


# Digital First, Fraud Last: Advancing AI-Enable Public Finance Systems in Ghana

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# Presentation Outline

- Context: why this matters now
- Understanding AI in Public Finance
- Current Challenges in PFM systems
- Ghana's Digital Foundations
- From Digital to Intelligent Public Finance
- AI architecture for PFM systems
- Practical AI use cases
- African Implementation evidence
- Governance, Cybersecurity and Risks
- Strategic roadmap for Ghana
- Way Forward and Recommendations
- Conclusion




# *Why This Matters*

- ✓ Tightening fiscal space across African economies
- ✓ Increasing sophistication of financial fraud
- ✓ Demand for real-time fiscal decision-making
- ✓ Limits of traditional audit-based control systems

# Understanding AI in Public Finance



**AI involves systems that simulate human intelligence for reasoning and learning.**



**In public finance, AI automates tasks, forecasts budgets, detects fraud, and enhances engagement.**



**AI helps governments achieve efficiency, transparency, and accuracy in fiscal management.**




# *Core Challenges in PFM Systems*

- ✓ Fragmented financial platforms across MDAs
- ✓ Manual and semi-digital processes
- ✓ Reactive, post-expenditure controls
- ✓ Limited visibility across government finances.

# Ghana's Digital Foundation

1. **Ghana Digital Economy Policy (GDEP)**
2. **National AI Strategy**
3. **Strong digital public infrastructure system**
4. **National digital identify system (Ghana Card)**
5. **Expanding digital Payment ecosystem**
6. **Established e-government platforms across MDAs (ghana.gov)**

# Current PFM System Landscape

1. **GIFMIS as core financial management system**
2. **Payroll systems (HRMIS/IPPD)**
3. **E-procurement platforms (Ghaneps)**
4. **Debt management systems**
5. **Limited interoperability and integration**



# The Core Gap- Data without Intelligence

- ✓ High-volume transactional data
- ✓ Weak system integration
- ✓ Limited predictive analytics capability
- ✓ Under-utilisation of data for decision-making

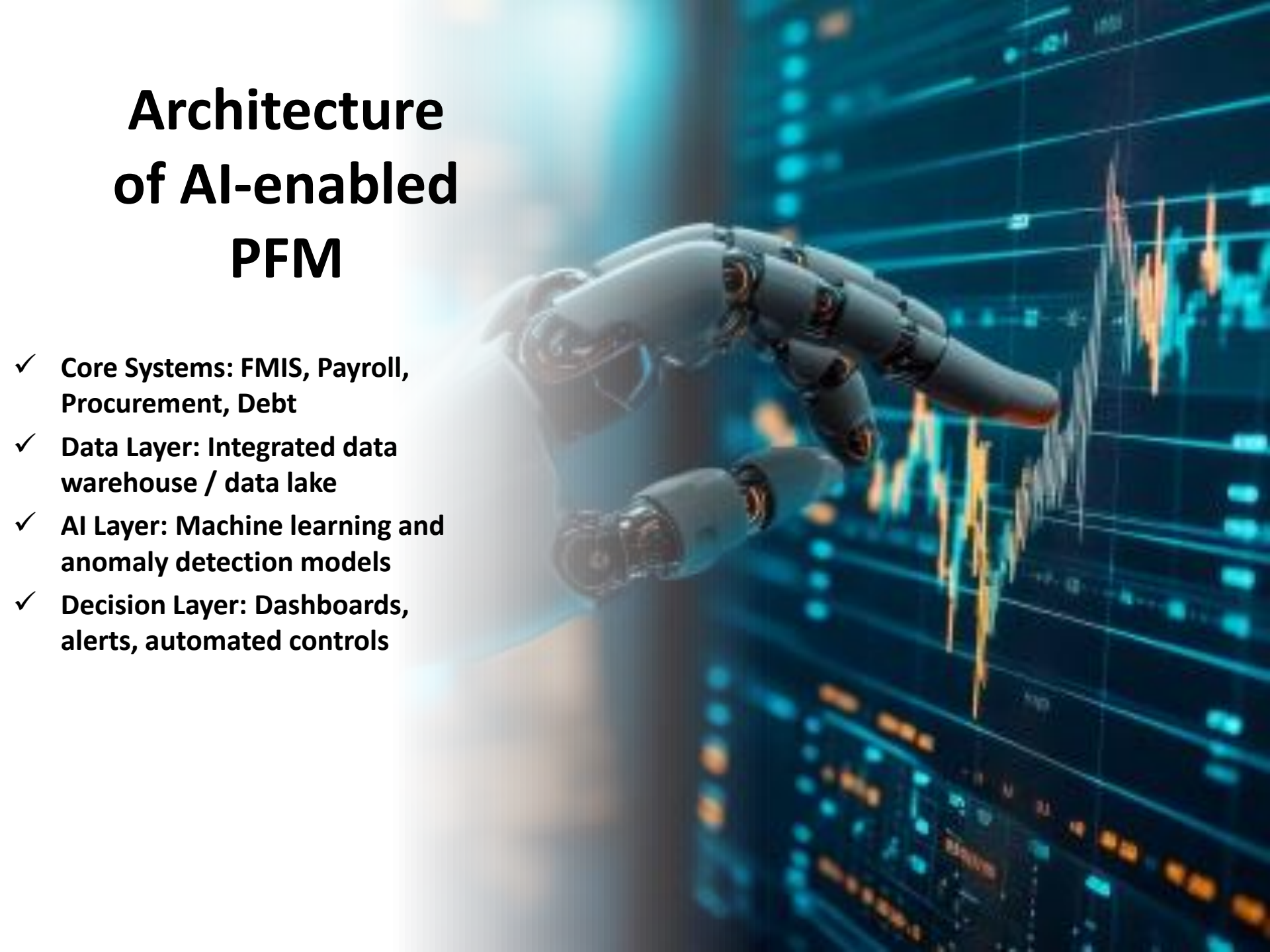



# From Digital to Intelligent PFM

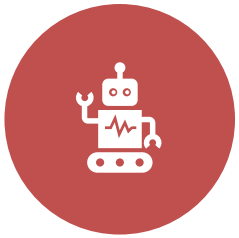
- ✓ **Reactive → Predictive**
- ✓ **Manual → Automated**
- ✓ **Siloed → Integrated**
- ✓ **Static reporting → Real-time analytics**

# Architecture of AI-enabled PFM

- ✓ **Core Systems: FMIS, Payroll, Procurement, Debt**
- ✓ **Data Layer: Integrated data warehouse / data lake**
- ✓ **AI Layer: Machine learning and anomaly detection models**
- ✓ **Decision Layer: Dashboards, alerts, automated controls**



# AI USE CASES IN PUBLIC FINANCE



Payroll anomaly detection (ghost workers, duplicates)



Procurement risk scoring (collusion, inflated pricing)

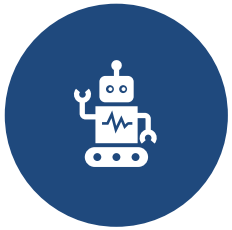


Expenditure outlier detection



Revenue leakage identification

# REAL-TIME OVERSIGHT TRANSFORMATION



Continuous transaction monitoring



Automated anomaly detection alerts



Faster decision-making cycles



Shift from ex-post audit to preventive control

# Data governance and Sovereignty



Data protection and privacy frameworks



Secure inter-agency data sharing protocols



Cloud vs sovereign infrastructure considerations



Accountability in algorithmic decision-making



# *Cybersecurity in Digital PFM*

- ✓ Financial systems as critical national infrastructure
- ✓ Increasing cyber fraud threats
- ✓ Fraud detection and anomaly flagging in transactions.
- ✓ Need for end-to-end security architecture
- ✓ Continuous monitoring and resilience

# Institutional and Change Challenges



SKILLS GAPS IN AI AND ANALYTICS



INSTITUTIONAL RESISTANCE TO AUTOMATION



PROCUREMENT AND REGULATORY CONSTRAINTS

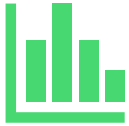


LEADERSHIP AND REFORM ALIGNMENT REQUIREMENTS

# Ghana’s Strategic way forwared



Full integration of PFM systems across MDAs



National fiscal data platform for analytics



Embedding AI into treasury operations

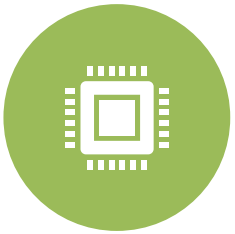


Strengthened governance and regulatory frameworks

# *Conclusion – Call to Action*



Move from digitisation to intelligence-led governance



Invest in systems integration, data, and skills



Strengthen African collaboration on PFM innovation



Build predictive, transparent, and resilient fiscal systems


Asante
Merci
Gracias
OBRIGADO
Thank You