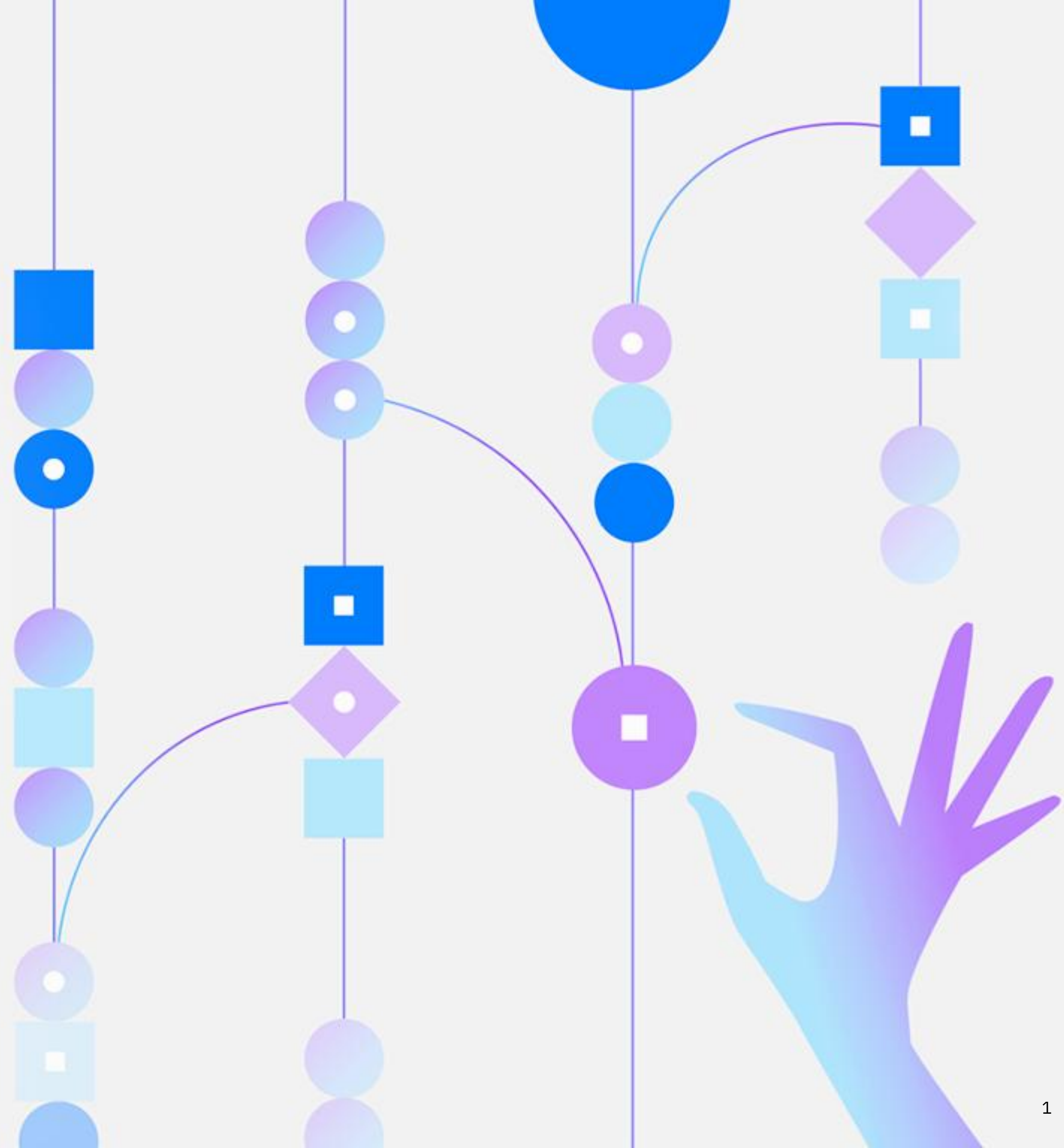




Claims-**AI**

# Intelligent Claims Processing with Agentic AI

IBM Consulting, July 2025



# The case for change in Claims Processing

## The Challenges | Hurdles in Claims Processing

### Reliance on Manual Review



Claims team spend significant time manually verifying coverage, reviewing documents, and calculating costs—resulting in delays, inconsistency, and higher processing costs..

### Fragmented Data and Inputs



Claims come in many forms—documents, images, emails, sensor data—creating friction in review and making it difficult for legacy systems to synthesize context accurately.

### Inconsistent Decisioning & Limited Auditability



Traditional workflows lack consistency in how decisions are made and offer limited traceability—raising compliance and regulatory risks.

## The Impact | Manual, Fragmented Processes Lead to Higher Costs, Delays, and Compliance Risk

70%

Up to 70% of effort spent on low-complexity claims triage and review

2-5 days

Claims cycle times delayed by 2-5 days due to manual document processing.

Inconsistent Decisions

Result in rework, disputes and lower customer satisfaction

## The Need and Opportunity | AI-Powered Claims Processing with Automation, Accuracy, and Transparency

### Automated Coverage & Cost Assessment

- 1 AI agents review submitted claims, match them against policy rules, and estimate damages using integrated cost databases.  
Value: Reduce claim cycle times and free up expert resources.

### Multi-Modal Data Handling & Context Understanding

- 2 Processes structured and unstructured data (PDFs, images, forms, sensor feeds) to generate a unified claim view.  
Value: Improve decision accuracy and reduce errors caused by incomplete data interpretation

### Human-in-the-Loop Oversight with Full Traceability

- 3 Ensures that AI decisions can be audited, reviewed, and adjusted—especially for complex claims.  
Value: Strengthen compliance and reduce liability exposure.





Claims-AI

## Agentic AI app for claims automation

IBM's Agentic AI solution for claims processing transforms how insurers and enterprises handle claim intake, assessment, cost estimation, and adjudication. Built with autonomous AI agents and scalable architecture, Claims AI automates end-to-end workflows while ensuring transparency, auditability, and human-in-the-loop control.

### App Overview

Claims-AI supports automating complex and high-volume claims processes across property, auto, health, and commercial policy coverage.

It uses several AI agents to intelligently review policy coverage, estimate costs, generate structured reports, and identify claims requiring human review.

It can integrate with existing systems to deliver faster claims decisions, reduce processing costs, and ensure consistent, policy-aligned outcomes at scale.

### Use Cases

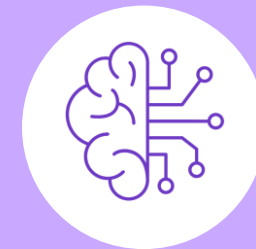
Property Damage  
Claims

Auto Accident  
Claims

Health/Workers'  
Comp Adjudication

Commercial Liability  
Evaluation

### Capabilities



#### Agents for coverage assessment

Agents for policy coverage understanding and agents to evaluate claims based on damage reports, images and sensor data.



#### Cost Estimation

Agents to estimate cost based on coverage assessment and enterprise data for cost estimates for various levels of repairs.



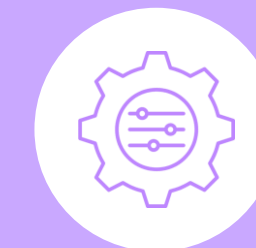
#### Online search

Agentic ability to search online sources (pre-approved during configuration) for repair providers.



#### Report Generation

Ability to act as underwriter agent to generate report for coverage, cost, and repair.



#### Customizability

Can adapt to various policies, can connect to enterprise data sources, customize context for agents.



#### Security, Compliance & Privacy

Built in grounding, guardrails for security and compliance.

## Insurance Claims Handling

Multi-Agent AI system

Claim overview

Client Details

Claim Details

Coverage Assessment

Legal Assessment

Und

### Claims selection

Specify the country

Specify the client segment

Provide client name

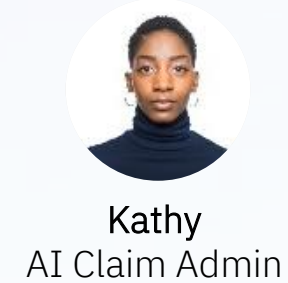
Search

### Claims Overview

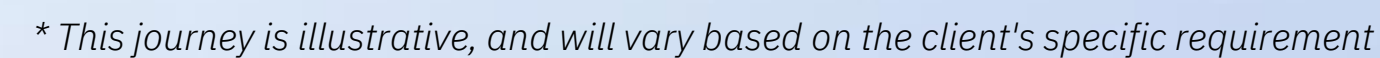
Company	Country	Date	Claim	Claim description
[REDACTED]	CH	12-03-24	G674125	Burglary: IT infrastructure
[REDACTED]	FR	11-11-24	F912348	Fire: Factory equipment de
[REDACTED]	ES	08-08-24	S712348	Storm: Solar panels dama
[REDACTED]	SE	04-09-24	U487231	Flood: Office basement flo
[REDACTED]	DK	12-08-24	N483721	Fire: Server room destroye
[REDACTED]	CH	01-06-24	A582113	Fire: Company office dama
[REDACTED]	DE	05-07-24	D458793	Flood: Warehouse invento
[REDACTED]	IT	03-05-24	B839274	Earthquake: Office buildin
[REDACTED]	BE	10-04-24	T928314	Burglary: Office comput



# Personas



## Journey / Workflow





## Benefits & Value

Reduction in time spent in reviewing and adjudicating claims

decrease in human error  
and inconsistency

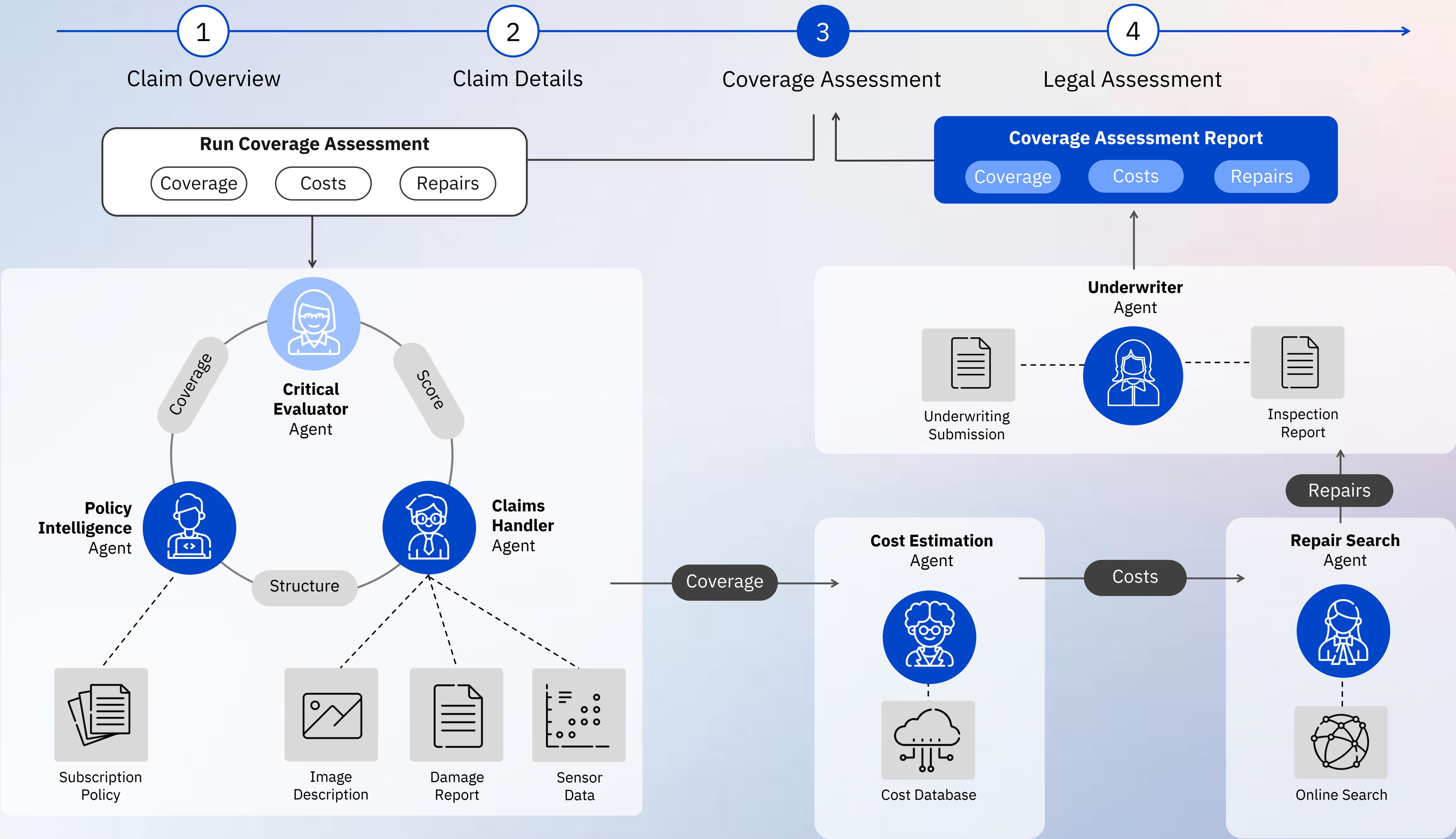
faster resolution time for  
low-complexity claims

 **Intelligent Multi-Agent Collaboration**  
Orchestrates specialized AI agents to automate assessments, cost analysis, and report generation

 **Human-in-the-Loop Controls**  
Ensure compliance, auditability, and expert oversight for complex cases.

▶▶ **Scalable & Configurable**  
Modular framework supports new product lines, regions, and workflows.

# Agentic Capabilities Overview





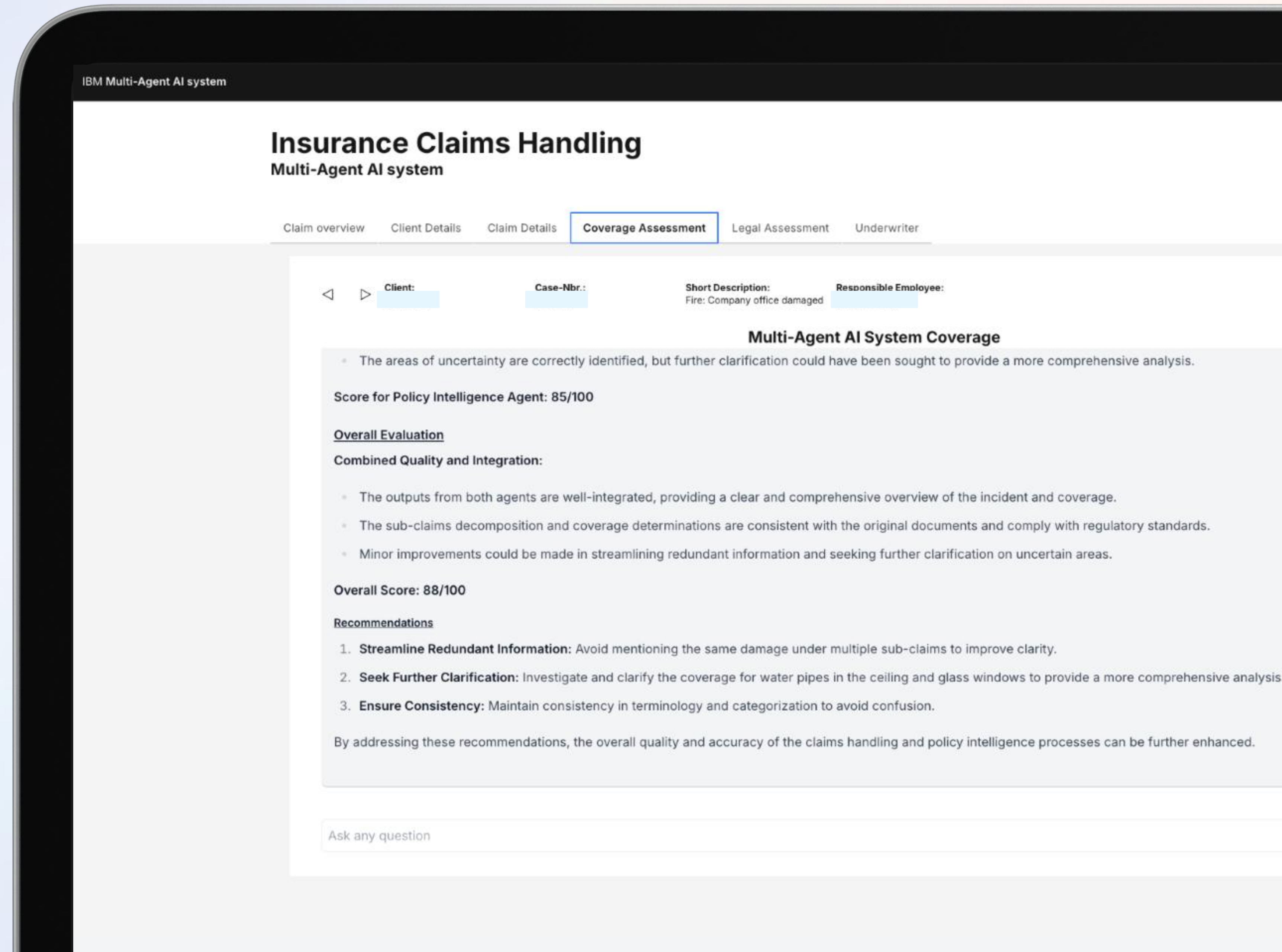


Claims-AI

## Feature 1 – Automated Coverage Assessment

Claims-AI accelerates the coverage validation process by automating policy checks and surfacing decisions in real time.

- Uses AI to extract key data points from claims and match them against policy terms
- Flags exclusions, limitations, and policy clauses relevant to the claim
- Generates an automated coverage assessment report for underwriters or adjusters
- Reduces cycle time and manual effort in early claim triage





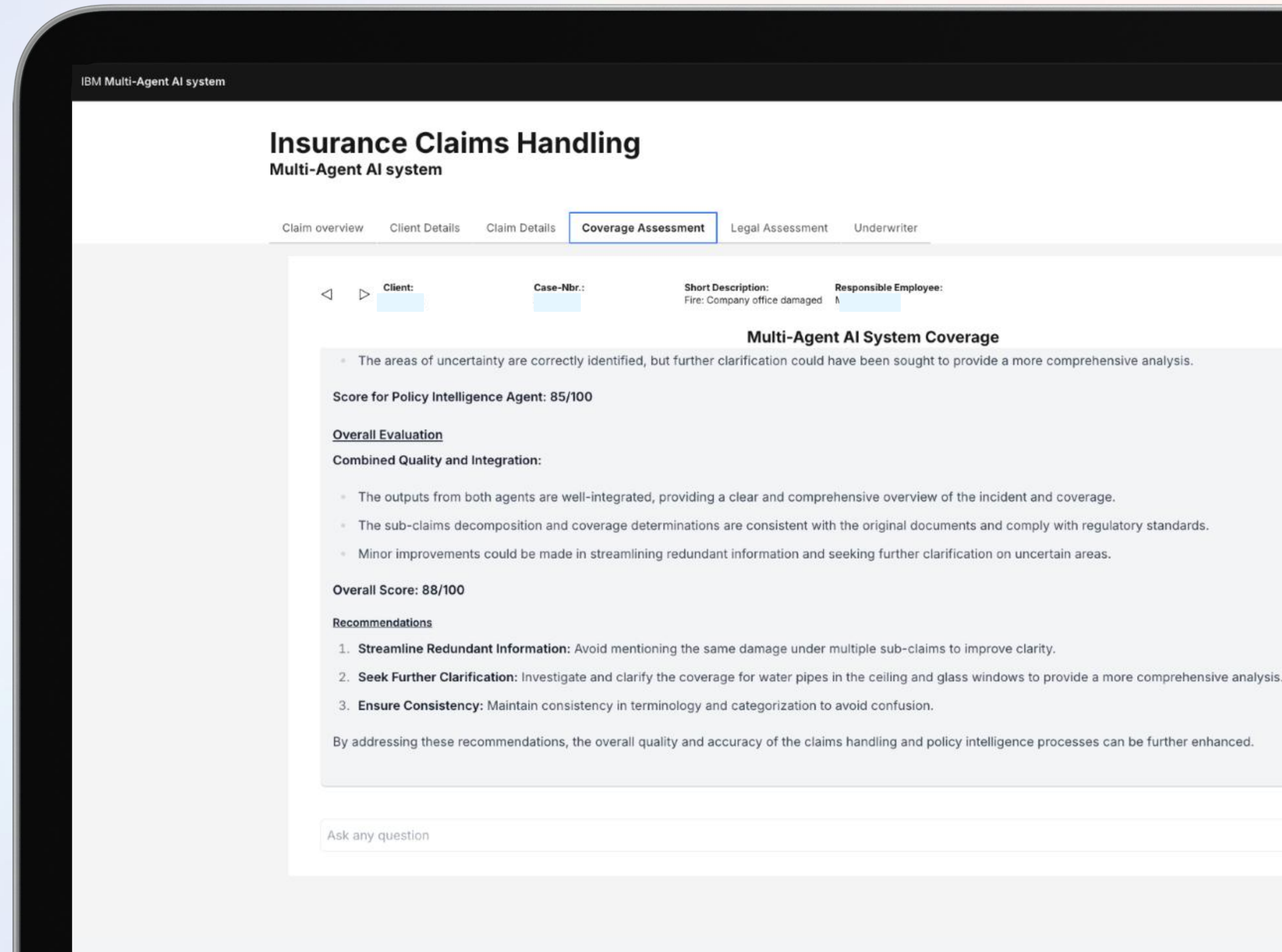


# Claims-AI

## Feature 2 – Multi-Agent Collaboration for Claims Review

Claims-AI coordinates specialized agents to perform complex claims tasks in parallel—ensuring speed, consistency, and accuracy.

- Involves agents like the Claims Handler, Policy Intelligence, and Cost Estimation Agent
- Each agent performs a distinct function and passes structured output to the next
- Supports seamless hand-offs and decision points across the claim's lifecycle
- Mirrors human roles for audit-ready explainability and transparency





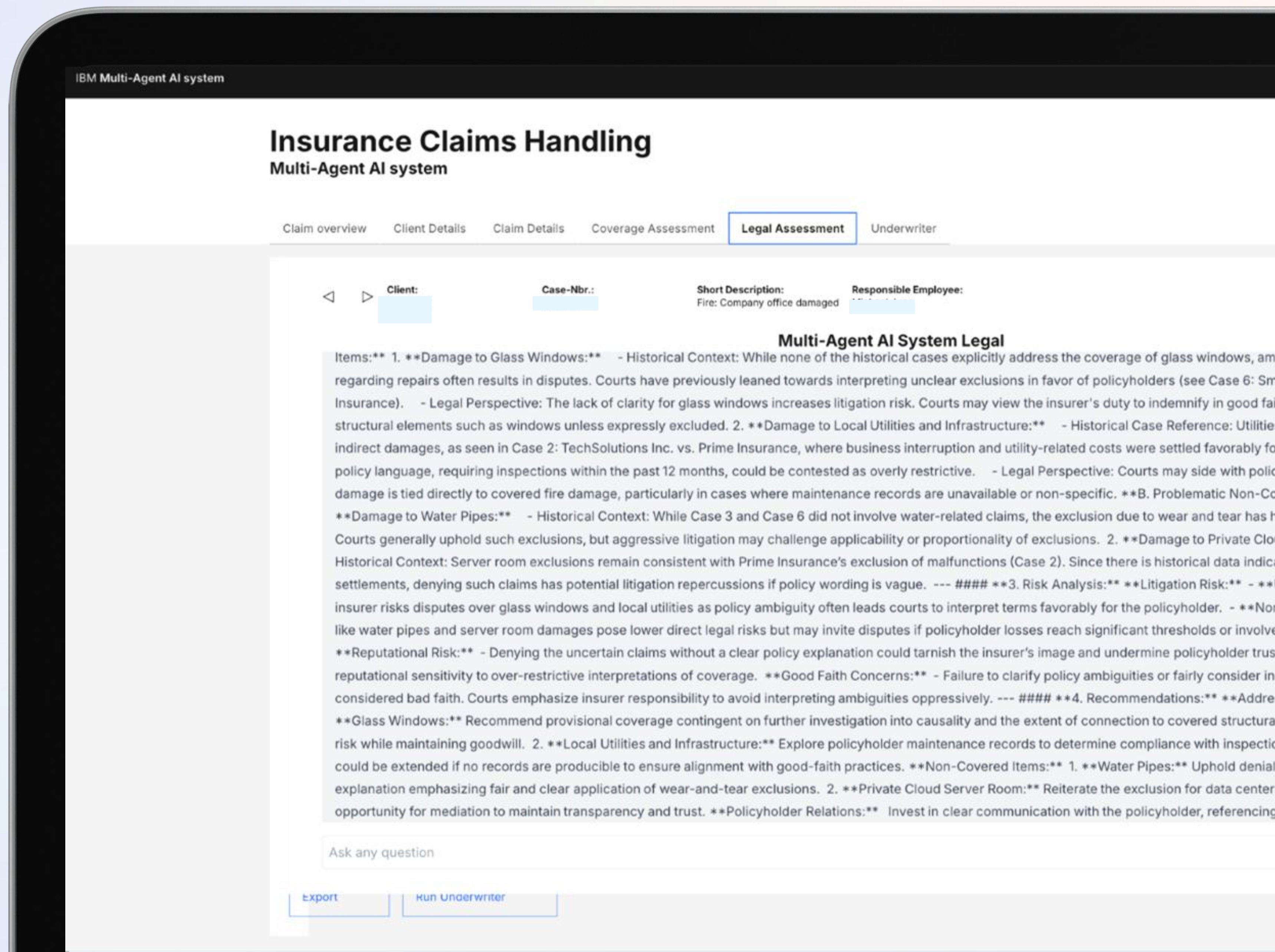


## Claims-AI

### Feature 3 – AI-Generated Legal and Risk Summaries

AI agents synthesize key legal insights and risk factors from claim documents and external data sources.

- Extracts relevant legal language and applies internal policy interpretation models
- Summarizes complex cases into readable, auditable narratives
- Supports faster decision-making and improves legal review consistency
- Can be extended to fraud risk signals and severity scoring





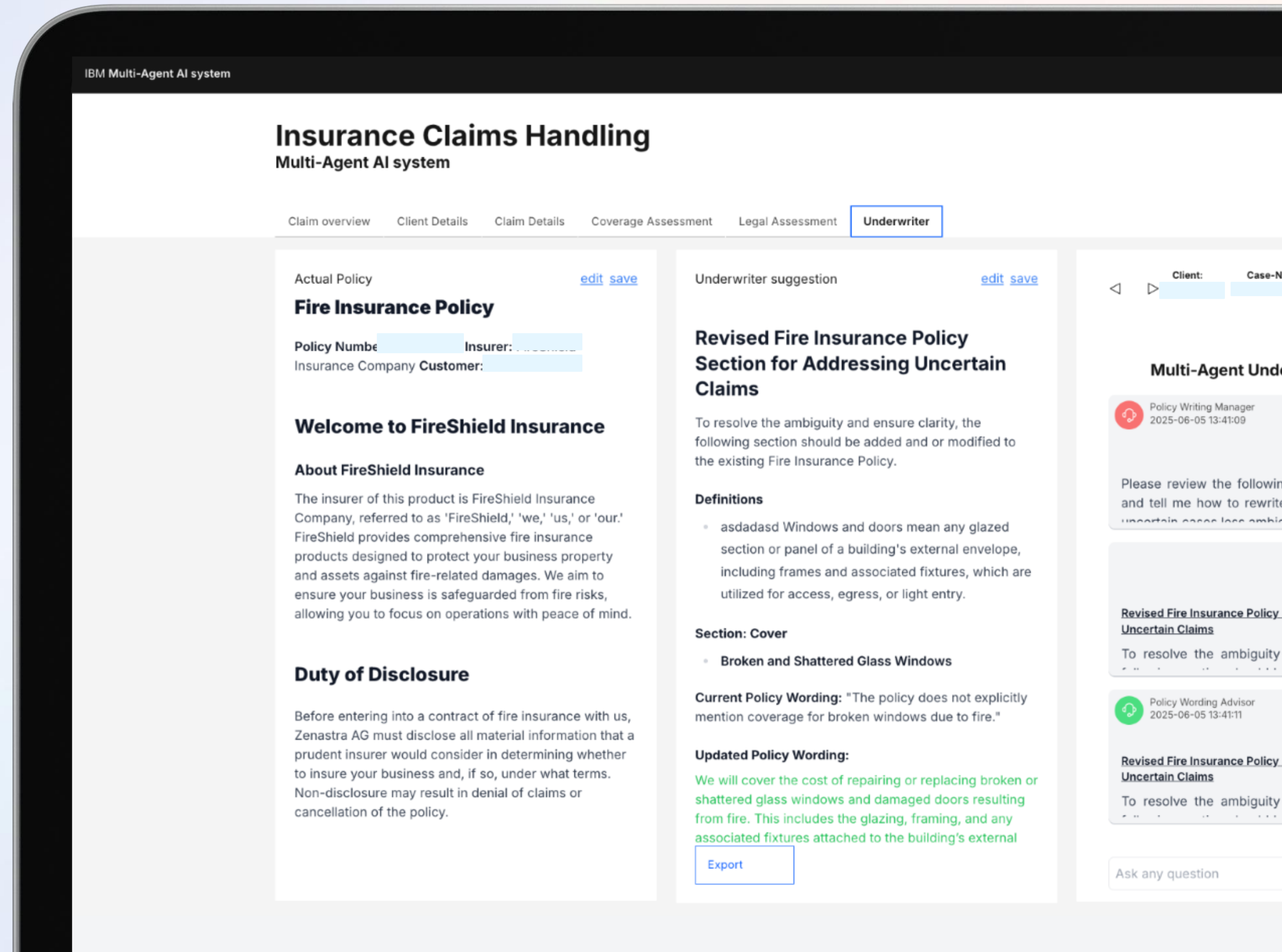


# Claims-AI

## Feature 4 – Human-in-the-Loop Oversight and Auditability

Claims-AI enables transparent review with embedded checkpoints for human approval, feedback, and escalation.

- Allows adjusters or underwriters to validate, revise, or override agent recommendations
- Maintains logs of human and AI decisions for audit and compliance
- Ensures regulatory defensibility and reinforces trust in AI-assisted decisions
- Balances automation with human expertise at critical decision points



# Insurance Claims Handling

Multi-Agent AI system

- Claim overview
- Client Details
- Claim Details
- Coverage Assessment
- Legal Assessment
- Underwriter

Claims selection

Specify the country

Specify the client segment

Provide client name

Provide Case ID

Specify assigned employee

Search

Claims Overview

Company	Country	Date	Claim	Claim description	Employee	Status	↑	Actions
	CH	12-03-24	G674125	Burglary: IT infrastructure stolen	Melanie Neu	Completed	⬆️⬆️	<a href="#">edit</a>
	FR	11-11-24	F912348	Fire: Factory equipment destroyed	Sophie Dubois	Completed	⬆️⬆️	<a href="#">edit</a>
	ES	08-08-24	S712348	Storm: Solar panels damaged	Isabella Garcia	Completed	⬆️⬆️	<a href="#">edit</a>
	SE	04-09-24	U487231	Flood: Office basement flooded	Liam Anderson	Completed	⬆️⬆️	<a href="#">edit</a>
	DK	12-08-24	N483721	Fire: Server room destroyed	Sofia Nielsen	Completed	⬆️⬆️	<a href="#">edit</a>
	CH	01-06-24	A582113	Fire: Company office damaged	Adrian Anger	Incomplete	⬆️⬆️	<a href="#">edit</a>
	DE	05-07-24	D458793	Flood: Warehouse inventory damaged	Lukas Muller	Incomplete	⬆️⬆️	<a href="#">edit</a>
	IT	03-05-24	B839274	Earthquake: Office building cracks	Marco Rossi	Incomplete	⬆️⬆️	<a href="#">edit</a>
	BE	10-04-24	T928314	Burglary: Office computers stolen	Emma Janssens	Incomplete	⬆️⬆️	<a href="#">edit</a>
	AT	09-10-24	G209823	Storm: Car fleet damaged	Ali Jung	Under Review	⬆️⬆️	<a href="#">edit</a>



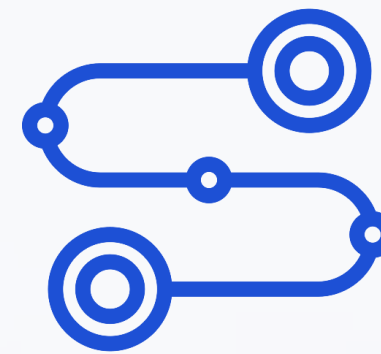
Enhanced performance across three dimensions, driving significant business value



## Deeper

**Improves LLM performance at tasks**

bring in multiple perspectives, have fact-checking, and leverage fine-tuned & customized models



## Broader

**Broadly applicable: complex processes**

agents have broad capabilities (multi-modality), connect to enterprise IT systems, cope with varied inputs & outputs

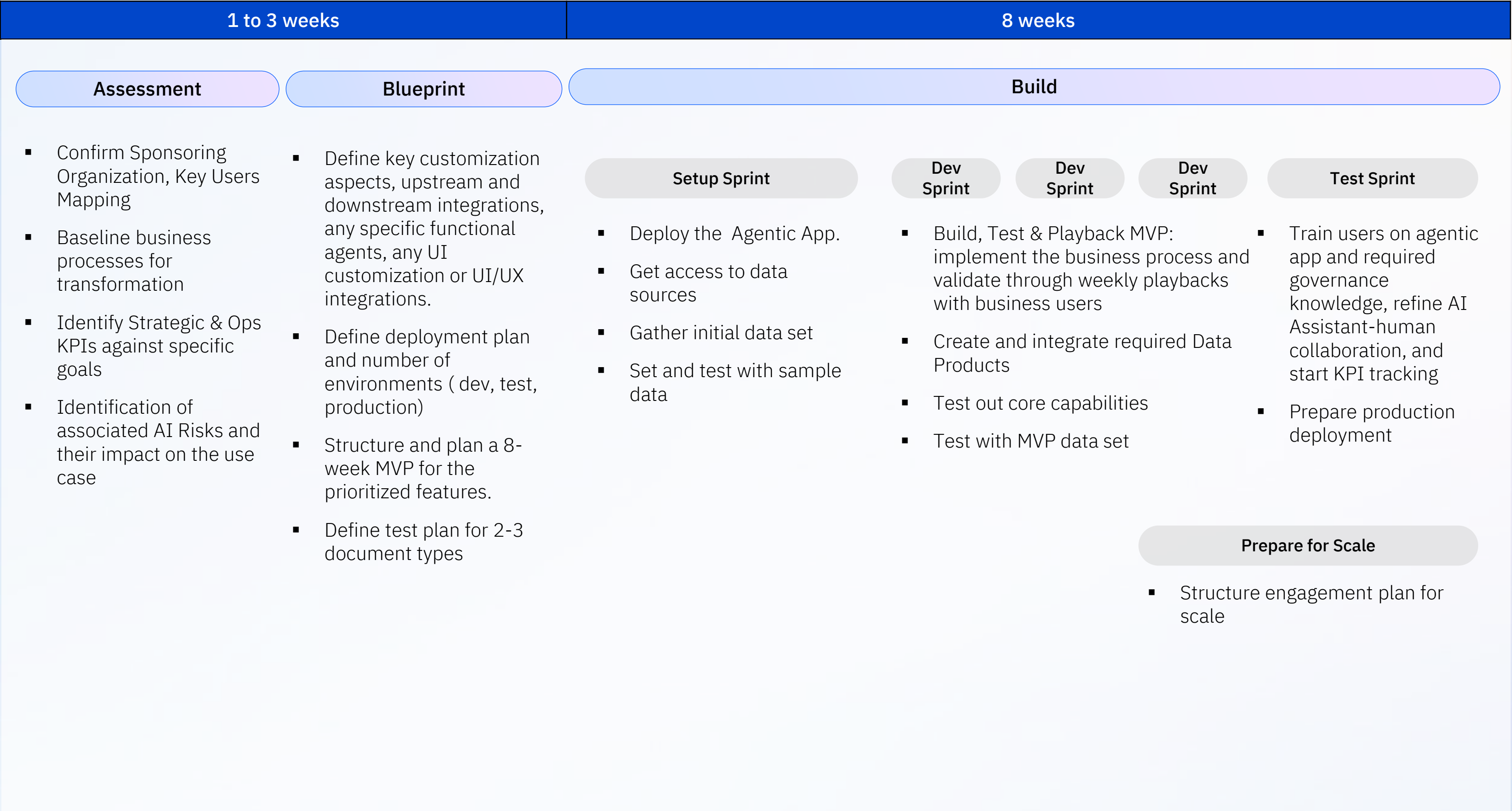


## Governed

**Oversight: trace, monitor and govern these systems**

full traceability (LLMs talk in English), monitoring & analytics (logs, replays)  
human in/out loop governance

# Indicative Delivery Timeline



### GenAI Assistants, Tools, Assets

- Agentic AI Readiness Score Framework
- ICA Assistant to classify process activities
- Mapping process mining metrics to Agentic AI Readiness Scores.

- ICA Assistant to generate first mapping to agentic architecture
- Agentic app Reference architecture

- Base App deployment code and containers
- GIT Repos
- Documentation and Deployment Guide

## Delivery Squad

- Delivery Executive
  - Agentic AI technical Lead
  - Technical Architect
  - UX Designer
  - Data Scientist
- AI Engineer
  - Full Stack Developer
  - DevOps
  - Test Specialist

## Assumptions and Dependencies

- 1 Setup and onboarding:**  
Environment access prior to project kickoff

  - Asset will be deployed in one development environment and availability zone
  - Azure resources provisioned
  - Required knowledge store finalized

IBM development team onboarded to environment within first week of project
- 2 SME time commitment:**  
SME input needed:

  - Data set knowledge
  - As is process and expected results
  - UI validation

SME feedback within three (3) business days
- 3 Base deployment:**

  - Will cover core base features of the app within 8-10 week MVP
  - Following query types will need additional development effort
    - Tool integration like raising ticket in workflow tool like service or any other type of integration with external API
    - Hyper personalization by connecting to user data
    - Queries based structured data sources like data base
    - Complex queries which require custom calculation before responding to user question



Get in touch and find out more



## Claims-AI

Find out more and request  
a demo in ICA4AA Agentic  
App Library

[Click here](#)



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technical documentation in  
our GitHub

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