National Information Technology Development Agency

AI Transformation Roadmap

March 2025

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Executive Summary

NITDA aims to transform into a smart organization by implementing AI and digital technologies across key operational areas. Our goal is to have computers and people working together to create a system of privileged insight that allows the agency to make informed and impactful decisions. As Nigeria's IT regulatory agency that aims to be aware, intelligent, and dynamic in how it develops its functions, NITDA's vision for Nigeria is a digitally empowered nation, fostering inclusive economic growth through technological innovation.
To achieve this vision, our AI transformation strategic implementation plan focuses on integrating three core AI technologies into our operations:

i. Document processing automation using Machine Learning (ML) and Robotics Process Automation (RPA)
ii. Generative AI for content creation and regulatory drafting
iii. Agentic AI for management and horizontal coordination

This initiative aligns with a hybrid strategy that combines cost leadership and differentiation. By automating routine tasks, NITDA will reduce operational costs while differentiating itself as an AI-enabled regulatory agency. The transformation will enhance regulatory effectiveness, improve service delivery, and position NITDA as a model for digital innovation in the public sector.

Implementing these technologies will address several critical challenges currently facing the agency. Document processing automation will streamline the handling of incoming correspondence, reducing the manual workload on executives and ensuring faster response times. Generative AI will assist in creating preliminary drafts of regulatory documents, accelerating the rulemaking process while maintaining high quality standards. The agentic AI system will revolutionise horizontal coordination across departments, ensuring efficient task management and timely completion of cross-functional projects.

Our transformation strategy is built on five key pillars: people, culture, content, process, and technology. This comprehensive approach ensures that technological implementation is supported by the necessary organisational changes and capability development. We are committed to upskilling our workforce, fostering a culture of innovation, and establishing transparent processes that effectively leverage AI capabilities.

The expected outcomes of this transformation include:

1. Significant reduction in operational costs through process automation
2. Enhanced regulatory effectiveness through data-driven decision making
3. Improved service delivery to stakeholders
4. Increased staff productivity and job satisfaction
5. Establishment of NITDA as a benchmark for AI transformation in the public sector

This roadmap outlines our journey towards becoming a smart organisation that combines human expertise with AI capabilities. The successful implementation of this plan will transform NITDA and serve as a model for other government agencies in Nigeria and across Africa.

Our Digital Transformation Journey

NITDA has embarked on an ambitious digital transformation journey, transitioning from a traditional government agency to an emerging innovative organisation. In August 2019, the Agency initiated a comprehensive transformation program to address the challenges of a typical government entity in a developing country, where staff motivation was low and processes were predominantly manual.

Our current deployment of innovative technologies follows a structured approach guided by our digital transformation journey. The first phase focused on documenting and optimising all processes to create institutional knowledge and establish Standard Operating Procedures (SOPs). This foundation has enabled us to venture into automation and now, we want to expand.

In our document management process, we have implemented a hybrid system where physical letters are received and scanned at our registry. These scanned documents are then processed using Microsoft Power Automate, which automatically reads the content and emails the documents to relevant department/unit/subsidiary based on predefined workflows. This has significantly reduced the manual routing of documents and executive review time.
We have made substantial progress in building institutional knowledge through AI integration. Staff are trained to use generative AI tools like Microsoft Copilot, ChatGPT, Claude, etc., to draft documents and build institutional knowledge. We are developing a comprehensive Knowledge Management System (KMS) with an ambitious vision - the system should be capable of guiding staff through all agency processes and procedures using simple prompts. This ensures continuity and consistency in our operations regardless of staff turnover.

In the regulatory space, we want to train AI systems on extant laws and regulations to support our rulemaking process. This initiative serves two purposes: first, it makes drafting regulatory instruments more efficient and consistent; second, it helps build intelligence about the Nigerian innovation ecosystem, enabling informed and responsive regulatory decisions.

Challenges

The groundwork we have laid in process documentation and knowledge management, positions us well for more advanced AI implementation that will further enhance our operational efficiency and regulatory effectiveness.

However, several challenges remain to be addressed:

- Horizontal communication between departments needs further improvement
- The full potential of data analytics in regulatory decision-making is yet to be realised
- Some staff members continue to show resistance to technology adoption
- Our Knowledge Management System needs further development to achieve its full vision
- The regulatory development process requires more sophisticated AI integration

These challenges present opportunities for further transformation through AI integration, particularly in areas of document processing, regulatory intelligence, and workflow management. Our current state, with its documented processes, basic automation, and emerging AI capabilities, provides a solid foundation for the next phase of our digital evolution.

Our Aspirations

We aspire to combine cost leadership and differentiation to meet our unique challenges as a government agency. This approach is essential because we must both operate efficiently with public resources and lead innovation in Nigeria's tech sector. The cost leadership elements will ensure efficient operation, while differentiation will position us as an innovative regulatory body.

1 Cost Leadership Initiatives

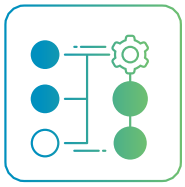
- Workflow automation reducing manual intervention
- Digital document management reducing paper-based processes
- Streamlined approval processes reducing operational costs

2 Differentiation Elements

- Enhanced service delivery compared to other government agencies
- Faster response time to stakeholder's requests
- Data-driven decision-making capabilities

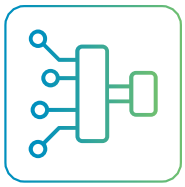
Proposed Initiatives

Our transformation vision centres on creating an intelligent, responsive regulatory agency through strategic AI integration. We have identified four areas in which we believe AI technologies will revolutionise how we work, make decisions, and deliver value to our stakeholders:



Document Processing Automation

Building on our existing digitisation system, our mail handling will be integrated with ML for intelligent content analysis. This system will automatically process incoming documents and route them to appropriate departments, with RPA monitoring processing times to ensure efficiency.



Intelligent Workflow Management

At the heart of our transformation is RPA systems that will revolutionise how we work. These systems will function in three distinct roles: as peers collaborating on routine tasks, as assistants supporting decision-making, and as managers ensuring deadlines and compliance are met.

AI-Powered Regulatory Intelligence

To fulfil our mandate as a dynamic regulatory agency, we will implement ML models for environmental sensing and predictive analytics. This system will help us identify emerging regulatory needs and assist in drafting appropriate responses, ensuring we stay ahead of technological developments.

Knowledge Management System

To preserve and leverage our institutional knowledge, we will develop an AI-powered Knowledge Management System. This will combine AI - enabled systems for knowledge preservation with generative AI for document creation, ensuring consistency and excellence in our operations.

Specific Tasks and Processes

Our AI integration targets two (2) core areas where technology can significantly enhance our operations:

1

Internal Operations

AI will streamline our internal operations, from routine task management to complex cross-departmental coordination, creating a more efficient and collaborative work environment. Currently our mail processing is a manual bottleneck and an enhanced mail processing system will automate the entire journey of documents through our organisation, from initial receipt to final action.

2

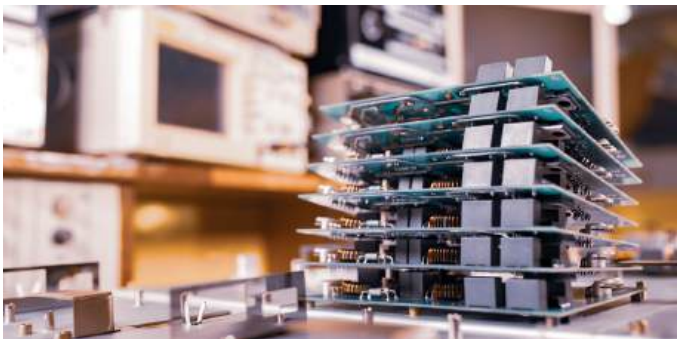
Regulatory Development

Our AI-powered regulatory development process will transform how we create and maintain regulatory frameworks, making us more responsive to industry needs and technological changes.

Technical Requirements

Infrastructure

- High-capacity document scanning systems
- Robust cloud computing infrastructure
- Secure data storage and processing capabilities
- Application Programming Interface (API) integration framework
- Advanced analytics platforms



Software

- ML development frameworks
- RPA software suite
- Document management system
- Workflow automation tools
- Knowledge management platform

Governance

Success in this transformation requires strong leadership at multiple levels. Executive sponsorship will drive organisational buy-in, while Reforms Coordination and Service Improvement Unit will manage implementation.

The cross functional team would comprise of but not limited to;

- Change management specialists
- Process optimization specialists
- AI/ML experts
- Technical project managers

Alignment With SRAP 2.0

This initiative perfectly aligns with the Agency's Strategic Roadmap and Action Plan 2024-2027 (SRAP 2.0), particularly our goal of becoming a smart organisation.

Each component supports our broader digital transformation goals while strengthening our core capabilities as Nigeria's IT regulatory agency.

Stakeholder Benefits

Our transformation will deliver tangible benefits to both external and internal stakeholders. For external stakeholders, it means faster, more consistent service delivery and improved access to information.

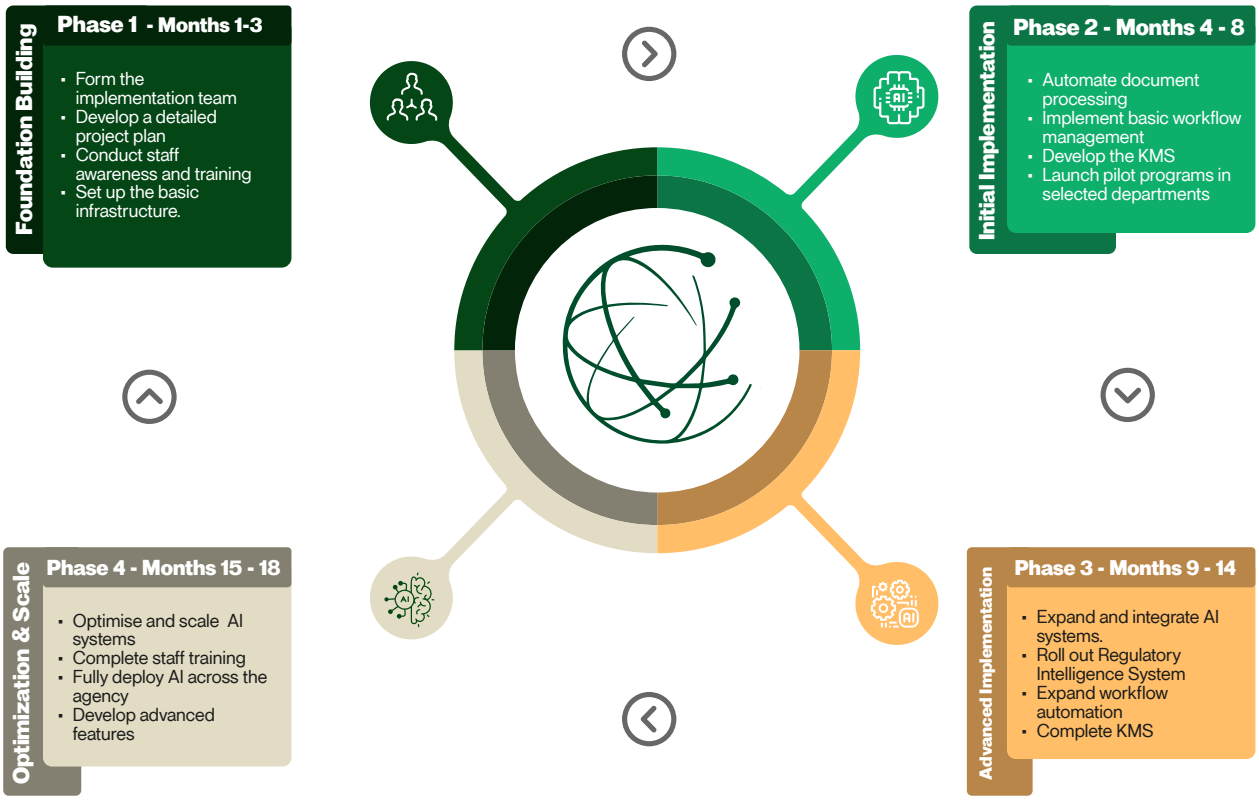
Internally, staff will benefit from reduced manual workload and enhanced decision-making support, leading to increased job satisfaction and professional development opportunities.

Plan of Action

To successfully implement our AI transformation, this action plan outlines the project timeline, required skills, and execution resources. It will guide us through each phase of the transformation, ensuring we achieve our goals efficiently and effectively.

Project Timeline and Milestones

Our AI transformation will be implemented over **18 months**, divided into four phases. Each phase has specific milestones to ensure successful execution.



Required Skills and Resources

We will need to build or acquire expertise in several key areas to achieve our transformation goals. These skills include:

1. AI/ML Development
2. RPA Implementation
3. Change Management
4. Process Optimisation
5. Data Science
6. Cloud Computing
7. Information Security
8. Knowledge Management

Key Stakeholders

The success of our AI transformation depends on the involvement and support of internal and external stakeholders. Each group plays a crucial role in implementing and sustaining our AI initiatives.

Internal Stakeholders

- Management
- Departments, Units and Subsidiaries
- Union Representatives

External Stakeholders

- Technology Partners
- Government Oversight Bodies
- Industry Stakeholders
- Public Users
- Others

Management Approach

We will adopt an agile management approach to ensure flexibility and responsiveness throughout the transformation process. This approach includes;

- Bi-weekly sprint reviews
- Monthly milestone assessments
- Quarterly strategic reviews
- Continuous feedback loops
- Regular stakeholder communication

Special Considerations

Several special considerations must be addressed to ensure the successful implementation of our AI transformation. These include;

- Government regulations and compliance requirements
- Data security and privacy concerns
- Integration with existing systems
- Cultural transformation needs
- Staff anxiety about AI adoption

Ethical Concerns and Risk Mitigation

Implementing AI systems raises several ethical concerns that must be carefully managed. We will implement robust mitigation strategies to address these concerns and ensure ethical AI use.

Primary Concerns

- Data privacy and security
- AI decision-making transparency
- Job displacement fears
- Algorithmic bias

Mitigation Strategies

- Compliance with Nigeria Data Protection Act (NDPA)
- NITDA Internal AI guideline
- Clear AI decision-making frameworks
- Comprehensive staff training programs
- Regular ethical audits of AI systems

Workforce Impact and Development

Our AI transformation will significantly impact the workforce, leading to job evolution and the need for skills development. We will support our staff through comprehensive training programs and career transition support.

Job Evolution

- Some administrative roles will transform into AI system operators
- New positions will be created in AI management and oversight
- Existing staff will be upskilled in AI operations

Skills Development

- Comprehensive training programs for staff
- Career transition support
- New role development and placement
- Continuous learning opportunities

Success Criteria

We have established clear success criteria to measure the effectiveness of our AI transformation. These criteria encompass both quantitative and qualitative metrics.

Quantitative Analysis

- **50%** reduction in document processing time
- **30%** improvement in regulatory response time
- **80%** staff adoption of AI tools
- **40%** reduction in manual tasks

Qualitative Analysis

- Increased staff satisfaction
- Enhanced service quality
- Better regulatory effectiveness
- Increased innovation capacity

Conclusion

In conclusion, this comprehensive transformation will make NITDA a model for public sector AI adoption, demonstrating how government agencies can leverage technology to improve service delivery while maintaining regulatory effectiveness.

Our success will create a blueprint for AI transformation in the public sector, supporting Nigeria's journey toward becoming an African digital economy leader.