GROWING THE ZIMBABWE INSURANCE INDUSTRY THROUGH EMERGING TECHNOLOGIES (AI, ML, AND BLOCKCHAIN)

Presentation Outline

1. Zimbabwean Insurance Industry (Overview)
2. Emerging Technologies Overview
3. AI in Insurance
4. ML in Insurance
5. What are the Applications of AI and ML in the Zimbabwean Insurance Industry.
6. Blockchain Technology Introduction.
7. Blockchain in Insurance.
8. Blockchain Use Cases in Insurance.
9. Technology Implementation Challenges
10. Successful Implementation : Case Studies
11. Joining the pieces together.
12. Conclusion

Zimbabwean Insurance Industry Overview (IPEC Q1 2024 REPORT)

General Insurance

Type of Institution	Number of Registered Entities/ Persons as at	
	31 March 2024	31 March 2023
Insurance Companies	20	20
Micro-insurance Companies	11	11
Reinsurance Companies*	10	10
Insurance Brokers	28	28
Reinsurance Brokers	8	8
Underwriting Management Agencies	4	4
Loss Assessors	62	59
Corporate Agents	207	187
Sole Agents	912	871
Total	**1,262**	**1,198**

- As at 31 March 2024 the industry had 1,262 players
- Total revenue for Insurance companies stood at USD 53,180,806 with Motor book contributing 40%
- Total revenue for Reinsurance companies was USD 32,767,665 with the Fire book contributing 49%
- The Industry has shown signs of growth with Total revenue increasing from USD 101,490,000 in 2021 to USD 143,850,000 in 2022 and finally USD 174,796,455 in 2023

Class contribution to total insurance revenue (IPEC Q1 2024 REPORT)

Insurers

Line of Business	Insurance Revenue (US$) 31 March 2024	Percentage Contribution To Total Insurance Revenue
Fire	11,174,621	21%
Motor	21,062,991	40%
Engineering	1,693,349	3%
Marine	1,100,753	2%
Aviation	1,294,313	2%
P/Accident	4,420,367	8%
P/Liability	835,111	2%
Misc Accident	1,807,864	3%
Bonds/Guarantee	1,733,555	3%
Hail	5,430,076	10%
Health	2,043	0%
Farming	1,904,908	4%
Casualty	184,308	0%
Credit	220,272	0%
Others*	316,275	1%
Total	**53,180,806**	**100%**

- Motor insurance contributes 40% to revenue, while Fire and Hail come in at 21% and 10%, respectively.
- For a country that relies on agricultural output, it is surprising to see farming contribute only 4%.

Class contribution to total insurance revenue (IPEC Q1 2024 REPORT)

Reinsurers

Line of Business	Insurance Revenue (US$) 31 March 2024	Percentage Contribution
Fire	16,119,949	49%
Farming	1,174,131	4%
Miscellaneous Accident	2,404,408	7%
Motor	2,883,257	9%
Engineering	1,880,398	6%
Casualty	1,004,454	3%
Marine	2,782,912	8%
Hail	1,318,508	4%
Bonds/Guarantees	675,621	2%
Others	299,252	1%
Aviation	1,254,921	4%
P/Liability	422,299	1%
P/Accident	536,193	2%
Health	2,652	0%
Credit	8,911	0%
Total	**32,767,866**	**100%**

- Fire business contributes 49% and Motor contributes 9%.
- Insurers retain more of their Motor business than they do the Fire business

Growth trends In Short term Insurance

In Zimbabwe, as noted above that individuals predominantly take insurance covers for their motor vehicles but there is low uptake on property insurance

The increased inflow of grey imports and the regulatory requirement for motorists to have motor insurance has contributed to the constant growth of this class

With climate change induced risks and increased incidents of fires, this becomes extremely critical, and most homeowners have started realising this escalating risk and seeking cover

This situation is exacerbated by low disposable incomes resulting from a combination of low wages and high inflation

Zimbabwean Insurance Industry (Overview)

Life Assurance Companies

- Nyaradzo Life
- Doves Life
- Zimnat Life
- First Mutual Life
- Old Mutual Life
- Econet Life
- ZB Life
- Fidelity Life
- CBZ Life
- Nhaka Life
- Evolution Life
- Heritage Life

- As at 31 March 2024 the industry had 12 players

Contribution to total insurance revenue (IPEC Q1 2024 REPORT)

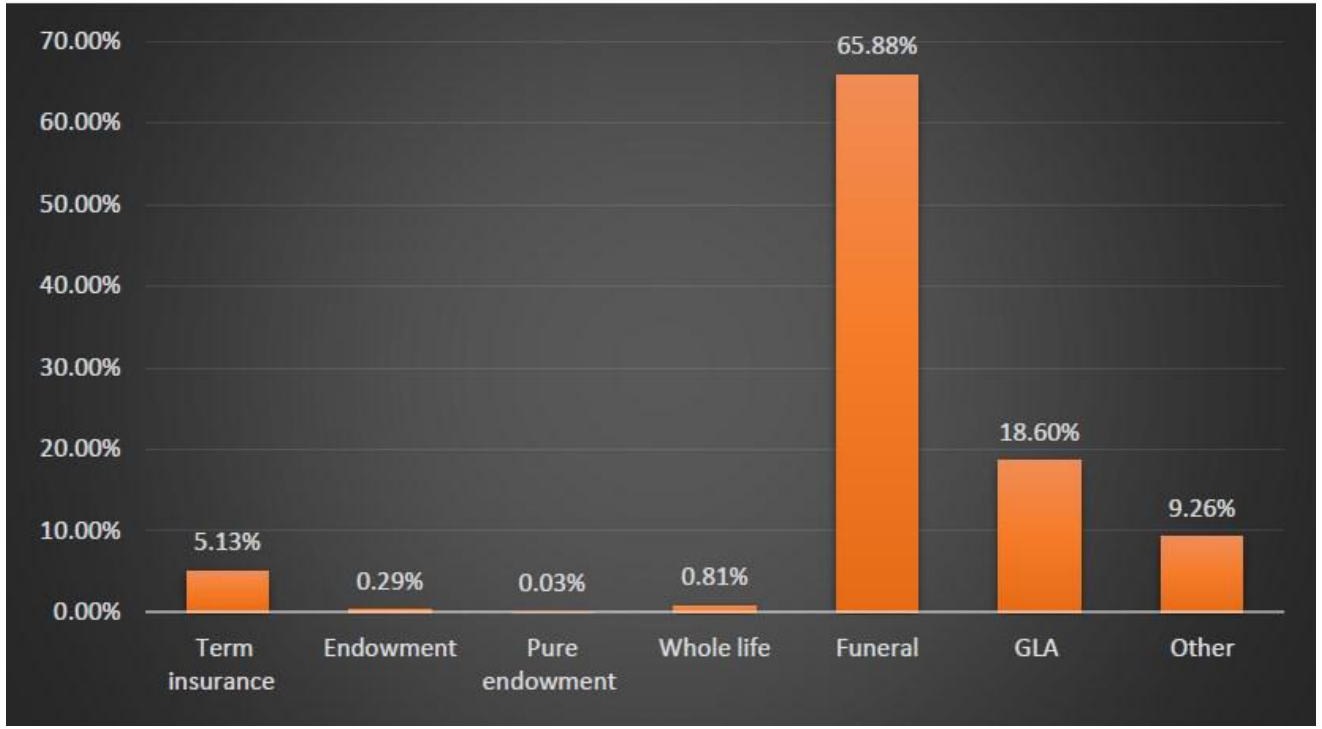
Life Assurance Revenue per Company

Name of Company	Insurance Revenue (ZWL Million)	Market share
Nyaradzo Life	194,691	40.07%
Doves Life	71,237	14.66%
Zimnat Life	59,967	12.34%
First Mutual Life	42,154	8.68%
Old Mutual Life	29,725	6.12%
Econet Life	28,110	5.79%
ZB Life	22,954	4.72%
Fidelity Life	20,286	4.18%
CBZ Life	13,024	2.68%
Nhaka Life	2,214	0.46%
Evolution Life	1,136	0.23%
Heritage Life	383	0.08%
Total	485,881	100%

Zimbabwean Insurance Industry Overview (IPEC Q1 2024 REPORT)

Life Assurance

Figure 2: Distribution of Insurance Revenue by Product Line

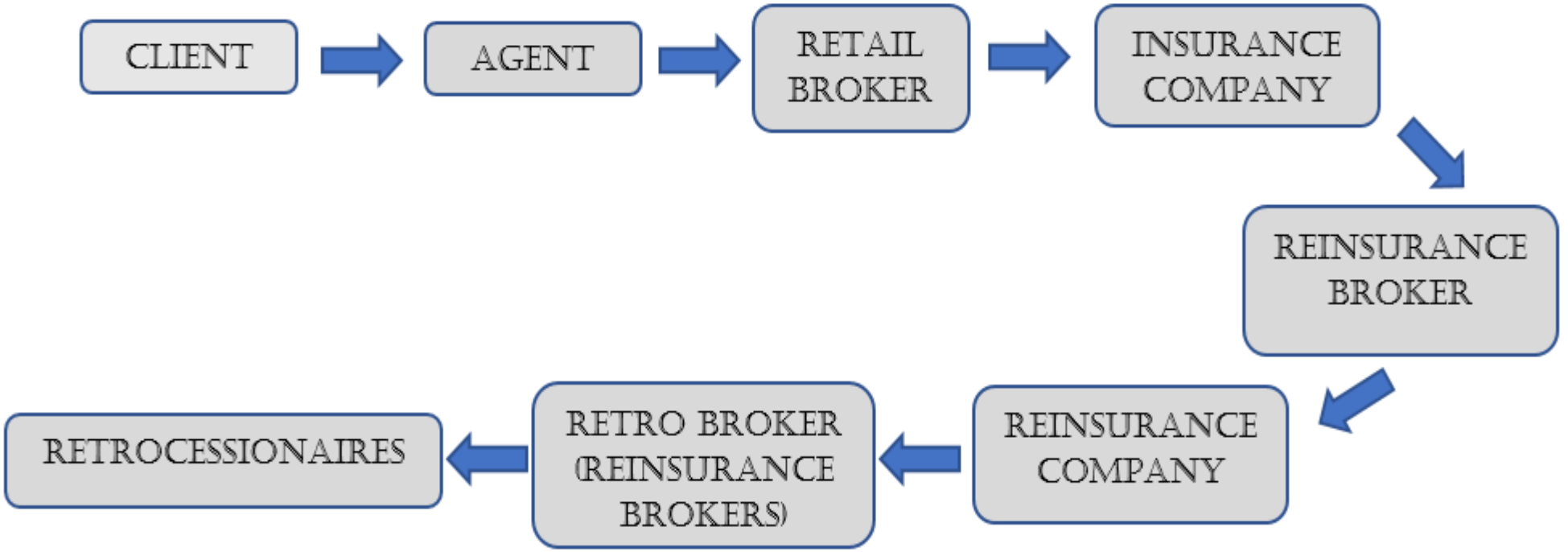


- As at 31 March 2024 direct life assurers reported insurance revenue amounting to US$30.93 million.
- Funeral assurance and group life assurance remain the primary revenue sources for the life sector, with a combined share of 84.48% of total revenue.
- Recurring and new business constituted 93% and 7%, respectively for the quarter.

Growth trends in Life Assurance

- ✓ Increased uptake of funeral assurance products
- ✓ Digital Transformation
- ✓ Innovation
- ✓ Healthy Lifestyles

Insurance market value chain



Some Challenges in Short term Insurance

- Limited Market Penetration
- Manual Processes
- Insurance Fraud
- Poor Risk Management
- Customer Expectations
- Premium collection challenges
- Soft pricing

Some Challenges in Life Assurance

- Episodes of loss of value
- Limited disposal Income
- Policy changes
- Limited premium collection channels
- Low level of financial literacy

Emerging Technologies in the Insurance Industry

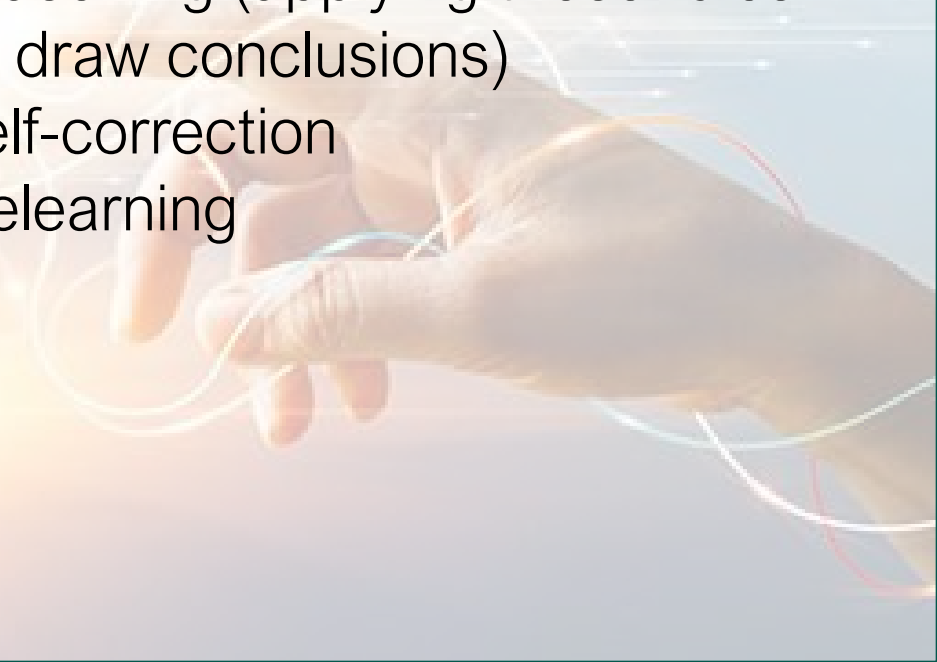
- Artificial Intelligence
- Machine Learning
- Blockchain

Artificial Intelligence (AI)

Artificial intelligence (AI) is a branch of computer science dedicated to creating intelligent machines that can learn and solve problems like humans do

AI is also the ability of machines to simulate or mimic human thought processes i.e.

- learning (gathering information and rules to use it)
- reasoning (applying those rules to draw conclusions)
- self-correction
- Relearning



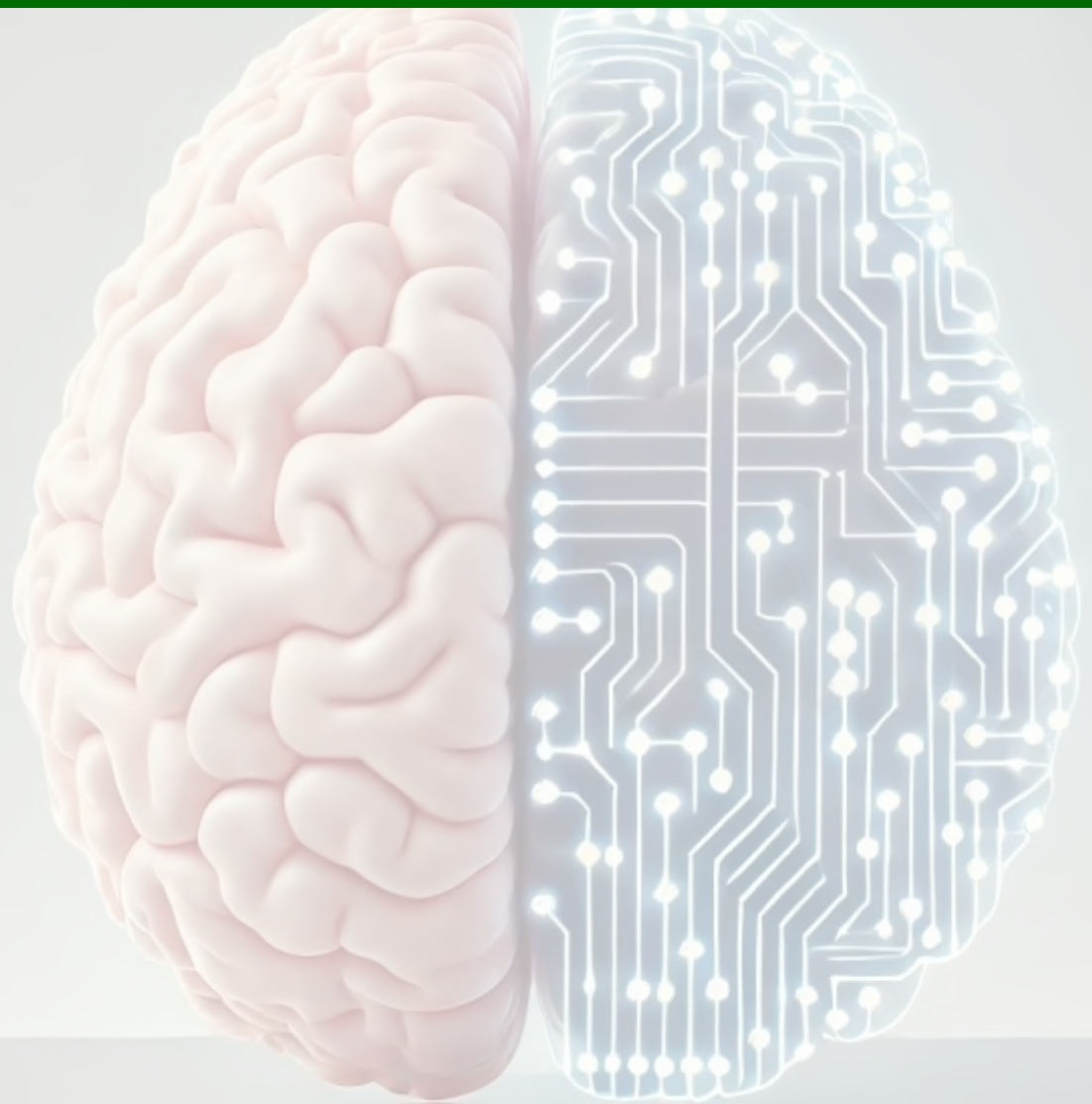
Components of AI

Machine Learning

- Using sample data to train computer programs to recognize patterns based on algorithms

Neural Networks

- Computer systems designed to imitate the neurons in a brain



Natural Language processing

- The ability to understand speech as well as understand and analyze documents

Robotics

- Machines that can assist people without actual human involvement

What Are The Applications Of AI & ML In The Zimbabwean Insurance Industry?

Top use cases of AI in Insurance

Blockchain technology

What Is Blockchain Technology?

It is a computer program that operates on a decentralized network of computers that work together to maintain a shared ledger of transactions. It groups transactions into blocks and each block is secured using cryptographic hashing. The ledger of transactions is distributed across all nodes in the network and each node maintains a copy of the entire Blockchain.

Blockchain in Insurance

Sales & Distribution

Decentralized digital ID enables frictionless quote generation as personal data could be safely shared with multiple insurers

Pricing & Underwriting

Decentralized data provides a large varied dataset for product pricing

Product Management

Blockchain and smart contracts could streamline the inception and admin of reinsurance, swaps and securitization.

Premium Payments

Smart contracts automate premium payment processing and policy updates

Claims Handling

Smart contracts could automate claim payouts.

Blockchain use cases- Regulatory Compliance

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- Among the various challenges affecting the Zimbabwean market, one significant issue identified by the Ministry of Finance as a threat to growth is the collection of premiums. Insurers were issuing coverage on credit and facing difficulties in collecting premium from clients. In response, the government, through the Ministry of Finance, introduced Statutory Instrument 81 of 2023, which requires insurers to issue coverage only after receiving premiums
- Section 5AA. (1) OF S.I 81 OF 2023 states that: " The receipt of an insurance premium shall be a condition for a valid contract and there shall be no cover in respect of an insurance risk unless the premium is paid in advance."

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- Emphasizes the claims turnaround time for insurance companies to within three working days. These strict demands by the regulator necessitate the need to implement emerging technologies in some of the insurance processes and checks to better meet the stated turn around times.

Blockchain in the Zimbabwean context

INSURANCE MARKET VALUE CHAIN

INSURED → AGENT → BROKER → INSURER → REINSURANCE → BROKER → RETROCESSION

- In addition to challenges in premium collection, there is also the issue of remitting premiums to relevant parties in the value chain, starting from the insured.
- If blockchain technology is adopted, it could facilitate the seamless movement of transactions along the value chain, ensuring that premiums are remitted to the rightful parties on time.
- This technology eliminates the need for time-consuming reconciliations.

Technology implementation challenges

Infrastructure Limitations: Zimbabwe has limited infrastructure in terms of internet connectivity, power supply, and technological resources. Implementing technologies like blockchain or AI will require robust infrastructure which might be lacking.

Cost Constraints: Emerging technologies often come with high implementation costs. For insurance companies in Zimbabwe, budget constraints may pose a challenge in adopting and integrating these technologies effectively.

Regulatory Hurdles: Zimbabwe may have strict regulations around data privacy, security, and financial transactions. Adhering to these regulations while implementing technologies like IoT or AI can be a challenge for insurance companies.

Technology implementation challenges

Skills Gap: There might be a shortage of skilled professionals with expertise in emerging technologies within the insurance sector in Zimbabwe. Training existing staff or hiring new talent can be a hurdle.

Cybersecurity Concerns: With the adoption of new technologies comes an increased risk of cyber threats and data breaches. Ensuring robust cybersecurity measures to protect sensitive customer data is essential but can be challenging in a constantly evolving threat landscape.

Customer Awareness and Acceptance: Introducing new technologies may require educating customers about the benefits and functionalities. Convincing customers to trust these technologies with their personal information and financial data can be a significant challenge.

Legacy Systems Integration: Many insurance companies in Zimbabwe may still rely on legacy systems that are not easily compatible with modern technologies. Integrating new technologies with existing systems can be complex and time-consuming.

Successful implementations

Case Studies

Successful implementations - case studies - 1

UK-based company Lemonade. Lemonade uses artificial intelligence and behavioural economics to offer homeowners, renters, condo, car, pet health, and term life insurance policies to clients across the UK.

Lemonade's policies are 100% digital. It provides quotes, underwrites and sells policies, and handles and pays claims via an online app. The company also charges a flat fee and pays claims "super-fast." The insurtech firm once famously granted a claim in two seconds by leveraging on chat-bots for policy queries and claims and fraud detection.

Successful implementations - case studies - 2

US-based insurance company Liberty Mutual developed automotive apps with AI capability and products aimed at improving driver safety

The insurance company developed a new app to help drivers involved in a car accident quickly assess the damage to their car in real-time using a smartphone camera. The app's AI component would be trained on thousands of images from car crashes and as a result could also provide damage-specific repair cost estimates

Successful implementations - case studies - 3

Allstate Insuretech partnered with EIS to develop a virtual assistant called ABle (the Allstate Business Insurance Expert). ABle (pronounced “Abbie”) was developed to assist Allstate agents seeking information on Allstate Business Insurance (ABI) commercial insurance products.

ABle, who appears as an avatar, reportedly provides agents with step-by-step guidance for “quoting and issuing ABI products” using natural language. EIS claims that ABle processes 25,000 inquiries per month.

Joining the pieces together

- Artificial Intelligence
- Machine Learning
- Blockchain

Some possible solutions

Artificial Intelligence (AI)

Insurance Fraud

- Deploy fraud detection algorithms to analyze patterns and anomalies in claims data
- Develop predictive models to assess fraud risk and identify fraudulent behavior early
- Utilize AI for fraud detection and prevention, reducing losses due to fraudulent activities

Customer Expectations

- Implement AI-powered chatbots and virtual assistants for personalized customer support
- Analyze customer data to understand preferences and behaviors, offering tailored products and services
- Enhance customer experiences by leveraging AI for personalized interactions and services

Premium Collection Challenges

- Analyze payment patterns and customer behavior to optimize premium collection strategies
- Develop predictive models to forecast premium payments and identify at-risk accounts
- Utilize AI for optimizing premium collection processes and reducing payment delays

Some possible solutions

Machine Learning (ML)

Limited Market Penetration

- Predict customer behavior and preferences to tailor product offerings and pricing
- Implement ML-driven strategies for targeted marketing and customer acquisition
- Enhance market penetration through ML-based customer insights and personalized offerings

Manual Processes

- Automate manual tasks such as data entry, document processing, and underwriting
- Implement workflow automation for claims processing, policy issuance, and customer service
- Streamline operations and improve efficiency by leveraging ML for process automation

Poor Risk Management

- Enhance risk assessment models by leveraging ML algorithms to analyze data
- Develop predictive analytics models to forecast potential risks and proactively manage them
- Improve risk management practices through ML-driven risk assessment and mitigation strategies

Some possible solutions

Blockchain Technology

Customer Expectations

- Ensure data security and privacy through Blockchain technology, building trust with customers
- Utilize Blockchain for secure and transparent transactions, meeting customer expectations for transparency
- Enhance customer trust and satisfaction by leveraging Blockchain's data security features

Premium Collection Challenges

- Utilize smart contracts for automatic premium collection and verification
- Implement Blockchain technology for secure and transparent premium payment processes
- Improve premium collection efficiency and accuracy through Blockchain-enabled solutions

Soft Pricing

- Enhance pricing transparency and accuracy through Blockchain-enabled platforms
- Utilize Blockchain for fair and consistent pricing practices, ensuring pricing integrity
- Improve pricing strategies by leveraging Blockchain technology for pricing transparency

Conclusion

- Looking at the balance of issues, it appears that ***emerging technologies have a place*** in improving the way we do business especially in the attainment of efficiency, cost optimization, and improved insurance penetration for both general insurance and life assurance

- Largely uninsured markets can be accessed through technologies alluded to above. Related industries **have *embraced new technologies culminating in growth from the informal sector*** in Zimbabwe e.g. banking can be done on whatsapp and USSD platforms

- Much as the industry competes there is need to ***collaborate*** in the adoption and rolling out of new technologies in order to attain economies of scale e.g. ICZ, LOA can facilitate collaboration to lower costs. This results in overall benefit to existing and future clients. Apple for instance has key competencies in software development but collaborates with Samsung on hardware

Thank you