applications.

Monitoring and Enforcement

- This entails implementing an AI Governance Monitoring System to track compliance and evaluate governance frameworks.
- Regular public reporting for transparency.
- Continuous improvement processes for review and updating of governance frameworks.
- Establishing Key Performance Indicators (KPIs) and strategically allocating resources to different strategy pillars.
- A **phased approach** to implementation, starting with key sectors like agriculture, is recommended.

Environmental Sustainability and Climate Considerations

Green AI Governance

Zimbabwe will require environmental impact assessments for large-scale AI deployments, evaluating energy use, carbon footprint and resource consumption. Sustainable AI standards will guide development to minimise environmental harm while maximising social and economic benefits. Carbon footprint monitoring and reporting will be mandatory for AI operations and incentives will promote the use of renewable energy to power AI infrastructure.

Climate-Resilient AI Governance

Zimbabwe's AI governance framework will integrate climate change considerations to ensure systems remain effective under evolving conditions. AI deployments will be required to demonstrate resilience to natural disasters and extreme weather through robust backup and recovery measures. Governance mechanisms will also promote AI applications that support climate mitigation, including carbon monitoring, renewable energy optimisation and sustainable resource management.

Environmental Sustainability

Potential environmental challenges are associated with technological growth. The strategy will integrate Environmental, Social, and Governance (ESG) principles and establish mechanisms for monitoring the Material, Minerals, Devices, and Processes (MMDP) footprint of AI at the user level, leveraging natural resources such as minerals (value addition and beneficiation) to support AI hardware development.

Innovation and Economic Development Balance

Innovation-Friendly Regulation

Zimbabwe will adopt flexible and agile regulatory approaches that adapt to rapid technological change to curtail laws that quickly become outdated. Incentives will encourage AI innovation aligned with national development goals, meeting high safety, ethical and social benchmarks. Start-ups and MSMEs will benefit from simplified compliance and technical support, while protections for AI research and development will ensure that outcomes advance the country's development objectives.

Economic Development Integration

Zimbabwe will integrate AI governance with broader economic development policies to ensure regulation drives rather than restricts growth. Solid governance frameworks will attract international AI investment aligned with national interests, promote exports of AI products and services while maintaining quality and ethical standards. This will also support regional economic integration through cross-border trade and investment in AI technologies.

Media Publicity, Public Trust and Social Acceptance

Trust Building Mechanisms

Zimbabwe's AI governance framework will prioritise public engagement to involve citizens in decision-making and build trust in AI technologies. Transparency and accountability measures will enable public oversight, while accessible grievance and redress mechanisms will ensure fair, timely resolution of AI-related concerns. Ongoing public education and awareness programmes will help citizens understand AI, its governance and their rights in relation to AI systems.

Social Cohesion and Cultural Preservation

Zimbabwe will require cultural impact assessments to ensure AI adoption strengthens, rather than undermines, cultural heritage and social cohesion. AI governance frameworks will include protections for traditional knowledge and cultural practices, supporting the integration of indigenous and modern systems. They will also promote social harmony and national unity while addressing potential sources of AI-related tension or conflict.

Implementation Roadmap and Milestones

Phase 1: Foundation Building (2025-2027)

Zimbabwe will establish core AI governance institutions, including the National AI Council, AI Strategy Implementation Office and National Data Agency, alongside developing the National AI Act and revising the Data Protection Act. Multi-stakeholder engagement platforms and public consultations will be initiated, while capacity-building programmes will be launched to equip government officials and stakeholders with the skills needed for effective AI governance.

## Phase 2: Framework Implementation (2027-2028)

Zimbabwe will operationalise its AI regulatory framework through certification systems, compliance monitoring and enforcement mechanisms, while actively engaging in regional and international governance initiatives and forming strategic partnerships. Sectoral AI governance frameworks will be implemented across key ministries and agencies; alongside public engagement initiatives aimed at building trust and confidence in AI systems.

Phase 3: Optimization and Leadership (2029-2030)

Zimbabwe will continuously improve and optimise its AI governance frameworks based on implementation experience and technological advances and active participation in regional and continental initiatives. The goal is to achieve international recognition as a model for developing countries while ensuring governance remains sustainable, adaptive and responsive to technological and social change.

Success Metrics and Evaluation Framework

The success of this pillar will be measured by public trust in AI systems, compliance with governance requirements, effectiveness of enforcement mechanisms, stakeholder engagement, international recognition and the contribution of AI governance to national development goals. Serving as the foundation for responsible AI development, it positions Zimbabwe as a regional and global leader in ethical AI governance. Through multi-level frameworks that balance innovation with protection, Zimbabwe will build trust while ensuring AI serves all citizens and supports sustainable national development.
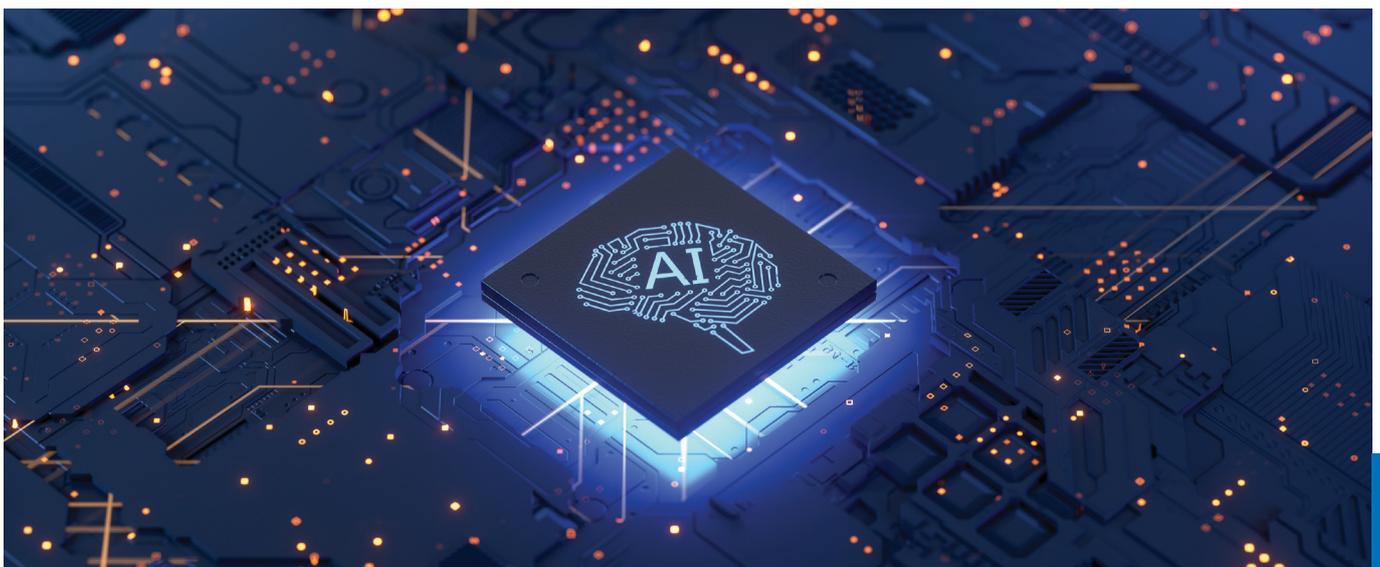
Pillar 5: AI Research, Development and Innovation

Strategic Objective: Zimbabwe aims to be a recognized hub for advanced AI research and development, promoting scientific discovery, technological innovation and locally tailored intellectual property that meets national priorities and enriches global AI knowledge.

Strategic Foundation and Vision

To establish a sustainable AI ecosystem in Zimbabwe, a strong foundation of fundamental and applied research is essential. This pillar aims to transition Zimbabwe from being a consumer to a producer of innovative AI technologies, fostering a dynamic Research and Development environment where academic theories are effectively applied in industry. The goal is to create a self-sustaining innovation cycle that attracts global talent, secures patents and positions Zimbabwe as a leader in niche AI areas that leverage the country's strengths.

Core Strategic Thrusts

Core strategic thrusts for advancing AI in Zimbabwe focus on three main areas:

Foundational and Applied Research Excellence

This includes defining a National AI Research Agenda that aligns research themes with national challenges, such as developing AI for drought-resistant crops and Natural Language Processing in local languages. Additionally, a competitive grant scheme via the National Research Fund is proposed for AI projects, aimed at supporting innovative, high-risk research. Public research outputs must be prioritized, encouraging publication in reputable, open-access platforms to enhance Zimbabwe's academic stature.

Innovation and Commercialization Pipeline

To facilitate the transition from research to market, AI Technology Transfer Offices will be bolstered within universities and associated research centers to manage AI-related intellectual property effectively. A framework will be set up for private companies to partner with public research entities, ensuring the relevance and practical impact of AI developments.

Niche Specialisation and Global Leadership

Specific universities or institutes will be designated as centres of specialization to lead in AI niches, such as sustainable mining and disease diagnostics. Furthermore, support will be provided for local researchers to engage with and contribute to significant global open-source AI initiatives, thus enhancing skills and building Zimbabwe's international reputation in the AI domain.

Key Performance Indicators (KPIs)

- Number of peer-reviewed AI publications by Zimbabwe-based researchers in top-tier international journals/conferences.
- Number of patents filed and granted for AI inventions originating from Zimbabwe.
- Volume of competitive R&D grant funding secured from both national and international sources.
- Number of AI research projects successfully commercialised or licensed to industry.
- Establishment and international ranking of at least two globally recognised AI research Centres of Specialisation.

Pillar 6: Strategic International Collaboration and Diplomacy

Strategic Objective: Zimbabwe aims to enhance its role in the global AI landscape through strategic partnerships that boost national capabilities, attract investments, amplify its influence in AI governance and secure technology transfer while protecting digital sovereignty.

Strategic Foundation and Vision

In an interconnected world, no nation can succeed in AI working alone; therefore, international cooperation must evolve into a strategic engagement. This approach emphasizes that while global collaboration is vital, it cannot replace the development of domestic capacities. The goal is to establish Zimbabwe as a respected partner within the global AI ecosystem, contributing to and benefiting from international advancements while advocating for an equitable AI order that serves the interests of the Global South.

Core Strategic Thrusts

The document outlines three core strategic thrusts aimed at enhancing Zimbabwe's position in the artificial intelligence (AI) landscape, focusing on partnerships, global governance and economic diplomacy.

Bilateral and Multilateral Partnerships

- **Strategic Technology Alliances:** Zimbabwe seeks to establish formal AI cooperation agreements with selected "AI Sprinter" nations, emphasizing joint research in pivotal sectors, such as smart cities, e-Health and AgriTech.

- **Engagement with Global Tech Hubs:** The strategy includes forming formal links with leading AI hubs across the globe to facilitate talent exchanges, joint ventures and enhance market access for Zimbabwean AI products.

- **Diaspora Knowledge Networks:** There is a proposal to formalize and extend the "Come Home to Build" program into a structured "Global Zimbabwean AI Network," fostering ongoing knowledge transfer, mentorship and investment opportunities.

Global Governance and Standard-Setting

- **Active Multilateral Participation:** Zimbabwe aims to maintain a consistent and impactful presence in AI forums such as the SADC, COMESA, UN, UNESCO, ITU and the African Union (AU) to advocate for ethical frameworks that safeguard the interests of developing nations.

- **Standards Adoption and Development:** The document directs the Standards Association of Zimbabwe (SAZ) to actively contribute to international AI standard-setting organizations like ISO and IEEE, ensuring that global standards align with the specific context and needs of Zimbabwe.

- **South-South Cooperation Leadership:** Zimbabwe is encouraged to lead a coalition of SADC and African nations to negotiate collectively with major AI powers on essential issues like data governance, intellectual property rights and access to computational resources.

Economic Diplomacy and Investment Attraction

- **Targeted Investment Promotion:** The strategy promotes hosting "Zimbabwe AI Investment Summits" and roadshows in key international financial centers to highlight AI opportunities and draw foreign direct investment into Zimbabwe's AI ecosystem.

- **AI for Development Partnerships:** There is an emphasis on deepening collaboration with international development agencies (such as ITU, UNECA, UNESCO, UNICEF, UNDP, ADB and the World Bank) and philanthropic organizations (like the Gates Foundation) to co-fund AI projects aligned with Sustainable Development Goals (SDGs).

Through these strategic thrusts, Zimbabwe aims to position itself as a competitive player in the global AI arena while fostering sustainable development and ethical practices.

Key Performance Indicators (KPIs)

- Number of active bilateral/multilateral AI cooperation agreements.
- Amount of foreign direct investment (FDI) in the AI sector.
- Number of Zimbabwean experts in leadership roles within international AI standards bodies and policy forums.
- Hosting of at least one major international AI conference or summit in Zimbabwe every two years.
- Influence of Zimbabwe's positions in international AI governance declarations and frameworks.

Pillar Integration and Synergistic Implementation

The six strategic pillars of Zimbabwe's National AI Strategy are designed as an integrated ecosystem where each pillar reinforces and amplifies the others, creating synergistic effects that exceed the sum of their individual contributions. This integrated approach ensures that Zimbabwe's AI transformation is sustainable and aligned with national development objectives.

Cross-Pillar Synergies

The AI strategy consists of six pillars, each reinforcing the other. Pillar 1 provides expertise for infrastructure, while Pillar 2 focuses on advanced AI research. Computational sovereignty in Pillar 2 supports large-scale AI adoption, while Pillar 3 generates practical experience. Pillar 4 focuses on governance frameworks, building public trust and regulatory certainty. These frameworks also promote ethical AI principles, producing ethically minded professionals who strengthen governance through effective implementation. Pillar 5 (R&D) functions as the "Engine of Novelty", utilizing talent from Pillar 1 and supported by Pillar 2's infrastructure to generate innovative solutions for Pillar 3, with ethical oversight from Pillar 4. Pillar 6 (International Collaboration) serves as the "Force Multiplier and Global Conduit", facilitating talent access from Pillar 1, global infrastructure and funding for Pillar 2, creating export markets for Pillars 3 and 5, while safeguarding Zimbabwe's sovereignty through Pillar 4.

Implementation Coordination

The implementation of these six pillars will be coordinated through the National AI Council and AI Strategy Implementation Office to ensure that activities across pillars are synchronized, resources are optimized and synergies are maximized. Regular cross-pillar coordination meetings, shared performance indicators and integrated planning processes will ensure that the pillars function as a unified system rather than isolated initiatives.

Adaptive Management and Continuous Improvement

The six-pillar framework is built to adapt to changing technological, economic and social conditions, with regular reviews ensuring the pillars work together effectively while responding to emerging opportunities and challenges in the fast-evolving AI landscape. Through this integrated approach, Zimbabwe's National AI Strategy will lay the foundation for AI-driven national transformation that benefits all citizens and positions the country as a leader in responsible AI development and deployment in Africa and beyond.

Cross-Cutting Integration Themes

The six strategic pillars of Zimbabwe's AI framework are an interconnected ecosystem that works together through five fundamental cross-cutting themes for optimum collective impact on Zimbabwe's AI development.

Inclusive Development and Digital Equity

This theme ensures AI-driven transformation reduces inequality and creates meaningful opportunities for all Zimbabweans, particularly marginalized communities, rural populations, women, youth and people with disabilities. Across all six pillars, this is achieved through targeted programs ensuring equal access to AI education (Pillar 1), distributed infrastructure reducing digital divides (Pillar 2), sector-specific applications prioritizing underserved populations (Pillar 3) and community-level governance structures with Ubuntu-centred ethics (Pillar 4).

Cultural Preservation and Enhancement

This theme maintains and strengthens Zimbabwe's cultural identity throughout AI adoption. It integrates indigenous knowledge systems into AI education (Pillar 1), develops digital cultural preservation platforms (Pillar 2), supports cultural industries and local languages (Pillar 3) as well as requires cultural impact assessments while protecting traditional knowledge (Pillar 4).

Adaptive Governance and Democratic Accountability

This theme promotes flexible agile governance mechanisms that evolve with technological advances while ensuring democratic accountability and citizen participation. It operates through flexible curriculum frameworks (Pillar 1), infrastructure planning that accommodates technological evolution (Pillar 2), regulatory sandboxes enabling controlled experimentation (Pillar 3) and multi-stakeholder governance with regular policy review cycles (Pillar 4).

Sectoral Synergies and Integrated Solutions

This theme maximizes interconnected AI benefits across healthcare, education, agriculture, finance and public services through integrated solutions. It creates cross-sectoral training programs (Pillar 1), shared infrastructure platforms (Pillar 2), integrated service delivery addressing multiple citizen needs (Pillar 3) and governance frameworks facilitating cross-sectoral collaboration (Pillar 4).

Sustainable Development and Environmental Stewardship

This theme ensures AI development contributes to sustainability while minimizing environmental impact. It embeds environmental education and green AI research (Pillar 1), promotes green infrastructure and renewable energy integration (Pillar 2), supports environmental monitoring and climate-smart practices (Pillar 3) and requires environmental impact assessments with sustainable development regulations (Pillar 4).

Implementation Synergies and Phased Coordination

The six pillars create powerful synergies: talent development (Pillar 1) provides expertise for infrastructure (Pillar 2), which enables widespread adoption (Pillar 3), generating experience for effective governance (Pillar 4), which builds trust for further adoption. Implementation follows three coordinated phases:

- **Phase 1 (Foundation Building, 2025-2026):** Establishes fundamental capabilities through talent pipeline initiation, core infrastructure development and governance framework establishment.

- **Phase 2 (Core Applications and Scaling, 2027-2028):** Deploys high-impact AI applications across key sectors while scaling foundational capabilities.

- **Phase 3 (Ecosystem Maturation and Leadership, 2029-2030):** Consolidates progress and establishes Zimbabwe as a regional AI leader through full pillar integration.

Cross-Cutting Enablers Framework

Seven focused enablers provide essential support systems across all strategic pillars, ensuring coordinated implementation and sustainable impact aligned with the four-pillar structure.

AI Transformation Enabler Framework

Enabler	Mission	Key Actions	Pillar Alignment
1. **Education and AI Literacy**	Integrate AI literacy across all education levels and create a digitally fluent population	• Embed AI concepts in national curriculum from primary to higher and tertiary education. Revise curricula to be transdisciplinary and focused on AI applications. • Launch 'Digital Mhuri/Umdeni' curriculum reform aligned with Education 5.0 • Establish AI Centers of Excellence at leading universities and POTRAZ. • Train teachers through 'Digital Varairidzi/Umbalisi' professional development • Create mandatory 'AI and Society' courses for all tertiary students • Nationwide Literacy: Utilize radio, National TV, and online platforms for non-formal AI education. • Develop capacity for non-formal education institutions to offer AI Education. This helps to extend AI education to the remote parts of the rural areas to educate even the elderly. • Leverage on the opportunity cost of AI such that teaching can be done using other non-formal platforms and genres like Arts and Entertainment • Targeted Scholarships & Brain Gain: Offer targeted scholarships in AI fields to allied nations and to incentivise the Zimbabwean diaspora who have AI expertise to contribute remotely.	Pillar 1 (Primary), Pillar 4 (Ethics integration)

Enabler	Mission	Key Actions	Pillar Alignment
2. Workforce Development and Skills	Transform the current workforce with AI-relevant skills and capabilities	• Launch 'Skills for New Zimbabwe' national upskilling platform • Create sector-specific AI academies (AgriTech, MiningTech, Public Sector) • Provide subsidized access to global AI learning platforms • Establish AI-powered career guidance systems • Develop industry-recognized micro-credentials and certifications	**Pillar 1** (Primary), Pillar 3 (Sectoral application)
3. Talent Cultivation and Research Excellence	Develop world-class AI experts and research capabilities	• Establish National AI Research Fellowship program • Create specialized research focus areas at universities • Engage diaspora through fractional appointments and mentorship • Fund advanced AI research projects and PhD programs • Build international research partnerships and exchanges • Specialized Talent Pipeline: Develop distinct pathways for AI Researchers, Application Developers, and Commercialization Experts.	**Pillar 1** (Primary), Pillar 2 (Infrastructure support)
4. Regulatory Framework and Standards	Establish clear, adaptive governance structures for responsible AI development	• Enact National AI Policy Act with risk-based regulatory approach • Develop national AI technical standards with Standards Association Zimbabwe (SAZ and POTRAZ • Create National AI Regulatory Sandbox ('Innovation Crucible/Umtombo Welwazi') • Establish clear compliance pathways and enforcement mechanisms with POTRAZ • Implement dynamic 'living guidelines' for emerging technologies	**Pillar 4** (Primary), All pillars (Compliance)
5. Ethics and Responsible AI	Embed natural culture/Ubuntu philosophy to authentically reflect Zimbabwean values in all AI systems	• Implement Ubuntu-based AI Ethics Framework • Establish independent National AI Ethics Committee • Mandate Ethical Impact Assessments for high-risk AI projects • Create 'Trustworthy AI - Made in Zimbabwe' certification • Develop bias detection and mitigation protocols • Develop local/regional/global content that promotes Zimbabwean Ethical Values	**Pillar 4** (Primary), All pillars (Ethics integration)

Enabler	Mission	Key Actions	Pillar Alignment
6. Investment and Financing	Mobilize diverse funding sources to fuel AI ecosystem development	• Establish National AI Innovation Fund with government co-investment • Create 'Pioneer Status' tax incentives for AI investments • Launch AI Investor Education Program for local capital markets • Conduct international roadshows to attract global investment • Align with 'AI for Good' philanthropic funding opportunities	**Pillar 2** (Infrastructure), Pillar 1 (Talent funding), Pillar 3 (Adoption support)
7. Strategic Partnerships and Cooperation	Build alliances that accelerate progress while maintaining sovereignty	• Lead African AI governance through SADC and AU initiatives • Host annual 'Harare Declaration on Ethical AI for Development' • Establish Joint Innovation Labs between government and private sector • Create 'Data for Development' agreements with private companies • Build Global South partnerships with other 'AI Sprinter' nations	**Pillar 4** (Regional governance), All pillars (International cooperation) Pillar 1 (Research) Pillar 2 Pillar 3
8. Power	A strategic shift towards alternative energy sources, Renewable energy (solar, wind, kinetic, nuclear) to run the power-hungry AI infrastructure in a hybrid format.	• Critical Enablers: The immense computational and connectivity demands of AI were noted, with the current national infrastructure deemed insufficient. • Energy Sector Inclusion: The strategy must explicitly include the energy sector. Reliable and abundant power is non-negotiable for data centers and AI facilities.	**Pillar 4** (Energy Infrastructure)

Enabler Integration with Six-Pillar Structure

The seven enablers are closely aligned with the Six-pillar framework to ensure effective support and prevent duplication.

For Pillar 1, Enablers 1, 2 and 3 drive talent development through education, workforce transformation and research excellence, while Enablers 6 and 7 provide funding and international partnerships.

For Pillar 2, Enabler 6 delivers critical financing for infrastructure, with Enablers 4, 7 and 8 ensuring regulatory clarity and international cooperation.

For Pillar 3, Enablers 2 and 6 advance sectoral adoption via workforce development and financing, while Enablers 4 and 5 promote responsible adoption through regulation and ethics.

For Pillar 4, Enablers 4, 5, 7 and 8 strengthen governance with regulatory frameworks, ethics implementation and international collaboration, while all enablers collectively contribute to effective governance.

Success Metrics and Coordination

Each enabler includes specific success metrics:

- **Enabler 1:** AI literacy rates and curriculum integration.
- **Enabler 2:** Workers upskilled and certifications earned.
- **Enabler 3:** Research publications and diaspora engagement.
- **Enabler 4:** Regulatory clarity index and compliance rates.
- **Enabler 5:** Ethics assessments completed and bias incident reports.
- **Enabler 6:** Total investment mobilized and funded start-ups.
- **Enabler 7:** Partnership agreements signed and regional leadership roles.
- **Enabler 8:** Strategic shift towards sustainable alternative and renewable energy sources

The National AI Council and AI Strategy Implementation Office will coordinate enabler implementation to ensure alignment with the six-pillar structure, maximize synergies and avoid duplication. Regular cross-enabler coordination meetings, shared performance indicators and integrated planning processes will ensure that enablers function as a unified support system for the four strategic pillars.

Flagship Initiatives: Igniting the National AI Mission

A strategy is only as powerful as the action it inspires. To translate our vision into reality, Zimbabwe will launch five bold, interconnected flagship initiatives within the first 18 months of this strategy's adoption. These are not pilot programs; they are national missions designed to be highly visible, deeply impactful and to lay the foundational cornerstones for the decades of work to come. They are the sparks that will ignite our national AI engine.

AI GRAND CHALLENGE
Yearly competition for innovative solutions

PROJECT PANGOLIN
National AI and data platform

National AI Initiatives

MUGOVE FUND
Co-investment fund for Ai startups

NZWISISO AI CAMPAIGN
Media, Public awareness and education

INNOVATIVE CRUCIBLE
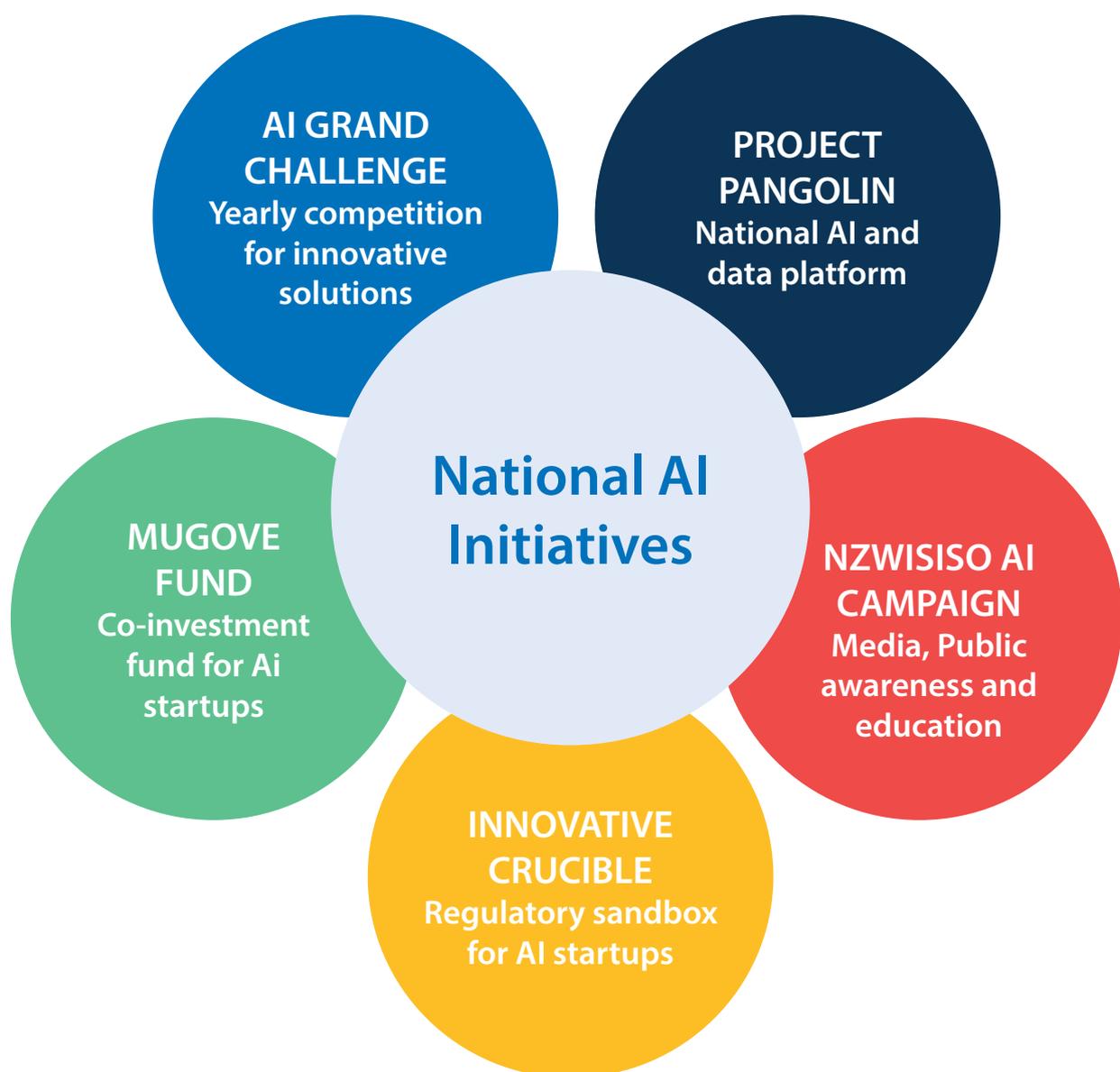Regulatory sandbox for AI startups

Figure 5: National AI Innitiatives

The Zimbabwean AI Grand Challenge: A National Quest for Solutions

A nationwide competition engaging innovators, researchers, students and entrepreneurs to solve pressing national priorities such as boosting maize yields, reducing child mortality and creating AI disaster warning systems. Winners gain funding, platform access, pilot contracts and international exposure, while all participants benefit from mentorship, AI problem formulation and solving, datasets and ethical AI training.

The National AI and Data Platform (Project "Pangolin/Haka/Inkakha"): The Digital-Bedrock

A secure, sovereign platform providing national datasets and computing power for AI development. Rolled out in phases, it will set up infrastructure, digitise agriculture and health data and open access to accredited users. Using a federated model, sensitive data stays within ministries but is securely accessed via privacy-preserving APIs. Driving digitalisation of rural and urban data for informed decision-making.

AI for Every Zimbabwean (The "Nzwisiso.ai" Campaign): Winning Hearts and Minds

A public campaign to make AI understandable, relevant and trusted through school programmes, local-language media and community Digital Ambassadors. Through practical demonstrations in farming, health and education, coupled with open ethics discussions, the initiative fosters trust and broad engagement across society.

The National AI Regulatory Sandbox (The "Innovation Crucible/Umthombo Wolwazi"): Safe Space for Bold Ideas

A monitored environment in which selected start-ups test AI solutions with temporary regulatory flexibility. Managed with key regulators, it enables safe innovation, informs policy updates and positions authorities as partners in advancing technology.

The National AI Innovation Fund (The "Mugove/Umqele" Fund): Capital for Creation

A co-investment fund matching private investment in certified AI start-ups. Independently managed, it provides both funding and accelerator support mentorship, legal aid and networks helping startups scale sustainably.

Implementation and Governance

This section outlines the governance framework designed to steer the Zimbabwe National AI Strategy. It is a model built for both authority and agility, ensuring that the national AI mission is pursued with the focus of a unified command and the dynamism of a networked team. This governance structure is composed of three core, interlocking components: The National AI Council (The Strategic Mind), the AI Strategy Implementation Office (The Operational Heart) and the Technical Working Groups (The Expert Hands).

The AI Strategy Implementation Office (AISIO): The Operational Heart

The AISIO is the engine that executes Zimbabwe's AI strategy, operating like a agile tech start-up within the lead ministry. Staffed by specialists in project management, policy, artificial intelligence and any other relevant expertise as shall be required as well partnerships, it drives flagship initiatives, manages monitoring and evaluation and coordinates with stakeholders. Serving as NAIC's secretariat, it also leads knowledge management and public engagement through initiatives like "AI for Every Zimbabwean."

The National Digital Regulatory Committee (NDRC): The Regulatory Guardian

The National Digital Regulatory Committee (ZNDC) is the independent regulatory body for AI in Zimbabwe. Hosted within POTRAZ for administrative efficacy, the ZNDC operates under the strategic supervision and performance oversight of the AI Strategy Implementation Office (AISIO). Its mandate is to develop and enforce a robust, agile regulatory framework and sector specific strategies that ensure responsible AI innovation, in alignment with the goals of this National AI Strategy. This Committee is comprised of leading experts across government, industry sectors, academic fields, ethics and emerging start-ups. It oversees AI performance and promotes collaborations among stakeholders to drive the country's AI agenda effectively.

The Technical Working Groups (TWGs): The Expert Hands

The TWGs turn national AI goals into sector-specific solutions, delivering results in priority areas. Each is co-chaired by a senior government official and private sector leader, with initial focus on agriculture, health, mining, finance and education. Projects include precision farming tools, AI diagnostics, regulatory sandbox trials and curriculum reform. Together with NAIC's strategic oversight ("the Mind/Pfungwa/Ingqondo") and AISIO's operational drive ("the Heart/Inhliziyo"), the TWGs ("the Hands") ensure coordinated, impactful AI transformation.

Implementation Roadmap: (2026-2030)

A vision for the future is realized through deliberate and sustained action. This Implementation Roadmap serves as the nation's coordinated plan of execution, aligning the efforts of all stakeholders within the ecosystem. It operationalizes the overarching strategy into a phased and disciplined sequence of initiatives, ensuring that ambition is consistently matched by accountability. The roadmap is structured to generate a compounding effect: beginning with targeted, high-impact interventions that establish momentum and credibility (The Sprint), advancing towards the development of essential infrastructure and institutional capacity (The Build) and culminating in the nationwide scaling of these achievements to drive comprehensive transformation (The Scale). As a living document, it will be subject to annual review by the National AI Council, yet it provides a clear, structured framework to guide collective action towards national objectives. It will also be taken as a learning process where the implementation and mistakes are recorded in order to achieve indigenous knowledge and capability.

Phase 1: The Sprint - Laying the Foundation (First 100 Days: Approx. Q1-Q2 2026)

The Mission: This initial phase is about urgently building trust and belief across the nation and the world that AI is a national priority for Zimbabwe. The goal is to establish the core governance, launch the Zimbabwe strategy and secure the first critical partnerships. In doing so it is important to draw historical parallels with past technological revolutions as to be response to issues of adaptation and reskilling,

AI Strategy Phase 1 Milestones and Deliverables

Milestone	Key Deliverables	Lead Entity	Success Indicator
Establish National Command Structure	• Official appointment and first inaugural meeting of the National AI Council (NAIC). • Legal charter for the AI Strategy Implementation Office (AISIO) finalized. • Recruitment of the AISIO Director and core team initiated.	Office of the President & Cabinet / Ministry of ICT, PCS / POTRAZ	NAIC is operational and has held its first meeting. AISIO Director is appointed.
Launch the National Quest	• Official launch of The Zimbabwean AI Grand Challenge (Year 1: Food Security). • Publication of the challenge rules, prize structure and call for applications. • A high-profile national launch event to capture public imagination.	AISIO / TWG for Agriculture	Over 50 qualified teams have registered for the Grand Challenge. Significant national media coverage.
Secure Foundational Partnerships	• First meeting of the "Future-Ready" Task Force (TWG for Education). • Memorandum of Understanding (MOU) signed with at least two leading national universities to become inaugural AI Centres of Excellence.	Ministry of Higher Education / AISIO / MICTPCS / POTRAZ	Legally binding MOUs are in place, outlining commitments for curriculum development and research focus.
Initiate the "Come Home to Build" Program	• Launch of a global online portal for the Zimbabwean diaspora in tech. First virtual town hall held with diaspora tech leaders to present the strategy and the "Come Home to Build" initiative. • Leveraging virtual collaboration platforms to reduce over-reliance on physical infrastructure.	Ministry of Foreign Affairs / AISIO	Over 200 diaspora tech professionals have registered on the portal. A formal Diaspora AI Advisory Group is formed.

Phase 2: The Build - Constructing the Core Engine (Q3 2025 - Q4 2027)

The Mission: With the foundation laid and momentum building, this 18-month phase is about the heavy lifting. It is the core construction period where Zimbabwe will put in place the critical infrastructure and the human capital pipelines that will power AI for the nation. This phase requires disciplined project management and sustained investment.

AI Strategy Phase 2 Milestones and Deliverables

Milestone	Key Deliverables	Lead Entity	Success Indicator
2.1: "Project Pangolin/Haka/ Inkaka" Phase 1 & 2	• ZCHPC initial cluster is physically installed, operational and benchmarked. • The Pangolin Data Trust legal framework is gazetted. • The National Agricultural Dataset and National Health Records Dataset are 50% digitized and curated.	Ministry of ICT / AISIO / POTRAZ	ZCHPC is live and provides compute resources to the Grand Challenge finalists. The first foundational datasets are accessible via secure APIs to accredited researchers.
2.2: Launch the "Innovation Crucible/ Umthombo Welwazi"	• The National AI Regulatory Sandbox is officially launched in partnership with the RBZ and POTRAZ. • The first cohort of 5–7 FinTech and Telecoms start-ups is selected and begins operating within the Sandbox.	NAIC / RBZ / POTRAZ	The first cohort of start-ups is publicly announced and operating under the Sandbox framework.
2.3: Activate the "Mugove/Umqele" Fund	• The National AI Innovation Fund is legally established and its independent board is appointed. • The first call for proposals from private VC and Angel investors is issued. • The first three co-investments in Zimbabwean AI start-ups are announced.	Ministry of Finance / AISIO	The fund is capitalized and has executed its first co-investment deals, injecting critical seed funding into the ecosystem.
2.4: Rollout of "Digital Mhuri/ Umdeni" & "Varairidzi/ Umbalisi"	• The new AI and Data Literacy curriculum for primary and secondary schools is finalized. • The "Digital Varairidzi/Umbalisi" program has trained its first cohort of 1,000 Master AI Teachers. • The "Skills for a New Zimbabwe" online platform is launched with at least 50 subsidized courses.	Ministry of Primary and Secondary Education / Ministry of Higher and Tertiary Education Innovation Science and Technology Development, Ministry of ICTPCS, Ministry of Youth / POTRAZ	The new curriculum is being piloted in 100 schools. The skills platform has over 10,000 registered users.
2.5: The "Harare Declaration"	• The inaugural "AI for the Global South" international conference is hosted in Harare. • The first "Harare Declaration on Ethical AI for Development" is published and presented to the African Union.	Ministry of Foreign Affairs / NAIC	The conference attracts over 500 international delegates. The Declaration is cited in AU policy discussions.

Phase 3: The Scale - National Transformation (Q1 2028 - Q4 2030)

The Mission: The Zimbabwe core engine, talent pipelines, and first successes are now focused on scale and saturation, with the mission to drive widespread AI adoption across the economy and society, ensuring benefits are felt by every citizen, and translating this potential into a nationwide, irreversible transformation.

AI Strategy Phase 3 Milestones and Deliverables

Milestone	Key Deliverables	Lead Entity	Success Indicator
3.1: Widespread Sectoral Adoption	• The winning solution from the Year 1 Grand Challenge is now being rolled out to 25% of its target farmer population. • At least three graduates from the Regulatory Sandbox have received full operating licenses and are scaling their services. • The government has officially adopted at least two AI solutions (e.g., for procurement auditing, e-services) for nationwide use.	All TWGs / AISIO	Measurable improvements in KPIs for the target sectors (e.g., a 15% increase in average maize yield in pilot areas, a 10% reduction in government procurement fraud).
3.2: A Self-Sustaining Ecosystem	• The "Mugove/Umqele/Isabelo" Fund has attracted at least two international VC firms as co-investment partners. • A Zimbabwean AI start-up achieves a valuation of over US$100 million (a "Zimba-Soaring Eagle"). • Our AI Centres of Excellence are now attracting paying international students and corporate research partners.	AISIO / Ministry of Finance	The ratio of private to public investment in the AI ecosystem has shifted to 3:1. At least one major international tech company has established a research lab in Zimbabwe.
3.3: A Nation of AI Literates	• The "Digital Mhuri/Umdeni" curriculum is now standard in 80% of schools nationwide. • The "Nzwisiso.ai" campaign has reached a verified 60% of the adult population. • The "Skills for a New Zimbabwe" platform has issued over 50,000 professional certifications.	Ministry of Education / Ministry of Information Communication Technology	National surveys show a 40% increase in public trust in AI technology and a significant increase in citizens using AI-powered government services.
3.4: Global Thought Leadership	• Zimbabwe holds a leadership position (e.g., Chair or Rapporteur) in the SADC or African Union AI Policy Working Group. • The "Harare Declaration" is now a widely recognized framework for ethical AI in the Global South. • At least two AI-related patents filed by Zimbabwean universities are licensed to international companies.	NAIC / Ministry of Foreign Affairs	Zimbabwean officials and experts are regularly invited to speak at major global AI forums like the UN's AI for Good Global Summit.

Roles and Responsibilities

The AI strategy is a national agenda requiring the collective effort of the entire society. The Zimbabwe National Commitment outlines five pillars with sacred duties and promises to uphold, binding the nation together in a shared mission. The failure of any pillar weakens the structure, while the strength of each reinforces it. The Citizen at the center holds the entire edifice in place, representing the beginning and end of the purpose.

The Role of Government: The Visionary Architect and Steadfast Guardian

Government sets the national AI vision, builds legal and infrastructural foundations and safeguards inclusive progress. It invests in key platforms like the ZCHPC and National Data and AI Platform, ensures universal connectivity and creates an agile regulatory framework that protects citizens and supports innovation. It validates local start-ups through procurement, represents Zimbabwe in global AI forums, forges alliances and defends national interests internationally.

The Role of the Citizenry: The Sovereign and the Soul

Citizens are the owners and beneficiaries of the AI strategy, shaping policy through dialogue and public consultations such as the "AI & Ethics Dare." They have the right to digital literacy via platforms like "Skills for a New Zimbabwe," protection from AI-related harms and control over their personal data. In turn, they must engage actively, use AI ethically and treat their data as a personal asset.

The Role of Industry

Industry drives innovation, job creation and economic growth by turning ideas into products and services. It invests in R&D, collaborates with academia to develop talent, upholds ethical standards and supports startups through mentorship and supply chain access. Its responsibility is to compete globally while meeting local needs.

The Role of Academia

Academia advances knowledge, trains ethical leaders and critically examines AI's societal impact. It conducts long-term research, maintains academic standards and acts as an independent voice on national AI strategy. Strong global links allow it to bring fresh ideas, talent and best practices into Zimbabwe's AI ecosystem.

The Role of Civil Society

Civil society ensures AI serves justice, equity and human dignity. It advocates for marginalized groups, monitors AI use, exposes harm, educates the public and facilitates dialogue between citizens and policymakers. Its role is to hold all actors accountable and ensure progress aligns with shared values.

Monitoring and Evaluation (M&E) Framework

The Monitoring and Evaluation (M&E) Framework, based on the principle "What gets measured gets done," serves as a National Dashboard of Progress, promoting transparency through publicly available KPI data, outcome-orientation, and adaptive learning, ensuring accountability and relevance throughout the strategy's lifecycle.

Key Performance Indicators (KPIs) for each Strategic Objective

Zimbabwe will employ a set of Key Performance Indicators (KPIs) to track progress from foundational activities to long-term societal impact. Lagging Indicators measure the ultimate success of the strategy, while Leading Indicators provide operational insights into flagship initiatives' health and momentum, offering early warnings when parts of the strategy are at risk of falling behind.

The following Table is a detailed breakdown of the KPIs for each of the strategy's core pillars and enablers.
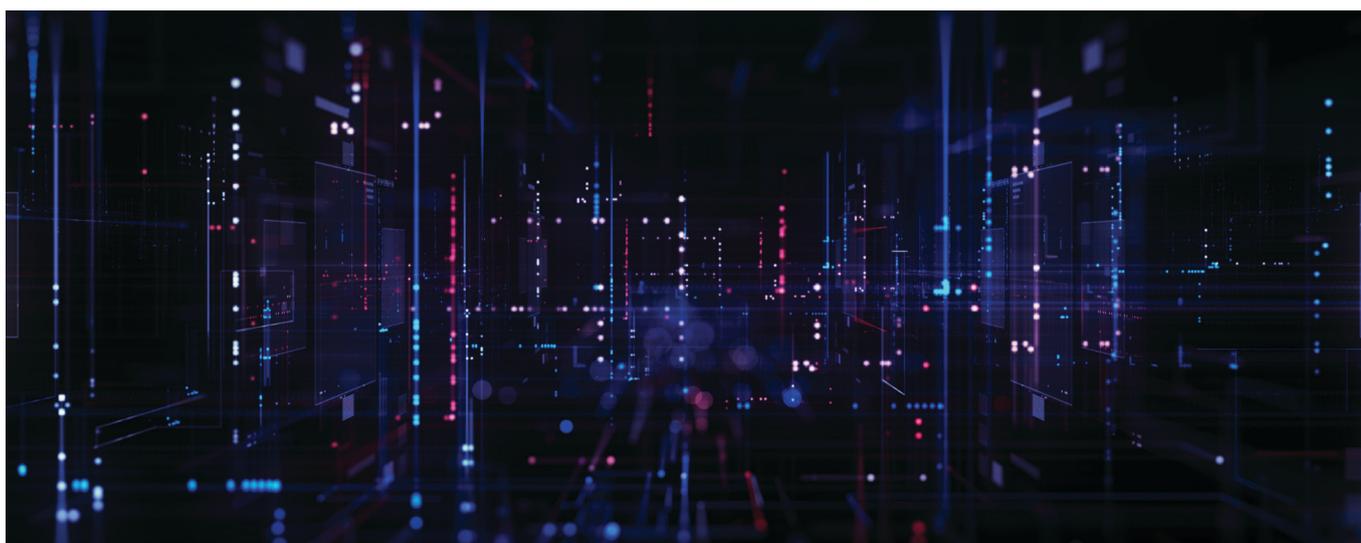
Pillar 1: AI for Economic Growth and Modernisation

Objective	Lagging Indicators	Leading Indicators
1.1: Transform Key Sectors	• GDP Contribution of Target Sectors: % increase in the contribution of Agriculture, Mining and Manufacturing to national GDP by 2030. • National Food Security Index: A measurable improvement in Zimbabwe's score on the Global Food Security Index.	• Adoption Rate: of commercial farms and MSMEs that have adopted a certified "Made in Zimbabwe" AI solution. • Productivity Metrics: % increase in average maize yield per hectare in areas using AI tools. • Safety Metrics: % reduction in safety incidents in mines that have deployed AI-powered predictive maintenance.
1.2: Foster a Vibrant Digital Economy	• AI Sector Economic Value: The estimated value (in US$) of Zimbabwe's domestic AI market by 2030. • High-Value Job Creation: of new, direct jobs created in the AI sector (e.g., AI/ML Engineer, Data Scientist).	• Startup Formation & Survival Rate: of new AI start-ups founded per year and the 3-year survival rate of those start-ups. • "Mugove" Fund Performance: Total value of private capital "crowded-in" by the fund. of start-ups funded. • "Zimba-corn" Watch: of Zimbabwean AI start-ups that achieve a valuation of over US$100 million.

Objective	Lagging Indicators (The "North Star"	Leading Indicators (The "Dashboard")
1.3: Enhance Public Service Delivery	• Citizen Satisfaction Index: % improvement in the national Citizen Satisfaction Index for public services (Health, Education, Home Affairs). • World Bank Governance Indicators: Measurable improvement in Zimbabwe's score for "Government Effectiveness" and "Control of Corruption."	• Platform Usage: of active monthly users of the "Gogo.ai" health platform and the "People's Office" e-gov platform. • Service Delivery Time: Average time taken to process a passport application or a birth certificate registration. • Diagnostic Accuracy: % improvement in the accuracy of TB diagnosis in clinics using the national AI diagnostic tool.

Pillar 2: Foundational Infrastructure and Data Ecosystems

| Objective	Lagging Indicators (The "North Star"	Leading Indicators (The "Dashboard")
2.1: Ensure Access to HPC	• National Compute Capacity: Total petaflops of sovereign HPC capacity available within Zimbabwe. • Global AI Index (Compute Rank): Zimbabwe's ranking on the compute infrastructure sub-index of a major global AI index.	• ZCHPC Utilization Rate: % of available compute time on the ZCHPC that is actively being used by accredited researchers and startups. • Cost of Compute: The average cost per hour for a Zimbabwean startup to train a standard AI model, compared to the global cloud provider average.
2.2: Establish a National Data & AI Platform	• Data Availability Score: A national index score measuring the availability and quality of machine-readable data for key sectors. • Research Output: of peer-reviewed academic papers published using data from the National Foundational Datasets.	• Platform Onboarding: of government ministries and private sector partners that have integrated with the "Pangolin" Data Trust framework. • Dataset Completion: % completion of the digitization and curation of the National Agricultural and Health datasets. • API Calls: of secure API calls made to the platform per month by accredited users.
2.3: Promote Green Infrastructure	• Carbon Footprint of National Compute: The overall CO_2 emissions per petaflop of the ZIM-HPC. • Renewable Energy Usage: % of the ZIM-HPC's total energy consumption that is sourced from certified renewable energy.	• PUE (Power Usage Effectiveness): The PUE score of the national data centres (a measure of energy efficiency). • Deployment of Green AI Models: of projects funded by the National Research Fund that focus on computationally efficient "Green AI" techniques.

Enabler 1: Human Capital Development

Objective	Lagging Indicators	Leading Indicators
3.1: Integrate AI into National Education	• Global Talent Competitiveness Index: Zimbabwe's overall ranking and its rank in the "Skills" sub-pillar. • STEM Graduates: % increase in the number of students graduating from Zimbabwean universities with STEM degrees.	• Curriculum Rollout: % of primary and secondary schools that have fully implemented the "Digital Mhuri/Umdeni" curriculum. • Teacher Training: of teachers who have completed the "Digital Varairidzi/Umbalisi" certification program.
3.2: Launch Upskilling & Reskilling Programs	• Workforce Productivity Growth: The annual growth rate of labour productivity in the formal economy. • Digital Skills Penetration: % of the adult workforce that possesses at least intermediate-level digital skills, as measured by national surveys.	• Platform Enrolment & Completion: of registered users and course completion rates on the "Skills for a New Zimbabwe" platform. • Certifications Issued: of industry-recognized micro-credentials awarded through the platform per year.
3.3: Cultivate a Pool of AI Experts	• "Brain Gain/Drain" Ratio: The net flow of AI-related talent into/out of Zimbabwe. • Global AI Research Ranking: Zimbabwe's ranking based on the number of AI papers published at top-tier international conferences (e.g., NeuralPS, ICML).	• Fellowship & COE Enrolment: of active National AI Fellows and PhD students enrolled at the AI Centres of Excellence. • Diaspora Engagement: of diaspora experts actively participating in the mentorship program or as fractional faculty.

Enabler 2: Agile Governance and Ethical Frameworks

Objective	Lagging Indicators	Leading Indicators
4.1 & 4.2: Robust & Ethical Framework	• World Justice Project Rule of Law Index: Zimbabwe's score in the "Regulatory Enforcement" and "Fundamental Rights" categories. • Public Trust in AI: % of citizens who agree/strongly agree with the statement "I trust AI systems used by the government and companies in Zimbabwe to be fair and safe."	• Adoption of "Trustworthy AI" Mark: of Zimbabwean companies that have voluntarily achieved the "Trustworthy AI - Made in Zimbabwe" certification. • AI Ombudsman Caseload: of complaints filed with the AI Ombudsman and the average time to resolution.
4.3: Agile & Pro-Innovation Environment	• World Bank Ease of Doing Business Index: Zimbabwe's ranking, specifically in the "Starting a Business" category.	• Sandbox Throughput: of startups that apply to, are accepted into and successfully graduate from the National AI Regulatory Sandbox each year. • Time to Market: The average time it takes for a Sandbox graduate to receive a full operating license.

Enabler 3: Strategic Investment and Partnerships

Objective	Lagging Indicators	Leading Indicators
5.1 & 5.2: Investment & PPPs	• Total AI-related Investment: Total annual investment (public + private + international) in the Zimbabwean AI ecosystem as a % of GDP. • FDI in the Tech Sector: Total Foreign Direct Investment flowing into the Zimbabwean technology sector.	• "Mugove/Isabelo/Umqele" Fund Leverage Ratio: The ratio of private/international capital mobilized for every dollar of public money invested by the fund. • PPP Pipeline: and total value of active Joint Innovation Labs and "Data for Development" Agreements.
5.3: International & Regional Collaboration	• Global Influence Score: A qualitative assessment of Zimbabwe's influence in shaping AI policy at SADC and the AU.	• High-Level Engagements: of joint R&D projects established with international universities. • Conference Leadership: of Zimbabwean experts invited to keynote or chair panels at major international AI conferences.
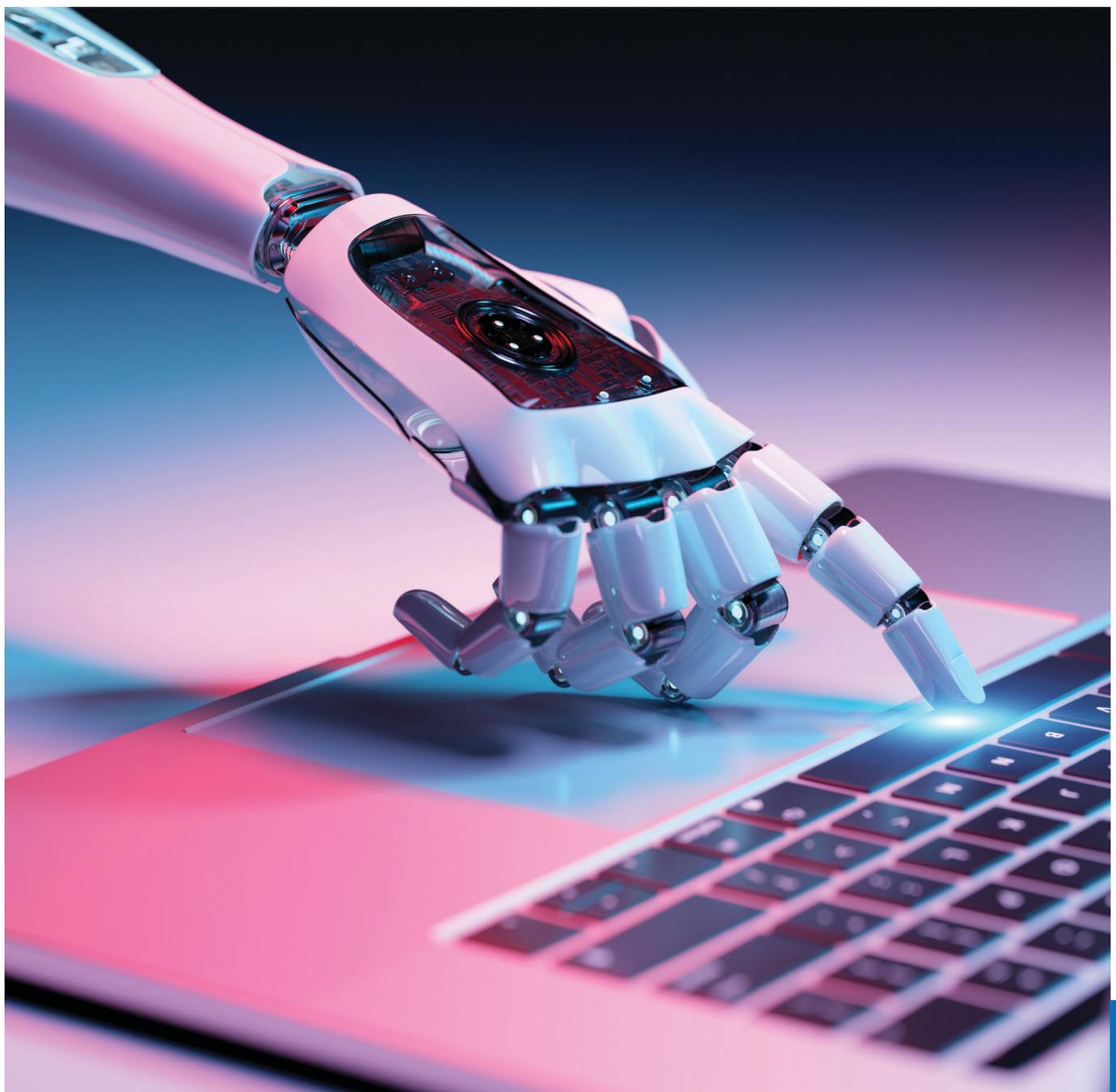
Monitoring and Evaluation Processes and Reporting Mechanisms to ensure accountability and continuous improvement

The strategy's success is determined by its execution, and a rigorous, transparent, and dynamic Monitoring and Evaluation (M&E) framework is essential. This system provides constant, honest information to celebrate successes, diagnose challenges, and intelligently adapt the course in real-time. It ensures accountability to Zimbabwe's ultimate stakeholders, the people, and is managed by the AI Strategy Implementation Office (AISIO) based on the "Single Source of Truth" principle.

The M&E Process: A Continuous Cycle

The M&E process is a continuous, four-stage cycle that ensures data flows seamlessly from the operational ground level to the strategic leadership.

Data Collection

Data Collection Framework

Component	Description
Responsibility	The primary responsibility for collecting raw data lies with the entities closest to the action: the Technical Working Groups (TWGs), the secretariats of the Flagship Initiatives and the relevant government ministries.
Methodology	A mixed-methods approach will be used to ensure and real-time data coverage:
Automated Data Streams	For digital platforms (e.g., ZCHPC utilization, "Skills for a New Zimbabwe" user numbers), data will be collected automatically via system dashboards and APIs to ensure real-time accuracy.
Standardized Reporting Templates	For qualitative and project-based updates, all TWGs and implementing partners will use standardized digital templates submitted to the AISIO on a monthly basis.
Annual National Surveys	The AISIO will commission an independent body (e.g., ZIMSTAT, reputable research firms) to conduct annual national surveys measuring high-level lagging indicators such as "Public Trust in AI" and "Citizen Satisfaction."
Third-Party Data	The AISIO will subscribe to and integrate data from credible international sources to track Zimbabwe's global performance (e.g., Global AI Index, Ease of Doing Business Index).

Data Aggregation and Analysis (Creating the National Picture)

- **Responsibility:** The AI Strategy Implementation Office (AISIO) is the central hub for all M&E data. Its dedicated M&E unit is responsible for aggregating, cleaning, verifying and analysing the data from all sources.

- **The "National AI Dashboard"**: The AISIO will maintain a secure, internal "National AI Dashboard." This will be a sophisticated data visualization platform that tracks every KPI in near real-time. This dashboard is the "single source of truth" for all reporting and will provide the analytical tools to identify trends, flag underperformance and diagnose bottlenecks.

Reporting and Dissemination (Ensuring Transparency)

- **Responsibility:** The AISIO is responsible for packaging the analysed data into different formats for different audiences. Our reporting mechanism is built on a "push and pull" model.

- **The Reporting Cadence:**
    - Monthly Internal Performance Reviews: The Director of the AISIO will hold a mandatory monthly performance review with the leads of all Flagship Initiatives and TWGs to review operational data and address immediate challenges.
    - Quarterly Strategic Briefings: The AISIO will produce a concise Quarterly Strategic Briefing for the National AI Council (NAIC). This report will focus on the leading indicators, highlighting key achievements, emerging risks and recommendations for strategic adjustments.
    - Annual Public Report on the State of AI: The NAIC will publish an Annual Public Report. This well-designed report, written in accessible language, will be presented to Parliament and released to the public. It will detail progress made on all lagging and leading indicators, present issues requiring corrective action and the lessons learned.
    - The Public-Facing Digital Dashboard: A simplified, public-facing version of the National AI Dashboard will be available on the strategy's official website, allowing any citizen to track a curated set of high-level KPIs.

Review and Adaptive Action (The Learning Loop)

- **Responsibility:** This is the crucial final stage where data is turned into decisions.

- **The Process:**

    - Quarterly NAIC Review: At its quarterly meetings, the NAIC will review the AISIO's strategic briefing. This meeting is the primary forum for course correction. The Council can make decisions to re-allocate funding, adjust timelines, or commission a deep-dive review into an underperforming area.
    - Annual Strategic Review Summit: Following the publication of the Annual Public Report, the NAIC will convene a Strategic Review Summit with all key stakeholders (TWG chairs, Flagship leads, industry and civil society partners). This summit will review the year's performance and set the key priorities and targets for the following year.
    - Mid-Term Strategy Refresh (End of 2027): At the halfway point of the strategy's lifecycle, an independent mid-term review will be commissioned. This review will assess the continued relevance of the strategy's core pillars and objectives and will recommend any major structural changes needed for the final push to 2030.

Risk Management and Mitigation Strategies

The Philosophy: Zimbabwe is launching a national AI mission with a strategic defence plan, acknowledging the immense power of AI and the potential for risks. The national risk register and plan aim to navigate progress with foresight and responsibility. The goal is to understand, manage and mitigate risks in order to stay on top of the challenges presented by AI.

A Framework for Understanding AI Risk in the Zimbabwean Context

Zimbabwe categorizes risks into three interconnected domains, each requiring distinct mitigation strategies.

- **Foundational & Economic Risks**: These are the risks to the very viability of Zimbabwe's economic and technological ambitions. They threaten to stall progress before it even begins.

- **Socio-Ethical Risks:** These are the risks which threaten social cohesion, the cultural values and the rights and dignity of citizens.

- **Geopolitical & Security Risks:** These are the external risks to national sovereignty and security in a volatile and competitive world.

The following table shows a Detailed Risk Analysis and Mitigation Strategies.

National AI Strategy Risk Matrix

Risk Category	Specific Risk & In-Depth Analysis	Multi-Layered Mitigation Strategy
Foundational & Economic Risks	Risk 1.1: The "White Elephant" Infrastructure. Analysis: The greatest immediate risk is that Zimbabwe invests heavily in the ZCHPC and National Data Platform, only for them to become underutilized, poorly maintained "white elephants" due to limited funding, shortage of skilled technicians, or weak demand from industry and academia. This would represent a catastrophic loss of national resources.	Mitigation: (1) Demand-Driven Phased Rollout – phased investments tied to demonstrable demand; (2) Public-Private Operational Model – state ownership with operations managed through a PPP involving a world-class operator; (3) "Anchor Tenant" Guarantee – government ministries mandated to use the HPC to guarantee baseline demand and financial stability.
	Risk 1.2: The Skills Gap. Analysis: Infrastructure may be established but talent pipelines fail. Graduates lack relevant skills, brain drain accelerates and reliance on foreign consultants deepens.	Mitigation: (1) Triple Helix Curriculum Design – programs co-created by academia, industry and government; (2) "Brain Circulation" Mandate – fellowships and return programs to attract and retain talent; (3) Industry-Led Skills Academies – job-linked academies emphasizing practical, work-ready training.

Risk Category	Specific Risk & In-Depth Analysis	Multi-Layered Mitigation Strategy
Socio-Ethical Risks	Risk 2.1: The "Algorithmic Apartheid." Analysis: AI trained on biased datasets risks perpetuating inequalities (e.g., denying credit to women or rural citizens), embedding discrimination under the guise of objectivity.	Mitigation: (1) Anti-Bias National Datasets – inclusive and representative data; (2) "Ubuntu" Ethical Impact Assessments – mandatory fairness reviews enforced by the AI Ethics Committee; (3) Right to Human Appeal – ensuring recourse to human review for all critical AI decisions.
	Risk 2.2: The Erosion of Public Trust. Analysis: Failures such as data breaches, discriminatory outcomes, or deep fake scandals could undermine public confidence, jeopardizing even beneficial AI programs.	Mitigation: (1) Radical Transparency – communication of both successes and failures via the Nzwisiso.ai campaign; (2) "Trustworthy AI – Made in Zimbabwe" Mark – a certification to reinforce citizen trust; (3) Zero-Tolerance on Breaches – strong cybersecurity frameworks and penalties for negligent handling of data.
Geopolitical & Security Risks	Risk 3.1: Over reliance on foreign solutions: Analysis: Excessive reliance on foreign partners more so a single partner for core AI infrastructure could expose Zimbabwe to undue external influence and loss of sovereignty.	Mitigation: (1) Multi-Aligned Partnerships – diversification across Global North, South and Asia; (2) Sovereignty in Project Pangolin – governance and data residency retained in Zimbabwe; (3) Homegrown Models – investment in indigenous AI through Centres of Excellence.
	Risk 3.2: Weaponisation of AI Against the State. Analysis: Adversaries may exploit AI for cyberattacks or disinformation to destabilize governance and elections.	Mitigation: (1) AI-Cybersecurity Fusion Centre – integrating AI with cybersecurity for real-time threat defence; (2) National Reality Check Platform – AI-powered truth-verification for media and government; (3) Public Resilience Training – citizen awareness programs under Nzwisiso.ai to counter digital misinformation.
Institutional & Collaborative Risks	Risk 4.1: Fragmented Ecosystem Participation. Analysis: National AI initiatives could stall if key players—particularly industry, infrastructure, finance and development agencies—fail to actively participate or if collaboration between them is ineffective. This risks duplication of efforts, wasted resources and a lack of sectoral alignment.	Mitigation: (1) National AI Compact – binding commitments by government, industry and academia to participate; (2) Cross-Sectoral Coordination Forums – regular convening under the National AI Council to align infrastructure, finance and development agendas; (3) Performance-Based Incentives – rewarding industry participation through tax breaks, innovation funds and preferential procurement.

Zimbabwe's proactive risk management approach enables confidence in pursuing its ambitious vision, anticipating potential dangers and building necessary defenses to navigate the turbulent but promising AI age waters.

Appendices

Appendix A: Glossary of Key AI Terms

Purpose: To create a shared and accessible vocabulary for the national AI conversation. This glossary is designed to demystify the technical jargon of Artificial Intelligence, ensuring that all stakeholders from policymakers and civil servants to journalists and the public have a clear and common understanding of the key concepts that underpin this strategy. The definitions provided here are simplified for clarity and are framed within the Zimbabwean context where possible.

- **Artificial Intelligence (AI):** A broad field of computer science focused on creating systems that can perform tasks that normally require human intelligence. This includes learning from data, reasoning, solving problems and understanding language. In the context of this strategy, AI is viewed as a powerful tool for national development.

- **Machine Learning (ML):** The most common type of AI today. It is the process of "training" a computer system by feeding it large amounts of data, allowing it to learn patterns and make predictions without being explicitly programmed for that task. Example: An ML model can learn to predict crop yields by analysing historical data on rainfall, soil type and seed variety.

- **Deep Learning:** A powerful subfield of Machine Learning that uses complex, multi-layered "neural networks" to learn from vast amounts of data. It is the technology behind most modern AI breakthroughs, from image recognition to large language models.

- **Large Language Model (LLM):** A type of deep learning model that has been trained on enormous amounts of text data. It can understand, generate and translate human language with remarkable fluency. Example: The technology that would power a multilingual government Chabot.

- **Generative AI:** A category of AI models (often including LLMs) that can create new, original content, such as text, images, music, or code. Example: An AI that can generate a new piece of artwork in the style of a Zimbabwean sculptor.

- **Algorithm:** A set of rules or instructions that a computer follows to perform a task or solve a problem. In AI, the algorithm "learns" and refines its own rules based on the data it is trained on.

- **Algorithmic Bias:** A systematic and repeatable error in an AI system that creates unfair outcomes, such as privileging one arbitrary group of users over another. This often results from biases present in the training data or flaws in the model's design. This is a primary risk that our "Ubuntu" Ethical Framework seeks to mitigate.

- **Data Set:** A structured collection of data used for a specific purpose. A Training Dataset is used to "teach" an AI model, while a Testing Dataset is used to evaluate its performance. The National Foundational Datasets are a key part of this strategy.

- **High-Performance Computing (HPC):** A powerful system of networked supercomputers capable of processing vast amounts of data at extremely high speeds. It is the essential "engine room" required for training large, complex AI models. The ZCHPC is a flagship initiative of this strategy.

- **Regulatory Sandbox:** A controlled environment established by regulators that allows companies to test new and innovative products or services with real customers for a limited time, without being subject to all the normal regulations. The "Innovation Crucible" is our national AI regulatory sandbox.
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- **Data Sovereignty:** The principle that a nation's data is subject to the laws and governance structures of that nation. It asserts national control over digital assets and is a cornerstone of our strategy. Policies should be formulated to govern what data can be uploaded to foreign AI models to protect national and organizational security, insisting that critical data must reside on local, secure infrastructure.

- **Natural Culture/Ubuntu (in AI Ethics):** A core principle of our national ethics framework, translating to "I am because we are." It mandates that AI systems should be designed to promote social cohesion, shared humanity and collective well-being, rather than purely individualistic or commercial goals.

Appendix B: List of Stakeholders Consulted

The purpose of this section is to acknowledge and honour the diverse voices that shaped the Zimbabwe National AI Strategy 2025–2030, reflecting the inclusive, multi-stakeholder process that gives it legitimacy. Developed through workshops, focus groups, interviews and written submissions, the strategy stands as a national compact co-created by a broad coalition of Zimbabweans. We extend our sincere gratitude to the organisations and groups whose time, expertise and commitment made this shared vision possible.

Key Stakeholders in the National AI Strategy Ecosystem

Category	Entities / Institutions
1. Government of Zimbabwe (MDAs)	• Office of the President and Cabinet • Ministry of ICT, Postal & Courier Services • All Government Line Ministries • Parliament of Zimbabwe • All Public Commissions • Attorney-General's Office • Postal & Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) - Reserve Bank of Zimbabwe (RBZ) • Standards Association of Zimbabwe (SAZ)
2. Academia and Research Institutions	• University of Zimbabwe (UZ) • National University of Science and Technology (NUST) • Harare Institute of Technology (HIT) • Midlands State University (MSU) • Great Zimbabwe University (GZU) • Bindura University of Science Education • Women University in Africa • Africa University • Zimbabwe Open University • Reformed Church University • Arrupe Jesuit University (AJU) • Masvingo Polytechnic College • Masvingo Teachers' College • Morgenster Teachers' College • Mushagashe Vocational Training College • Research Council of Zimbabwe • Zimbabwe Council for Higher Education (ZIMCHE) • Scientific and Industrial Research and Development Centre SIRDC
3. Industry and Private Sector	• Confederation of Zimbabwe Industries (CZI) • Zimbabwe National Chamber of Commerce (ZNCC) • Chamber of Mines of Zimbabwe • Bankers Association of Zimbabwe • ICT Sector Players (TOAZ, ZISPA)

4. Civil Society and Non-Governmental Organizations	• Media Institute of Southern Africa (MISA) • Zimbabwe Council of Churches • Christian Care Masvingo • Media Houses • Internet Society • Computer Society of Zimbabwe
5. International Partners	• UN Agencies, AU and SADC blocks

Appendix C: AI Characteristics

Generally, AI has the following characteristics

Benefits	Types of AI	Challenges	Best Practices
Automation of repetitive tasks	Machine Learning (ML)	Job displacement	Start with a clear strategy and goals
Enhanced data analysis and insights	Natural Language Processing (NLP)	Bias and fairness	Identify areas for automation and optimization
Improved decision-making	Computer Vision	Data quality and management	Choose the right AI technology and vendor
Increased productivity	Robotic Process Automation (RPA)	Security and privacy	Ensure data quality and management
Personalized customer experiences			
Talent acquisition and management	Deep Learning	Integration with existing systems	Provide training and development for employees
Employee engagement and training	Cognitive Computing	Training and development	Monitor and evaluate AI performance
Cybersecurity	Expert Systems	Ethics and accountability	Address ethics and accountability concerns
Compliance and risk management	Neural Networks	Transparency and explainability	Continuously review and refine AI implementation
Cost reduction		Dependence on technology	Engage stakeholders and communicate changes
		High implementation costs	Establish AI governance frameworks
Address job displacement and skill gaps		Intellectual property concerns	Foster human-AI collaboration and trust

Appendix D: References

This appendix provides a curated list of the core references that directly informed the Zimbabwe National AI Strategy, as well as a selection of further reading materials. These additional resources are intended to provide deeper insights into the technical, ethical and strategic dimensions of Artificial Intelligence for any stakeholder wishing to engage more deeply with the topics covered in this document.

Part I: Core References

These documents were the primary sources and benchmarks used in the formulation of this strategy.
National and Regional AI Strategies (Primary Benchmarks):

Comparative AI Strategy References from Africa

Country	Document Reference	Relevance
Republic of Kenya	*Republic of Kenya. (2024). Kenya National Artificial Intelligence (AI) Strategy 2025–2030 (Draft). Nairobi: Ministry of Information, Communications and The Digital Economy.*	A leading African example of an ecosystem-focused strategy. Essential reading for understanding multi-stakeholder governance and the integration of AI with national development goals.
Federal Republic of Nigeria	*Federal Republic of Nigeria. (2024). National Artificial Intelligence Strategy (NAIS) August 2024 (Draft). Abuja: Federal Ministry of Communications, Innovation & Digital Economy.*	Demonstrates a bold approach to talent development and fostering a globally competitive start-up ecosystem. Particularly useful for its detailed SWOT analysis and risk mitigation frameworks.
Republic of Zambia	*Republic of Zambia. (2024). National Artificial Intelligence Strategy 2024–2026. Lusaka: Ministry of Technology and Science.*	A pragmatic and actionable strategy from a fellow SADC nation. Its focus on "AI for Emerging Economies" and it is clear, phased implementation plan provide a valuable model for execution.

Zimbabwean National Policy Documents (Strategic Alignment)

Document Title	Citation	Relevance
Vision 2030	*Government of Zimbabwe. (2020). Zimbabwe Vision 2030: Towards a Prosperous & Empowered Upper Middle-Income Society by 2030. Harare: Office of the President and Cabinet.*	The foundational document outlining the ultimate national goals that this AI strategy is designed to serve and accelerate.
National Development Strategy 1 & 2 (NDS1 & 2)	*Government of Zimbabwe. (2021). National Development Strategy 1 (NDS1): 2021–2025. Harare: Ministry of Finance and Economic Development.*	Provides the specific, short-to-medium term national priorities that inform the selection of our "Grand Challenge" areas and sectoral focus.

Education 5.0 Framework	*Ministry of Higher & Tertiary Education, Science and Technology Development. (2018). Education 5.0: A Policy Framework for Higher and Tertiary Education. Harare.*	The philosophical underpinning for our Human Capital Development pillar. This document explains the "why" behind our focus on linking education to innovation and industrialization.
Cyber and Data Protection Act	*Government of Zimbabwe. (2021). Cyber and Data Protection Act [Chapter 12:07]. Harare.*	The legal cornerstone for our principles on data privacy and sovereignty. Essential reading for anyone involved in building or managing data-driven systems in Zimbabwe.

Appendix E: AISIO and NDRC Reporting Structures/Organogram

Here is a comprehensive and tailored proposal for the structure and organogram of a National Digital Regulatory Committee in Zimbabwe, designed to provide strategic leadership, ensure multi-stakeholder representation and drive responsible AI and emerging technologies adoption.

## Vision for the National Digital Regulatory Committee

To harness the transformative power of Artificial Intelligence and other emerging technologies for sustainable economic development, social progress and improved governance in Zimbabwe, positioning the nation as a responsible and innovative leader in the Fourth Industrial Revolution.

Guiding Principles

- **Sovereignty and National Interest:** AI and emerging technologies development and deployment must align with Zimbabwe's national development goals and data sovereignty.

- **Inclusivity and Equity:** Ensure AI and other emerging technologies benefits all citizens and avoids exacerbating existing inequalities.

- **Ethical and Human-Centric:** AI and emerging technologies must respect human rights, privacy and fairness, operating with transparency and accountability.

- **Collaboration and Partnership:** Foster synergy between government, industry, academia, innovators, development partners and civil society.

- **Agility & Future-Readiness:** The structure must be adaptable to rapid technological change.

Proposed Organogram: National Digital Regulatory Committee

The structure is a multi-tiered model to ensure strategic regulatory oversight, operational coordination and technical execution.
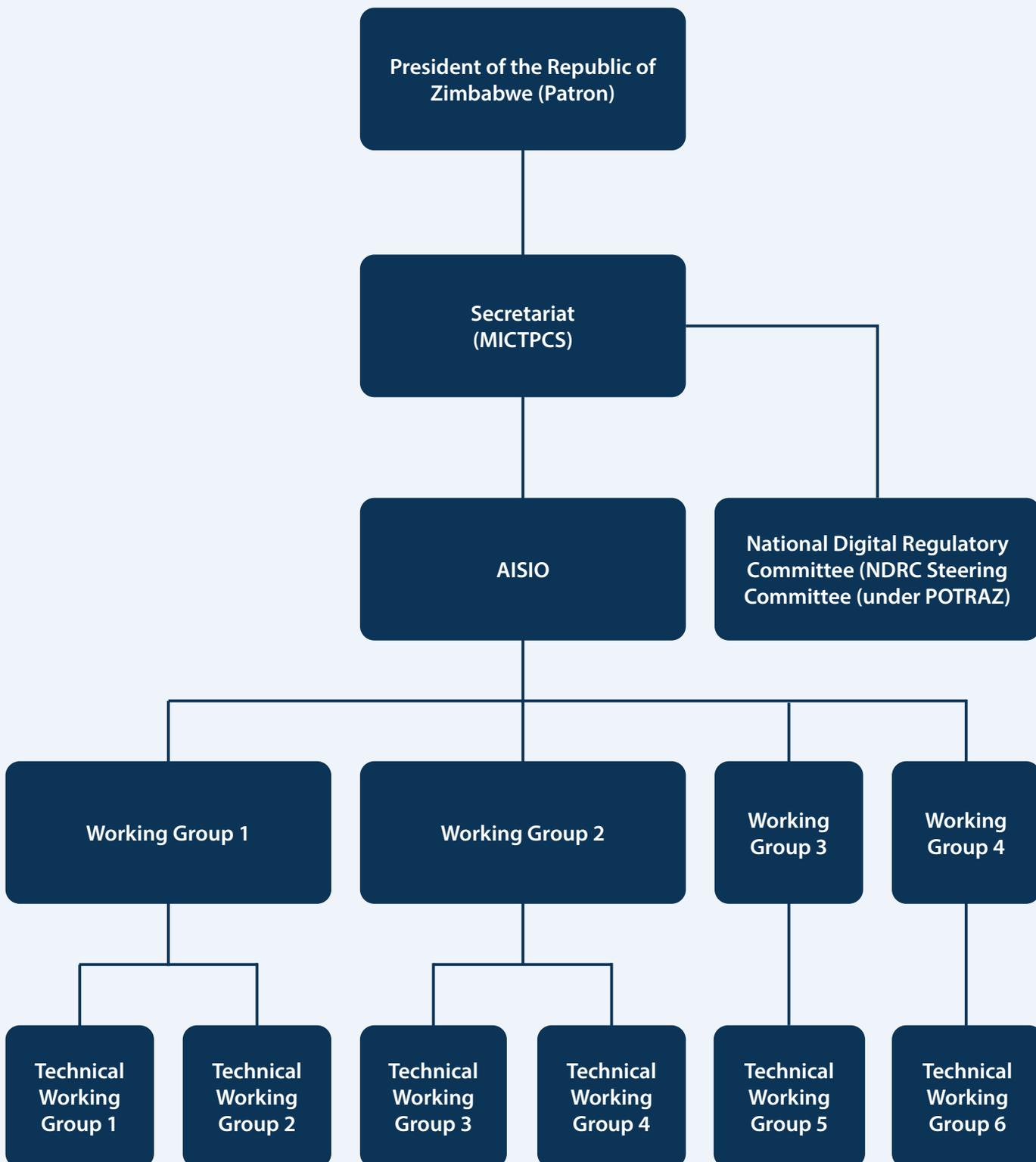
2. Independent Advisory Board of Experts

A non-standing committee of renowned international and Zimbabwean diaspora experts in AI, ethics, law and business.

- **Composition:** 5-7 globally recognized experts appointed on a 2-year rotational basis.

- **Key Functions:**
    - Provide unbiased, world-class technical and strategic advice to the Committee.
    - Offer insights on global AI trends and best practices.
    - Review and critique the National AI Strategy and key policies.

Tier 3: Technical Execution and Expertise

Specialized Working Groups (WGs)

These are the technical "engine rooms" comprising subject-matter experts from government, industry, academia, development partners and civil society. They are responsible for the detailed research, planning and proposal development.

WG 1: Strategy, Policy and Ethics

- **Focus:** Legal frameworks, ethical guidelines, national security and international alignment.

- **Members:** Legal experts, ethicists, philosophers, representatives from the Ministry of Justice and security agencies.

WG 2: Infrastructure and Data Governance

- **Focus:** National data marketplace, cloud computing, high-performance computing (HPC), broadband connectivity and data standards.

- **Members:** Experts from POTRAZ, telecoms (Econet, NetOne), data scientists and cloud providers.

WG 3: Innovation, R&D and Skills Development

- **Focus:** Funding AI research, startup ecosystem development, curriculum modernization and public awareness.

- **Members:** Representatives from UZ, NUST, MSU, research institutes, tech hubs and the Education ministries

WG 4: Sectoral Adoption and Use Cases

- **Focus:** Identifying and implementing high-impact AI pilots in key sectors of the economy.

- **Members:** Sector-specific experts from:

- **Agriculture:** Ministry of Agriculture, commercial farmers unions, seed companies.

- **Healthcare:** Ministry of Health, medical associations, hospital administrators.

- **Finance:** RBZ, Bankers Association of Zimbabwe, fintech companies.

- **Public Service:** Home Affairs and heads of key government departments (e.g. Civil Registry, ZIMRA, ZIMSTAT).

Tier 1: Strategic Leadership & Governance

The National Digital Regulatory Committee (Steering Committee)

This is the AI and emerging technologies regulator, decision-making body that provides high-level direction, champions the national AI and emerging technologies agenda and ensures inter-ministerial coordination.

- **Chairperson:** Office of the President of Zimbabwe to guide (to signify supreme national importance and ensure cross-ministerial authority).

- **Vice-Chairperson:** Minister of Information Communication Technology, Postal and Courier Services (providing the technical and operational home).

- **Core Members:**

  - Minister of Finance, Economic Development and Investment Promotion
  - Minister of Higher and Tertiary Education, Innovation, Science and Technology Development
  - Scientific and Industrial Research and Development Centre (SIRDC).
  - Minister of Industry and Commerce
  - Minister of Health and Child Care
  - Minister of Primary and Secondary Education
  - Minister of Agriculture
  - Governor, Reserve Bank of Zimbabwe (RBZ)
  - Chief Secretary to the President and Cabinet (or representative)
  - Director General, Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ)
  - Director, Data Protection Authority

- **Key Functions:**

  - Directs the National AI Strategy and Roadmap.
  - Enact high-level AI and emerging technologies policies and regulations.
  - Allocate national resources and budget for flagship AI initiatives.
  - Resolve inter-ministerial and cross-sectoral policy conflicts.
  - Provide ultimate oversight on AI and emerging technologies ethics and governance.

Tier 2: Coordination and Advisory

1. The Secretariat (AISIO)

Hosted within the Ministry of ICT, Postal and Courier Services, this is the administrative and coordination engine of the AI Strategy as well as emerging technologies adoption.

- **Head:** Permanent Secretary of the Ministry of ICT or a designated Chief Director.

- **Composition:** A dedicated team of senior policy advisors, project managers and administrators.

- **Key Functions:**

  - Provide logistical and technical support to the Committee.
  - Coordinate the activities of all Working Groups.
  - Prepare reports, briefing documents and meeting minutes.
  - Act as the central repository for all emerging technologies and AI-related documentation.

Linkage to Implementation

The Advisory Board and the National AI Committee are the strategic and oversight body. Their decisions and policies are executed by a dedicated operational arm, structured as follows:

The AI Strategy Implementation Office (AISIO)

- **Reporting Line:** Reports through the Ministry of ICTPCS through the AI and emerging technologies Directorate.

- **Role:** The permanent, project management body responsible for the day-to-day execution of the National AI Strategy.

- **Structure:** Comprises a Director, Deputy Directors and project managers focused on ethics, stakeholder engagement and managing flagship AI projects.

This proposed structure ensures that Zimbabwe has a robust, inclusive and effective governance framework to navigate the complexities of AI and emerging technologies, and harness its potential for the benefit of all its citizens. This office is the operational engine, the "boots on the ground" that will translate the high-level strategy from the Committee into actionable programs and projects.

Mandate of the AI Strategy Implementation Office (AISIO)

To drive the execution of the National AI Strategy by coordinating resources, managing projects, building capacity and monitoring impact, ensuring that AI and emerging technologies initiatives deliver tangible economic and social benefits for Zimbabwe.

Core Principles

- **Action-Oriented:** Focused on execution and delivery.

- **Cross-Functional:** Works across all government ministries, agencies and with private sector partners.

- **Data-Driven:** Uses metrics and KPIs to measure success and guide decisions.

- **Agile:** Adapts quickly to new technologies and lessons learned.

The AISIO should be a dedicated unit, ideally housed under the Ministry of Information Communication Technology, Postal and Courier Services for administrative purposes, but with a clear mandate to work across government.

Detailed Roles and Responsibilities for AISIO Leadership

1. Head of the AISIO – Emerging Technologies, Projects, Digital Innovations, Research and Development (Directorate)

- **Overall Purpose:** To provide strategic vision, executive leadership, and overall accountability for the successful implementation of the National AI Strategy and the adoption of other emerging technologies (e.g., Blockchain, IoT, Quantum Computing). This role is the ultimate authority and public face of Zimbabwe's digital transformation agenda in the emerging technologies and AI sphere.

Key Responsibilities:

- **Strategic Leadership & Accountability:**

  - Serve as the primary accountable officer to the Permanent Secretary for ICT and the Government of Zimbabwe for the delivery of the National AI Strategy's objectives.
  - Provide final approval for the National AI Implementation Roadmap, annual work plans, and budget.
  - Champion the AI agenda at the highest levels of government, including Cabinet and Parliamentary committees, to secure ongoing political and financial support.

- **Resource Mobilization & Fiscal Stewardship:**

  - Secure and manage the AISIO's funding from government treasury, international development partners (World Bank, AfDB), and the Universal Service Fund.
  - Approve all major expenditures, procurement, and resource allocation in line with strategic priorities.
  - Sign off on contracts and Memoranda of Understanding (MoUs) with key technical and funding partners.

- **Decision Authority & Governance:**

  - Chair the AISIO's internal management committee, making final decisions on project prioritization, go/no-go decisions for flagship projects, and resolving inter-deputy director conflicts.
  - Represent Zimbabwe in international fora on AI and emerging technologies, shaping the country's position and attracting foreign direct investment.

- **Stakeholder & Spokesperson Role:**

  - Act as the primary government spokesperson on all matters related to AI and emerging technologies.
  - Build and maintain top-level relationships with CEOs of multinational tech companies, global AI research leaders, and heads of major development partner agencies.

2. Emerging Technologies Ethics and Operations (Unit)

- **Overall Purpose:** To serve as the chief of staff for the AISIO, ensuring all activities are strategically aligned, ethically sound, administratively efficient, and compliant with national policies. This role is the guardian of the office's integrity and operational coherence.

Key Responsibilities:

- **Strategic Alignment & Policy Oversight:**

  - Oversee the Strategy and Policy Alignment Unit (Pillar 1) to ensure all AI initiatives comply with national laws, international standards, and the Zimbabwe-specific AI Ethics Framework.
  - Act as the primary liaison with the Attorney-General's office and other regulatory bodies for legal and regulatory reviews.
  - Ensure cross-governmental policy coherence, aligning AISIO activities with the broader national development plans (e.g., NDS1).

- **Stakeholder Management and Public Trust:**

  - Oversee the Stakeholder Management and Communications Unit (Pillar 2) to build national consensus and maintain public trust.
  - Manage high-level stakeholder engagements with civil society, academia, and industry bodies to address ethical concerns and foster inclusive dialogue.
  - Approve all major public communications, awareness campaigns, and the content for the public-facing portal.

- **Performance and Accountability:**

  - Oversee the Monitoring and Evaluation (M&E) Unit (Pillar 3), ensuring robust tracking of the strategy's KPIs.
  - Consolidate quarterly and annual impact reports from the M&E unit for the Director, Ministry and the National AI Committee.
  - Commission and oversee independent audits of AI systems for bias, fairness, and performance.

- **Internal Operations:**

  - Manage the day-to-day administration, human resources, and procurement functions of the AISIO.
  - Coordinate all reporting from other Deputy Directors to the Ministry and other government MDAs.

3. Projects and Technical Services (Unit)

- **Overall Purpose:** To serve as the chief technology and delivery officer, translating strategic AI goals into executable, technically sound projects and programs. This role is accountable for the on-time, on-budget, and on-specification delivery of all AISIO technical projects.

Key Responsibilities:

- **Technical Project Portfolio Management:**

  - Provide direct oversight and leadership to the AI Infrastructure and Data Governance Unit (Pillar 4).
  - Approve technical designs, architecture plans, and implementation timelines for all flagship projects (e.g., Gov-Data-Hub, National HPC Centre feasibility study).
  - Manage the entire project lifecycle, from ideation and scoping to procurement, execution, and deployment.

- **Technical Feasibility and Standards:**

  - Ensure all projects are grounded in robust engineering principles, are scalable, and adhere to national data interoperability and security standards.
  - Make key technical decisions regarding cloud infrastructure, data architecture, and software platforms.
  - Partner and Ecosystem Management:
  - Serve as the primary technical interface for relationships with technology vendors, cloud service providers, telecom companies (POTRAZ), and implementation partners.
  - Manage the technical aspects of partnerships with academia for research collaborations.

4. Cyber and Data Protection (Unit)

- **Overall Purpose:** To serve as the Chief Security and Risk Officer, ensuring that all AI and emerging technology initiatives are built on a secure and trustworthy foundation that protects national digital assets and citizens' data privacy.

Key Responsibilities:

- **Cybersecurity for AI Systems:**

  - Develop and enforce a cybersecurity framework specifically for national AI systems and critical data infrastructure.
  - Conduct threat modelling and security risk assessments for all AISIO projects before they are deployed.
  - Lead incident response efforts in the event of a cybersecurity breach affecting national AI assets.

- **Data Protection Compliance:**

  - Act as the AISIO's primary Data Protection Officer, ensuring full compliance with the Data Protection Act and other relevant legislation.
  - Develop and implement data governance policies for the National Data Marketplace, focusing on data anonymization, consent management, and lawful data processing.
  - Liaise with the Data Protection Authority on audits, impact assessments, and compliance issues.

- **Risk Management & Assurance:**

  - Work closely with the Ethics and Operations to integrate data protection and security principles into the national AI Ethics Framework.
  - Provide security and privacy assurance for the Innovation and Capacity Building pillars, ensuring start-ups and academic labs adhere to baseline security standards.

5. Digital Innovations, Research and Development (Unit)

- **Overall Purpose:** To serve as the Chief Innovation Officer, catalysing the growth of a vibrant AI and emerging technology ecosystem in Zimbabwe's private sector and academia. This role is focused on fostering creativity, research, and commercial application.

Key Responsibilities:

- **Innovation Ecosystem Development:**

  - Provide strategic direction and oversight to the Innovation and Ecosystem Development Unit (Pillar 5).
  - Manage the "Zimbabwe AI Innovation Fund," making recommendations to the Director on grant allocations, challenge prizes, and start-up investments.
  - Facilitate the creation of AI sandboxes and testbeds for start-ups and MSMEs to experiment with new solutions.

- **Research & Development (R&D) Leadership:**

  - Identify key national sectors (e.g., Agriculture, Health, Finance) for targeted R&D in AI and emerging tech.
  - Forge and manage R&D partnerships between Zimbabwean universities, international research institutions, and local industries.
  - Oversee the support for establishing and equipping AI Research Labs in tertiary institutions.

- **Capacity Building & Future Skills:**

  - Provide strategic oversight to the Capacity Building and Education Unit (Pillar 6).
  - Approve the national AI curriculum frameworks developed for primary, secondary, and tertiary education levels.
  - Champion the design and rollout of large-scale public sector upskilling programs and specialized postgraduate programs in AI.
  - Oversee the management of scholarship and internship programs to build the national AI talent pipeline.

The Six Functional Pillars

Pillar 1: Strategy and Policy Alignment Pillar

- **Function:** To ensure all AI initiatives are aligned with national laws, policies and ethical guidelines.

- **Key Roles:** Policy Analyst, Legal and Ethics Expert.

- **Tasks:**

  - Develop and maintain the National AI Implementation Roadmap.
  - Draft model AI procurement guidelines for government.
  - Work with the Attorney-General's office to review and propose updates to laws (e.g., Data Protection Act).
  - Develop a Zimbabwe-specific AI Ethics Framework.

Pillar 2: Stakeholder Management and Communications Pillar

- **Function:** To build a national consensus and maintain transparency around AI initiatives.

- **Key Roles:** Stakeholder Engagement Lead, Communications Specialist.

- **Tasks:**

  - Run public awareness campaigns on AI benefits and risks.
  - Manage relationships with private sector, academia, development partners and civil society.
  - Create a public-facing portal to showcase AI projects and progress.
  - Organize the annual "Zimbabwe AI Summit."

Pillar 3: Monitoring and Evaluation (M&E) Pillar

- **Function:** To track progress, measure impact and ensure accountability.

- **Key Roles:** M&E Specialist, Data Analyst.

- **Tasks:**

  - Define KPIs for the National AI Strategy (e.g., jobs created, efficiency gains, AI Start-up funding).
  - Track the progress of all flagship AI projects.
  - Produce quarterly and annual impact reports for the Committee.
  - Conduct audits of AI systems for bias and performance.

Pillar 4: AI Infrastructure and Data Governance Pillar

- **Function:** To build and manage the foundational data and compute infrastructure required for AI.

- **Key Roles:** Data Architect, Cloud/IT Infrastructure Specialist.

- **Tasks:**

  - Oversee the development of the National Data Marketplace or "Gov-Data-Hub".
  - Work with POTRAZ and telecoms to ensure affordable, high-speed data connectivity.
  - Propose a business case for a National High-Performance Computing (HPC) Centre.
  - Develop standards for data interoperability and open data.

Pillar 5: Innovation and Ecosystem Development Pillar

- **Function:** To catalyse AI innovation in the private sector and academia.

- **Key Roles:** Innovation Fund Manager, Startups and MSME Liaison.

- **Tasks:**

  - Manage the "Zimbabwe AI Innovation Fund" (grants, challenges).
  - Support the establishment of AI Research Labs at universities.
  - Facilitate partnerships between local startups and international tech firms.
  - Run "AI in Agriculture" or "AI for Health" innovation challenges, etc.

Pillar 6: Capacity Building and Education Pillar

- **Function:** To develop the human capital needed for an AI-powered economy.

- **Key Roles:** Curriculum Development Expert, Public Sector Training Lead.

- **Tasks:**

  - Work with the Ministry of Primary and Secondary Education to integrate AI/digital literacy into school curricula and with Ministry of Higher and Tertiary to integrate AI into tertiary institutions curricula.
  - Develop upskilling programs for public servants on AI basics.
  - Partner with universities to design specialized AI Masters and PhD programs.
  - Facilitate scholarships and internships in AI fields.

Proposed Location and Funding

- **Location:** Physically housed within the Ministry of ICT, Postal and Courier Services, but with a strong, cross-governmental mandate.

- **Funding:** Initial seed funding from the government budget, supplemented by dedicated allocations from the Treasury, international development partners (e.g. World Bank, AfDB) and a portion of the Universal Service Fund (USF) managed by POTRAZ.

This structure ensures that the AISIO is not just a planning body but a dynamic, results-driven organization capable of making Zimbabwe's AI ambitions a reality.