

The Next Generation: Data & AI-Augmented propositions

Munich Re Digital Solutions (Life & Health)
Asia Pacific, Middle East and Africa

Transforming your customer experience and growth

“Significant improvements in customer experience and precision in risk assessment are now possible by combining data (internal and external), actionable advanced analytics insights, traditional AI models, GenAI, human experts and modern technology. Learn more in this brochure how we enable life and health insurers to go beyond the POC and achieve competitive advantage.”

Lee Sarkin, Chief Analytics Officer (Life & Health)
Asia Pacific, Middle East, Africa

Enabling insurers to grow profitably in a rapidly evolving landscape: Our commitment to sustainable innovation through Data and AI

Insurance plays a pivotal role in our lives by providing the necessary financial security in the face of unexpected events.

Despite its significance, cumbersome underwriting processes are at odds with the dynamic expectations of modern consumers for a fast, frictionless, personalized and digitally-enabled customer experience when buying insurance. Insurers are also exposed to costly non-disclosure and misrepresentation. Munich Re's Data and AI-Augmented underwriting proposition addresses these needs by combining our deep domain knowledge, responsible AI, data, modern technology and risk acceptance. We enable insurers' transition to the next generation (Underwriting 2.0) by augmenting rule engines and human experts with advanced analytics insights, traditional AI models and GenAI. What sets Munich Re apart is our track record deploying and managing AI-Augmented solutions live in production with stable performance for years in multiple countries and our deep expertise in managing the risk from AI model error for insurers' future claims and AI regulatory compliance.

We also leverage external data sources such as public health/insurance industry databases and health check-up data in AI models to deliver a faster, streamlined customer journey and reduce drop-off, enabling sales. Another benefit is a more holistic view of customers' risk – without adding friction to the customer journey.

Our bancassurance proposition leverages rich, up-to-date bank and insurance data on an untapped customer base in AI models to predict not only consumers' propensity to buy, but also their underwriting risk to enable a streamlined underwriting journey.

Finally, our proposition to optimize health business profitability includes a rules- and AI-based fraud, waste and abuse detection solution and advanced analytics tools to unearth deep insights into your portfolio experience.

Our propositions

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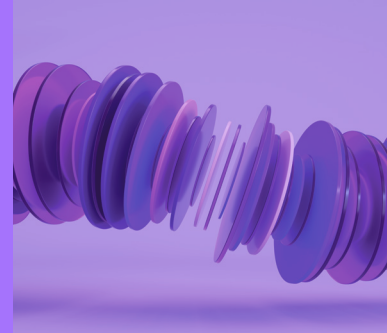
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Data and AI-Augmented underwriting	Evolution to Underwriting 2.0	6–9
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Next-Gen Underwriting 2.0

Transform your customer journey

Unlock the full potential of your data and rule engine/cloud investments by augmenting with powerful AI models and Advanced Analytics insights.

The strategic roadmap alongside illustrates the insurer's digital and AI evolution, starting with the first underwriting generation (UW 1.0) – from digitizing paper applications to underwriting rules engines (URE) and optimizing rules. Many insurers with UREs still have untapped potential to increase STP which presents a strong call to action given the associated benefits: improved customer experience, reduced customer drop off, increased sales and cost reduction. A recent NMG survey of 130+ insurers (adjacent quote) validated the above pain points as the focus of insurer's transformation efforts in the next 5 years and the use of AI/ML to address them.

Two challenges arise in UW 1.0, firstly the complex nature of underwriting in which thousands of correlated variables (e.g. demographics, back-office flags, medical questions, etc.) drive underwriting decisions. Manual analysis of such complexity often hasn't been effective in materially increasing STP. Second, the stakes are high – errors in underwriting decisions result in increased future claims, impacting insurers' bottom lines. The impact of 'frictionless underwriting' solutions to insurers' bottom lines needs to be sustainable however, UW 1.0 typically lacks data to balance large STP increases with increased claims risk.

To address these challenges, the next-generation (UW 2.0), shown in step 4, leverages a dual approach: Advanced Analytics tools unearth short-term wins from data on your underwriting process and powerful AI/predictive models. UW 2.0 uniquely balances speed-to-market of improved customer experience and future claims risk or price competitiveness. Given synergies between our URE, data, AI models and technology, UW 2.0 unlocks the untapped potential of your data and current investments in URE/cloud transition.

"We've likely seen the last "reflexive" systems...the industry now expects "intelligent" systems."

NMG

"It's no longer good enough for underwriting decisions to be rule-based."

Forrester Wave

"AI/ML seen as game changing for life & health insurance – highest priority and most impactful change to life insurance business models over the next 5 years."

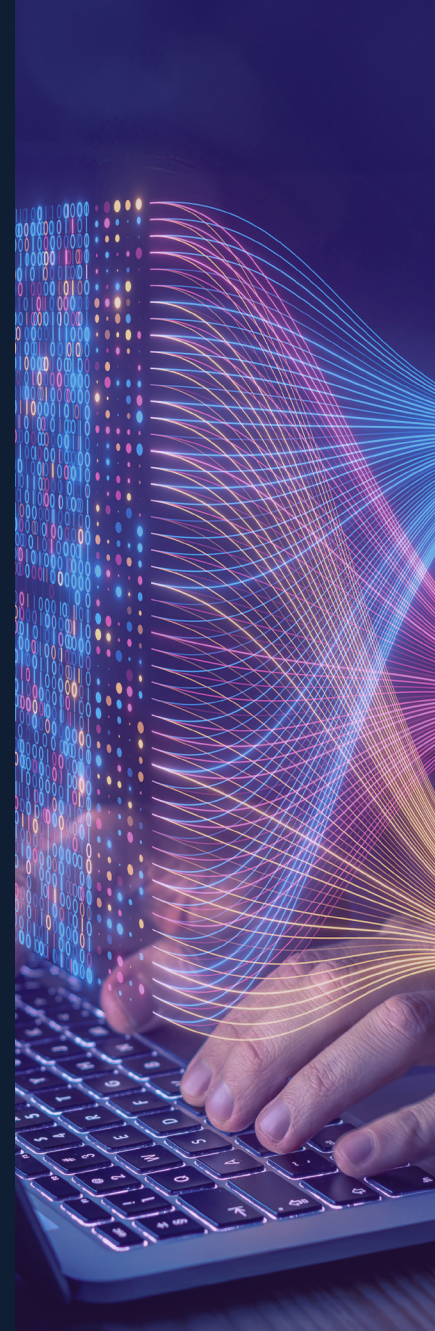
2023 NMG Digital Solutions Study (130+ insurers surveyed)

"Focus on using AI for customer acquisition and onboarding (underwriting & issuance)."

2023 NMG Digital Solutions Study (130+ insurers surveyed)

"Many organizations successfully conduct experiments and proof-of-concept models but have trouble transitioning to production."

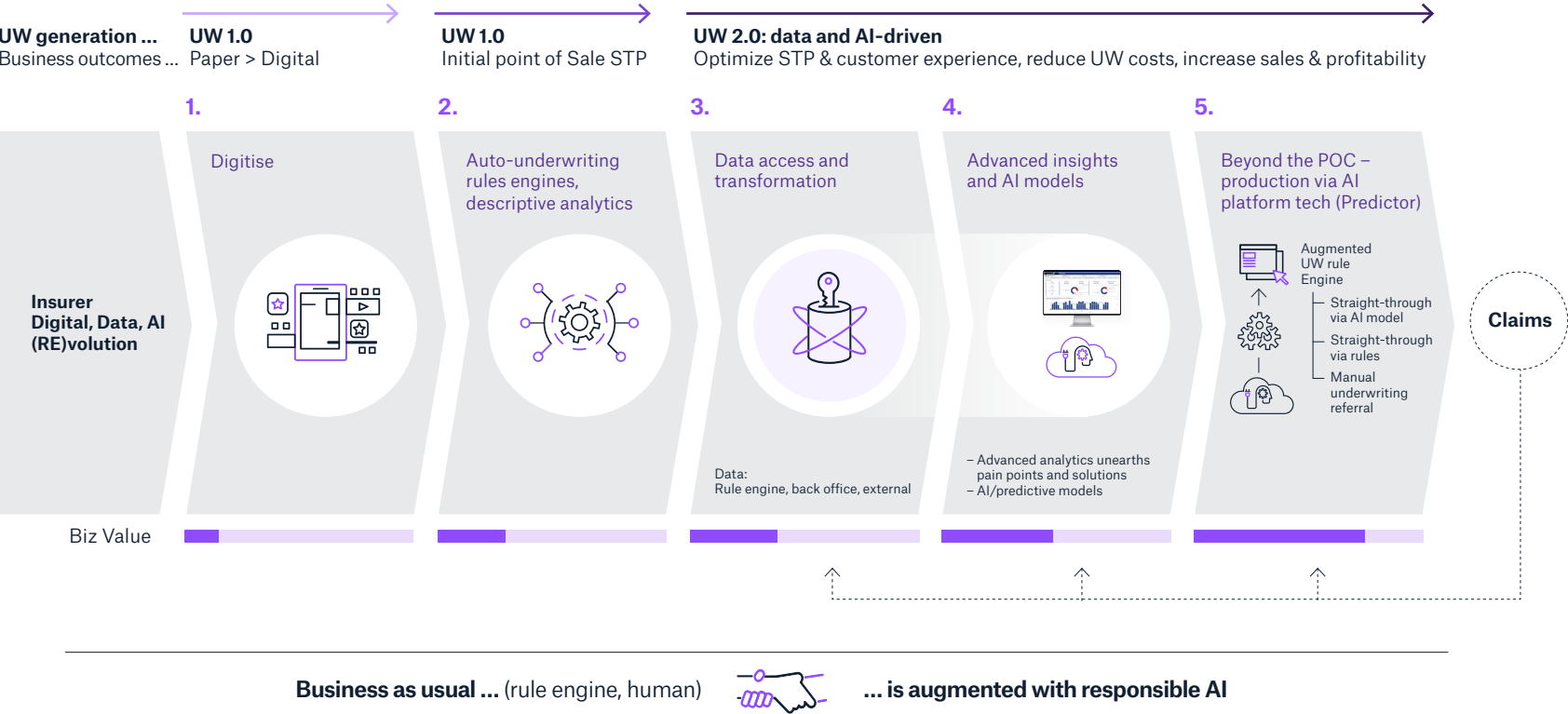
McKinsey Digital



Underwriting 2.0: Accelerate your path to value through data and AI

... evolution to Data and AI-Augmented underwriting

Unlock the potential of your data and rule engine/cloud investments



Data and AI-Augmented Underwriting 2.0

Augmenting the traditional Underwriting process with Advanced Analytics and AI

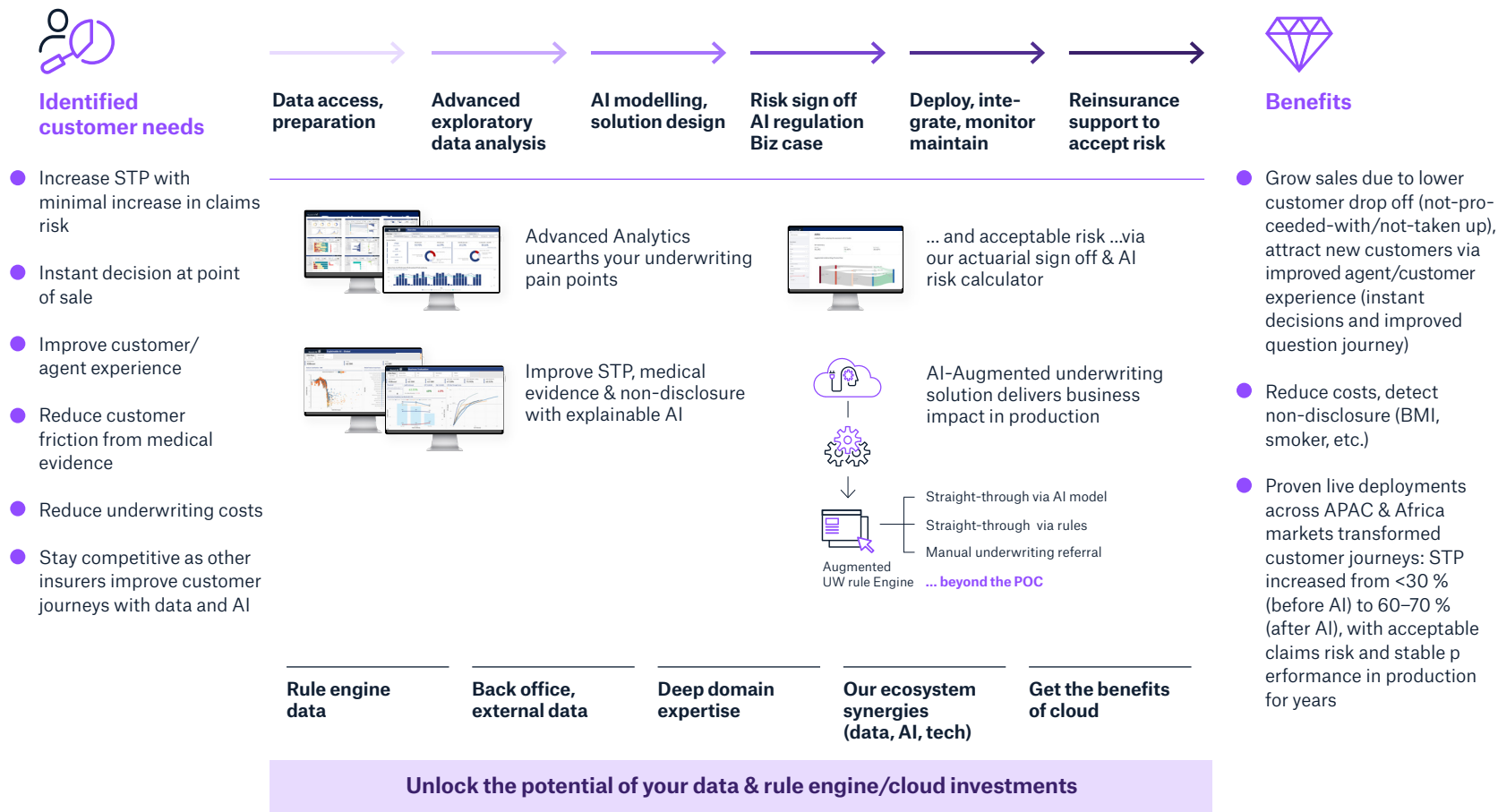
Munich Re's live AI-Augmented deployments in multiple countries show a track record of transformational increases in STP and customer experience with acceptable risk. Under UW 2.0, insurers have access to Munich Re's ecosystem comprised of our URE (ALLFINANZ), AI-Augmented solutions, deployed by our AI platform technology (Predictor) to seamlessly integrate into our URE, enabling real-time business impact from point of sale AI-decisioning. We minimise your efforts through use of our pre-built tools for model monitoring & retraining (using MLOps) and ongoing AI regulatory compliance.

Prior to deployment, Munich Re provides a comprehensive AI risk sign off process, achieving actuarial sign off and AI regulatory compliance, e.g. MAS' FEAT (Fairness, Ethics, Accountability, and Transparency). Lastly, to provide peace of mind to insurers, we offer alignment of interest by reinsuring business using our AI models. Insurers can therefore rest assured of our extensive due diligence and ongoing vested interest in model performance. This sets us apart from IT/tech vendors that don't have exposure to the resulting claims after going live.



Data and AI-Augmented Underwriting 2.0

Augmenting the traditional UW process with Advanced Analytics and AI



Underwriting 2.0 combines rules, traditional AI, Gen AI, human experts and external data to address multiple pain points

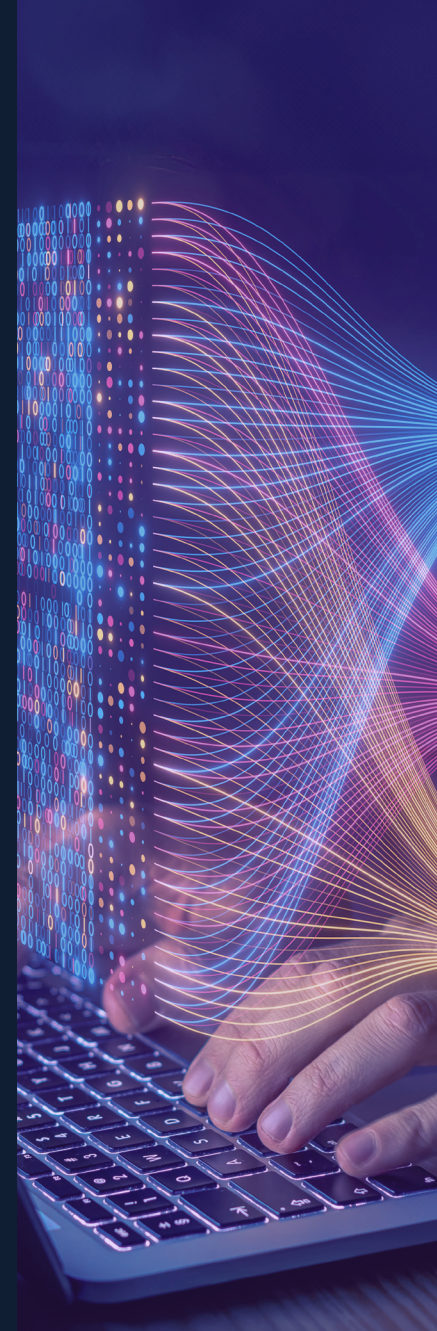
Our UW 2.0 vision is an augmentation of the current process (rules, human experts) with traditional AI/ predictive models, Gen AI and external data as shown alongside, transforming the customer journey in two fundamental ways. First, via the “STP Fastlane”, AI models enable point-of-sale instant decisions (higher STP) and reduced customer friction (streamlined questions and medical evidence). Second, more sustainable pricing of insurance due to better detection and management of non-disclosure. For referred/ complex cases, intelligent triaging via rules, traditional AI and GenAI-based underwriting assistants, support the human underwriter workflow.

Our live deployments of AI-Augmented solutions have significantly uplifted STP with acceptable risk for multiple insurers in APAC and Africa. AI models can also streamline underwriting questions as customers may otherwise drop out due to lengthy/complex questions which are often still followed by referral to manual underwriting.

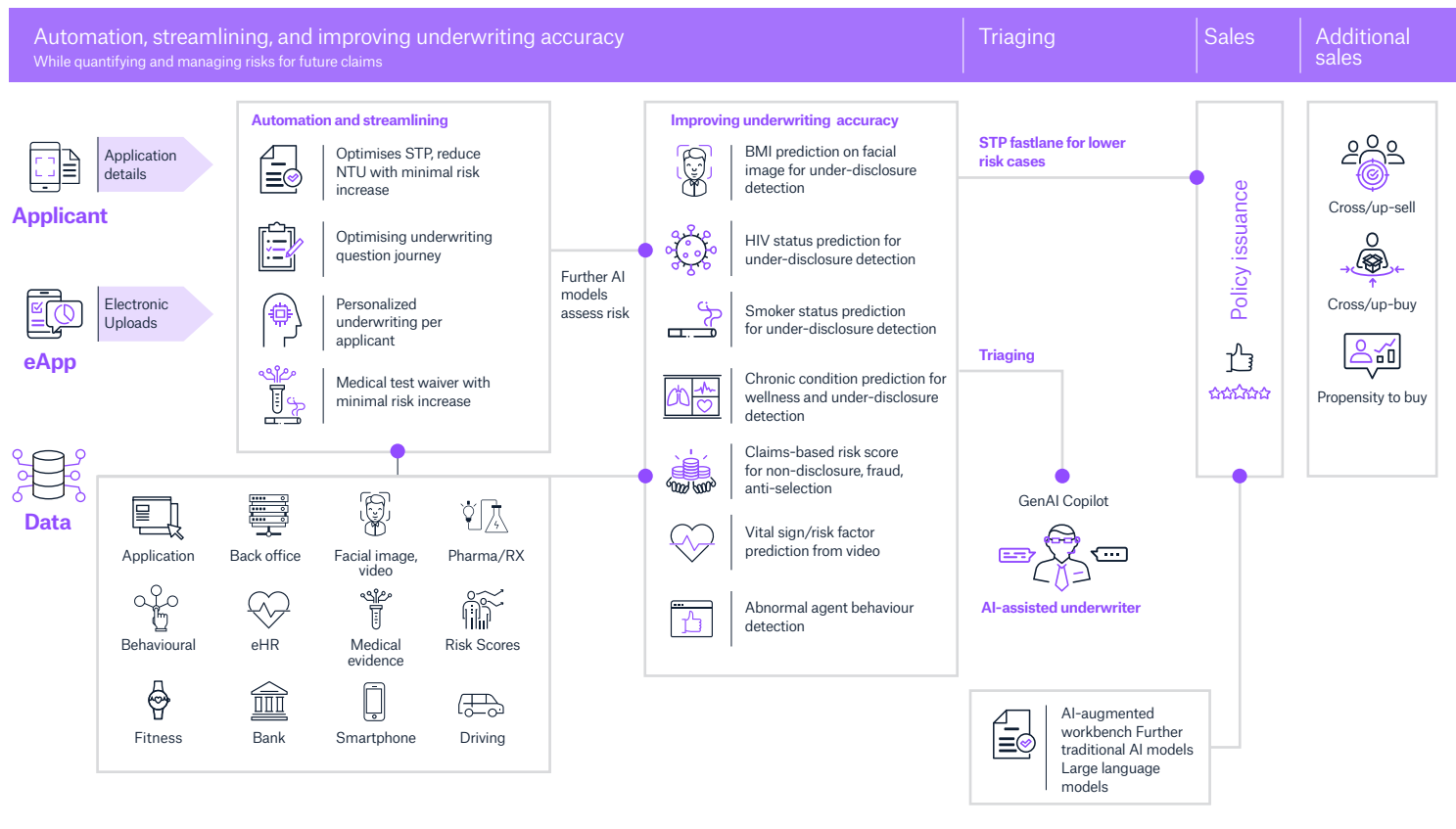
AI models have been used to waive selected medical evidence that otherwise causes customer friction and drop off, leading to missed sales and costs. Examples are prediction of HIV, BMI, smoker status and chronic conditions.

Other AI models predict future claims using underwriting data, offering a wider lens on customers’ risk at point of sale, helping to flag potential non-disclosure/fraud. External data, where available, may also flag non-disclosure.

Finally, our active innovation on GenAI such as “Underwriting Copilots” aim to assist underwriters in their workflow, e.g. efficiently processing medical evidence documents and creating structured data for rules and traditional AI models.



Underwriting 2.0 combines rules, traditional AI, Gen AI, human experts and external data to address multiple pain points



Business as usual ... (rule engine, human)



... is augmented with responsible AI

Tailored insurance offers using Predictive Risk Scoring model for better onboarding journey

Bancassurance offers strategic advantages for both banks and insurers through Banks' access to a large customer base and real-time customer information. Multiple factors are crucial to drive success including targeting the right customers, offering needs-based products, customizing the engagement channel and streamlining the onboarding journey.

Our predictive risk scoring model is custom built utilizing advance analytics methods to capture the breadth of data, assess data quality, and learn

behavioral patterns to predict the risk profile of customers. Customer demographics (occupation, marital status, socio-economics), Financial profile (income, credit cards usage, credit history, mortgages, loan history), and Behavioral insights (spending patterns, lifestyle) are correlated against customers' medical risk for cross-selling opportunities with the appropriate risk assessment and personalized underwriting journey.



Bancassurance Proposition | Predictive Risk Scoring

A custom-built AI model for cross-selling opportunities with appropriate risk management



Identified customer needs

- Leverage banca partnership and target the untapped bank's large customer base
- A simpler onboarding journey at customers' convenience
- A maximized customer lifetime value by offering multiple financial solutions through banks



Customer

Personalized onboarding journey

- Offering determined based on existing banking behaviour
- Covering protection products typically only offered on fully underwritten basis

Customized offering reflecting **individual protection needs, lifestyle and life-stage**



Credible data Insight

- Comprehensive Exploratory Data Analysis (EDA) on bank data performed to evaluate relationship with insurance medical risk
- Advanced analytics methods to process hundreds of data points to predict customers' risk profile



Benefits

- Improving conversion rate through personalized underwriting journey at customers' convenience
- Enhancing customer trust and loyalty through customized engagements
- Balancing trade-off from sales uplift vs. risk management

Demographics

Financial profile

Creditcard

Transactions

Investment

Data-driven Underwriting:

Enhancing risk scoring with external insights

Collecting information during the insurance application process is important for risk assessment yet this process is lengthy and complex. Obtaining a comprehensive view of customers (personal, medical, financial) can lead to frustration and customers not proceeding with the application. Risk assessment relies mainly on self-disclosures which may lead to inaccurate or incomplete information.

Our predictive risk scoring model is custom built utilizing advance analytics methods to enhance risk assessment by leveraging available external data

sources such as health check-up reports, public health databases, insurance industry database, and vital stats screenings.

Using external data sources to augment the underwriting process can reduce the need for extensive questionnaires or medical exams leading to quicker policy issuance, improving customer experience, and reducing drop-off rates.



Leveraging external data sources | Predictive Risk Scoring

A custom-built AI model for streamlining underwriting process and objective risk assessment



Identified customer needs

- A faster, simpler, more streamlined underwriting process to improve customers' journey and reduce drop-off
- Objective risk assessment of customers to supplement self-disclosures
- Improved operational efficiency to only collect documentation and medical exams as required



Customer

Streamlined onboarding journey

- Reducing the need for extensive questionnaires or medical exams
- Faster underwriting process leading to quicker policy issuance
- Minimize the likelihood of unintentionally providing inaccurate or incomplete information

Data-driven innovation for new
**product development, enhancements,
and recommendations**



Credible data Insight

- Comprehensive Exploratory Data Analysis (EDA) to identify patterns of data sources (hospitalization, check-up, lifestyle, etc.) to evaluate insurance medical risk
- Advanced analytics methods combined with domain experts' rules-based approach to assess risk and operationalized in real-time



Benefits

- Reducing application drop-off rates with a streamlined underwriting journey
- Enhancing risk assessment without inconveniencing customers or lengthy process
- Data-driven offering for up-sell/cross-sell opportunities and new product development/enhancements
- Reducing costs associated with manual underwriting and extensive data collection

Medical
check-up

Public health
database

Insurance
industry
database

Vital stats
screening

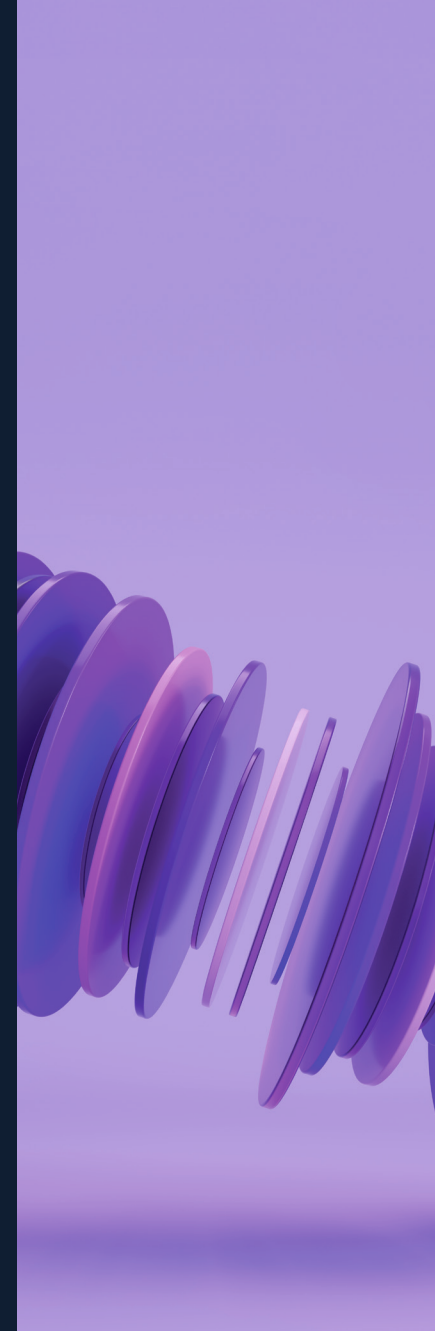
Prescription
history

Tackling Fraud, Waste, and Abuse in health claims via rules-based and AI-driven solutions

Fraud, waste, and abuse (FWA) commonly arises due to intentional or unintentional misuses such as upcoding (charging more expensive services than provided), unbundling (charging separately), phantom billing (for services not rendered), providing unnecessary treatments, or submitting duplicate claims.

Our FWA detection solution relies on rules-based (in phase 1) and AI driven solutions (in phase 2) to flag potential FWA claims. Triggers such as inpatient

authorizations (unexpected hospitalization, complications, re-authorizations), outpatient authorizations (claims happen within first/last month from start/end contract, repeated authorizations), and general checks (doctor hopping, duplicate check, authorized vs. claimed, referrals) are flagged for further investigation. The presence of human-in-the-loop helps capture the decision on the suspicious claims for AI driven solutions.



Detecting Fraud, Waste and Abuse | AI-Augmented claims

Leveraging rules-based, Advanced Analytics and AI driven solutions for sustainable healthcare



Identified customer needs

- An advanced detection mechanism to identify and prevent fraudulent or wasteful claims
- A better overall claims management via a more efficient usage of limited claim resources
- A more sustainable healthcare system by reducing waste and generating financial stability
- Improved portfolio profitability via analytics insights



Customer

Improved healthcare quality:

- Fewer unnecessary treatments, procedures, and medications
- Quicker turn-around in processing legitimate claims
- Affordable insurance premiums from sustainable healthcare offering

Augmented claim solution to **increase operational efficiency** by streamlining claims processing and reducing potential disputes



Credible data Insight

- Process flow identifies claims journey from claim submission, pre-authorization to claim adjudication & analyzes possible FWA trigger points
- Advanced analytics insights, AI models and domain expert rules detect outliers, abuse, trends and flag FWA

Our Advanced Analytics tools generate insights to improve portfolio profitability



Benefits

- Improve profitability or minimize financial losses by identifying and preventing fraudulent or wasteful claims
- Better overall claims management and increase customer satisfaction by processing legitimate claims quicker
- Improve data reliability for better risk assessment that leads to appropriate pricing and sustainable healthcare protection
- Data-driven improvements to portfolio profitability

Submission info

Preauthorization

Authorization

Re-submission

Claims pattern

Transform your customer journey, sales and profitability

At Munich Re, our Digital Solutions team is committed to helping you solve your specific business challenges and achieve your desired outcomes by leveraging our pre-built advanced analytics tools as well as designing custom-built solutions tailored to your unique needs. Our diverse team of data scientists, MLOps engineers, underwriters, actuaries, and broader domain experts leverages both rules-based, traditional AI and GenAI approaches to augment your existing processes.



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