

AIFAT Perspective
on the UNGIS Joint
Implementation Road Map
for WSIS-GDC Coherence:

Operationalizing Equitable Integration through Pan-African AI Governance Strategies



AN AIFAT ADVISORY NOTE



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Abstract

This advisory note offers an Africa-centric analysis of the United Nations Group on the Information Society (UNGIS) Joint Implementation Road Map for World Summit on the Information Society (WSIS)–Global Digital Compact (GDC) Coherence. It diagnoses the threats to African digital sovereignty, including the "Onopticon" of algorithmic governmentality and the multilingual "Token Tax" that causes exponential compute costs and accuracy degradation for African languages. To ensure equitable integration and structural equalization, the note proposes five strategic governance pillars to be embedded in the UNGIS Road Map: 1) **Semantic Sovereignty** to eliminate language bias and cost barriers; 2) The **Reserve of Humanity Doctrine** to mandate Human-in-the-Loop (HITL) architectures in high-stakes AI; 3) **Infrastructural Sovereignty** via Decentralized Physical Infrastructure Networks (DePIN) and a Dual Core Finance Model to localize data wealth; and 4) **Agentic Tool Sovereignty (ATS)** to govern autonomous AI actions at runtime. The paper concludes that a unified Pan-African diplomatic strategy, utilizing these pillars, is imperative to transition the continent from a passive "data colony" into a sovereign co-architect of the global digital future.

Keywords

Pan-African AI Governance; WSIS-GDC Coherence; Digital Sovereignty; Onopticon; Algorithmic Governmentality; Token Tax; Semantic Sovereignty; Reserve of Humanity Doctrine; DePIN; Agentic Tool Sovereignty (ATS).

Thematic Classifications

- Global Digital Governance and Policy
- Artificial Intelligence Ethics and Regulation
- Digital Infrastructure and Economic Sovereignty
- Linguistic Equity in Large Language Models (LLMs)

Key Takeaways

- African delegations must utilize the WSIS-GDC coherence process to embed five key pillars into global policy: Semantic Sovereignty, the Reserve of Humanity Doctrine, Agentic Tool Sovereignty (ATS), and Infrastructural Sovereignty (DePIN/Dual Core).
- To counter the "Token Tax," enforce UN-backed fair pricing standards based on semantic word count, not token output, to lower the cost of entry for African innovators.
- Public sector AI systems must include mandatory Human-in-the-Loop (HITL) architectures and undergo rigorous Algorithmic Impact Assessments (AIAs) to protect against algorithmic governmentality and the production of the "Homovictimus".
- African states must mandate data localization laws to drive demand for local **DePIN** solutions, transitioning data from an exported raw material to a locally refined, wealth-generating asset.
- Regulate AI agents at runtime by restricting them to approved, compliant tool registries to prevent autonomous cross-border data breaches and secure Agentic Tool Sovereignty (ATS).

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1. Introduction: Navigating the Intersection of Global Coherence and African Digital Sovereignty

The presentation of the Draft Joint Implementation Road Map for WSIS–GDC Coherence by the United Nations Group on the Information Society (UNGIS) at the 29th session of the Commission on Science and Technology for Development (CSTD) on April 21, 2026, marks a watershed moment in the evolution of multilateral digital governance.¹ Mandated by the United Nations General Assembly resolution A/RES/80/173 and the Economic and Social Council (ECOSOC) resolution E/RES/2025/18, this Road Map represents an institutional imperative to synthesize two foundational architectures: the legacy World Summit on the Information Society (WSIS) framework and the newly minted Global Digital Compact (GDC).¹ The explicit objective is to ensure a unified, resource-efficient approach to digital cooperation across the United Nations system, avoiding bureaucratic duplication while maximizing synergies to advance inclusive, rights-based, and development-oriented digital societies.²

However, from the perspective of the African continent, this pursuit of administrative coherence carries profound existential weight. The African continent finds itself at the precipice of a neural-age transition, heavily characterized by persistent digital divides, algorithmic hegemony, and the looming specter of "Cognitive Colonialism".⁴ Africa represents approximately 18% of the global population, yet it currently controls less than 1% of the world's global data center capacity.⁶ The continent contributes a mere 3% to the global artificial intelligence talent pool, while simultaneously suffering an innovation drain characterized by the outmigration of an estimated 70,000 skilled technology professionals annually.⁷ Internet penetration remains starkly asymmetrical, hovering around 37% compared to a global average of 67%, and only roughly 5% of African AI researchers report having access to the high-performance computing resources requisite for modern AI development.⁷

Despite these structural deficits, the potential upside is monumental. Artificial intelligence is projected to generate \$1.2 trillion for the African economy by 2030, an amount equivalent to 6% of its gross domestic product.⁷ Recognizing this historic opportunity to accelerate sustainable development and foster a

cultural renaissance aligned with Agenda 2063, the African Union (AU) adopted its Continental Artificial Intelligence Strategy in 2024.⁴ The AU strategy envisions a unified approach among Member States to navigate AI-driven changes, aiming to position Africa not merely as a consumer of foreign technologies, but as a sovereign leader in inclusive and responsible AI development.⁵

For the UNGIS Joint Implementation Road Map to genuinely serve the global majority, it must transcend its administrative mandate and serve as a vehicle for structural equalization. The integration of GDC commitments—particularly Objective 1 (Closing digital divides), Objective 3 (Fostering safe digital spaces), and Objective 5 (Enhancing international AI governance)—into the WSIS Action Lines presents a critical diplomatic window.⁹ This report provides an exhaustive, Africa-centric analysis of the WSIS-GDC coherence process. It articulates a comprehensive framework designed to operationalize Pan-African agency, ensuring the continent transitions from a passive "data colony" into a sovereign co-architect of the global digital future. This transformation is predicated on five strategic interventions: dismantling the algorithmic governmentality of the "Onopticon," eradicating the multilingual "Token Tax" through Semantic Sovereignty, hardcoding the Reserve of Humanity Doctrine into high-stakes AI, securing infrastructural autonomy via Decentralized Physical Infrastructure Networks (DePIN) and Dual Core Financing, and enforcing Agentic Tool Sovereignty (ATS) at runtime.

2. Diagnosing the Ontological Threat: The "Onopticon" and the Emergence of "Homovictimus"

To accurately position African digital diplomacy within the WSIS-GDC matrix, it is first necessary to diagnose the fundamental nature of contemporary digital power dynamics. Historical frameworks of digital inclusion often rely on the paradigm of the "digital divide," framing connectivity as an inherent, unmitigated good. However, emerging theoretical frameworks in 2026 challenge this tech-optimist consensus, arguing that compulsory infrastructural inclusion without sovereign safeguards frequently leads to systemic exploitation.¹⁰

2.1 From the Panopticon to Algorithmic Governmentality

The classical architecture of surveillance, conceptualized through Jeremy

Bentham's Panopticon and later popularized by Michel Foucault, functioned as a disciplinary mechanism. It relied on physical visibility and the psychological internalization of control, wherein subjects modified their behavior because they knew they *could* be observed.¹⁰ In the contemporary digital ecosystem, this paradigm has been entirely superseded by a new ontological regime: the "Onopticon." Derived from the Greek *on* (being) and *optikon* (seeing or observing), the Onopticon represents a radical departure from mere observation; it actively reconstructs human existence as calculable, predictive data.¹⁰

Under the Onopticon, traditional governance rooted in law, political discourse, and social norms is replaced by "algorithmic governmentality" and "technological solutionism".¹⁰ The system acts as a recognizing and calculating apparatus that categorizes individuals—such as high-risk loan applicants, potential border threats, or low-productivity workers—across vast, opaque datasets long before any physical action is initiated.¹⁰ This regime of pre-recognition operates through statistical probabilities to preemptively eliminate life possibilities, effectively foreclosing the future of marginalized populations.¹⁰

2.2 The Subjugation of Homovictimus and Digital Civil Death

The subject produced by this regime is defined as the "Homovictimus" (a portmanteau of *homo* and *victima*)—a data victim crushed beneath the weight of their own digital shadow.¹⁰ The Homovictimus is stripped of epistemic autonomy, reduced to a "phantom built of ciphers".¹⁰ As individuals are forced to delegate decision-making, memory, and social verification to artificial intelligence, they experience a systemic cognitive proletarianization, losing the critical knowledge required to act as autonomous citizens.¹⁰

In the context of the Global South, the consequences of this algorithmic foreclosure are profound. Subjects are frequently deemed "guilty" or "ineligible" based purely on statistical inferences drawn from datasets that inherently lack an understanding of African socio-economic realities.¹⁰ This operationalizes a form of "Digital Jim Crow," leading to "digital civil death" wherein individuals are exiled from financial systems, healthcare networks, and public services without due process or human trial.¹⁰ Furthermore, this system perpetuates severe ontological violence, particularly through technology-facilitated gender-based violence (TFGBV), where AI-generated

content industrially violates bodily integrity.¹⁰

2.3 State and Market Operational Models of the Digital Leviathan

The Onopticon is operationalized through two primary vectors, both of which concentrate power within the Digital Leviathan:

1. **The State-Centric Model:** Citizens are reduced to biometric codes and compulsory digital identifiers. Systems such as India's Aadhaar and Kenya's Maisha Namba—often criticized as instruments of "digital colonialism"—enforce behavioral compliance by tying basic civic survival to algorithmic legibility.¹⁰ Similar mechanics are visible in social credit architectures that deploy punishment and reward mechanisms to enforce conformity.¹⁰
2. **The Market-Centric Model:** Under the dictates of surveillance capitalism, individual freedom and attention are aggressively converted into "behavioral surplus" for data extraction.¹⁰ Multinational technology monopolies trap users in hyper-personalized echo chambers, modifying behavior while simultaneously providing predictive risk scores to intelligence agencies and state actors.¹⁰

2.4 Implementing Ontological Mutiny and Architectural Rights

To counter this paradigm, African delegations must champion what theorists term "Ontological Mutiny"—a deliberate regulatory and technological resistance aimed at dismantling the digital enclosure.¹⁰ Within the WSIS-GDC coherence framework, specifically WSIS Action Line C5 (Building confidence and security in the use of ICTs) and GDC Objective 3 (Foster an inclusive, open, safe, and secure digital space that respects human rights), policymakers must introduce the **Architectural Rights Doctrine**.⁹

This doctrine advocates moving beyond superficial software regulations, demanding that human dignity and privacy be hardwired directly into the physical computing hardware (e.g., initiatives akin to CHERIoT).¹⁰ It calls for the legal prohibition of purely profiling-based predictive policing and social scoring, mirroring robust global safeguards such as those outlined in the EU AI Act.¹⁰ Furthermore, it validates the use of "negentropic" resistance tools—technologies that deliberately poison unauthorized AI training data to protect

local content creators from expropriation.¹⁰ Ultimately, African governance must ensure that human unpredictability—the "glitch" in the machine—is protected by law, preventing the totalizing administrative restriction of the Onopticon.¹⁰

3. The Epistemic Enclosure: Dismantling the Multilingual "Token Tax"

If the Onopticon represents the overarching architecture of digital control, the mechanism through which this control is exercised at the granular level is foundational language modeling. Artificial intelligence systems, particularly generative Large Language Models (LLMs), dictate how information is processed, retrieved, and generated globally. However, these systems are fundamentally biased against the linguistic diversity of the African continent. The core of this bias lies in the inefficiency of Natural Language Processing (NLP) tokenization, an engineering oversight that manifests as a crippling, systemic "Token Tax" on African languages.¹³

3.1 The Mechanics and Economics of Tokenization Bias

Tokenization is the mandatory foundational layer of all modern NLP systems. It is the process by which raw text is fragmented into machine-readable sub-word units, known as tokens. The efficiency with which a language is processed is measured by its "fertility rate," expressed mathematically as the ratio of tokens per word ($F = T/W$).¹⁴

Because mainstream foundational models are optimized primarily for English and other high-resource Western languages, their tokenizers are poorly equipped to handle the complex, highly agglutinative morphological structures characteristic of many African languages (such as isiZulu, Amharic, or Swahili).⁷ Consequently, an African language phrase might require three to four times as many tokens to express the exact same semantic meaning as its English counterpart.¹³

This high fertility rate triggers catastrophic downstream effects due to the mathematical architecture of transformer models. Transformer attention mechanisms scale quadratically with sequence length, denoted as $O(n^2)$.¹³ Therefore, an increase in token counts does not result in a linear increase in required compute; it results in exponential resource consumption. If a language has a fertility rate of 2x compared to English, it requires 4x the

computational power, 4x the training time, and emits 4x the carbon footprint.¹³

The economic implications are staggering. For example, training a state-of-the-art model like Llama-3.1-405B costs an estimated \$105 million using highly optimized English tokens. If an African sovereign entity attempted to train a mathematically equivalent model purely in a language with double the token fertility, the compute costs would artificially inflate to approximately \$420 million.¹⁴ This mathematically prices African researchers, MSMEs, and public sector institutions out of the foundational model market, erecting insurmountable structural barriers to entry and enforcing an economic exclusion that stifles domestic innovation.¹⁴

3.2 Accuracy Degradation and High-Stakes Vulnerabilities

The Token Tax is not solely an economic burden; it is a direct proxy for model incompetence. Elevated token counts rapidly consume a model's effective context window, eroding its ability to learn long-range dependencies and maintain coherent reasoning.¹³

Recent comprehensive evaluations of 10 major LLMs utilizing the AfriMMLU dataset—a robust multilingual benchmark comprising 9,000 multi-choice question answering items across 5 subjects and 16 African languages—demonstrated an irrefutable correlation: higher token fertility reliably predicts lower model accuracy.¹⁴ Linear regression analyses indicate that for every additional token per word required, a model's accuracy drops by an alarming 8 to 18 percentage points.¹⁴ Consequently, African languages trail English by an average deficit of 25 accuracy points.¹⁴

While newer generation reasoning models (such as DeepSeek and OpenAI's o1) have demonstrated a capacity to narrow this gap—improving performance on African languages by 8 to 12 points and cutting the English-African disparity nearly in half—they do not resolve the underlying architectural flaw of tokenization bias.¹³

The systemic underperformance of AI in African languages creates life-threatening disparities in high-stakes application environments. If a rural healthcare clinic in sub-Saharan Africa deploys an AI diagnostic assistant, and that system provides medically sound guidance in English but hallucinatory, factually degraded guidance in Hausa or ChiShona, the technology operates

with fatal double standards.¹⁵ This disparity transitions the language gap from a mere technical glitch into a profound question of equity, risk, and human safety in already marginalized communities.¹⁵

3.3 Semantic Sovereignty within the GDC Matrix

The ongoing neglect and mismanagement of African linguistic data is conceptualized by researchers as "language data flaring"—a systemic waste paralleling the ecological damage of gas flaring.¹⁶ Without deliberate, structural intervention, the rapid expansion of AI into African markets will entrench a permanent two-tier technological society: one where English speakers benefit from highly capable, low-cost tools, and non-English speakers bear the dual burden of high costs and degraded performance.¹⁵

To operationalize WSIS Action Line C8 (Cultural diversity and identity, linguistic diversity, and local content) and GDC Objective 1 (Close all digital divides), the UNGIS Road Map must formalize the doctrine of **Semantic Sovereignty**.

Table 1: Semantic Sovereignty Interventions for WSIS-GDC Coherence

Core Challenge Identified	Policy Objective	WSIS-GDC Implementation Mechanism
Quadratic Compute Penalties ($O(n^2)$),	Eradicate artificial cost barriers for African MSMEs.	Establish UN-backed Fair Pricing Standards requiring API providers to bill by semantic word count rather than raw token output.
Architectural Token Bias	Improve contextual capacity for agglutinative languages.	Mandate technology transfer of morphologically aware tokenization frameworks (e.g., FlexiTokens) under GDC Objective 1.

<p>Language Data Flaring</p>	<p>Retain sovereign ownership of regional linguistic corpora.</p>	<p>Fund Pan-African Data Trusts (leveraging models like Masakhane) through the UN Digital Cooperation Portal to build open-source African LLMs.</p>
<p>Accuracy Degradation</p>	<p>Prevent high-stakes failures in public health and agriculture.</p>	<p>Integrate the AfriMMLU multilingual benchmark into standard UN AI auditing requirements prior to public sector procurement.</p>

4. Reclaiming Agency: The Reserve of Humanity Doctrine

As artificial intelligence systems advance from passive analytical tools to active, autonomous decision-makers, the global community faces a critical inflection point regarding the delegation of moral and ethical agency to machines. The United Nations Secretary-General's AI Advisory Body, through its report *Governing AI for Humanity*, has established that international human rights law must serve as the cornerstone for all global AI governance architectures.¹⁷ Furthermore, the establishment of the UN AI Governance for Humanity Lab within the Office for Digital and Emerging Technologies (ODET) seeks to connect regional perspectives to the Global Dialogue on AI Governance.¹⁹

However, the prevailing discourse frequently over-indexes on existential risks (x-risks) and broad principles, failing to provide hard regulatory boundaries against the immediate, localized harms impacting vulnerable populations. In response, Pan-African policy frameworks must demand the formal codification of the **Reserve of Humanity Doctrine**.

4.1 The Boundaries of Automation in High-Stakes Contexts

The Reserve of Humanity Doctrine asserts a non-negotiable ethical baseline: no machine, regardless of its mathematical accuracy or apparent sophistication, should possess unilateral authority over life-altering decisions.²⁰ This doctrine advocates for the absolute preservation of human intelligence and oversight in sectors involving justice, welfare distribution, healthcare triage, and the application of lethal force.²⁰ It aligns philosophically with global ethical calls, such as the Vatican's *Quo vadis, humanitas?* document, which emphasizes that technology must complement rather than replace human intelligence, preserving the constitutive tensions of human experience—fragility, finitude, and community—against the utopias of transhumanist substitution.²⁰

In the African context, where institutional safety nets may be developing or fragile, the uncritical deployment of autonomous systems by state actors or foreign corporations is uniquely hazardous. If an algorithm is tasked with determining the distribution of emergency drought relief or assessing the risk profile of individuals in the criminal justice system, it inevitably applies historical data fraught with systemic biases. AI lacks the capacity for contextual empathy or moral reasoning; it optimizes strictly for programmed efficiencies. When bureaucratic efficiency supersedes human dignity, marginalized Base-of-the-Pyramid (BoP) populations are subjected to an automated denial of service.¹⁰

Furthermore, civil society organizations such as ARTICLE 19 have highlighted that current global frameworks often fail to adequately capture the critical impacts AI has on fundamental freedoms, particularly freedom of expression and the role of the press.¹⁷ Governing bodies frequently focus on harms caused by "disinformation"—a term lacking universally agreed-upon international definitions—while understating the risk of algorithmic censorship or the suppression of independent media.¹⁷

4.2 Embedding the Doctrine in the Implementation Road Map

To operationalize the Reserve of Humanity Doctrine within the WSIS-GDC coherence process, African Member States must inject specific, binding mandates into the implementation of GDC Objective 5 (Enhance international

governance of artificial intelligence for the benefit of humanity) and WSIS Action Line C10 (Ethical dimensions of the Information Society).⁹

Key implementation requirements include:

- **Mandatory Human-in-the-Loop (HITL) Architectures:** Any AI system deployed within the African public sector that impacts civic rights, resource allocation, or legal standing must possess a mandatory human override mechanism. The ultimate arbiter of a decision must be a named, legally accountable human official.
- **Algorithmic Impact Assessments (AIAs):** Prior to the procurement of any algorithmic system, governments must conduct and publicly publish AIAs that specifically evaluate the potential erosion of human agency. These assessments must scrutinize whether the system disproportionately impacts specific ethnic, linguistic, or socioeconomic demographics.
- **Non-Delegable Liability Frameworks:** The WSIS-GDC coherence roadmap must promote international legal standards clarifying that responsibility for an AI system's actions cannot be abstracted to a "black box." Ultimate liability must reside unequivocally with the corporate developers and the deploying human operators.

5. Securing the Substrate: Infrastructural Sovereignty, DePIN, and the Dual Core Finance Model

The theoretical pillars of Semantic Sovereignty and the Reserve of Humanity are fundamentally unenforceable if a sovereign state does not control the physical infrastructure upon which its digital economy operates. Currently, the geopolitical architecture of the global internet relegates Africa to a position of profound infrastructural dependency.

5.1 The Plunder Economy and the Fragility of Centralization

The historical narrative of resource exploitation in Africa—where raw materials such as gold, diamonds, and crude oil were systematically extracted to fuel industrialization elsewhere—is repeating itself in the digital domain.⁶ In the 21st century, digital data is the raw material driving the global AI economy.⁶ Because Africa controls less than 1% of the world's data center capacity, the

vast majority of digital interactions generated by its citizens are exported to foreign-owned servers, processed into high-value AI insights, and sold back to the continent.⁶ This mechanism represents digital capital flight on a continental scale, structurally preventing Africa from accruing domestic wealth from its own demographic dividend.⁶

To meet the accelerating demand, the African data center market is projected to reach \$9.15 billion by 2029, bolstered by an expected \$3.5 billion in new investments by multinational hyperscalers by 2027.⁶ However, these investments are overwhelmingly centralized and top-down. Relying on massive, centralized hyperscaler facilities creates catastrophic vulnerability known as a Single Point of Failure (SPOF).⁶ A single localized power grid failure, or the severing of critical submarine internet cables—a frequent occurrence along the African coast—can trigger cascading blackouts across regional financial systems, public services, and communications networks, demonstrating the extreme fragility of external control.⁶

5.2 The DePIN Revolution: Architecting the "ArchNet"

The antidote to centralized fragility is Decentralized Physical Infrastructure Networks (DePIN).⁶ DePIN represents a paradigm shift away from massive, capital-intensive data centers toward a widely distributed model utilizing blockchain-based cryptographic incentives to mobilize individual citizens and Micro, Small, and Medium Enterprises (MSMEs).⁶

Under a DePIN model, local internet cafes, tech hubs, and small businesses can host highly affordable Network-Attached Storage (NAS) mini-servers.⁶ Through a decentralized protocol, these thousands of disparate devices form a unified, distributed cloud computing network dubbed the "ArchNet".⁶ Data processed through the ArchNet is encrypted, fragmented, and distributed across multiple nodes. This architecture completely eliminates the SPOF; if a local node goes offline due to a power outage, the data remains secure and accessible across the broader network.⁶ Furthermore, localized processing slashes latency and can be deployed 10x to 100x faster and cheaper than traditional data centers, effectively solving the 1% capacity problem organically.⁶

5.3 The Dual Core Finance Model

The central challenge of scaling DePIN infrastructure lies in complex tokenomics and capital mobilization.²³ Traditional financing mechanisms are

misaligned with decentralized ecosystems, necessitating the adoption of a **Dual Core Finance Model** to fund Infrastructural Sovereignty under WSIS Action Line C2 (Information and communication infrastructure) and GDC Objective 2 (Expand inclusion in and benefits from the digital economy).⁹

The Dual Core Architecture operates via two distinct capital mechanisms:

1. **Anchor Capital (Institutional Liquidity):** This involves slow-moving, high-volume funding from traditional entities such as the UN Joint SDG Fund, regional development banks, sovereign wealth funds, and major venture capital firms (e.g., Anchor Capital Advisors, Velocity Capital).²⁴ Anchor Capital is deployed to underwrite foundational public goods—such as landing rights for submarine cables, continental fiber-optic backbones, and deep-tech research grants—creating the stable bedrock upon which decentralized networks can operate.
2. **Velocity Capital (Decentralized Liquidity):** This involves fast-moving, hyper-local capital generated by the DePIN ecosystem itself. To bootstrap supply without falling prey to the volatility of speculative cryptocurrency markets, the African DePIN model must integrate Community Inclusion Currencies (CICs).⁶ Utilizing models proven by initiatives like Sarafu in Kenya, MSMEs hosting DePIN nodes earn stable tokens that can be spent within their immediate communities for daily goods and services.⁶ Sub-Saharan Africa is uniquely primed for this; the region received over \$205 billion in on-chain value between mid-2024 and mid-2025, with over 8% of all transfers being under \$10,000—a clear indicator of retail utility and everyday financial inclusion rather than pure speculation.²²

Table 2: Synergies of the Dual Core DePIN Framework

Feature	Centralized Hyperscaler Model	Sovereign DePIN (ArchNet) Model	Economic Impact on Africa
Capital Flow	Massive capital flight to foreign tech monopolies.	Wealth remains localized via CICs and tokenized rewards.	Transitions data from an exported raw material to a locally refined asset.

Network Resilience	High SPOF risk (vulnerable to cable cuts/grid failures).	Hyper-resilient; no single point of failure.	Ensures continuous uptime for vital government and financial services.
Latency & Speed	High latency routing data off-continent.	Ultra-low latency due to local edge-processing nodes.	Enables real-time AI applications in healthcare and agriculture.
Regulatory Alignment	Frequently clashes with data localization laws.	Inherently complies with local data sovereignty mandates.	Turns regulatory compliance into a competitive advantage for MSMEs.

Crucially, the pursuit of DePIN is accelerated by the implementation of stringent data localization laws across the AU.⁶ When African governments legally mandate that citizen data be stored on local servers, they generate guaranteed, built-in demand for local storage. This regulatory maneuver forces multinational corporations to lease space on African-owned, decentralized DePIN nodes, converting a bureaucratic compliance requirement into a massive economic catalyst for local businesses.⁶

6. Agentic Tool Sovereignty (ATS): Confronting the Crisis of Runtime Governance

While DePIN addresses the physical location of hardware, the software layer of the neural age is undergoing a radical evolution that threatens to bypass physical sovereignty entirely. Artificial intelligence is transitioning from static, conversational chatbots into autonomous "agentic" systems. These AI agents do not merely generate text; they autonomously plan, select, and execute

actions across the internet using third-party APIs and remote servers.²⁸

This evolution has exposed a massive regulatory blind spot in international frameworks, including the highly lauded EU AI Act. Current legislation is fundamentally designed for predictable, bounded software.²⁸ It assumes that human deployers dictate how and where an AI system operates. However, agentic AI shatters this assumption, leading to the critical challenge of **Agentic Tool Sovereignty (ATS)**.²⁸

6.1 The Dynamics of Agentic Data Breaches

Agentic Tool Sovereignty is defined as the absolute requirement to control, audit, and classify the dynamic, autonomous runtime decisions made by AI systems.²⁸ When an AI agent is tasked with a complex problem, it dynamically queries digital registries to find the appropriate tools to solve it.

Technically, because agents select tools from constantly updating catalogs in real-time, the jurisdiction where the data will be processed is completely unknown until the exact moment of execution (runtime).³⁰ Legally, if an AI agent deployed by an African financial institution autonomously decides to utilize an external risk-calculation API hosted in a non-compliant, offshore jurisdiction to optimize its workflow, it executes an autonomous cross-border data transfer violation.³⁰ Operationally, responsibility for this breach becomes highly diffused across the original model provider, the system deployer, and the third-party tool provider, leaving regulators with no clear target for enforcement.³⁰

The financial and geopolitical risks of ignoring ATS are severe. Regulators are already signaling their willingness to aggressively penalize cross-border AI violations, evidenced by €20 million in recent GDPR fines levied against companies like OpenAI and Replika.³¹ Recognizing this threat, approximately 72% of German organizations are actively seeking sovereign AI solutions, fully aware that sovereignty ends the moment an agent autonomously calls an external tool.²⁸ If highly capitalized European organizations view agentic runtime behavior as a critical threat, African organizations—operating in environments with fewer cybersecurity resources—are exponentially more vulnerable.

6.2 Instituting Runtime Governance Protocols

The UNGIS Joint Implementation Road Map currently lacks the conceptual vocabulary to address ATS. Existing WSIS Action Lines and GDC objectives

embed sovereignty purely in territory and static data residency, whereas agentic systems necessitate embedding sovereignty directly into runtime behavior.³⁰

To close this gap under GDC Objective 4 (Advance responsible, equitable, and interoperable data governance) ⁹, Pan-African negotiators must introduce **Runtime Governance Mandates**.

These mandates must require that:

1. **Tool Discovery and Selection Constraints:** Any AI agent operating within an AU jurisdiction must be programmatically restricted to discovering and executing APIs only from a pre-approved, geographically compliant registry.
2. **Real-Time Telemetry and Auditing:** Static, pre-deployment AI compliance audits must be replaced or augmented by continuous telemetry monitoring. Every autonomous API call, data transfer, and tool interaction initiated by an agent must be logged in real-time to ensure it remains within sovereign bounds.²⁸
3. **The Global AI Fluidity Alliance (GAFA):** Because agentic systems inherently operate across borders, African states should champion the formation of GAFA within the UN digital architecture. This alliance would establish managed interdependence, ensuring that Global South nations have reciprocal visibility and regulatory oversight into the autonomous data flows routing through their digital borders.

7. Strategic Alignment and Implementation Roadmap for the UNGIS JIRM

The Draft Joint Implementation Road Map for WSIS-GDC Coherence presented to the CSTD emphasizes multi-stakeholder engagement and the avoidance of systemic duplication.¹ However, administrative coherence alone will not correct historical asymmetries. To ensure the post-2025 digital architecture serves the Global South, African diplomacy must operate with precision, embedding the pillars of Semantic Sovereignty, the Reserve of Humanity, DePIN infrastructure, and Agentic Tool Sovereignty directly into the UN's operational mechanisms.

7.1 Mapping Pan-African Imperatives to UN Frameworks

The following matrix outlines exactly how African Member States can align

their strategic demands with the existing WSIS Action Lines and the newly adopted GDC Objectives.

Table 3: Pan-African Strategic Matrix for WSIS-GDC Coherence

AIFAT Strategic Pillar	WSIS Action Line	GDC Objective (Annex I)	Proposed Implementation Mechanism within the UNGIS Road Map
Semantic Sovereignty	C8: Cultural identity and linguistic diversity	Obj 1: Close all digital divides	Establish the "Token Equity Taskforce" under the UN Working Group on Digital Technologies (WGDT). ³ Fund Pan-African Data Trusts.
Infrastructural Sovereignty (DePIN/Dual Core)	C2: Info and communication infrastructure	Obj 2: Expand inclusion in the digital economy	Designate DePIN as a recognized digital public good. Mobilize "Anchor Capital" via the UN Joint SDG Fund to incentivize local hardware deployment. ⁶
Reserve of Humanity Doctrine	C10: Ethical dimensions of the Information Society	Obj 3: Open, safe, secure digital space & human rights	Mandate binding Human-In-The-Loop (HITL) protocols for AI deployed in public welfare, justice, and security sectors. Enforce strict Algorithmic Impact Assessments (AIAs). ⁹
Agentic Tool Sovereignty (ATS)	C5: Building confidence & security	Obj 4: Advance equitable data	Update the UN Digital Cooperation Portal to include telemetry

	in the use of ICTs	governance	standards for runtime governance. Restrict autonomous cross-border API executions. ³
Fluid Institutionalism & Governance	C11: International and regional cooperation	Obj 5: Enhance international AI governance	Ensure robust African representation on the UN Independent International Scientific Panel on AI to counter Euro-centric risk models. ¹¹

7.2 Tactical Execution for African Delegations

As the global community approaches the UN Global Dialogue on AI Governance scheduled for July 2026, African delegations must transition from fragmented national policies to a unified, continental bloc.

1. **Leverage Fluid Institutionalism:** African digital governance must embrace "Fluid Institutionalism".³³ Rather than attempting to replicate the rigid, slow-moving bureaucratic structures of the Global North, African regulators must build highly adaptive, multi-stakeholder coalitions capable of rapidly responding to agile threats like ATS and token bias. This requires unprecedented synergy between the public sector, academia, and local technology communities.
2. **Redefine Global AI Metrics:** Current global AI indices are overwhelmingly Euro-centric, evaluating "readiness" strictly through the lens of capital accumulation and Western legalism, while ignoring distributive justice and labor equity.¹¹ Through the UNGIS Road Map, Africa must advocate for the adoption of the Global AI Responsibility Index (GARI), which prioritizes Data Sovereignty, Semantic Equity, and the protection of Homovictimus from algorithmic governmentality.¹⁰
3. **Harness the Digital Cooperation Portal:** African states must aggressively utilize the UN Digital Cooperation Portal—launched to track GDC implementation—to log Pan-African DePIN projects, local LLM initiatives, and data trust formations, securing international visibility and matching funds for "Anchor Capital" deployments.³

8. Conclusion: The Imperative of Sovereign Co-Architecture

The United Nations Group on the Information Society's attempt to harmonize the WSIS framework with the Global Digital Compact represents a critical, yet highly fragile, inflection point in global governance.¹ If the resulting Joint Implementation Road Map is relegated to a bureaucratic mapping exercise, it will inadvertently rubber-stamp the consolidation of the "Onopticon"—an algorithmic regime that reconstructs human existence as extractable data, foreclosing the futures of the global marginalized.¹⁰

The African continent cannot afford to remain a passive consumer of foreign cognitive architectures. The economic and cultural penalties imposed by the multilingual Token Tax, the extreme fragility of centralized foreign-owned infrastructure, and the looming threat of autonomous AI agents bypassing territorial laws at runtime demand an aggressive posture of digital defense.⁶

By embedding the core pillars articulated in this report—Semantic Sovereignty to ensure linguistic equity, the Reserve of Humanity Doctrine to protect moral agency, DePIN and Dual Core Finance to secure the physical substrate, and Agentic Tool Sovereignty to govern autonomous runtime behaviors—African Member States can fundamentally alter the trajectory of the neural age. The WSIS-GDC coherence process must be leveraged to execute an Ontological Mutiny, transitioning Africa from the era of data colonialism into its rightful role as a sovereign co-architect of a pluriversal, human-centric digital reality.

Works cited

1. Joint Implementation Road Map for WSIS–GDC Coherence | UNGIS, accessed April 30, 2026, <https://www.itu.int/net4/wsis/ungis/Articles/View/3267>
2. Draft Joint Implementation Road Map for WSIS–GDC Coherence | UNGIS - ITU, accessed April 30, 2026, <https://www.itu.int/net4/wsis/ungis/Articles/View/2264>
3. Global Digital Compact in 2024 | DW Observatory, accessed April 30, 2026, <https://dig.watch/processes/global-digital-compact>
4. CONTINENTAL ARTIFICIAL INTELLIGENCE ... - African Union, accessed April 30, 2026, [https://au.int/sites/default/files/documents/44004-doc-EN-Continental AI Strategy July 2024.pdf](https://au.int/sites/default/files/documents/44004-doc-EN-Continental_AI_Strategy_July_2024.pdf)
5. Continental Artificial Intelligence Strategy | African Union, accessed April 30, 2026, <https://au.int/en/documents/20240809/continental-artificial-intelligence-strategy>
6. The Sovereign Network: Why Africa Must Claim its Digital Gold with ..., accessed April 30, 2026, <https://medium.com/@ngige.mwenda/the-sovereign-network-why-africa-must-claim-its-digital-gold-with-depin-12a63a9ac9e9>
7. AI for Africa, by Africa - UNESCO, accessed April 30, 2026, [https://articles.unesco.org/sites/default/files/medias/fichiers/2025/10/AI for Africa by Africa EN.pdf](https://articles.unesco.org/sites/default/files/medias/fichiers/2025/10/AI%20for%20Africa%20by%20Africa%20EN.pdf)
8. EN_Draft-Continetal-AI-Strategy-May-2024-9-5-2024-Version-for-Validation.docx - Kenya ICT Action Network, accessed April 30, 2026, [https://posts.kictanet.or.ke/wp-content/uploads/2024/05/EN Draft-Continetal-AI-Strategy-May-2024-9-5-2024-Version-for-Validation.docx](https://posts.kictanet.or.ke/wp-content/uploads/2024/05/EN_Draft-Continetal-AI-Strategy-May-2024-9-5-2024-Version-for-Validation.docx)
9. Annex I: Global Digital Compact | Pact for the future - the United Nations, accessed April 30, 2026, <https://www.un.org/pact-for-the-future/en/annex-i-global-digital-compact>
10. (PDF) Onopticon and Homovictimus: The Ontological Regime of the the ..., accessed April 30, 2026, [https://www.researchgate.net/publication/401757734 Onopticon and Homovictimus The Ontological Regime of the Digital Leviathan and the Operationalization of Algorithmic Governmentality](https://www.researchgate.net/publication/401757734_Onopticon_and_Homovictimus_The_Ontological_Regime_of_the_Digital_Leviathan_and_the_Operationalization_of_Algorithmic_Governmentality)
11. 98158 PDFs | Review articles in CRITIQUE - ResearchGate,

- accessed April 30, 2026, <https://www.researchgate.net/topic/Critique/publications>
12. (PDF) The Double Face of International Governance: WHO, Pandemic Politics, and the Ontopolitics of Global Control - ResearchGate, accessed April 30, 2026, https://www.researchgate.net/publication/404081844_The_Double_Face_of_International_Governance_WHO_Pandemic_Politics_and_the_Ontopolitics_of_Global_Control
 13. The Token Tax: Systematic Bias in Multilingual Tokenization - ACL Anthology, accessed April 30, 2026, <https://aclanthology.org/2026.africanlp-main.10.pdf>
 14. The Token Tax: Systematic Bias in Multilingual Tokenization - arXiv, accessed April 30, 2026, <https://arxiv.org/abs/2509.05486>
 15. The value of inclusion of African Languages in AI - AI4D, accessed April 30, 2026, <https://www.ai4d.ai/blog/the-value-of-inclusion-of-african-languages-in-ai>
 16. AI and Language Data Flaring in Africa: Addressing the Low-Resource Challenge, accessed April 30, 2026, <https://www.cigionline.org/publications/ai-and-language-data-flaring-in-africa-addressing-the-low-resource-challenge/>
 17. UN: Response to Governing AI for Humanity report - ARTICLE 19, accessed April 30, 2026, <https://www.article19.org/resources/un-response-to-governing-ai-for-humanity-report/>
 18. Governing AI for Humanity - Final Report - the United Nations, accessed April 30, 2026, https://www.un.org/sites/un2.un.org/files/governing_ai_for_humanity_final_report_en.pdf
 19. AI Governance for Humanity Lab | Office for Digital and Emerging Technologies, accessed April 30, 2026, <https://www.un.org/digital-emerging-technologies/content/ai-governance-humanity-lab>
 20. The Vatican calls for AI guidelines that preserve human intelligence | SBS News, accessed April 30, 2026, <https://www.sbs.com.au/news/podcast-episode/the-vatican-calls-for-ai-guidelines-that-preserve-human-intelligence/ez2ytbfol>
 21. Vatican releases long-awaited document on AI and Transhumanism - Omnes, accessed April 30, 2026, <https://www.omnesmag.com/en/news/the-vatican-publishes-long-awaited-document-on-ia-and-transhumanism/>
 22. The DePIN Renaissance And Its Impact On The Future Of AI -

- Forbes, accessed April 30, 2026, <https://www.forbes.com/councils/forbesbusinesscouncil/2026/01/13/the-depin-renaissance-and-its-impact-on-the-future-of-ai/>
23. Decentralized physical infrastructure networks (DePIN) tokenomics - Frontiers, accessed April 30, 2026, <https://www.frontiersin.org/journals/blockchain/articles/10.3389/fbloc.2025.1644115/full>
 24. Signatory Directory Update (Mon, accessed April 30, 2026, https://dwtyzx6upklss.cloudfront.net/Uploads/y/k/f/signatory_update_sept_2024_642502.xlsx
 25. 220505 - OpenVC, accessed April 30, 2026, <https://cdn.prod.website-files.com/67db4bde8f92402fd46a91c3/67db4bde8f92402fd46a9ead4774%20OpenVC%20-%20The%20best%20VC%20list%20for%20cold%20outreach.xlsx>
 26. exhibit a, accessed April 30, 2026, <https://fksfirm.com/wp-content/uploads/2023/06/2023-06-07-Affidavit-of-Paul-Mulholland-Concerning-Mailing-of-Post-Card-Notice.pdf>
 27. Global Startup Funding & Investors Data [July-Dec 2021] - StartupTalky, accessed April 30, 2026, <https://startuptalky.com/global-startups-funding-investors-data-2021/>
 28. Agentic Tool Sovereignty: The EU AI Act Problem Nobody Saw Coming - Medium, accessed April 30, 2026, <https://medium.com/@michael.hannecke/agentic-tool-sovereignty-the-eu-ai-act-problem-nobody-saw-coming-869325cd8352>
 29. EU AI Act: Compliance Flexibility & Strategy - Enzai, accessed April 30, 2026, <https://www.enz.ai/the-eu-ai-act-bends-for-agentic-ai-it-need-not-break>
 30. Agentic Tool Sovereignty - European Law Blog, accessed April 30, 2026, <https://www.europeanlawblog.eu/pub/dq249o3c>
 31. (PDF) Agentic Tool Sovereignty - ResearchGate, accessed April 30, 2026, https://www.researchgate.net/publication/397899667_Agentic_Tool_Sovereignty
 32. Follow-ups: - un desa dpidg - the United Nations, accessed April 30, 2026, https://publicadministration.desa.un.org/sites/default/files/2021-04/2025/Inputs%20to%20Zero%20Draft/UN%20ODET_inputs%20

[Oto%20Zero%20Draft.pdf](#)

33. (PDF) Embracing Changes: Adaptation by Adolescents with Cancer, Critical Appraisal - Academia.edu, accessed April 30, 2026,
[https://www.academia.edu/38515579/Embracing Changes Adaptation by Adolescents with Cancer Critical Appraisal](https://www.academia.edu/38515579/Embracing_Changes_Adaptation_by_Adolescents_with_Cancer_Critical_Appraisal)
34. (PDF) Merger & Acquisition of Robi & Airtel BD - Academia.edu, accessed April 30, 2026,
[https://www.academia.edu/36190009/Merger and Acquisition of Robi and Airtel BD](https://www.academia.edu/36190009/Merger_and_Acquisition_of_Robi_and_Airtel_BD)