

# Reimagining Underwriting journey with AI



Candace Chan

Senior Business  
Development Manager, L&H  
Solutions  
Swiss Re



Jeremy Cheung

Senior Client Manager,  
Head of Innovation HK & TW  
Swiss Re

# The Evolvement of AI Development



1

## Rule-Based AI

(Expert Systems)

Follows explicit rules and logic to make decisions.



2

## Machine Learning

Learns from data to make predictions and decisions.



3

## Deep Learning & AI Technologies

Learns complex patterns from large data. Understands images, speech and text.

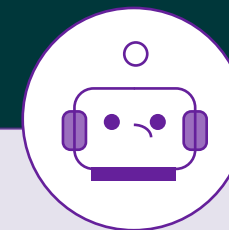


4

## GenAI & IDP

(NLP + OCR + ML)

Understands unstructured information, generates content and provides insights.



5

## Agentic AI

Plans, reasons, uses tools and takes actions to achieve goals autonomously across systems.

### Rule-Based AI



Compliance Clerk  
Following a Manual

### Machine Learning (ML)



Experienced  
Risk Analyst

### Generative AI (GenAI)






















Consultant

### Agentic AI



Operations Manager

 Persona  
(Analogy)

	Rule-Based AI	Machine Learning (ML)	Generative AI (GenAI)	Agentic AI
 <b>Persona (Analogy)</b>	 <p>Compliance Clerk Following a Manual</p>	 <p>Experienced Risk Analyst</p>	 <p>Consultant</p>	 <p>Operations Manager</p>
 <b>Thinks Like</b>	 <p>“Follow the rulebook.”</p>	 <p>“Based on past patterns...”</p>	 <p>“Here’s my interpretation and explanation.”</p>	 <p>“I’ll coordinate the whole process.”</p>
 <b>Strengths</b>	<ul style="list-style-type: none"> <li>✓ Deterministic and reliable</li> <li>✓ High explainability</li> <li>✓ Works well for clear rules</li> </ul>	<ul style="list-style-type: none"> <li>✓ Predicting outcomes effectively</li> <li>✓ Learns from historical data</li> <li>✓ Handles large volumes well</li> </ul>	<ul style="list-style-type: none"> <li>✓ Digests unstructured data into summary</li> <li>✓ Flexible across many tasks</li> <li>✓ Natural language interaction</li> </ul>	<ul style="list-style-type: none"> <li>✓ Multi-step workflow automation</li> <li>✓ Adapts and makes decisions</li> <li>✓ Orchestrates across systems</li> </ul>
 <b>Weaknesses</b>	<ul style="list-style-type: none"> <li>✗ Not adaptive to changes</li> <li>✗ Hard to handle complex cases</li> <li>✗ Requires manual rule updates</li> </ul>	<ul style="list-style-type: none"> <li>✗ Data dependence</li> <li>✗ Bias from historical data</li> <li>✗ Medium explainability</li> </ul>	<ul style="list-style-type: none"> <li>✗ Hallucination risk</li> <li>✗ Weak deterministic reliability</li> <li>✗ Low-Medium explainability</li> </ul>	<ul style="list-style-type: none"> <li>✗ Highest governance risk</li> <li>✗ Complex to build and operate</li> <li>✗ Hard to explain decisions</li> </ul>
 <b>Governance Complexity</b>	<p style="text-align: center;"><b>LOW</b></p>  <p>Low → Very High</p>	<p style="text-align: center;"><b>MEDIUM</b></p>  <p>Low → Very High</p>	<p style="text-align: center;"><b>HIGH</b></p>  <p>Low → Very High</p>	<p style="text-align: center;"><b>VERY HIGH</b></p>  <p>Low → Very High</p>
 <b>Complexity to Implement</b>	<ul style="list-style-type: none"> <li>• Low data and infrastructure</li> <li>• Rule maintenance required</li> </ul>	<ul style="list-style-type: none"> <li>• Medium to high data and infra setup</li> <li>• Model maintenance required</li> </ul>	<ul style="list-style-type: none"> <li>• API cost (Medium-High)</li> <li>• High fine tuning &amp; customization</li> <li>• Governance &amp; compliance cost</li> </ul>	<ul style="list-style-type: none"> <li>• Potential complex integration</li> <li>• Cost associated with governance and compliance</li> <li>• High monitoring and oversight</li> </ul>
 <b>Swiss Re</b>				

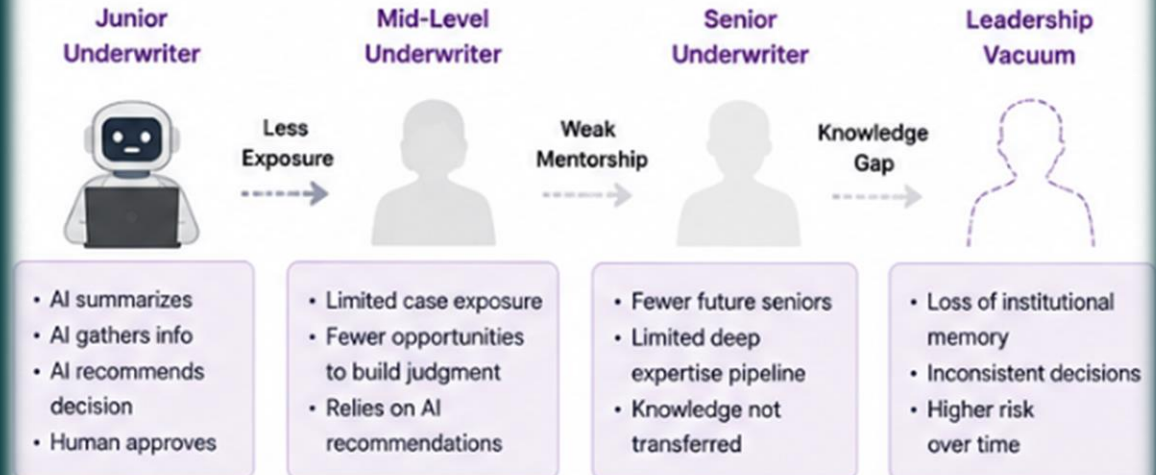
# Potential Expertise Hollowing Risk

## Traditional Underwriting Talent Development (Learning by Doing + Mentorship)



Knowledge grows stronger with each generation

## AI-First Underwriting Path (Automation Replaces the Learning Layer)



Expertise erodes. The bench becomes hollow.

## Airbnb tech chief warns of an invisible AI hollowing out effect

Recent statistics show that new graduate hiring by major technology corporations has declined by half since 2019 due to entry-level automation.

# Sustainable AI Adoption consideration

## Expertise Hollowing Risk

- Potential lost of expertise over time
- Lack of **differentiation** and **less adaptive** to changes
- The need of a mechanism to **retain knowledge** within the enterprise

## Consistency & Accuracy

- **Hallucination** - AI generates incorrect information confidently
- **Quality of Prompt**

## GenAI Ops and Ownership

- Prompt Management
- Model Management
- **Cost Management**
  - ***Token Based Billing***
- Quality Monitoring
- Governance & Compliance

## Microsoft reports are exposing AI's real cost problem: Using the tech is more expensive than paying human employees

By Jake Angelo

News Fellow

May 22, 2026, 12:56 PM ET

[Source: Microsoft reports expose AI's cost problem: The tech is more expensive than paying human employees | Fortune](#)

[Add us on](#)  



## Uber burned through its entire 2026 AI budget in four months. Now its COO is questioning whether it's worth it

By Jake Angelo

News Fellow

May 26, 2026, 2:03 PM ET

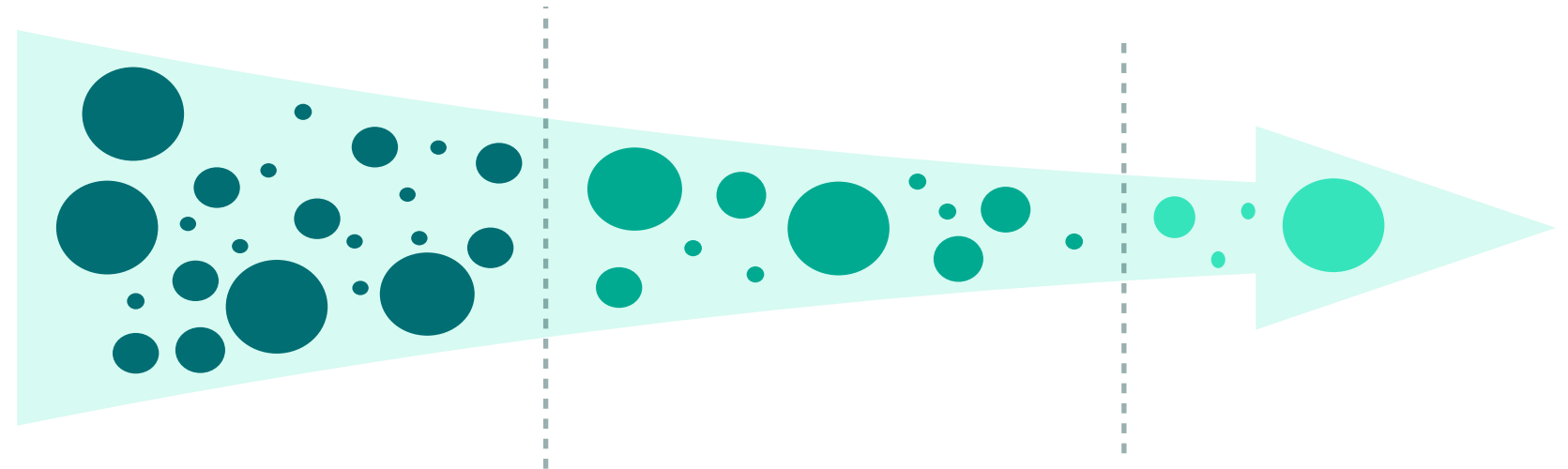
[Source: Uber's COO says it's getting harder to justify the company's AI spend: 'That link is not there yet' | Fortune](#)

[Add us on](#)   



# Reimagine beyond Underwriting Journey

## Industry has been exploring to leverage AI and Gen AI to improve the efficiency of Underwriting Process



### Application with Disclosure

- Leverage automated Underwriting engine to achieve STP 50-70%
- Refine questionnaire and AI dictionary and reduce free text to drive further **STP**



### Additional Medical Evidence

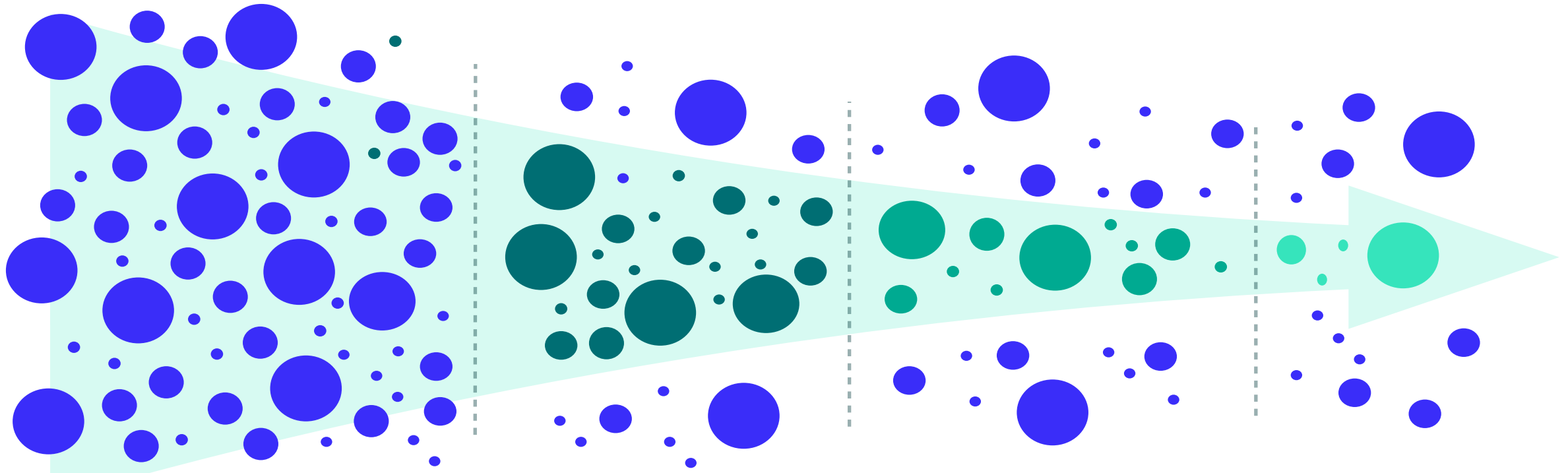
- Leverage OCR and NLP to digitize the Medical Checkup report
- Potential to improve **efficiency** and even **STP** through by applying medical rules



### Manual Underwriting

- Leverage AI and Gen AI to summarize complex case to increase the **efficiency** for manual review

# Beyond Underwriting Process



**Uncaptured Sales Opportunity**

**Application with Disclosure**



**Additional Medical Evidence**



**Manual Underwriting**

- **Lack of knowledge from agents**
- **Agents' attrition**
- **Drop out after applications (NTU)**

# Major Causes for untapped opportunity

01

## Distribution Challenges

**Agents: 50-70% leave within the 1<sup>st</sup> year**

- **Income pressure & Capability gap**
  - Generating leads
  - Closing sales
  - Understanding underwriting outcomes

**Bancassurance:**

- RM tends to sell saving products as struggle with underwriting process and outcomes

Untapped Potential Opportunity

02

## Customer Not Taken Up ( NTU)

**1. Unexpected underwriting outcomes**

Leads to:

- customer rejection
- loss of trust

**2. Additional requirements friction**

- Medical exams

**3. Long turnaround time**

Untapped Potential Opportunity + Opportunity cost for Underwriting resources

# Shift Left Approach: Pre-assessment platform principle (ACE)

A

## Anticipation

- Ability to provide expected outcome for better expectation management
- Ability to anticipate potential follow up test required to shorten the Turn Around Time

C

## Consistency

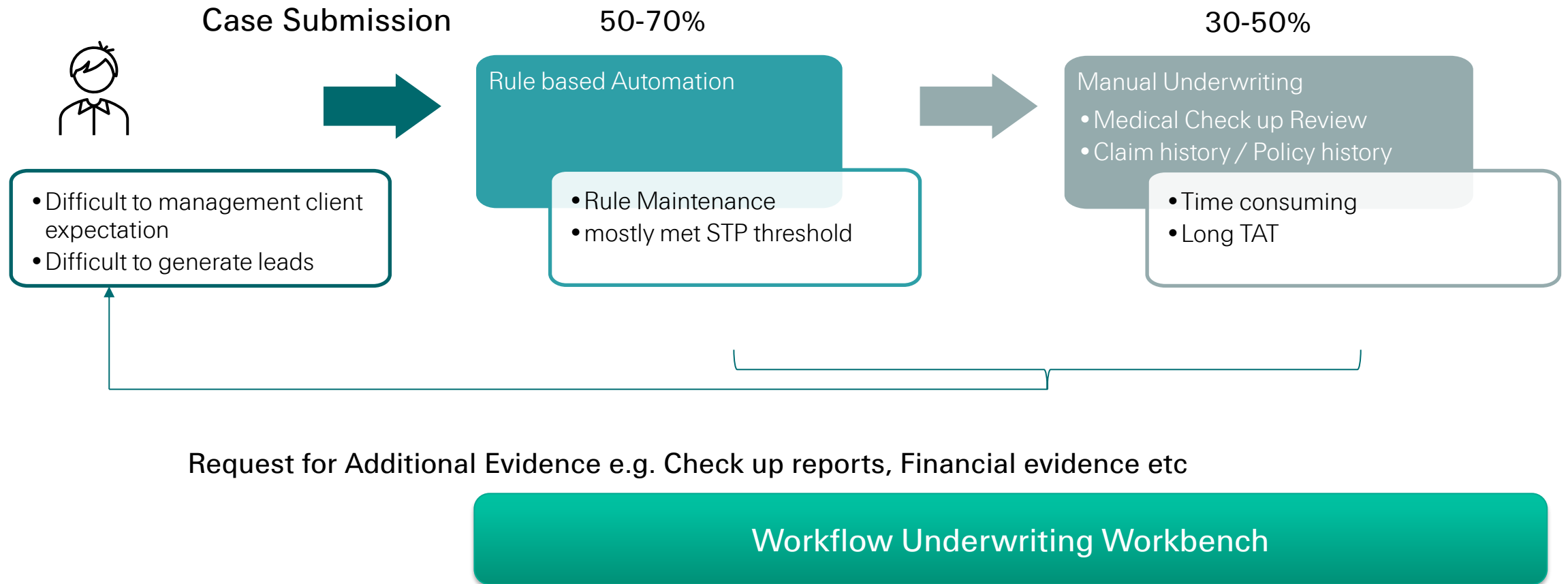
- Higher consistency on expect outcome across all distribution in front of prospect
- Consistency on expected outcome vs the final UW result

E

## Enablement

- As a lead generation conversation
- Enable the distribution to understand the potential offering impact by different risk factors

# Current UW process



# Reimagining the UW Journey



## Pre-assessment powered by AI

- Enable distribution to have initial assessment
- Identify follow-up check up report at early stage to shorten TAT
- Improve NTU



↑ Drive further STP

## Rule based Automation powered by AI

By Disclosure



By Check up report

- Leverage AI to manage rules
- AI dictionary to reduce Free Text
- Leverage OCR and NLP to digitize Medical report to achieve further STP



↓ Less Manual Case

## GenAI augmented Manual Underwriting

- GenAI to summarize case insights
- Suggest and recommend decision based on targeted UW Manual



## Agentic AI powered Workbench

- Check completeness
- Gather and follow up required info based on individual case nature

# Case Sharing and Lesson Learnt

# Hong Kong client case: MagnumXP pre-assessment

## What it does

- Assesses health check-up reports
- Indicates likely underwriting outcomes for different product types based on UW manual
- Reduces early underwriter referrals
- Identifies required items for faster agent conversations

## Business need

- Enables agents to evaluate insurability earlier for customers with health records
- Improves pre-sales decision-making.

## Solution & Expected value

- Repurposed digital underwriting capability w/ front-end & OCR
- Built for privacy, cross-border, IT security
- Boosts agent productivity, shortens assessment turnaround, strengthens differentiation, scalable for other markets

## Lessons learned

- Define tool ownership early
- Embed compliance guardrails
- Design risk prompts
- Improve usability
- Strengthen AI governance

**Data Driven. Insight Led.**

Intelligent assessment for smarter underwriting

**DOCUMENT PROCESSING**

Health Check-up Report → OCR → Extraction Complete

**OCR EXTRACTION**

Name	A. K.
Age / Gender	38 / Male
Date of Report	14 May 2024
Height / Weight	172 cm / 76 kg
BMI	25.7
Blood Pressure	124 / 80 mmHg
Fasting Blood Sugar	98 mg/dL
Total Cholesterol	182 mg/dL
LDL / HDL	110 / 48 mg/dL
Triglycerides	132 mg/dL
SGOT	26 U/L
SGPT	28 U/L
Creatinine	0.9 mg/dL
Hemoglobin	14.2 g/dL
ECG	Normal
Chest X-Ray	Normal
Summary	No significant abnormality detected.

**UNDERWRITING ASSESSMENT**

Risk Classification: **Low Risk**

Overall Assessment: **Favourable**

Recommendation: **Standard Terms**

Next Action: **Proceed**

**Key Insights**

- All vitals within normal range
- No adverse lifestyle indicators
- No significant medical concerns identified

**Accurate Extraction** | **Faster Turnaround** | **Consistent Decisions** | **Regulatory Ready**

# Pre-assessment results

## Traffic light

 Green

 Amber

 Red

 Blue

 Grey

## Meaning

Standard / Health indicators are within normal range

Non-standard / Health indicators are not all normal

Non-standard / Health indicators are not all normal

No assessment result currently available

Not processed

## Interpretation

Health indicators are at a normal level. If applying for insurance, the chance of passing underwriting is relatively high.

Health condition has areas requiring attention. If applying for insurance, there may be **extra loading / exclusion items**.

Health condition has areas requiring attention. If applying for insurance, the application may be **declined**.

1. Additional checks are required;
  2. Some examination items exceed the support scope of this tool; or
  3. The physical examination report contains invalid or incomplete information.
- 
1. The uploaded images are unclear, causing the system to be unable to identify them; or
  2. The uploaded file contains medical information in unrecognized format

# Agents feedback on pre-assessment tool

## ENCOURAGEMENT

"The report is an example to persuade clients to attend scheduled check-ups; it can also be used to **encourage** clients to do further tests."

## BENEFIT

"Very **helpful** to conduct a pre-assessment before the client visits Hong Kong, so we can provide indicative UW results"

## KNOWLEDGE

"Increased my **understanding** and health literacy"

## CONFIDENCE

"Gives me **confidence** to guide my client on product recommendation through their health check up results"

## NEXT NEED

"**AI based UW assistant**, list all checks and tests needed instead of displaying traffic lights"

## EFFICIENT

"Saves me **time** to refer and explain the health condition to the UW team"

# Case Sharing and Lesson Learnt

## Lesson learnt from *Client Implementation*

### Clarify tool positioning and ownership

- Is it for reference only?
- Or can be used for policy application or future underwriting?
- Level of detail for results interpretation

### Build compliance guardrails early

- Consent to terms/privacy
- Define accepted reports, formats, size, language, and exclusions
- Agree on UW manuals and algin change requests

### Design differentiated journeys and risk prompts

- Residency-specific declarations
- UWers view
- Agent-only visibility
- No direct client sharing

### Design differentiated journeys and risk prompts

- Explainable traffic-light results
- FAQ
- Dos & Don'ts
- Support channels
- Early human QA

Turn insights into trusted pre-assessment results to enable sales

# Legal notice

©2026 Swiss Re. All rights reserved. You may use this presentation for private or internal purposes but note that any copyright or other proprietary notices must not be removed. You are not permitted to create any modifications or derivative works of this presentation, or to use it for commercial or other public purposes, without the prior written permission of Swiss Re.

The information and opinions contained in the presentation are provided as at the date of the presentation and may change. Although the information used was taken from reliable sources, Swiss Re does not accept any responsibility for its accuracy or comprehensiveness or its updating. All liability for the accuracy and completeness of the information or for any damage or loss resulting from its use is expressly excluded.

