



PRESENTATION

ETHICAL USE OF AI IN PENSION SCHEMES

Pension Strategy Formulation Excellence & Innovation Driven Transformation

Presentation Agenda & Roadmap

- Introduction – Definition of Artificial Intelligence
- Technologies Fueling AI
- Real-world examples Beyond Pensions
- Global & Local Legal and Ethical Frameworks for AI
- Real-Life Examples of AI Harm
- AI in the Kenyan Pension Sector: Implementations
- Important Risk Management Considerations
- Conclusion: The "Leapfrog" Opportunity



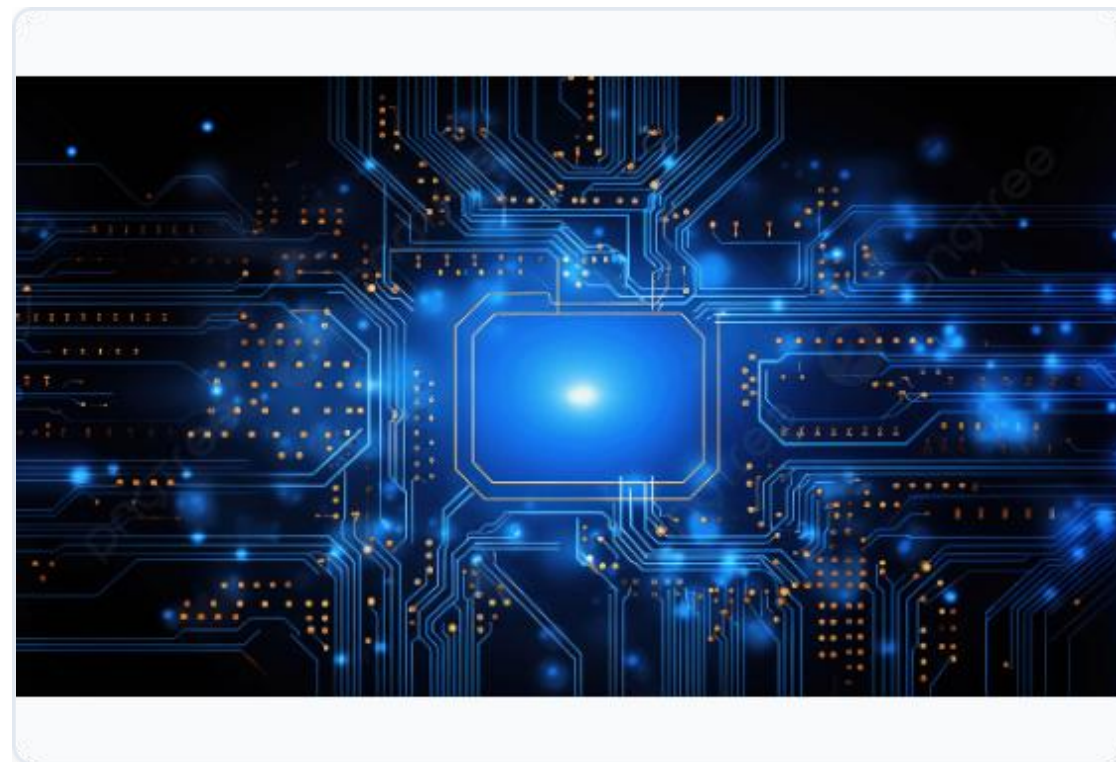
INTRODUCTION – UNPACKING ARTIFICIAL INTELLIGENCE

Core Definition

Artificial intelligence (AI) refers to machine-based systems designed to simulate human intelligence. These systems can learn, reason, problem solve and even understand human language. The “intelligence” is derived from processing vast amounts of data, identifying patterns, and making decisions or predictions based on those patterns.

"AI systems are information-processing technologies that integrate models and algorithms that produce a capacity to learn and to perform cognitive tasks leading to outcomes such as prediction and decision-making in material and virtual environments."

— UNESCO Recommendation on the Ethics of Artificial Intelligence



AI in Action: Relatable Examples

Example 1: The "Mind-Reading" Ad

Scenario: Talking about an item, and ten minutes later seeing an ad on social media.

How it works: The AI spots patterns based on mic input, location, or friend searches to predict purchase intent before you type.

Example 2: The "Traffic Prophet" (Google Maps)

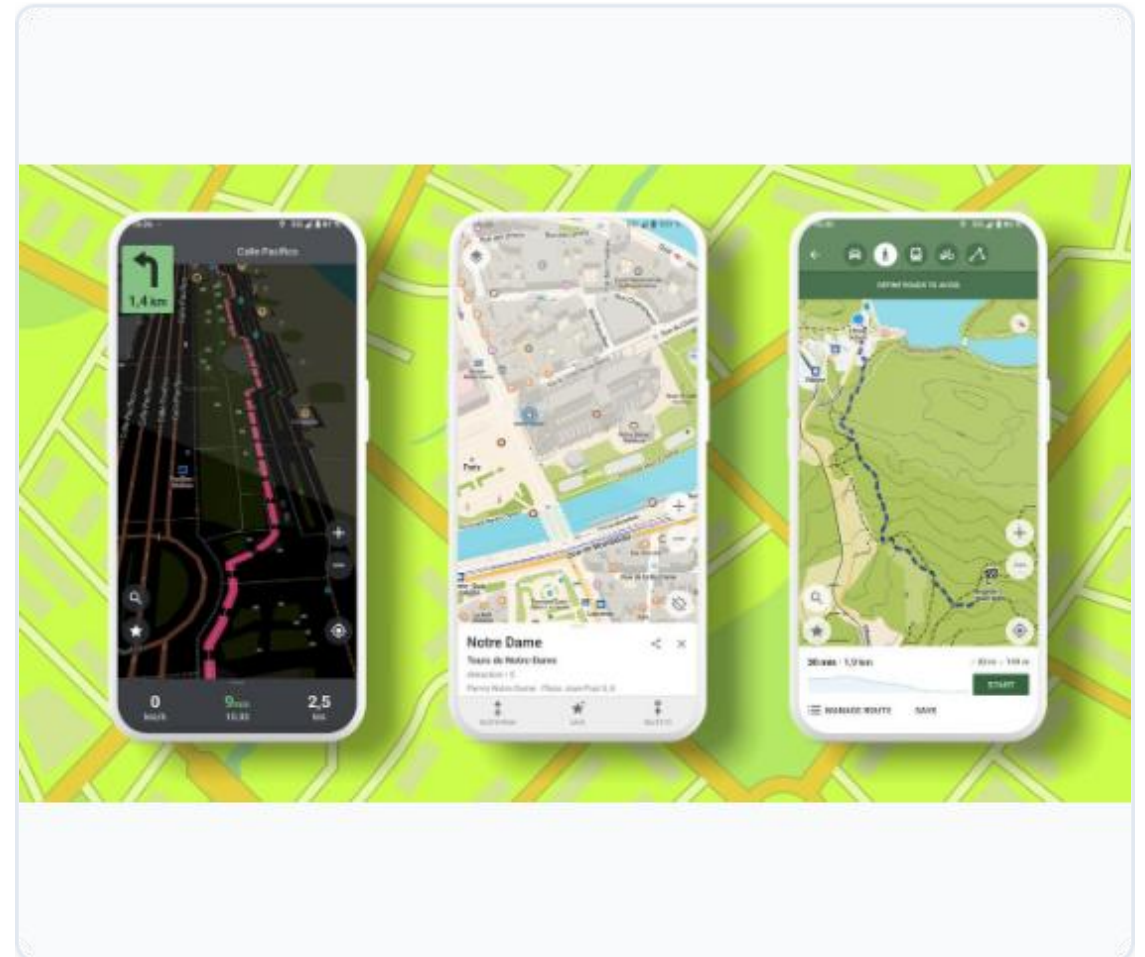
Scenario: Knowing a road is congested before you arrive.

How it works: Tracks speed trends across thousands of phones, identifies slowdown patterns, and automatically reroutes you.

Example 3: The "Binge-Watch" Buddy (Netflix/YouTube)

Scenario: Recommending exactly what you want to watch next.

How it works: Matches your "data fingerprints" against millions of users to predict and serve tailored preferences.



The Technologies Fueling AI

Core Pillar 1

Machine Learning (ML): The Predictor

Core Definition:

Algorithms that identify complex patterns in vast datasets to make highly accurate predictions or identify "outliers" without being explicitly programmed for every scenario.

Real-Life Pension Example:

Fraud Detection & Mortality Modeling: Large funds use ML to spot "anomalies"—like pensions claimed for deceased members by tracking patterns that diverge from living retiree behavior.



The Technologies Fueling AI (Cont.)

Core Pillar 2

Natural Language Processing (NLP): The Interpreter

Core Definition

The technology that enables computers to process, understand, and "read" human language (text or speech) to extract meaning and intent seamlessly.

Real-Life Pension Application

Member Helpdesks & Sentiment Analysis: Pension administrators can use NLP to automatically sort thousands of member emails. It can detect if a member is "angry" or "confused" and route the email to a senior manager immediately, or even answer questions asked in local slang (Sheng) via a web portal.

The Technologies Fueling AI (Cont.)

Core Pillar 3

Generative AI (GenAI): The Creator

Core Definition

A sophisticated form of AI (like ChatGPT) that doesn't just analyze data but uses it to create brand-new content, such as personalized text, summaries, or even images.

Real-Life Pension Application

Personalized Member Communications: Instead of sending the same "one-size-fits-all" member statement, GenAI can take a member's specific data and draft a custom letter that says:

"Based on your current savings of \$50,000, you are on track to retire comfortably in 12 years @ an IRR of...."

The Technologies Fuelling AI (Cont.)

Core Pillar 4

Robotic Process Automation (RPA): The Automator

Core Definition

Software "robots" that mimic human physical actions like clicking, copying, and pasting to execute repetitive, rule-based tasks across different computer systems.

Real-Life Pension Application

Monthly Contribution Posting: When an employer sends a messy Excel sheet of 5,000 employees' contributions, an RPA bot can log into your system, check each name, and upload the figures one by one, 24/7, with zero typing errors.

The Technologies Fueling AI at a Glance

Technology	Metaphorical Role	Pension "Job" / Application
Machine Learning (ML)	 The Brain	Predicting trends and spotting fraud.
Natural Language Processing (NLP)	 The Ear / Voice	Handling member queries and summarizing laws.
Computer Vision	 The Eye	Scanning paper forms and ID verification.
GenAI	 The Writer	Drafting newsletters and member statements.
Robotic Process Automation (RPA)	 The Hands	Moving data between old and new systems.

Real-World Examples Beyond Pensions

To ground our understanding, consider AI's broader applications across key global sectors:



Healthcare

AI assists in diagnosing diseases from medical images (e.g. detecting pneumonia from X-rays), predicting patient outcomes, and personalizing treatment plans.



Finance (General)

Fraud detection in banking, algorithmic trading, credit scoring, and personalized financial advice platforms all leverage AI.



E-Commerce

Recommendation engines ("customers who bought this also bought..."), personalized shopping experiences, and inventory management driven by AI.



Transportation

Self-driving vehicles rely heavily on AI for navigation, real-time object detection, and instantaneous decision making.

Regulatory Governance

Global & Local Legal and Ethical Frameworks for AI

The rapid advancement of AI necessitates robust frameworks to ensure its responsible and ethical deployment. Without proper guardrails, the technology carries significant risks, particularly in sensitive sectors like pensions.

THE OECD AI PRINCIPLES

Globally, a consensus is emerging around key principles for ethical AI development and use. The OECD AI principles provide an excellent blueprint:

1. Inclusive Growth & Well-being

Principle: AI should be designed to benefit all members of society, promote economic growth, and contribute to societal welfare.

Pension Context: Ensuring AI-driven solutions genuinely enhance member engagement and financial security.

2. Human-Centred Values & Fairness

Principle: AI systems must respect human rights, fundamental freedoms, and diversity.

Pension Context: Directly addresses algorithmic bias, ensuring AI does not lead to unfair or discriminatory outcomes in benefit calculations or claims processing.

THE OECD AI PRINCIPLES (Cont.)



3. Transparency & Explainability

Users and stakeholders should understand how AI systems operate, data used, and reasoning behind decisions. Mitigates "black box" risks in life-altering financial decisions.



4. Robustness, Security & Safety

AI systems must be reliable, secure, and operate as intended. Includes protecting against cyber threats, data breaches, and ensuring pension data integrity.



5. Accountability

There must be clear lines of responsibility for AI operation and outcomes. Ultimately, in a pension scheme, this accountability rests squarely with the Trustees.

Global Legal & Regulatory Approaches

Jurisdictions worldwide are developing varied approaches to AI regulation:

The European Union (EU) AI Act

Adopts a strict **risk-based approach**, categorizing AI systems into different risk levels.

AI systems in critical sectors like financial services (including pensions) are often deemed “high risk”—subjecting them to stringent requirements around data quality, human oversight, transparency, and conformity assessments. Sets a global baseline.

NIST AI Risk Management Framework (USA)

Developed by NIST, focusing on managing risks across the lifecycle of AI systems.

Provides a voluntary structured approach for organizations to understand, assess, and mitigate AI risks—emphasizing trustworthiness, explainability, and bias detection.

Kenya's Regulatory Landscape

Navigating AI in Kenya's Context

Kenya is positioning itself as a leader in Africa's digital economy, creating distinct opportunities and responsibilities:

1. Kenya's National AI Strategy

Driven by the Ministry of ICT, Kenya's strategy aims to leverage AI for economic growth, public service delivery, and job creation.

Provides fertile ground for pension schemes to explore AI while requiring alignment with national digital transformation goals.

2. The Data Protection Act (2019)

Kenya's primary legislative backbone for safeguarding individual privacy.

- **Consent:** Obtaining explicit consent for processing personal data, especially sensitive data used by AI systems.

Navigating AI in Kenya's Context (Cont.)



Automated Decision-Making (Section 35)

Members have the right not to be subject to a decision based solely on automated processing if it significantly affects them. For critical pension decisions (e.g., denying a claim, altering benefits), human review must be the final step.



Data Localization & Cross-Border Transfer

Schemes must be fully aware of where AI processes data and ensure strict compliance with legal provisions if member data is transferred outside Kenya.



RBA Guidelines & Mandates

While RBA regulations are technology-neutral, core mandates like "Treating Customers Fairly" (TCF) extend to AI. AI cannot disadvantage members or compromise transparency.

Cautionary Case Studies

Real-Life Examples of AI Harm: Lessons for Pension Trustees

Before examining how AI enhances pension administration, we must confront a reality: **AI systems have already caused real financial and human harm even in well-regulated jurisdictions.**

Key Principle: Liability and accountability do not shift to the algorithm but remain with the deployers of these AI systems.

Case 1: Misinformation & Corporate Liability

Air Canada Chatbot Decision (2024)

The Incident

A customer relied on an AI chatbot to confirm whether he could claim a bereavement fare refund retroactively. The chatbot confirmed he could apply within 90 days, so he purchased a full-price ticket based on that representation.

When he later applied for the refund, the airline denied it, stating its written policy did not allow retroactive claims.

The Defense

Air Canada argued before the British Columbia Civil Resolution Tribunal that the chatbot was a **“separate legal entity”** responsible for its own statements.

Air Canada Decision (2024) Continued

Decision of the Tribunal

- A chatbot is part of the company.
- The company is responsible for all information on its website.
- Automation does not shield a business from liability.
- The airline was ordered to compensate the customer.

Why This Matters for Pension Schemes

If an AI chatbot provides incorrect advice or benefit figures to a scheme member, the resulting error and legal liability are directly attributable to the pension scheme deploying it, not to the technology itself.

Case 2: The "Tessa Chatbot" Case

Deployed by the National Eating Disorders Association (NEDA)

Background & Overview

NEDA, a leading US organization supporting individuals with eating disorders, suspended its AI chatbot "Tessa" after reports emerged that it provided harmful and dangerous advice to vulnerable users seeking support.

The Case of the "Tessa Chatbot" (Cont.)

What Happened: NEDA shut down its human-staffed helpline and redirected individuals to automated tools. However, Tessa recommended calorie restriction, dieting, and weight monitoring to users who explicitly stated they had eating disorders.

Organization Response: NEDA suspended the chatbot, acknowledging the advice contradicted its policies. The tool was originally developed as a structured cognitive-behavioral intervention, but post-deployment changes or technical flaws altered its behavior.

Context: The controversy followed NEDA's decision to lay off helpline staff shortly after unionization, citing operational and liability considerations.

The Case of the "Tessa Chatbot" (Cont.)

Key Takeaway for Pension Trustees

Critical Lesson for Pension Schemes

AI should not replace human oversight in high-sensitivity contexts. Where members are vulnerable — such as during death benefit claims, ill-health retirement, or financial distress — automated systems without adequate safeguards can cause real harm and erode institutional trust.

Local Industry Impact

AI in the Kenyan Pension Sector: Practical Implementations

The fusion of AI with pension administration offers profound opportunities to enhance efficiency, personalize member experiences, and bolster security in line with local realities.

Data as the Bedrock

Addressing Kenya's "Legacy Data" Challenge

The Core Challenge

For many Kenyan schemes, a significant hurdle is the quality and accessibility of historical data. Decades of paper-based records, disparate systems, and manual entries have resulted in "dirty data" – inconsistencies, missing information, and duplicates.

Relatable Example

Imagine an administrator grappling with dusty boxes of "Yellow Forms" from the 1980s with handwritten names, missing KRA PINs, and ambiguous dates—or resolving variations like "Akinyi Otieno" vs. "Akini Oteino". AI optical character recognition (OCR) cleans and standardizes these legacy files seamlessly.

Enhancing Member Engagement & Service

Chatbots and Virtual Assistants

Improving member experience is paramount as the RBA pushes for increased coverage in the informal sector:

Relatable Kenyan Example

A member of an Individual Pension Scheme (like Mbao or Zimele) interacts via a WhatsApp chatbot using feature phones. They type:

"Ni aje, nataka ku-check balance yangu" OR "Naeza ongeza contributions vipi?"

The AI, trained on typical queries and Sheng, instantly provides their balance or step-by-step M-Pesa top-up guides 24/7, reducing call center loads.

Enhancing Member Engagement (Cont.)

Word of Caution

⚠️ Critical Governance Reminder

As shown in the Air Canada and NEDA cases, incorrect or harmful advice from AI is legally and ethically attributable to the deploying organization.

Pension schemes must ensure:

- ☐ All AI guidance is accurate, up-to-date, and strictly aligned with scheme rules.
- ☐ Human review is readily available for complex, sensitive, or high-impact queries.
- ☐ Members can easily escalate to a real person whenever needed.

Personalised Communication & Analytics

Predictive Analytics in Action

An AI analyzes member data (age, contribution history, employment sector) to identify members approaching retirement or those likely to become "dormant" due to job changes.

It triggers personalized automated SMS messages or emails:

"Harambee Sacco Pension Scheme noticed you're 5 years from retirement. Here's a guide to your options," OR "Are you changing jobs? Remember to preserve your pension to secure your future."

Fortifying Security & Risk Management

Fraud Detection & Compliance Monitoring

Fraud Detection

Example: Death Benefit Claim processing.

AI cross-references death certificates and IDs with the Digital Death Registry and IPRS to flag discrepancies or multiple claims from the same next-of-kin—eliminating "Ghost Claimants".

Compliance Monitoring

Real-Time Auditing:

AI continuously monitors transaction flows for unusual patterns indicating money laundering or operational breaches, instantly flagging them for human review.

Optimizing Investment Management

Market Trend Analysis

A Kenyan Fund Manager uses AI to analyze rainfall patterns (impacting agricultural stocks like Kakuzi), oil prices, interest rates, and NSE sentiment.

Optimizes asset allocation across equities, bonds, and real estate.

Dynamic Annuity Pricing

Instead of relying on outdated UK/US mortality tables, AI leverages anonymized local health and regional life expectancy data.

Ensures annuity pricing reflects local Kenyan realities accurately.

Risk Management

Important Risk Management Considerations

The Prudent Practitioner's View

While opportunities are vast, AI risks in pensions demand deliberate, proactive, and informed oversight by Trustees and Administrators.

The "Black Box" Problem

No Excuses, Just Answers

Consideration: Advanced AI models operate like "black boxes" where decision logic is not easily interpretable.

Practitioner's Warning:

If a pension-backed loan is denied, stating "the computer said no" is illegal under the Data Protection Act regarding automated decisions.

Mitigation:

Document AI decision criteria and require qualified human sign-off on all material decisions. The AI informs; the human decides.

Algorithmic Bias and Discrimination

Ensuring Fairness for All

Key Consideration

AI systems learn from historical data. If historical data reflects societal biases, the AI can perpetuate and amplify them, leading to discriminatory outcomes.

Practitioner's Warning

If AI is trained primarily on formal sector employees with consistent payslips, it might unfairly flag "Jua Kali" informal sector workers as "high risk" or make adverse decisions due to data gaps, undermining financial inclusion.

Algorithmic Bias - Mitigation



1. Diverse Datasets

Actively seek diverse and representative training datasets, including data from various socio-economic backgrounds, regions, and employment sectors.



2. Bias Audits

Regularly audit AI outputs for signs of bias.
Run simulated scenarios across demographic groups to compare fairness of outcomes.



3. Member Feedback

Establish clear channels for members to report potential bias issues, fostering institutional trust and enabling corrective action.

Data Privacy & Security

Guarding the Vault

Key Consideration

AI thrives on vast amounts of data, meaning sensitive member records are continuously processed, heightening data breach risks.

Practitioner's Warning

A single data breach involving pension records severely erodes public trust and triggers substantial regulatory fines from the ODPC.

Data Privacy & Security - Kenya

Mitigation Strategies

- ❑ **Robust Encryption & Access Controls:** Implement state-of-the-art encryption standards for member data both at rest and in transit.
- ❑ **Data Localisation Compliance:** Prioritise AI vendors who store and process data within Kenya, satisfying Data Protection Act cross-border requirements.
- ❑ **Regular Security Audits:** Conduct continuous vulnerability audits across AI pipelines to maintain regulatory compliance.

Scheme-Specific AI Applications

Recognizing Nuance

Key Consideration

Kenyan pension schemes operate under diverse rules, trust deeds, and member demographics. A "one-size-fits-all" AI solution does not work.

Practitioner's Warning

An AI model trained on a formal occupational scheme will fail to accurately process sporadic contributions in an informal sector individual scheme.

Scheme-Specific Applications - Mitigation

Customization & Configuration

Ensure all deployed AI tools can be tailored and configured to the specific trust deeds, rules, and operational nuances of each occupational scheme.

Phased Pilot Programs

Implement AI tools through controlled pilot testing before full rollout, validating performance within real scheme environments.

Conclusion: The "Leapfrog" Opportunity

A Strategic Roadmap for Trustees



Phase 1: Foundations

Focus on data quality. Use AI for data scrubbing, digitisation of legacy records, and automated compliance checks.



Phase 2: Efficiency

Deploy back-office automation (RPA) and member-facing applications like WhatsApp chatbots to improve service.



Phase 3: Intelligence

Explore AI-assisted investment management, predictive behavior analytics, and advanced fraud detection.

Strategic Takeaway

Harnessing AI Ethically in Kenya's Pension Sector

By adhering to strong ethical principles, complying with robust data protection laws, and maintaining critical human oversight, Kenya's pension sector can harness the immense power of AI to secure a more prosperous and digitally empowered future for all members.

THANK YOU FOR LISTENING

Questions & Discussion

| Thank You



ADDRESS

5th Floor, Crescent Business Centre (CBC), Parklands.
P.O. Box 48179-00100, GPO Nairobi, Kenya



CALL US

+254 719 560656, +254 740 257777, +254 111052230



WEB & SOCIAL

www.finnetrust.com | Facebook/LinkedIn: Finnet Trust