

# Emergent Data Governance Framework In Nigeria

Egbedion Oghenekevwe

*Data Governance & Data Quality Specialist, Lagos, Nigeria*

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In an increasingly digital world, data has emerged as one of the most valuable assets a company can possess. For businesses across the globe, effectively managing this data is crucial for strategic decision-making, innovation, and maintaining a competitive edge. In Nigeria, the growing importance of data governance is evident as organizations strive to harness the power of data while complying with emerging regulations such as the Nigeria Data Protection Regulation (NDPR). This article explores the process of setting up a robust data governance framework in a Nigerian company, focusing on key components such as technology enablement, cultural and behavioral change, information management, and strategic alignment.

However, as seen globally, organizations, particularly Small and Medium Enterprises (SMEs), often struggle to implement data governance frameworks due to resource constraints, lack of expertise, and technological limitations. This challenge is not unique to Nigeria but also prevalent in developed markets like the U.S., where SMEs drive a significant portion of economic activity but face similar governance gaps. My proposed “Data Governance Management for SMEs Initiative” specifically aims to address these challenges by creating scalable, adaptable protocols for SMEs to enhance their data management practices. This initiative introduces practical and affordable frameworks, allowing SMEs to protect their data, improve data quality, and ensure compliance with increasingly complex regulations.

## I. Definition And Importance

Data governance refers to the collection of practices, policies, and standards that ensure the proper management of data throughout its lifecycle. It is a comprehensive approach that encompasses everything from data quality and security to data access and usage policies. According to Alhassan, Sammon, and Daly (2016), data governance is essential for organizations to manage data as a strategic asset, enabling better decision-making, ensuring compliance with regulations, and fostering innovation.

In the Nigerian context, data governance is not just about compliance; it is about building a foundation that supports business growth and resilience. Similarly, for SMEs, the need for robust governance structures is critical, particularly as they operate on lean budgets and often lack the resources of large corporations. The proposed initiative for SMEs recognizes this limitation and aims to bridge the gap by providing tailored governance solutions designed for businesses with constrained resources. For instance, SMEs in Nigeria and other parts of the world can benefit from practical data management toolkits, compliance assistance, and strategic frameworks that focus on leveraging data for growth without overburdening their operational capabilities.

## II. Core Components Of Data Governance

A successful data governance framework is built on several key components, each of which is crucial for effective data management:

- 1. Policies and Standards:** These form the backbone of any data governance strategy, providing clear guidelines on how data should be managed, who has access to it, and how it is to be used within the organization. Policies should address issues such as data quality, privacy, security, and compliance with local and international regulations (Gartner, 2021). For SMEs, such policies need to be adaptable and affordable. The Data Governance Management for SMEs Initiative specifically incorporates flexible frameworks that can be customized based on the size, industry, and resource availability of SMEs. This ensures that smaller organizations can still maintain high standards for data quality and security without excessive costs or complexity.
- 2. Roles and Responsibilities:** Effective data governance requires clear definitions of roles and responsibilities. This ensures that there is accountability at every level of data management, from the data owner who is entrusted with authoritative rights over particular datasets to data stewards who oversee data quality and data custodians responsible for its security (DAMA International, 2017). In SMEs, these roles are often shared among few employees, making it difficult to implement traditional data governance structures. My proposed initiative simplifies these roles by providing SMEs with a step-by-step guide for designating data governance responsibilities that match their operational capacity.

- 3. Data Quality Management:** Maintaining high data quality is crucial for making reliable decisions. This involves setting standards and rules for data accuracy, completeness, consistency, and timeliness. It also includes implementing processes to monitor and improve data quality over time (Wang & Strong, 1996). For SMEs, data quality challenges are often tied to insufficient resources to implement sophisticated data systems. The initiative proposes a lightweight yet effective system for SMEs, allowing them to maintain data accuracy through scalable tools that automate data validation and improve reporting accuracy, thus reducing the burden on internal teams.
- 4. Data Security and Privacy:** In an era where cyber threats are on the rise, protecting data from unauthorized access and ensuring compliance with data protection regulations is paramount. In Nigeria, the NDPR mandates strict measures to protect personal data (NITDA, 2019). However, SMEs, both in Nigeria and globally, are often unable to afford complex security infrastructures. The proposed initiative focuses on providing affordable data protection tools such as basic encryption, access control mechanisms, and privacy-by-design frameworks, enabling SMEs to comply with regulations without heavy financial outlay.
- 5. Technology Enablement:** Technology plays a significant role in supporting data governance. From data management platforms to analytics tools, the right technology can help automate data governance processes, improve data quality, and ensure compliance. For SMEs, the initiative offers a curated list of low-cost, cloud-based tools and data governance platforms that can be easily integrated into existing workflows. This technology enablement ensures SMEs can manage their data effectively without incurring excessive operational costs.

### **III. Challenges In Data Management**

Nigeria presents a unique set of challenges when it comes to data management. These challenges include limited access to advanced technology, a shortage of skilled professionals in data science and management, and varying levels of awareness about the importance of data governance. Additionally, the rapid pace of digital transformation in the country has led to an explosion of data, making it increasingly difficult for organizations to manage their data effectively (Akpa, 2020).

Similarly, SMEs across the U.S. and Nigeria face these challenges, but on a smaller scale, where the lack of dedicated data governance teams and expensive software solutions prevents them from achieving data governance excellence. My proposed endeavor directly addresses these challenges by providing SMEs with adaptable and cost-effective solutions such as simplified governance protocols, training programs to build internal data governance capacity, and toolkits designed to automate core data governance processes. This ensures that SMEs, despite their limitations, can harness the value of their data efficiently.

### **IV. Role Of The Nigeria Data Protection Regulation (NDPR)**

To address some of these challenges, the Nigerian government introduced the Nigeria Data Protection Regulation (NDPR) in 2019. The NDPR aims to provide guidelines for data processing and protection, ensuring that organizations handling personal data implement necessary data protection measures. It mandates that organizations must obtain consent from data subjects before processing their data, report any data breaches within 72 hours, and adhere to data minimization principles (NITDA, 2019).

While the NDPR raises awareness around data protection, many SMEs in Nigeria struggle to fully comply with its requirements due to lack of resources. The “Data Governance Management for SMEs Initiative” includes a specific focus on helping SMEs navigate regulatory landscapes like the NDPR, providing compliance assistance, and ensuring they meet legal obligations without stretching their already limited capacities. This focus on regulatory compliance is a key part of the initiative's goal to protect SMEs from potential legal liabilities while improving their overall data governance..

### **Comparison with Global Data Governance Practices**

When compared to global data governance practices, Nigeria is still in the early stages of development. In countries like the United States, the European Union, and Canada, data governance frameworks are well-established, supported by robust regulations such as the General Data Protection Regulation (GDPR) in the EU. These frameworks emphasize data protection, privacy, and transparency, setting a high standard for data management.

In contrast, Nigeria's data governance practices are still evolving, with the NDPR serving as the primary regulatory framework. However, there is growing recognition of the importance of data governance, and many organizations are beginning to adopt best practices from global counterparts. This includes investing in technology, data culture, training, and processes that support data quality, security, and compliance.

### **Strategic Importance of Data Governance**

#### **Alignment with Business Strategy**

One of the key benefits of a robust data governance framework is its ability to align data management practices with overall business strategy. By ensuring that data is accurate, accessible, and secure, companies can

make more informed decisions, optimize operations, and achieve strategic goals. For example, a company that aims to enhance customer experience can use data governance to ensure that customer data is accurate and up-to-date, enabling personalized interactions and better service delivery.

For SMEs, aligning data governance with business strategy is equally important, as they often operate in fast-changing environments where rapid decision-making is critical to survival. The proposed initiative emphasizes aligning data management practices with the business goals of SMEs, providing them with the necessary tools to use data as a strategic asset to drive growth, improve customer interactions, and enhance overall competitiveness. This ensures that SMEs can make data-driven decisions while maintaining operational efficiency.

### **Risk Management and Compliance**

Data governance also plays a critical role in managing risks related to data breaches, unauthorized access, data retention, and regulatory compliance. In Nigeria, where cyber threats are becoming increasingly sophisticated, robust data governance practices are essential for protecting sensitive information and maintaining customer trust. For example, the financial services sector requires strict adherence to data governance principles to prevent fraud and ensure the integrity of financial transactions.

Similarly, SMEs face significant risks if they fail to protect their data. My initiative helps mitigate these risks by providing easy-to-implement security protocols and ongoing support, helping SMEs adopt best practices for data security and privacy. This reduces their vulnerability to cyber threats while ensuring compliance with local and international regulations.

### **Operational Efficiency and Enhancing Decision-Making**

Reliable data is the cornerstone of effective decision-making. By implementing a strong data governance framework, organizations can ensure that their data is consistent, complete, valid, accurate, and readily available when needed. This leads to faster and more reliable decision-making processes, which are critical in today's fast-paced business environment. For example, in the financial industry, where customer data is vast and complex, effective data governance can help companies analyze customer behavior, predict trends, and make informed decisions about service offerings.

For SMEs, operational efficiency is a key driver of success, as they typically operate with limited resources. The "Data Governance Management for SMEs Initiative" enhances operational efficiency by streamlining data management processes, reducing redundancies, and improving productivity. By offering practical toolkits and resources tailored to SMEs, the initiative ensures that they can manage their data effectively without overburdening their limited teams. Additionally, the initiative's focus on training and automation provides SMEs with the capability to use data for real-time decision-making, improving their agility in competitive market.

### **Key Components of a Data Governance Framework Technology Enablement for Data Governance**

Technology plays a critical role in enabling effective data governance by automating data management, improving data quality, and ensuring compliance. In Nigeria, the availability of affordable technology solutions is often limited, and SMEs typically face greater challenges in adopting advanced tools due to resource constraints. To address this, the Data Governance Management for SMEs Initiative emphasizes affordable, scalable technology solutions, such as cloud computing and open-source data management tools.

**Cloud Computing:** SMEs can leverage cloud computing platforms such as Amazon Web Services (AWS) and Microsoft Azure to manage their data more efficiently. The initiative helps SMEs adopt these cloud solutions by providing them with guidance on selecting cost-effective plans and managing their data securely in cloud environments. This reduces their reliance on expensive on-premise infrastructure while improving scalability.

For Nigerian companies, cloud computing offers several benefits, including cost savings, scalability, and flexibility. By migrating their data to the cloud, organizations can reduce their reliance on on-premises infrastructure, which can be expensive to maintain and scale. Additionally, cloud platforms offer advanced analytics and machine learning capabilities, enabling companies to gain deeper insights from their data.

**Data Management Platforms:** The initiative identifies affordable data management platforms that are ideal for SMEs. These platforms consolidate data from multiple sources, improve data quality, and enhance reporting capabilities. By implementing these platforms, SMEs can ensure data integrity while maintaining a unified view of their data assets, regardless of their size or industry.

For Nigerian companies, adopting a data management platform can help overcome some of the challenges associated with data governance. For example, a platform that supports data quality management can help ensure that data is accurate and consistent, reducing the risk of errors in decision-making. Similarly, a platform with built-in security features can help protect sensitive data from unauthorized access.

**Data Security Tools;** Given the increasing threat of cyberattacks, SMEs need strong security frameworks. The initiative offers SMEs low-cost tools for encryption, access control, and monitoring, helping them protect sensitive data from breaches while complying with relevant data protection regulations such as the NDPR or GDPR.

For example, a Nigerian financial company(Bank) might implement encryption to protect customer data, use access controls to limit who can view or edit data, and monitor its systems for signs of unauthorized access.

#### **Data Analytics Tools;**

Data analytics tools are essential for turning raw data into meaningful insights, predictions, and decision making purposes. These tools allow organizations to analyze large volumes of data, identify patterns, and make data-driven decisions. In the Nigerian business environment, where competition is fierce, leveraging data analytics can provide a significant competitive advantage. Tools such as Tableau, Power BI , Python, R Programming Language e.t.c.

For example, in the retail industry, data analytics tools can help companies analyze customer behavior, optimize pricing strategies, and improve inventory management. In the financial services sector, analytics can be used to detect fraudulent transactions, assess credit risk (RDARR-Risk Data Aggregation and Risk Reporting), reduce customer churn and develop personalized products for customers.

#### **Culture**

While technology is essential, it is not enough to ensure the success of a data governance framework. Cultural and behavioral change is equally important, as it involves getting buy- in from employees and aligning their behavior with data governance policies.

#### **Training and Awareness;**

Training and awareness programs are essential for ensuring that employees understand their roles and responsibilities in data governance. These programs should educate employees about the importance of data governance, the policies and standards they need to follow, and the consequences of non-compliance.

For example, a Nigerian bank implementing a data governance framework might conduct training sessions for its employees on data privacy and security. These sessions could cover topics such as how to handle customer data, capture accurate customer data, how to identify phishing attacks, and how to report data breaches.

#### **Change Management;**

Implementing a data governance framework often requires significant changes to the way an organization manages its data. Change management is the process of helping employees adapt to these changes and ensuring that they are successfully integrated into the organization.

Change management involves several key activities, including communication, training, and support. It is important to communicate the reasons for the change, the benefits it will bring, and how it will impact employees' day-to-day work. Providing training and support is also essential for helping employees navigate the transition.

#### **Information Management and Data Quality**

Information management, encompassing the processes of collecting, storing, and organizing data, is vital for ensuring data accuracy, security, and accessibility. The Data Governance Management for SMEs Initiative emphasizes practical approaches for SMEs to manage their information effectively without requiring complex systems. This includes:

**Data Quality Management:** The initiative ensures that SMEs can maintain high standards of data quality by providing them with frameworks for accuracy, completeness, and consistency. This is critical for decision-making, as SMEs rely heavily on the reliability of their data to optimize operations and improve customer experience.

For Nigerian companies, data quality management is particularly important due to the challenges associated with data collection and integration. In many cases, data is collected from multiple sources, such as customer surveys, customer onboarding, transaction records, and social media. Ensuring that this data is accurate and consistent can be challenging, but it is essential for making reliable decisions.

**Metadata Management:** For SMEs, managing metadata—data about data—is equally important for understanding data provenance and maintaining data integrity across multiple sources. The initiative provides SMEs with metadata management strategies to ensure transparency and consistency in their data architecture, thereby improving the reliability of their analytics.

## **Strategy**

Strategic alignment is the process of ensuring that data governance supports the overall goals and objectives of the organization. This involves aligning data governance initiatives with the organization's strategic priorities, such as improving customer experience, reducing costs, or enhancing operational efficiency.

### **Connecting Data Governance to Corporate Strategy:**

For data governance to be effective, it must be closely aligned with the organization's corporate strategy. This means that data governance initiatives should be designed to support the organization's strategic goals and objectives.

For example, a Nigerian bank that aims to improve customer experience might focus its data governance efforts on ensuring that customer data is accurate and up-to-date. This could involve implementing data quality management processes, investing in data analytics tools, and training employees on how to handle customer data.

### **Data Ownership and Stewardship**

Data ownership and stewardship are key elements of information management. Data ownership refers to the responsibility for ensuring that data is managed in accordance with data governance policies. Data stewardship involves the day-to-day management of data, including data quality, security, and compliance.

In a Nigerian company, data ownership might be assigned to a specific department or individual, such as the IT department or a data governance officer. Data stewards, on the other hand, might be responsible for managing data within specific business units or functions.

### **Leadership and Commitment**

The success of data governance depends on strong leadership and commitment from top management. Leaders must recognize the strategic importance of data governance and be willing to invest the necessary resources to implement it. They should also communicate the importance of data governance to employees and set an example by adhering to data governance policies themselves.

In Nigeria, where hierarchical structures are common in organizations, leadership commitment is particularly important. When leaders demonstrate their commitment to data governance, it sends a strong message to employees that data governance is a priority for the organization.

### **Measuring the Impact of Data Governance**

Measuring the impact of data governance is essential for ensuring that it delivers value to the organization. This involves tracking key performance indicators (KPIs) related to data quality, security, and compliance, as well as assessing the impact of data governance on business outcomes.

For example, a Nigerian manufacturing company might track KPIs such as data accuracy, data breaches, and compliance with regulatory requirements. It might also assess the impact of data governance on operational efficiency, customer satisfaction, and revenue growth.

### **Alignment with Global Practices**

Although Nigeria is still developing its data governance standards, the principles discussed align closely with global data governance practices. The proposed endeavor takes this into account by adapting international best practices for the SME sector. By leveraging frameworks such as the General Data Protection Regulation (GDPR) and drawing from best-in-class global approaches, the initiative ensures that SMEs in Nigeria and beyond can operate in compliance with evolving global standards.

### **Steps to Implement a Data Governance Framework**

Implementing a data governance framework involves several key steps, from setting objectives to investing in technology and training. This section outlines the key steps involved in setting up a data governance framework in a Nigerian company, while incorporating insights from the **Data Governance Management for SMEs Initiative**, ensuring scalability and adaptability for small and medium enterprises (SMEs).

#### **Setting Objectives**

The first step in implementing a data governance framework is to set clear objectives. These objectives should align with the organization's strategic goals and address specific challenges related to data management. For instance, a Nigerian healthcare organization might set objectives related to improving data quality, ensuring compliance with the NDPR, and enhancing patient outcomes.

For SMEs, setting objectives is equally important, particularly given their limited resources and operational capacities. The proposed initiative emphasizes the development of scalable, objective-driven frameworks that help SMEs prioritize data security, quality, and compliance. These tailored objectives ensure that SMEs can meet legal

requirements, protect their data, and align their governance practices with their business strategies.

### **Setting up a Governance Team**

The next step is to form a governance team responsible for developing and implementing the data governance framework. This team should include representatives from key business units, such as IT, legal, finance, and operations, as well as data stewards and data custodians.

In the case of SMEs, the roles within a governance team are often shared across fewer employees due to resource limitations. The Data Governance Management for SMEs Initiative addresses this by offering structured guidance on forming lean governance teams that can still manage key responsibilities effectively. In smaller organizations, data owners, stewards, and custodians may play multiple roles, but the initiative helps SMEs manage these roles efficiently by providing role definitions and practical tools.

### **Developing Policies and Standards**

Once the governance team is in place, the next step is to develop policies and standards that will guide data management practices within the organization. These policies should cover key aspects of data governance, such as data quality, security, privacy, and compliance.

For example, a Nigerian bank might develop a data privacy policy that outlines how customer data should be handled, who has access to it, and how it should be secured. It might also develop data quality standards that specify the level of accuracy, completeness, and consistency required for different types of data.

For SMEs, the proposed endeavor introduces adaptable policies and standards that fit the specific constraints of smaller businesses. These policies, designed to be easily implemented, focus on ensuring regulatory compliance, maintaining data quality, and protecting sensitive information without requiring extensive financial or human resources.

### **Implementing Stewardship and Ownership Structures**

Implementing stewardship and ownership structures is essential for ensuring that data governance policies are followed throughout the organization. This involves assigning roles and responsibilities for data management, such as data stewards, data custodians, and data owners.

For example, a Nigerian telecommunications company might assign data ownership to the IT department, while data stewardship might be assigned to business units responsible for customer data, network data, and financial data. Data custodians, on the other hand, might be responsible for ensuring that data is securely stored and protected.

In SMEs, where such structured roles may be difficult to assign, the initiative provides a simplified framework for stewardship and ownership, allowing SMEs to assign these critical responsibilities without creating operational burdens. This ensures that even with smaller teams, data governance roles are clearly defined and aligned with the organization's objectives.

### **Investing in Technology and Training**

Investing in the right technology and training is essential for supporting data governance initiatives. This includes investing in data management platforms, data analytics tools, and cloud computing, as well as providing training and support for employees.

For example, a Nigerian retail company might invest in a data management platform that allows it to consolidate data from multiple sources, improve data quality, and ensure compliance with the NDPR. It might also provide training for employees on how to use the platform, how to handle customer data, and how to identify and report data breaches.

For SMEs, however, access to advanced technology and comprehensive training can be a significant challenge due to cost constraints. The proposed initiative offers affordable and scalable technology solutions, such as cloud-based data management platforms and lightweight data security tools. Additionally, the initiative emphasizes low-cost training programs tailored to SME employees, ensuring that data governance practices are integrated across the organization without requiring large-scale investments.

### **Case Studies from Nigerian Companies**

Several Nigerian companies have successfully implemented data governance frameworks, providing valuable lessons and insights for others. For example, a leading Nigerian bank implemented a data governance framework to improve data quality and ensure compliance with the NDPR, Central Bank of Nigeria (CBN) regulations. The framework included a data management platform, metadata, data quality rules and standards, and a data privacy policy. As a result, the bank was able to improve data accuracy, make better decisions, reduce the risk of data breaches, regulatory fines, and enhance customer experience and KYC (Know Your Customer) practices.

Another example is a Nigerian telecommunications company that implemented a data governance framework to improve customer experience. The company invested in data analytics tools, trained its employees on data privacy and security, and implemented data quality management processes. As a result, the company was able to analyze customer behavior, optimize service offerings, and reduce churn.

For SMEs, similar case studies are emerging, where the Data Governance Management for SMEs Initiative has enabled organizations to implement low-cost governance frameworks, improve data security, and enhance customer service by using data more effectively. SMEs in industries such as retail and healthcare have seen tangible improvements in their decision-making processes, regulatory compliance, and operational efficiency due to adopting data governance strategies suited to their scale and capabilities

### **Legislation/Regulatory**

Below are some of the legislation/regulations pertaining to the management of data and information, mostly within the Nigerian context. These regulations are essential for setting the legal framework that governs how data is managed, protected, and utilized:

- Central Bank of Nigeria (Establishment) Act 2007 - NG
- Payment Card Industry - Data Security Standards (PCI-DSS)
- Cybercrimes (Prohibition, Prevention, etc.) Act 2015 - NG
- Anti-money Laundering and Counter-Financing of Terrorism Act - NG
- Nigerian Financial Intelligence Unit Act 2018 - NG
- Federal Competition and Consumer Protection Act, 2018 (FCCPA) - NG
- General Data Protection Regulation (GDPR)
- National Information Technology Development Agency (NITDA)
- Nigeria Data Protection Regulation (NDPR)

For SMEs, navigating this complex regulatory landscape can be overwhelming. The initiative offers SMEs practical guides to help them comply with these laws without overstressing their resources. By providing compliance templates and simple guidelines, SMEs are empowered to meet their legal obligations efficiently.

### **V. Conclusion: Strategic Approach To Data Governance For Smes And Larger Organizations**

Setting up a data governance framework in a Nigerian company is essential for managing data as a strategic asset, ensuring compliance with regulations, driving informed decision-making, and enabling business growth. By focusing on key components such as technology enablement, cultural and behavioral change, information management, and strategic alignment, organizations can develop a robust data governance framework that supports their goals and objectives.

The Data Governance Management for SMEs Initiative is tailored to ensure that even smaller enterprises can implement these frameworks effectively. While there are challenges associated with implementing data governance in Nigeria, adopting best practices, such as those introduced in the proposed endeavor, can help SMEs and larger organizations alike overcome these obstacles.

As the Nigerian business environment continues to evolve, data governance will become increasingly important for organizations looking to harness the power of data and maintain a competitive edge. The initiative helps ensure that SMEs are not left behind, providing them with the tools and knowledge needed to succeed in a data-driven world.

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