



Insurance offering

# Insight accelerates action: Real-time risk decisions with agentic AI

## Problem statement

Life insurance underwriting remains a multi-step, rule-driven but heavily manual process that relies on human review across intake, document validation, external data checks (MIB, Rx, DMV, Credit), rating, and decisioning. This leads to:

- Long cycle times—typically 5–15 days—driven by repetitive tasks and hand-offs
- Fragmented data handling across multiple sources, increasing error rates (8–12%) versus 3–5% when automated
- Subjective risk scoring with limited system support for context or explainability
- Escalation bottlenecks to medical directors and senior underwriters, slowing policy issuance and impacting CX
- High manual effort despite the industry processing billions of documents, ~85% unstructured and often handled by humans today

## Solution overview

Cognizant Underwriter Assist augments underwriting teams with agentic AI to streamline end-to-end case processing while keeping humans in the loop for oversight and final judgment.

### How it works (at a glance)

**Intake Agent:** Ingests applications and supporting artifacts; normalizes formats; performs NIGO/validation checks.

**Enrichment Agent:** Pulls and structures external data (MIB, Rx, DMV, Credit), extracts salient medical/financial signals, and fills feature gaps.

**Recommendation Agent:** Produces explainable risk scores, preliminary rating class, and contextual next best actions based on rules + LLM reasoning.

**Selection Agent:** Routes cases to the optimal underwriter based on skills/availability when human review is warranted.

**Evaluation Agent:** Provides a human in the loop review surface to validate/override recommendations with full rationale tracking.

**Orchestrator Agent:** Coordinates agent flows, ensures policy/sequence integrity, and applies guardrails.

**Communication Agent:** Automates structured communications (e.g., requirement requests, approvals/declines) with audit trails.

### The approach delivers two operating modes:

- Auto-Approve for low-risk profiles with rules conformance.
- Underwriter-Assist for medium/high risk, prioritizing complex cases with ready-to-review summaries and evidence—reducing manual prep time while maintaining control

## Technology used

### GenAI & Reasoning

- Azure OpenAI (GPT-4o) for contextual reasoning, summarization, and recommendation rationale.
- Retrieval Augmented Generation (RAG) over a curated Knowledge Graph of underwriting rules, medical/financial ontologies, and guidelines.

### Search & Data Layer

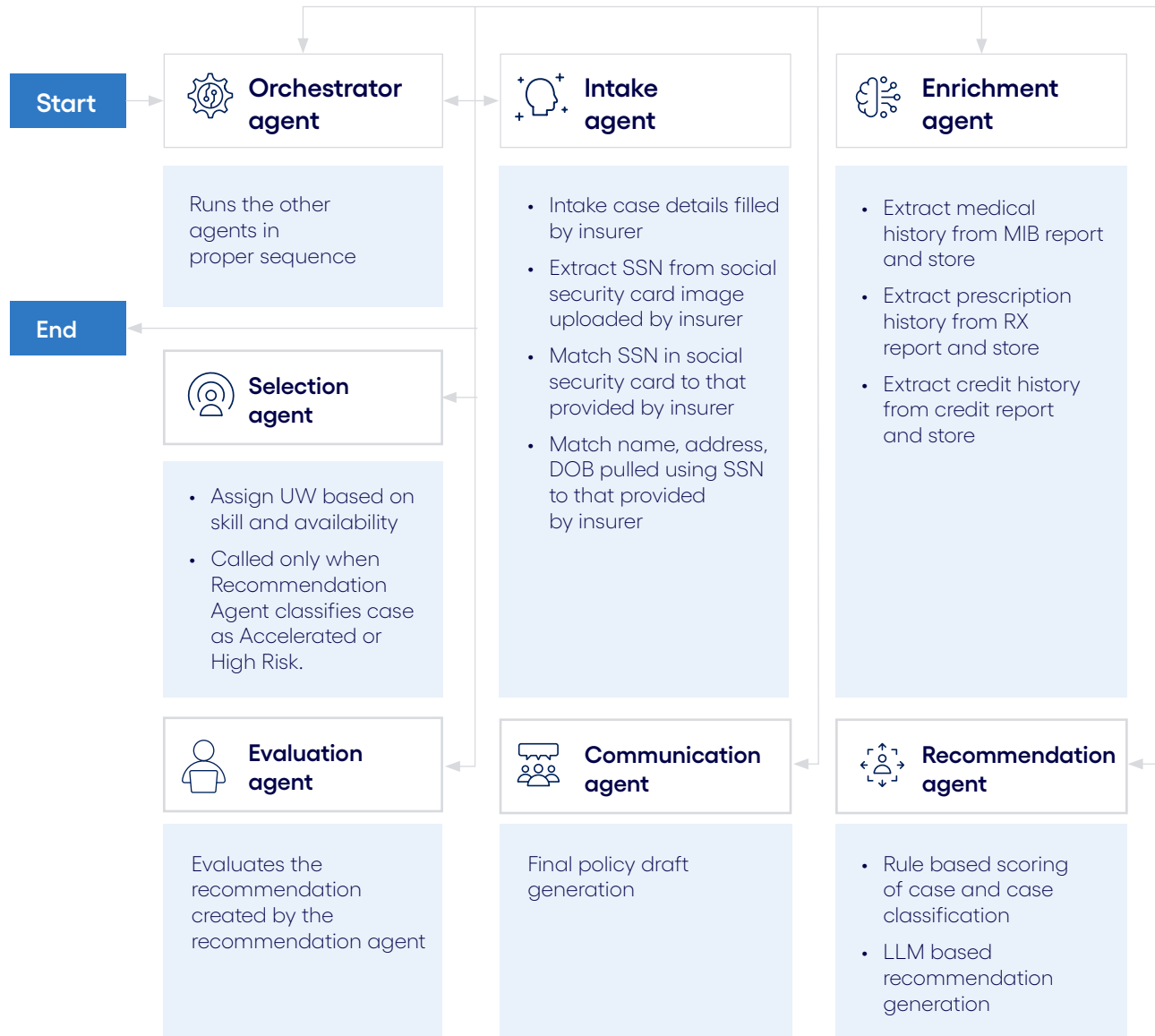
- Azure AI Search for semantic retrieval across documents and case histories.
- Secure connectors to MIB, Rx, DMV, Credit data sources; structured extraction & normalization pipelines.

### Agent Framework & Integration

- AI Agents Framework with an Orchestrator coordinating Intake, Enrichment, Recommendation, Evaluation, Selection, and Communication agents.
- REST/WebSocket APIs and UI layer (e.g., React) integrated into the existing underwriting platform/workbench.

## Governance, Security & Observability

- PHI handling aligned to HIPAA and enterprise privacy policies; policy guardrails and content filtering.
- Human in the loop checkpoints, override protocols, and full auditability (agent commentary, inputs/outputs, evidence links).
- Monitoring dashboards for drift, bias, performance, and SLA adherence.



## Partner ecosystem



## Business benefits

**Cycle-time compression:** ~30% reduction in underwriting cycle time; AI-driven flows can shrink decisions from weeks to hours in suitable cohorts

**Productivity uplift:** ~25% improvement in underwriter throughput by offloading repetitive intake, validation, and summarization work

**Faster issuance:** ~20% improvement in policy issuance speeds, improving placement ratios and revenue realization

**Quality and consistency:** Lower error bands (toward 3–5%) via structured data assimilation and repeatable rules + LLM reasoning

**Experience and scalability:** Enhanced CX through quicker, more consistent decisions; scale underwriter capacity for peaks without linear headcount growth

**Compliance readiness:** Built-in governance, explainability, and audit trails to support regulatory reviews and internal risk controls

## Example scenario

Aurora Life Insurance (a mid-sized North American life insurer) processes thousands of applications monthly. Emma Collins, a senior underwriter, must maintain accuracy and compliance while handling high volumes and diverse state regulations. Today she spends hours per case consolidating documents, reconciling discrepancies, and interpreting MIB/Rx/DMV/credit data. Escalations to medical directors create bottlenecks, extending issuance timelines.

## With underwriter assist

### Document intake and prep

The Intake Agent ingests application PDFs, scanned forms, and emails; extracts and

validates key fields; and produces an instant summary with discrepancy flags. Emma receives a clean, ready-to-review case file rather than raw documents.

### Data assimilation and rules-based rating

The Requirements support agent pulls MIB, Rx, DMV, and credit data, updates the case as results arrive, and applies carrier rules. The Rules-Based rating agent assigns a preliminary rating class and suggests additional requirements (if any).

### Risk assessment and decision support

The decision support agent synthesizes all signals into an explainable risk view and generates contextual recommendations. An integrated dashboard surfaces material factors and rationale; Emma can accept, adjust, or override.

### Human-in-the-loop oversight

If clinical nuance is needed, Emma consults a medical director with a succinct AI-generated brief. Turnaround improves because the discussion focuses on exceptions, not data wrangling.

### Case closure and communications

For approvals, the Case Closure Agent triggers binder generation and agent/applicant notifications; for declines, it generates compliant letters with documented reasons. Policy issuance proceeds faster with fewer back-and-forths.

### Outcome

Aurora Life observes materially shorter cycle times (commonly ~30%, with cases achieving up to 70% reduction), higher throughput per underwriter (~25%), and faster issuance (~20%), while maintaining control and auditability through transparent, explainable AI.



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