

How PalTech Built an AI-Driven Underwriting Agent for a Commercial Property MGA to Accelerate Submission Processing by 50%



A Commercial Property-focused Managed General Agents (MGA) company working with multiple insurers was handling large volumes of broker submissions containing ACORD forms, Statements of Values (SOVs), Schedule of Locations, Loss Runs, Broker Cover Letters, and supporting underwriting documents.

The MGA's underwriting support process was heavily dependent on manual data extraction, validation, and coordination with insurer underwriting teams. Submission data had to be consolidated across multiple documents and validated against external risk intelligence sources before it could be shared with carrier underwriters for decision-making.

Critical underwriting information was manually verified using datasets and platforms such as:

- FEMA Flood Zone data
- Wind Zone classifications
- OSHA history records

- Natural catastrophe exposure datasets
- Historical claims and property intelligence repositories

Because validation workflows were fragmented and research-intensive, underwriting turnaround times increased, operational scalability became difficult, and underwriting consistency varied across teams.

The insurer needed an intelligent underwriting layer capable of automating submission intake, standardizing validation workflows, enriching risk intelligence, and improving underwriting efficiency across MGA-driven operations.

Solution Approach

PalTech implements an AI-powered Underwriting Agent that acts as an intelligent operational layer between MGAs, brokers, and underwriting teams.

The platform combines GenAI-driven document understanding, agentic

AI-powered risk enrichment, and retrieval-driven underwriting intelligence to streamline commercial property submission processing and validation workflows.

The underwriting agent begins by ingesting broker submissions across:

- ACORD forms
- Statements of Values (SOVs)
- Schedule of Locations
- Loss Runs
- Broker Cover Letters
- Supporting underwriting documents

Using GenAI-powered document parsing, the platform extracts and structures underwriting-relevant information from unstructured and semi-structured documents. The extracted data is then normalized into a standardized underwriting-ready format to eliminate inconsistencies across submissions.

Once normalized, the underwriting agent enriches the submission using internal systems and external intelligence sources including FEMA Flood Zone data, Wind Zone classifications, OSHA history, natural catastrophe datasets, and property intelligence repositories. This enables the system to generate contextual risk intelligence summaries while validating exposure-related information automatically.

The platform then performs underwriting guideline validation by evaluating submissions against underwriting manuals, eligibility criteria, renewal conditions, and clause-level requirements. This creates a more consistent and governed underwriting process.

As the next step, the underwriting agent retrieves comparable historical accounts and previously bound policies to benchmark risks against historical exposure patterns, underwriting decisions, and loss ratios. This provides underwriters with contextual intelligence to support faster and more informed decision-making.

Solution Implementation

1. AI-Driven Submission Parsing Layer

The platform uses a GenAI-powered ingestion framework to process unstructured underwriting documents and convert them into machine-readable formats.

Key capabilities include:

- Automated extraction of insured values, occupancy details, locations, property characteristics, and claims history
- Parsing of Broker Cover Letters and underwriting narratives
- Cross-document entity reconciliation
- Missing information detection
- Multi-format ingestion across PDFs, spreadsheets, scanned documents, and emails

This significantly reduces manual data extraction and validation effort for underwriting teams.

2. Data Normalization Engine

The extracted submission data is standardized into a unified underwriting schema to eliminate inconsistencies across broker and MGA submissions.

The normalization layer enables:

- Standardized property-level risk representation
- Consistent exposure and location mapping
- Structured loss-run summaries
- Unified underwriting-ready datasets for downstream evaluation

This creates a scalable operational foundation for underwriting workflows.

3. Agentic Risk Research and Data Enrichment Module

An AI-driven research agent validates and enriches underwriting submissions using both enterprise systems and external intelligence datasets.

The module:

- Retrieves FEMA Flood Zone and Wind Zone intelligence
- Evaluates OSHA history and compliance indicators
- Enriches catastrophe exposure insights
- Generates detailed risk summaries
- Flags missing or inconsistent information
- Supports Match, Refer, or Decline workflows

By automating risk intelligence gathering, the platform reduces manual underwriting research effort while improving decision quality.

4. Underwriting Guideline Audit Agent

A retrieval-driven underwriting validation engine compares submissions against underwriting manuals, historical policies, and renewal conditions.

Capabilities include:

- Clause-level guideline validation
- Eligibility verification
- Renewal policy comparison
- Underwriting deviation identification
- Pre-bind audit recommendations

This introduces greater consistency, governance, and auditability into underwriting operations.

5. Similar Risk Benchmarking Engine

The underwriting agent retrieves comparable historical accounts and previously bound policies based on exposure characteristics and underwriting patterns.

The capability enables:

- Historical loss ratio benchmarking
- Similar property risk retrieval
- Comparable exposure analysis
- Prior underwriting decision comparison
- Faster underwriting recommendations

This helps underwriters make more data-backed and consistent underwriting decisions.

Value Delivered

60–70% Reduction in Manual Validation Effort

Automated extraction, normalization, and external risk validation significantly reduce repetitive underwriting verification activities.

40–50% Faster Submission Processing

AI-driven submission intake and enrichment accelerate underwriting turnaround times across commercial property submissions.

Improved Underwriting Consistency

Guideline validation and standardized risk enrichment improve underwriting governance and reduce variability across underwriting teams.

Faster Access to External Risk Intelligence

Automated integration with FEMA Flood Zone, Wind Zone, OSHA, and catastrophe datasets eliminates the need for manual research across multiple systems and public sources.

Improved Submission Quality

The platform proactively identifies missing information and underwriting gaps before underwriter review, reducing rework and broker communication cycles.

Better MGA Visibility and Collaboration

MGAs gain improved transparency into submission completeness, validation status, and underwriting progression, improving operational collaboration across the underwriting ecosystem.

Enhanced Risk Benchmarking

Historical policy comparison and similar-risk retrieval improve underwriting confidence and support more data-informed decision-making.

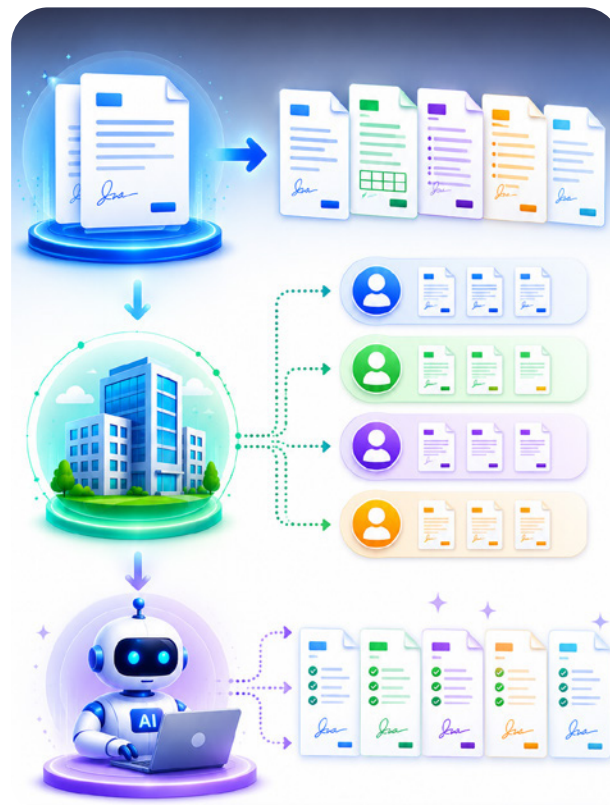
Scalable Underwriting Operations

The insurer establishes a scalable underwriting operating model capable of handling increasing submission

volumes without proportional growth in underwriting operations teams.

Foundation for Intelligent Underwriting

The underwriting workbench creates a foundation for predictive risk scoring, appetite matching, AI-assisted underwriting recommendations, and automated pre-bind risk assessment.



For more information, please visit <https://www.pal.tech/artificial-intelligence/>

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