



Small Steps to Big Intelligence

A Micro-Transformation Approach to AI Governance in Nigeria's Public Institutions

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Executive Summary

Nigeria's public institutions face a critical gap between AI ambition and execution capacity. Despite a new National AI Strategy and data-protection laws, government AI initiatives remain fragmented, under-resourced, and risk-averse. Agencies tasked with both deploying and regulating AI lack the institutional muscle to do so effectively. Current large-scale digital transformations fail by ignoring weak technical capacity, siloed structures, and cultures that penalise failure, creating an "AI governance paradox" where the state cannot govern what it cannot competently deploy.

This brief proposes a Micro-Transformation Framework (MTF) as a practical alternative. Rather than comprehensive overhauls, MTF breaks AI reform into small, disciplined digital interventions tied to core agency mandates. These micro-transformations deliver measurable service improvements while simultaneously building skills, data protocols, and ethical safeguards. Seven interconnected pillars embed continuous learning, transparency, and adaptability into daily workflows, shifting reform from a one-time event into an ongoing capability-building process.

This approach is particularly fitting because it matches the ambition of AI digital reform with the realities of Nigeria's institutional constraints.



Federal agencies lack specialised AI expertise, operate in silos, and maintain risk-averse cultures. Low public trust means technology failures become political crises. By starting with low-risk, high-impact use cases like automating routine audit checks or streamlining citizen enquiries, MTF builds confidence without gambling on unproven grand plans. Early pilots focus on visible service delivery gaps so benefits are tangible to citizens and officials alike.

Key Recommendation:

Implement MTF in one lead oversight agency as a testbed. Begin with a single AI application addressing a core service challenge (fraud detection in audits or a citizen-service chatbot). Track outcomes with simple dashboards and pilot logs, share lessons across agencies, and scale only proven practices. This deliberate, evidence-driven path of small experiments yielding real results will incrementally build AI expertise and legitimacy, enabling Nigeria's institutions to become credible, capable stewards of ethical and effective AI governance.

Background



Nigeria's digital governance journey reflects bold ambition meeting incomplete execution. Internet penetration reached close to half the population in 2024^[1]. The National Information Technology Development Agency's (NITDA) Strategic Roadmap (2021–2024) seeded hundreds of digital centres across the federation,^[2] and the National e-Government Master Plan targets 75% digitisation of public services by 2027^[3], while the Nigeria Data Protection Act (2023) established an independent commission to safeguard privacy and govern data use^[4].

^[1] [DataReportal, 2025](#)

^[2] [Nairametrics 2025](#)

^[3] [Open Government Partnership \(2024\)](#)

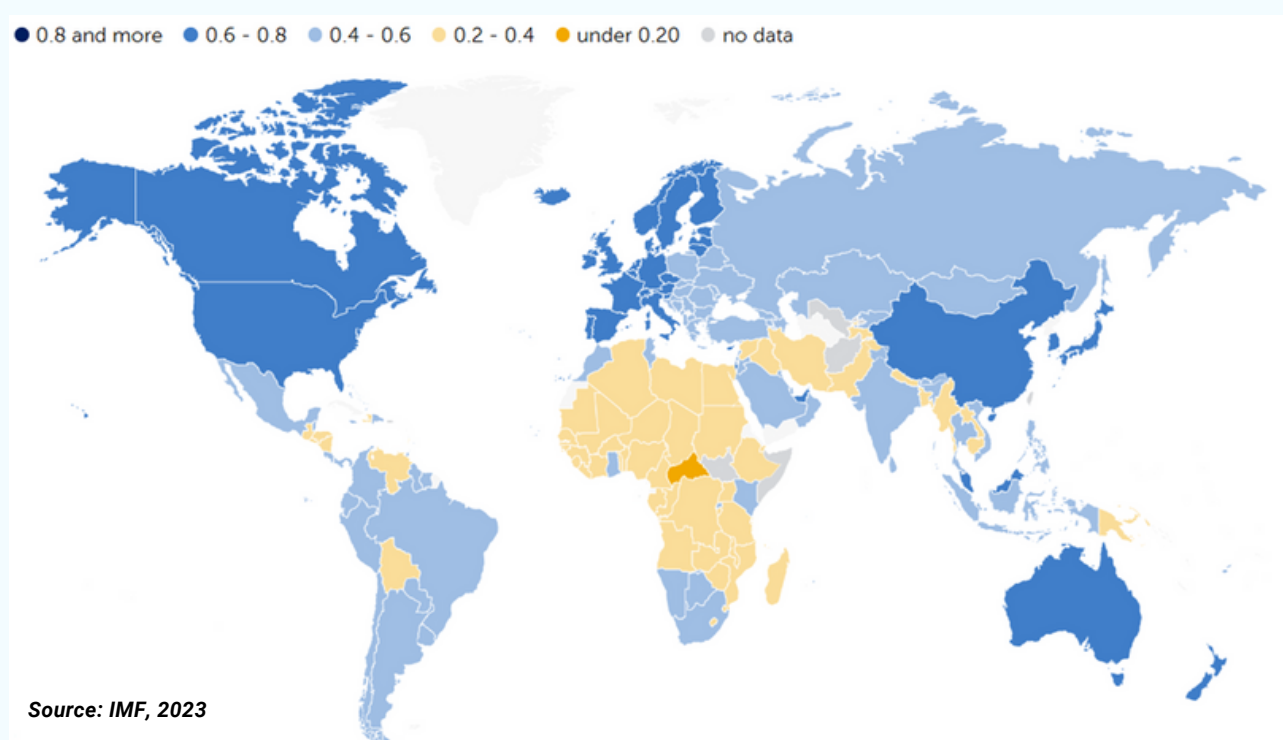
^[4] [Adeoti, 2023](#)

Nigeria has assembled a functional foundation for sophisticated digital public services, supported by its young, tech-savvy population and vibrant private-sector innovation in payments, agriculture, and health.^{[5][6]}

AI now stands at the centre of this next phase of development. When properly governed, AI can significantly enhance state capability by strengthening institutions' capacity to detect fraud, triage citizen enquiries, improve compliance monitoring, and accelerate high-volume service delivery.^{[7][8]}

However, enabling conditions remain uneven. Nigeria currently ranks 18th out of 54 African countries in AI readiness, trailing nations such as Kenya, Tunisia, and South Africa.^[9] On the IMF's 2023 international AI-readiness indices (Figure 1), Nigeria scored just 0.34, well below the global average of 0.68 for advanced economies and 0.46 for emerging markets. These gaps stem primarily from persistent challenges in broadband infrastructure, reliable power supply, fragmented public data systems, and shortages of applied AI and regulatory talent.^[10]

Figure 1: IMF Data on Global AI Readiness



In response, Nigeria's National Artificial Intelligence Strategy (NAIS), launched in 2024, presents an ambitious five-pillar framework spanning infrastructure, ecosystem growth, sectoral adoption, responsible AI, and governance.

^[5] Akinyemi & Akinyemi, 2023

^[6] Amuda & Parveen, 2024

^[7] Chava, 2025

^[8] Engstrom et al., 2020

^[9] PWC, 2024

^[10] Okonkwo et al., 2024

It sets 32 targeted outcomes over five years, including establishing a national AI ethics council and high-performance computing infrastructure.^[11] Yet the strategy stops short of prescribing an operational model for institutional adoption, leaving Ministries, Departments, and Agencies (MDAs) without clear pathways to implement AI safely, ethically, and at scale. Thus, the current landscape of AI governance in Nigeria remains both ambiguous and unrealistic, seemingly repeating the historical patterns of stalled public sector digital reforms.

The AI Governance Problem Statement For Nigeria's Public Sector Institutions

Nigeria's public institutions (regulators, supervisors, auditors, and coordinating ministries) are under growing pressure to both use AI for public value and govern it to high standards of legality, fairness, and accountability. The private sector adopts AI to gain a competitive advantage; the public sector must deploy it while preserving equity, transparency, and citizen trust. The consequence is a dual mandate that is far more complex, as public institutions must innovate responsibly and regulate effectively, often without the capacity or coherence to do either well. This duality is particularly critical because these core institutions anchor the broader governance ecosystem. Their digital competence shapes how markets function, how citizens access services, and how policy credibility is sustained.

When they lack the people, processes, or tools to evaluate and deploy AI responsibly, the effects ripple outward, eroding citizen rights, market integrity, and confidence in state capability.^[12]

Yet, despite years of reform initiatives, most efforts to embed digital or AI capability across government have underperformed. A 2025 report from Nigeria's National Information Technology Development Agency (NITDA) reveals that 56% of large government IT projects fail, resulting in wasted resources and reform fatigue. This recurring pattern points not to a shortage of strategies or technology but to a persistent inability to translate ambition into operational reality.

^[11] NITDA, 2024

^[12] Kempeneer et al., 2024.

Understanding this persistent failure requires looking beyond resource or technical deficits to examine the deeper structural paradoxes shaping public-sector digital transformation. Recent studies reveal four interconnected dimensions that consistently undermine reform efforts and explain why ambitious AI and digital strategies stall before reaching scale.

Finding 1: Capacity Deficits Create a Double Bind

Nigeria's MDAs lack skilled staff, face outdated technology, poor data quality, and limited resources, echoing global trends where public AI uptake lags behind the private sector. The paradox is stark, as the same capacity constraints that make AI adoption necessary also make AI governance nearly impossible. UNESCO's 2025 training programme illustrates this bind, as 80 officials were trained, but their agencies lacked the frameworks, protocols, and procedures to translate knowledge into practice.^[13] The capacity bar is raised precisely where capacity is most scarce.

This double bind is evident in daily operations: government agencies may invest in AI tools or platforms, but without personnel who understand

complex algorithms or data management, these investments are underutilised. For instance, a Ministry of Health might try to implement predictive analytics for disease outbreaks but struggle to interpret results accurately or integrate them into existing workflows. Moreover, outdated IT infrastructure slows data processing, creating bottlenecks that hinder real-time decision-making. Although international training programmes, though valuable, often focus on theoretical knowledge and overlook the realities of Nigeria's resource and infrastructure limitations. Without localised curricula and continuous mentorship, skill-building efforts fail to deliver sustainable outcomes.

Finding 2: Institutional Fragmentation Prevents Collective Learning

Knowledge about digital governance remains siloed across agencies, leading to policy overlaps and inefficiencies.^[14] Nigeria's AI regulations exemplify this fragmentation: they are spread across multiple bodies, hindering unified approaches to issues like data privacy. Successful initiatives rarely travel beyond their originating agencies, forcing each institution to repeat efforts rather than learn from existing solutions.^[15]

^[13] UNESCO, 2025

^[14] Mikhaylov et al., 2018

^[15] Cihon et al., 2020

The consequences of this fragmentation are severe and compounding. Scarce resources are wasted on duplicated efforts. Unified responses to cross-cutting issues like data privacy and algorithmic fairness become impossible. Most critically, successful experiments in one agency never inform practice elsewhere when learning cannot flow across institutional boundaries, every agency must reinvent solutions rather than adapting proven approaches. The AI-driven fraud detection success in South-South Nigeria illustrates this pattern: the initiative stalled partly due to fragmented data systems and unclear institutional ownership, meaning its lessons remained trapped within a single context rather than benefiting the broader ecosystem^[16].

Finding 3: Cultural Barriers Block Adaptive Implementation

A culture of risk aversion in Nigeria's public sector stifles the experimentation necessary for effective AI adoption. Even when technical capacity improves, organisations struggle with implementation due to ingrained norms that prioritise compliance over innovation.^[17] Research into BigGAN (Big Generative Adversarial Network, an AI model for generating high-quality synthetic images and data) applications within Nigeria's civil service illustrates this dynamic: while the study confirmed technical feasibility, it found essential readiness components absent such as ethical oversight, incremental testing, and adaptive learning strategies.^[18] The institutions are structurally designed for stability, not adaptation.

This risk-averse culture manifests in practical ways that compound the implementation challenge. Lengthy approval cycles for new technologies

discourage frontline workers from proposing innovative solutions. When pilots do occur, failures are met with punitive responses rather than treated as opportunities for learning and improvement. The absence of psychological safety within Nigerian MDAs means employees prefer to stick to established procedures, even if they are inefficient, rather than risk criticism or career setbacks. In contrast, countries with more adaptive bureaucratic cultures encourage controlled experimentation, allowing quick pivots and scaling of successful models. Without this cultural shift, even technically sound initiatives and well-coordinated efforts will struggle to translate policy intent into operational reality because underlying norms and incentives discourage the very experimentation necessary for learning.

^[16] [Chinda & Obiosa, 2025](#)

^[17] [Najari et al., 2025](#)

^[18] [Atache et al., 2024](#)

Finding 4: Trust Deficits Turn Technical Failures into Legitimacy Crises

Nigeria operates within a context of institutional fragility where public confidence in government fairness and integrity remains persistently low. The 2025 Edelman Trust Barometer reveals that crises of trust, fueled by inequality and disinformation, directly shape public attitudes toward AI ^[19]. Globally, individuals with high grievances are over 20% less likely to trust AI or its institutional users. While Nigeria's overall trust index stands at 65%, this figure masks deep skepticism about government fairness and integrity. In this environment, AI must earn legitimacy amid low institutional credibility, a challenge compounded by the reality that technology failures further erode trust and widen the very legitimacy gap that responsible AI governance requires.

This trust deficit fundamentally transforms the stakes of AI implementation. In high-trust environments, technical failures are treated as troubleshooting opportunities; in low-trust environments, they become evidence that institutions cannot deliver, further widening the legitimacy gap.

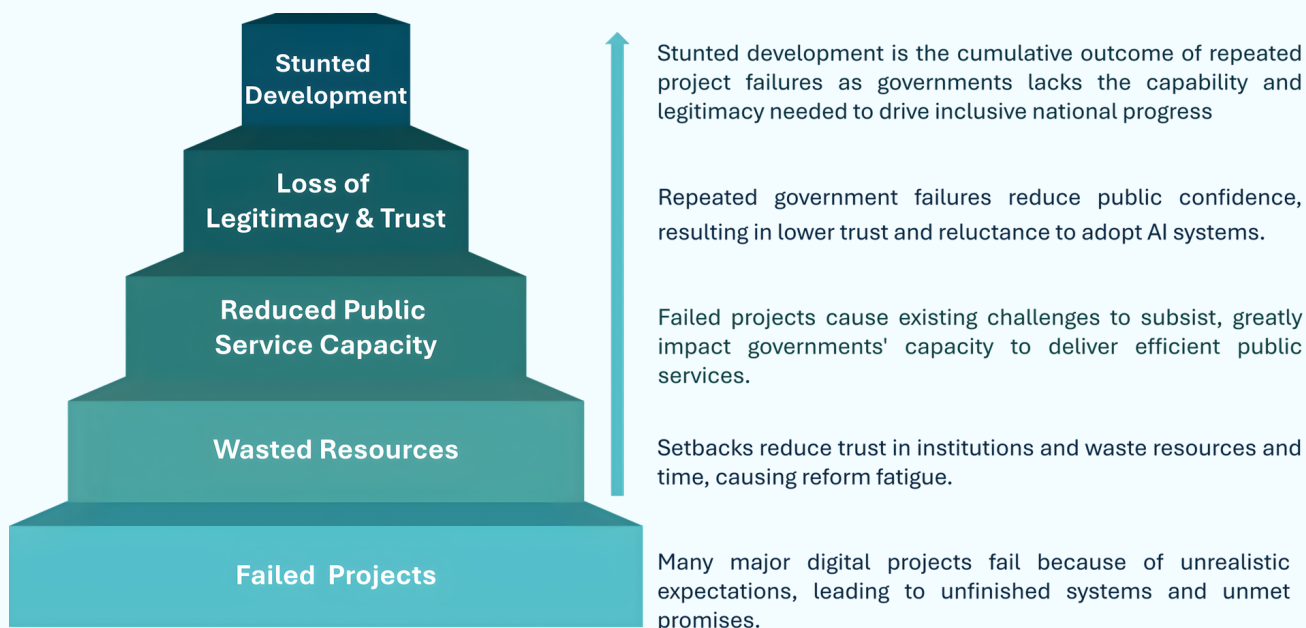
This creates an asymmetric risk environment: AI successes build credibility slowly and incrementally, but failures erode it rapidly and dramatically. The paradox is acute. Public sector institutions must precisely govern AI to exceptionally high standards when their capacity to do so is most constrained.

The margin for error is smallest where the capability gap is largest, turning every implementation into a high-stakes test of institutional competence.

It is important to note that these four dimensions do not operate independently; rather, they reinforce each other in a self-perpetuating cycle. Capacity deficits make experimentation risky. Institutional fragmentation prevents learning from experiments that do occur. Cultural barriers discourage the adaptive approaches needed to build capacity. Trust deficits raise the stakes of failure, further discouraging experimentation. The result is institutional paralysis disguised as caution. Figure 2 illustrates how these dimensions interact to create and perpetuate the design-reality gap in Nigeria's public sector digital reforms.

[\[19\] Edelman, 2025](#)

Figure 2: Summary of Nigeria's AI governance problem ecosystem



Source: Author's Construction

Why Traditional Approaches Fail In Nigeria's Public Sector Digital Transformation

Grand strategies overestimate existing infrastructure and skills, underestimate organisational friction, and neglect the feedback loops necessary for safe, adaptive system operation.^[20] They assume an implementation context that does not exist: adequate capacity, coordinated institutions, adaptive culture, and sufficient public trust. When these assumptions meet reality, the consequences manifest across three interconnected levels:

1

For Individual Institutions:

Public sector bodies find themselves caught between the imperative to modernise and the absence of institutional infrastructure to do so responsibly. They face pressure to both deploy AI and govern it but lack the capacity for either. The result is cautious adoption without assured safeguards or pilots that never scale because governance, not code, becomes the binding constraint.

2

For the Broader Ecosystem:

When public sector institutions struggle, the costs extend beyond their operations. Their limited capacity poses risks to citizen rights (ungoverned AI in service delivery), market integrity (inconsistent regulatory standards), and public confidence (visible failures that confirm institutional incompetence). As depicted in Figure 2, their struggles ripple outward, affecting the entire ecosystem of public service delivery, citizen protection, and democratic accountability that depends on their effective functioning^[21].

3

For Reform Strategy:

The design-reality gap cannot be closed through more ambitious strategies or additional resources alone. The problem is structural: transformation approaches that assume ideal conditions will continue to collapse under real-world constraints. Where the past decade of digital reform was characterised by ambition without absorption capacity, the next must be defined by adaptation without institutional collapse.

^[20] Schiff et al., 2022

^[21] Kempeneer et al., 2024

The solution to this pattern lies not in abandoning ambition, but in reimagining how transformation unfolds.

“Rather than attempting change in one grand leap, success requires breaking down large ambitions into small, strategic steps that progressively close the gap between plans and reality”.

The question is not whether Nigeria should adopt AI or regulate it, but how to do both simultaneously given current institutional capacity. Moreover, this insight is not unique to Nigeria. Countries that achieved digital transformation started not with sweeping reforms but with targeted pilots. Bangladesh's a2i labs and South Korea's e-People platform both began as small experiments embedded in government workflows, building trust and demonstrating value before scaling.^{[22][23]} In each case, success came from micro-level experimentation that informed and enabled macro-level transformation. The comprehensive strategies came later, built on foundations of proven capability and institutional learning. Nigeria now faces the same choice: continue pursuing ambitious strategies that exceed institutional capacity, or adopt an approach that sequences ambition to match reality. This sequencing logic forms the premise of the Micro-Transformation Framework.

Micro-Transformation Framework (MTF): A New Lens For AI Governance

The Micro-Transformation Framework (MTF) offers a fundamentally different approach to public sector reform. MTF, shown in Figure 3, does not attempt to make big changes all at once. Instead, it reframes public-sector innovation as a continuous journey of targeted, incremental interventions. Drawing on complexity theory^[24] and sociotechnical systems research,^[25] it provides a roadmap for agile reforms and experiments that cumulatively drive significant improvements in institutional performance and public trust. Importantly, the MTF maintains ambitious reforms and does not simply present micro-transformations as miniature versions of a big reform.

[\[22\] Bhuiyan, 2011](#)

[\[23\] Jin, 2018](#)

[\[24\] Turner & Baker, 2019](#)

[\[25\] Kudina & Van de Poel, 2024](#)

The framework positions micro-transformations as strategic decompositions of ambitious goals into contextual, sequenced interventions that build toward the overall vision iteratively.



Source: Author's construction

MTF comprises seven reinforcing pillars that help institutions evolve continuously, responsibly, and with measurable impact:

1.Strategic Inflection Points serving as Leverage for Change: Transformation succeeds when reform meets readiness. MTF begins by identifying high-leverage moments, such as crises, policy shifts, new leadership, increased stakeholder tension around a service touchpoint, or breakthroughs in innovation, where modest interventions can yield disproportionate results. For Nigeria, these key moments include post-pandemic digital reforms, anti-corruption initiatives, and using AI to improve slow services or enforce regulation . These visible, high-impact pilots generate proof, momentum, and learning that justify scaling.

2. Innovation Leadership that Empowers Change Agents: Policies and systems move only when people lead them. Innovation leadership cultivates public-sector champions, who serve as officials who bridge policy and technology, protect reform teams, and sustain ethical focus.

Evidence from e-government reforms worldwide shows that committed leadership, not technical sophistication, best predicts success. Building this cadre within Nigeria's institutions ensures continuity, coordination, and an enduring culture of responsible experimentation.

3. Participation and Co-Creation that Prioritises Designing with Stakeholders:

The MTF embeds collaboration and transparency into governance. By involving civil servants, citizens, technologists, academics, and civil society from design to deployment, systems become context-aware, trusted, and legitimate. Participatory design reduces resistance, surfaces hidden risks, and builds societal ownership. It transforms AI governance from a government-only project into a shared public mission anchored in trust.

4. Incremental Execution through Learning by Doing:

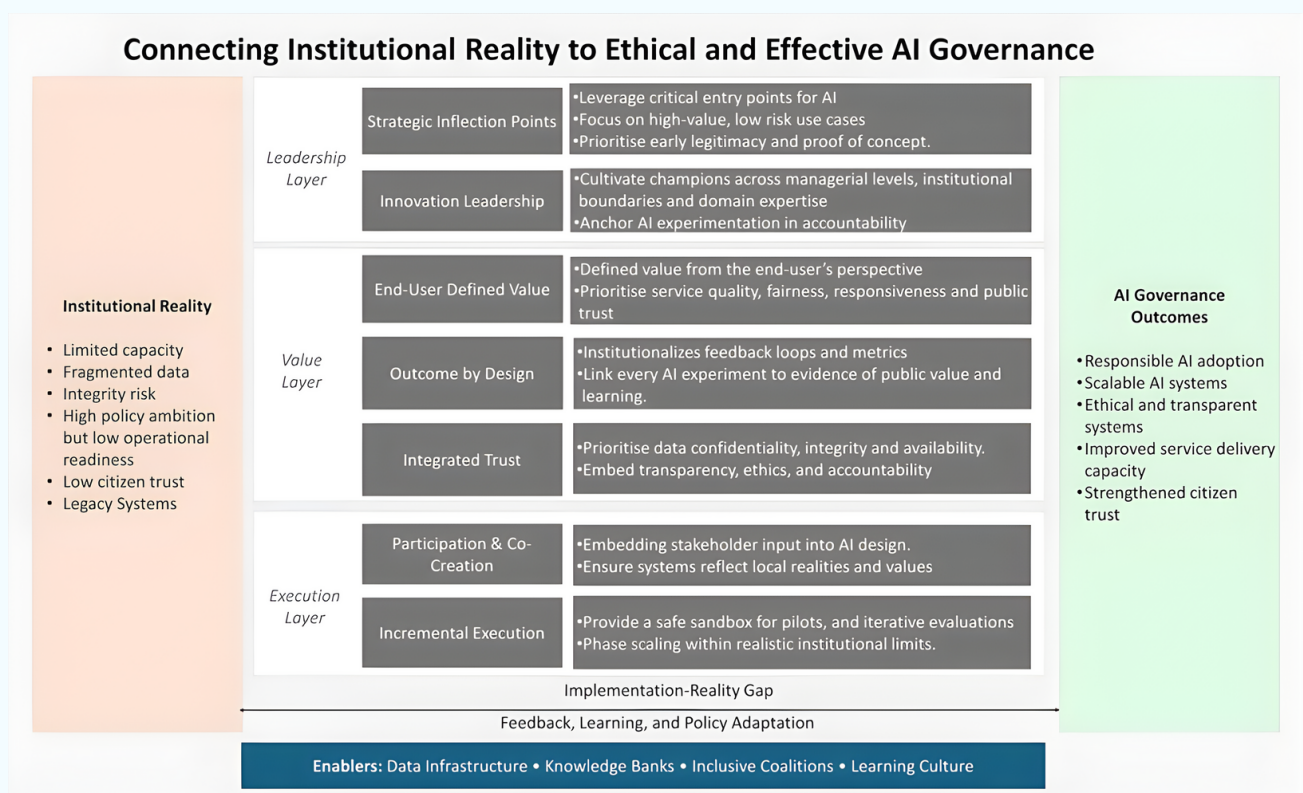
MTF operationalises reform through small, iterative steps rather than colossal projects. Pilots and phased rollouts allow for safe experimentation, early correction, and cumulative progress. This agile approach turns each project into a learning cycle: what works is scaled, and what fails teaches. The outcome is a culture where experimentation is expected, not punished, which is crucial in bureaucracies wary of risk.

5. Integrated Trust that embeds Building Confidence by Design: Trust is not an add-on but an architectural principle. MTF weaves transparency, accountability, and ethics into every stage of AI design and deployment. Technical reliability, human oversight, explainability, and data protection combine to create "trust by design". For Nigeria, where confidence in digital systems is fragile, these mechanisms are essential for legitimacy and long-term adoption.

6. End-User Defined Value that ensures Solving the Right Problems: Reform must begin with real needs, not fashionable technologies. End-User Defined Value anchors success in tangible improvements to citizens' and workers' daily experiences (time saved, fairness increased, outcomes improved). By focusing on problems users face, governments close the design-reality gap, ensure adoption, and direct scarce resources to interventions that create genuine public value

7. Outcome by Design that Makes Results Measurable and Impactful: Activity is not achievement. Outcome by Design requires that every initiative specify its intended results, how they will be measured, and how learning will inform adaptation. This pillar links micro-interventions to strategic objectives, aligns actors across institutions, and creates evidence that guides investment, scaling, and accountability.

The seven pillars function together as a system: inflection points signal where to begin; leadership drives action; participation ensures legitimacy; incremental execution manages risk; trust builds adoption; user-defined value maintains relevance; and outcome measurement supports learning. This cycle enables steady progress by accumulating small wins that build capacity and coordination. For Nigeria’s public sector institutions, from regulators, supervisors, and auditors, this also represents a practical methodology for resolving the AI paradox where these institutions must design, use, and govern AI systems in a manner that respects their institutional realities, bolsters service delivery capacity, and delivers public good. Figure 4 shows an illustrative mapping of how this framework connects these realities to the expected outcome.



Source: Author's construction

By examining AI governance from the perspective of the MTF, it is clear that when capacity gaps make widespread AI adoption risky, the MTF enhances capability through controlled experiments. Additionally, in cases where institutional fragmentation hinders learning, the MTF establishes organised environments for experimentation and knowledge exchange among various agencies. Where cultural resistance stops innovation, MTF makes change safer through small pilots that limit downside while proving benefits. Where trust deficits raise stakes, MTF generates credibility through visible, incremental successes rather than betting everything on untested grand plans. In essence, MTF recognizes that sustainable transformation in limited-resource settings requires gradual accumulation rather than sweeping declarations.

In the Nigerian context, the MTF recommends starting small, learning quickly, building trust, and scaling proven solutions for responsible AI governance.

Policy Recommendations

Guided by the MTF (Figure 4), the following policy recommendations present solutions that translate systemic diagnosis into actionable interventions designed for Nigeria's institutional realities. Rather than prescribing ideal-state reforms, each recommendation responds directly to the binding constraints facing Nigeria's public sector institutions: limited capacity, fragmented coordination, risk-averse culture, and fragile public trust. Table 1 in the appendix provides an overview of these recommendations. Together, they chart a deliberate pathway toward sustainable AI governance that builds capability through doing, scales ambition through sequencing, and earns legitimacy through demonstrated results.

PROBLEM 1: Capacity Deficits Create a Double Bind

SOLUTION: Build Capacity Through Strategic Experimentation

The way out of the capacity double bind is not to wait until capacity exists but to build it through doing. Replace large-scale AI projects with contained experiments that deliver measurable value while building institutional muscle. Start small, learn fast, and scale deliberately based on demonstrated readiness rather than political pressure. This approach limits downside risk while generating the evidence and expertise needed for broader adoption.

Priority Action 1: Launch Mission-Aligned AI Pilots *(Timeline: 0-6 months)*

Begin with 1-2 high-value, low-risk use cases directly tied to each institution's core mandate. A regulator might automate anomaly detection in audits, a consumer protection agency could pilot an AI chatbot to triage complaints, or a ministry might test AI-assisted document classification for policy archives.

Each pilot should respond to existing pain points (bottlenecks in data analysis, delays in correspondence, and repetitive manual verification) and include defined success metrics observable within six months: processing time reduction, accuracy rates, error reduction, or cost savings.



Lead Actor: Permanent Secretaries/Chief Executives of MDAs



Supporting Actors: IT Departments, Policy Units, Project Implementation Teams



Immediate Steps: Identify persistent operational problems limiting performance; select one use case with clear link to statutory function; define success metrics upfront; secure visible leadership sponsorship through internal circulars or quarterly reports; integrate pilot into formal workplans and budget lines rather than treating it as side project



Success Indicator: At least one operational pilot per agency within six months, with defined KPIs being tracked

Priority Action 2: Establish Cross-Functional AI Working Groups (Timeline: 0-3 months)

Capacity gaps exist not just in technical skills but in the ability to evaluate AI from multiple perspectives simultaneously. Create standing committees that bring together representatives from IT, legal, policy, audit, and operations to review AI initiatives holistically. For example, the Central Bank's AI group might include supervisors, data scientists, compliance officers, and legal counsel, reflecting all disciplines affected by automation. These working groups should have decision authority, quarterly meeting schedules, and direct reporting lines to leadership.



Lead Actor: Directors-General/Chief Executives



Supporting Actors: Department heads from IT, Legal, Policy, Audit, Operations



Immediate Steps: Designate representatives from each relevant department; establish terms of reference with clear decision-making authority; schedule standing monthly or quarterly meetings; create documentation protocols for decisions and recommendations



Success Indicator: Functional working group conducting regular reviews of all AI initiatives within three months

Priority Action 3: Create Internal Evidence Systems (Timeline: 3-12 months)

Convert each AI experiment into institutional learning by systematically documenting what works, what doesn't, and why. Develop lightweight monitoring dashboards using accessible tools (Excel, Power BI, or open-source alternatives) that track pilot performance in real time: accuracy, timeliness, error rates, and user sentiment. After each pilot cycle, conduct structured retrospectives documenting lessons in standardised AI Pilot Logs. Over time, these logs become an internal evidence repository, a micro-knowledge bank that informs future regulation and procurement standards, reducing reliance on external consultants and improving continuity across leadership transitions.



Lead Actor: Internal Audit Units, Policy Evaluation Departments



Supporting Actors: Academic partners, Technical consultants, and Project teams



Immediate Steps: Design a simple monitoring dashboard template; establish an AI Pilot Log format capturing hypothesis, implementation approach, results, and lessons; invite internal audit or academic partners to validate performance data independently; create a shared digital repository for documented cases.



Success Indicator: Live dashboard operational for each pilot; at least three documented pilot logs within 12 months

PROBLEM 2: Institutional Fragmentation Prevents Collective Learning

SOLUTION: Break Down Silos Through Federated Learning

Fragmentation can be addressed without forcing uniformity, especially where different agencies exhibit disparate digital maturity levels.

The solution is to create structured mechanisms for knowledge sharing and light-touch coordination that allow agencies to maintain sectoral autonomy while contributing to collective intelligence. This federated learning approach converts scattered experiments into a coherent governance ecosystem where one agency's discovery becomes another's starting point.

Priority Action 1: Establish National AI Governance Coordination Hub *(Timeline: 0-6 months)*

Create a lightweight coordination platform, not a new bureaucracy, combining physical quarterly convenings with a digital knowledge repository where agencies share pilot results, ethical frameworks, and procurement standards. Host bi-annual "AI Governance Rounds", bringing together project teams from across government to present progress, identify common challenges, and co-develop solutions. The hub should function as a learning network, not a command centre, facilitating horizontal exchange rather than top-down directives.



Lead Actor: National Information Technology Development Agency (NITDA)



Supporting Actors: All MDAs implementing AI, National Data Protection Commission (NDPC), Federal Ministry of Communications, Innovation and Digital Economy



Immediate Steps: Designate coordination team within NITDA; establish simple digital platform (could start as shared drive or wiki); schedule first AI Governance Round within three months; create a standardised template for agencies to share case studies; invite initial cohort of 10-15 agencies actively experimenting with AI



Success Indicator: At least 15 agencies participating within 12 months; shared repository containing a minimum of 10 documented case studies; two AI Governance Rounds convened

Priority Action 2: Develop Shared AI Governance Standards *(Timeline: 6-12 months)*

Regulatory overlap and incoherence stem from agencies developing guidance in isolation. Bring sector regulators together to co-develop minimum interoperability standards for AI deployment across government: common data governance protocols,

shared ethical principles, and standardised risk assessment frameworks. The goal is alignment, not uniformity. Agencies should adapt standards to sectoral contexts while ensuring baseline consistency. This collaborative standard-setting reduces confusion for implementers and prevents the regulatory arbitrage that occurs when standards conflict.



Lead Actor: NITDA in collaboration with sector regulators



Supporting Actors: Central Bank of Nigeria (CBN), Securities and Exchange Commission (SEC), Nigerian Communications Commission (NCC), relevant ministries, legal experts



Immediate Steps: Convene a working group of sector regulators; conduct a landscape review of existing AI guidance across agencies; identify areas of overlap and contradiction; draft minimum standards through a consultative process; pilot standards with 3-5 early adopter agencies before full rollout.



Success Indicator: Approved and published AI Governance Standards adopted by at least five agencies within 18 months

Priority Action 3: Institutionalize Cross-Agency Learning Partnerships *(Timeline: 6-18 months)*

Expand capacity without expanding payroll by formalising collaboration with universities, civic tech organisations (Data Science Nigeria, AI4Good, civic labs), and international development partners. These partnerships can co-develop datasets and evaluation frameworks and explainability dashboards while building civic engagement into the governance process. Additionally, establish "innovation exchanges" pairing agencies at different maturity stages for peer learning e.g. an advanced agency mentors one just beginning its AI journey, creating a cascade of capability transfer.



Lead Actor: Individual MDAs



Supporting Actors: Universities, civic tech organizations, international development partners, NITDA (as convenor)



Immediate Steps: Identify potential partner institutions with relevant expertise; draft simple collaboration MOUs focused on specific deliverables; start with 2-3 pilot partnerships before scaling; document and share partnership models that work; create innovation exchange matching system pairing mature and emerging agencies



Success Indicator: At least 5 active learning partnerships operational within 18 months; at least 3 innovation exchanges facilitating peer learning

PROBLEM 3: Cultural Barriers Block Adaptive Implementation

SOLUTION: Cultivate Adaptive Culture Through Incentives and Guardrails

Cultural change cannot be mandated, but it can be catalysed by redesigning incentive structures and institutional norms. The solution is to make measured risk-taking safe, valued, and systematic. This requires both carrots (recognition, career advancement, resources for innovators) and guardrails (clear ethical boundaries, sandbox protections, documentation of learning from failures). When staff see that honest experimentation within boundaries leads to recognition rather than punishment, innovation becomes self-propelling.

Priority Action 1: Designate and Empower AI Champions (Timeline: 0-6 months)

Cultural transformation needs human carriers. Select 2-3 motivated officers per agency to serve as AI champions. These champions will act as translators between technical teams and business units who prototype ideas rapidly and mentor peers. Critically, provide them with formal time allocation (20% of work hours), small discretionary budgets (~~₦~~500,000-~~₦~~2,000,000 annually for prototyping), and direct access to senior leadership to remove procedural obstacles. These champions should not be isolated in IT departments but distributed across operational units where AI will be deployed.



Lead Actor: Permanent Secretaries/Directors-General



Supporting Actors: HR Departments, Department Heads, IT units

-  **Immediate Steps:** Identify officers with demonstrated interest in innovation and credibility with peers; formalise the champion role through an official designation letter; allocate budget and time explicitly in work plans; create a community of practice, connecting champions across agencies for peer support; provide basic training on AI fundamentals, ethics, and project management
-  **Success Indicator:** AI champions designated in at least 10 agencies within six months; champions leading at least one pilot each within 12 months

Priority Action 2: Embed Innovation in Performance Management *(Timeline: 6-12 months)*

Individual behaviour follows institutions' incentives. If performance evaluations reward only compliance and error avoidance, innovation will remain marginal. Revise performance evaluation frameworks to include "innovation contribution" as a formal criterion (10-15% weight in annual assessments). Recognise contributions through internal awards, commendations in annual reports, and fast-track consideration for training opportunities or promotions. Simple gestures cost little but signal that experimentation is valued institutional work, not an extracurricular hobby.

-  **Lead Actor:** Office of the Head of Civil Service of the Federation (OHCSF), Service-wide agencies
-  **Supporting Actors:** HR Departments in MDAs, Performance management units
-  **Immediate Steps:** Review and revise performance evaluation templates to include innovation metrics; define what counts as innovation contribution (leading pilots, documenting lessons, mentoring peers, proposing process improvements); establish internal innovation awards with quarterly or annual recognition; communicate changes clearly through circulars and town halls; train supervisors on how to assess innovation contributions fairly
-  **Success Indicator:** Revised performance frameworks adopted across civil service; at least 50 officers recognized for innovation contributions within 18 months

Priority Action 3: Create Safe Experimentation Protocols (Timeline: 3-9 months)

Risk aversion is rational when failure has career consequences and success goes unrewarded. Make risk-taking psychologically safe by establishing clear boundaries within which experimentation is explicitly protected. Develop and publish ethical and security guardrails for AI pilots: data privacy rules, model testing protocols, human oversight requirements, and documentation standards. Establish "innovation sandbox" policies that allow teams to try new tools within these boundaries, with explicit protection for honest failures that are documented as learning. When failure becomes a learning opportunity rather than a career liability, adaptive culture can take root.



Lead Actor: Legal Departments, IT Security Units, Risk Management Units



Supporting Actors: External ethics advisors, Data protection officers, Internal audit



Immediate Steps: Draft experimentation protocol document outlining ethical boundaries and security requirements; define what qualifies for sandbox protection (small scale, reversible, documented, within ethical bounds); establish simple approval process for sandbox projects; create template for documenting failures as lessons; publish protocols with leadership endorsement



Success Indicator: Published experimentation protocols approved by leadership; at least 3 pilots operating under sandbox provisions within 12 months

PROBLEM 4: Trust Deficits Turn Technical Failures into Legitimacy Crises

SOLUTION: Build Legitimacy Through Transparency and User-Centered Design

Trust cannot be declared or mandated; it must be earned through demonstrated benefit and accountability. The solution is to embed transparency, user participation, and ethical oversight into every stage of AI design and deployment, making trust-building operational rather than rhetorical.

Measure success not by technological sophistication but by felt improvement in citizen experience. When AI visibly solves real problems, operates transparently, and responds to feedback, it converts sceptics into advocates one interaction at a time.

Priority Action 1: Co-Design AI Systems with End Users (Timeline: 0-12 months, ongoing)

The empathy gap, where systems are designed without understanding user realities, is a primary driver of implementation failure and public backlash. Before deploying any AI system, map the complete user journey with those who will interact with it: frontline staff, citizens, and regulated entities. Develop visible prototypes and conduct testing sessions to uncover practical barriers (language, bandwidth, workflow incompatibility) before procurement contracts are signed. Embed feedback mechanisms in every deployed system (satisfaction surveys, in-app comment boxes, complaint channels) with quarterly leadership review of feedback data and public reporting on changes made. This "you said, we did" transparency converts participation from theatre to trust.



Lead Actor: Project teams implementing AI pilots



Supporting Actors: Frontline staff, citizen representatives, civil society organizations, UX designers



Immediate Steps: Before any AI deployment, conduct user journey mapping sessions with at least 10 representative users; develop low-fidelity prototypes (mockups, simulations) for early testing; build feedback mechanisms into system design from the start; establish quarterly review process where leadership evaluates feedback and approves system updates; publish summaries of feedback received and actions taken



Success Indicator: 100% of AI pilots include documented user journey mapping and feedback loops; published "you said—we did" summaries for each pilot after 6 and 12 months

Priority Action 2: Establish Algorithmic Transparency Standards (Timeline: 6-18 months)

Opacity breeds suspicion. When citizens don't understand how AI systems work or who oversees them, failures confirm pre-existing distrust.

Require all government AI systems to be registered in a public Algorithm Registry documenting purpose, data sources, responsible officer, validation history, and update schedule. When systems affect citizen rights (benefit eligibility, licensing, regulatory enforcement), publish plain-language summaries explaining how decisions are made and what recourse exists for appeal. Before the full rollout of any system, conduct mandatory "Red Team" testing to simulate worst-case scenarios: data leakage, adversarial manipulation, and discriminatory outputs. Document findings and mitigation steps publicly.



Lead Actor: NITDA in collaboration with NDPC



Supporting Actors: All MDAs deploying AI systems, communications teams, and legal advisors



Immediate Steps: Design an algorithm registry template that captures essential information; establish registration requirement for all government AI systems; develop plain-language summary template for citizen-facing systems; create Red Team testing protocol and checklist; designate responsible officer in each agency for maintaining registry entries; publish registry on government portal with regular updates



Success Indicator: Algorithm Registry operational within 12 months with at least 20 systems documented; public summaries published for all citizen-facing AI applications; Red Team testing conducted before rollout of high-stakes systems

Priority Action 3: Integrate AI Ethics into Existing Oversight Mechanisms *(Timeline: 6-18 months)*

Ethics should be operationalised through existing institutional machinery rather than as an add-on or afterthought. Each agency should develop and approve an internal AI Ethics Charter codifying responsible AI principles: fairness, explainability, data minimisation, human oversight, and contestability. Rather than creating parallel ethics committees, integrate algorithmic audits into existing risk management and internal audit cycles. Quarterly reviews should assess whether models perform consistently across demographics, regions, and use cases, flagging disparities for investigation. This approach leverages existing oversight infrastructure rather than overwhelming institutions with new structures.



Lead Actor: Internal Audit Units, Risk Management Departments



Supporting Actors: External ethics advisors, Academic institutions, Legal departments



Immediate Steps: Draft agency-specific AI Ethics Charter using NAIS responsible AI framework as foundation; secure approval from governing board or permanent secretary; revise internal audit annual plans to include algorithmic audits; train audit staff on AI bias detection and fairness metrics; establish protocols for responding to audit findings; document and share audit methodologies across agencies



Success Indicator: AI Ethics Charters approved by governing boards in at least 10 agencies; algorithmic audits incorporated into audit plans within 18 months; at least one audit cycle completed with documented findings

Taking AI From Small Steps To Big Impact For Nigeria's Public Sector Institutions

For Nigeria's public sector institutions, "Small Steps to Big Intelligence" represents both the core value proposition of the Micro-Transformation Framework and the philosophy of governing AI in a pragmatic, human-centred way. By balancing innovation with oversight, ambition with realism, and technology with human values, Nigeria can find a way that avoids the twin pitfalls of paralysis and recklessness. The recommendations outlined above chart a clearpath: beginning with micro-projects that create learning loops, building institutional knowledge and networks, and carefully scaling up what works while engaging the public throughout. Elements of this approach are already visible in Nigeria's emerging digital reform, such as the document workflow automation and AI Knowledge Management System at the CBN as well as data-sharing protocols across fiscal agencies. This creates fertile ground for institutionalising the MTF as a highly contextual approach to achieving successful AI Governance.

The payoff will be significant. In the near term, oversight institutions like the Auditor-General, anti-corruption agencies, and financial regulators will become more effective, catching more fraud, responding faster to issues, and making data-informed decisions that save public funds. Citizens will start to notice government services that are more responsive and tailored to their needs.

Over the medium term, this approach will bolster public trust in government. Each successful pilot and each transparent improvement shows citizens that the government is learning and adapting in their interest. That trust is essential for any digital transformation to truly take root. And in the long run, Nigeria stands to emerge as a trailblazer in AI governance, a model for other countries on how to harness AI for public good responsibly and inclusively.

The journey will not be without challenges. It requires persistence and patience to accumulate many small wins and courage to learn from the occasional misstep. It also demands ongoing political support to sustain the effort across administrations. Here, maintaining open communication with high-level leaders is key: regular briefings to the National Assembly or the President on "AI in Governance: Progress and Plans" will help secure the mandate and resources to continue. By highlighting tangible improvements (a reduction in processing time here, an increase in revenue there, a fairness correction in another case), reformers can keep policymakers invested in the micro-transformation journey. In doing so, Nigeria's leaders and institutions can connect the dots of individual projects into a cohesive programme of national capacity building.

An institution that follows these recommendations signals that it is proactive, learning, and adaptive, exactly the traits needed to navigate the rapidly evolving AI landscape. In the end, AI governance in Nigeria will be built not just in conference rooms or by policy decrees, but in the day-to-day decisions of offices like the CBN, NDPC, FCCPC, Auditor-General, and our ministries. The guidance above is meant to empower those offices to begin that journey today, taking small, smart steps that pave the way for big, intelligent outcomes for the citizens of Nigeria.

APPENDIX

Table 1: Summary of Policy Recommendations for AI Governance in Nigeria's Public Sector Institutions

Problem	Solution Strategy	Priority Action	Timeline	Lead Actors	Supporting Actors	Immediate Steps	Success Indicators
1. Capacity Deficits Create a Double Bind	Build Capacity Through Strategic Experimentation – Replace large-scale projects with small, mission-aligned pilots that build capability while delivering value.	1. Launch Mission-Aligned AI Pilots	0–6 months	Permanent Secretaries / CEOs of MDAs	IT, Policy, and Project Implementation Teams	Identify bottlenecks; select one core use case; define KPIs; secure leadership support; embed in the workplans and budgets	One operational AI pilot per agency with tracked KPIs within 6 months
		2. Establish Cross-Functional AI Working Groups	0–3 months	Directors-General/CEOs	IT, Legal, Policy, Audit, Operations	Designate reps; set ToR and meeting schedule; document deliberations	Standing group reviewing all AI initiatives within 3 months
		3. Create Internal Evidence Systems	3–12 months	Internal Audit, Policy Evaluation Depts	Academic partners, technical consultants, project teams	Develop dashboards and pilot logs; validate data; build digital repository	Real-time dashboard per pilot; ≥ 3 documented pilot logs in 12 months

Problem	Solution Strategy	Priority Action	Timeline	Lead Actors	Supporting Actors	Immediate Steps	Success Indicators
2. Institutional Fragmentation Prevents Collective Learning	Break Down Silos Through Federated Learning – Enable coordinated learning and shared standards without rigid centralisation.	1. Establish National AI Governance Coordination Hub	0–6 months	NITDA	NDPC, MDAs, FMCIDE	Form coordination team; set up shared platform; convene AI Governance Round; collect pilot case studies	≥ 15 agencies engaged; 10 shared case studies; 2 Governance Rounds in 12 months
		2. Develop Shared AI Governance Standards	6–12 months	NITDA + sector regulators	CBN, SEC, NCC, Ministries, legal experts	Convene regulators; review current AI guidance; co-draft and pilot minimum standards	Common standards adopted by ≥ 5 agencies within 18 months
		3. Institutionalize Cross-Agency Learning Partnerships	6–18 months	Individual MDAs	Universities, civic tech orgs, dev partners, NITDA	Sign MOUs for data/evaluation partnerships; create peer-learning “innovation exchanges”	≥ 5 partnerships; ≥ 3 active innovation exchanges in 18 months

Problem	Solution Strategy	Priority Action	Timeline	Lead Actors	Supporting Actors	Immediate Steps	Success Indicators
3. Cultural Barriers Block Adaptive Implementation	Cultivate Adaptive Culture Through Incentives and Guardrails – Make experimentation safe and rewarded through structured incentives and ethical protections.	1. Designate and Empower AI Champions	0–6 months	Permanent Secretaries / DGs	HR, Department Heads, IT	Select 2–3 officers per agency; allocate 20% time + budget; form champions' community	Champions in ≥ 10 agencies; each leads 1 pilot within 12 months
		2. Embed Innovation in Performance Management	6–12 months	OHCSF	HR units, performance management offices	Revise appraisal forms to include innovation metrics; introduce awards and fast-track recognition	Civil-service-wide adoption; 50 officers recognized within 18 months
		3. Create Safe Experimentation Protocols	3–9 months	Legal, IT Security, Risk Units	Ethics advisors, DPOs, internal audit	Draft sandbox protocol; set approval process; document and share lessons	Published sandbox policy; ≥ 3 pilots under sandbox within 12 months

Problem	Solution Strategy	Priority Action	Timeline	Lead Actors	Supporting Actors	Immediate Steps	Success Indicators
4. Trust Deficits Turn Technical Failures into Legitimacy Crises	Build Legitimacy Through Transparency and User-Centered Design – Embed participation, openness, and ethics in every AI stage.	1. Co-Design AI Systems with End Users	0–12 months (ongoing)	AI project teams	Frontline staff, citizens, CSOs, UX designers	Conduct user-journey mapping; prototype testing; embed feedback channels; publish “you said—we did” reports	100% pilots include mapping and feedback loops; public updates every 6–12 months
		2. Establish Algorithmic Transparency Standards	6–18 months	NITDA + NDPC	All MDAs, comms, legal	Create public Algorithm Registry; plain-language summaries; Red-Team testing	Registry live with ≥ 20 systems; summaries for all citizen-facing AI
		3. Integrate AI Ethics into Oversight Mechanisms	6–18 months	Internal Audit, Risk Depts	Ethics experts, academia, legal	Develop AI Ethics Charter; add algorithmic audits to annual plans; train audit staff	Ethics Charters in ≥ 10 agencies; audit cycle completed with findings

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