Insurance in a digital age: Transformation and disruption of business models





The scene

- Driving force
- Al underwriting
- Al claims
- Customer service
- The future
- Discussion





Technology transformation

These advancements have revolutionized the insurance industry, improving efficiency, accuracy, and customer experience

Driving force

- Technological advancements
- Customer expectations



Emerging technologies

AI & ML (Machine Learning)

Robotic process automation (RPA)

Data analytics , automation, fraud detection

software robots to automate repetitive and rule-based tasks e.g data capture, policy documents Internet of Things (IoT)

sensors and wearables, provide real-time data on insured assets, vehicles, or even individuals

Emerging technologies

Telematics & Usage Based Insurance (UBI)

• Customization and individual pricing

Natural Language processing (NLP)

 enables computers to understand and interpret human language

Image voice Recognition

 used for damage assessment, virtual inspections, and voice-based customer interactions.

Customer expectations







Al Underwriting & Claims Scenariohome owners policy application

Al

Traditional

Draw data from various sources- real estate maps, geographical & environmental data, crime rates, flood potential, property values, credit scores

Model computes risk scores and individualized premium

Application forms, questionnaires

rates and rules

Manually calculate using predefined

Traditional

- Application form, medical tests, questionnaires
- Rate tables, underwriting manual

AI

- Medical records, wearable devices, prescription drugs, social media, online activity for behavioural and mental health insights
- Automatic mortality and morbidity computations

Scenario – Life policy



Scenarioagriculture u/w Historical data, field inspections, weather reports, manual assessment

• Traditional

Satellite imagery, remote sensing, weather predictive analytics, pest data

Al-powered underwriting Pros & cons

Increased accuracy and efficiency in risk evaluation Faster underwriting decisions Personalized pricing based on granular data analysis

Data quality and availability Model bias and fairness concerns Ethical issues-data privacy Regulatory compliance and trust issues



Scenario- auto claim



Traditional

• The claims adjustor manually reviews, and determines appropriate cover

Al

 Al system employs computer vision techniques to analyze the submitted photographs and videos of the damaged vehicle. It can detect and classify the type and extent of damage (e.g., dents, scratches, broken parts) and estimate the severity of the damage.

Scenario – agriculture claim

Traditional

AI

 claims adjuster physically visits the farm, inspects the affected fields, and assesses the extent of the damage. The adjuster may collect samples, take photographs or videos, and review relevant data like weather records and farming practices.

 leverages computer vision, remote sensing, and machine learning algorithms to automate the initial triage and assessment of incoming crop damage claims. Benefits of Al in claims assessment

- Faster claims processing
- Improved accuracy and consistency
- Fraud detection
- Cost reduction



Chat bots and customer service

"Hello. I am Taylor. I am a bot. I am delighted to handle your request today!"



Chatbots for Customer Service

Advantages:

- 24/7 availability and instant response
- Improved customer satisfaction and engagement
- Cost savings compared to traditional call centers

Challenges:

- Limited capabilities for complex queries
- Integration with backend systems
- Maintaining a human touch in customer interactions

Customer experience

- Trust
- Human & personal touch
- Complex issues



The future of the digital age

- Increased use of alternative data sources
- Real-time and continuous underwriting:
- Explainable AI and transparent decision-making
- Hybrid AI and human-in-theloop systems
- Integration with other emerging technologies



Winding down

- Combining technological implementation with robust risk management
- ethical considerations
- ongoing monitoring and adaptation.
- balance between technology and human expertise
- maintaining a customer-centric focus



Examples : Lemonade



Examples



Zurich Ins Group – Zura

Prudential Financial-Ayasdi



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Reflections