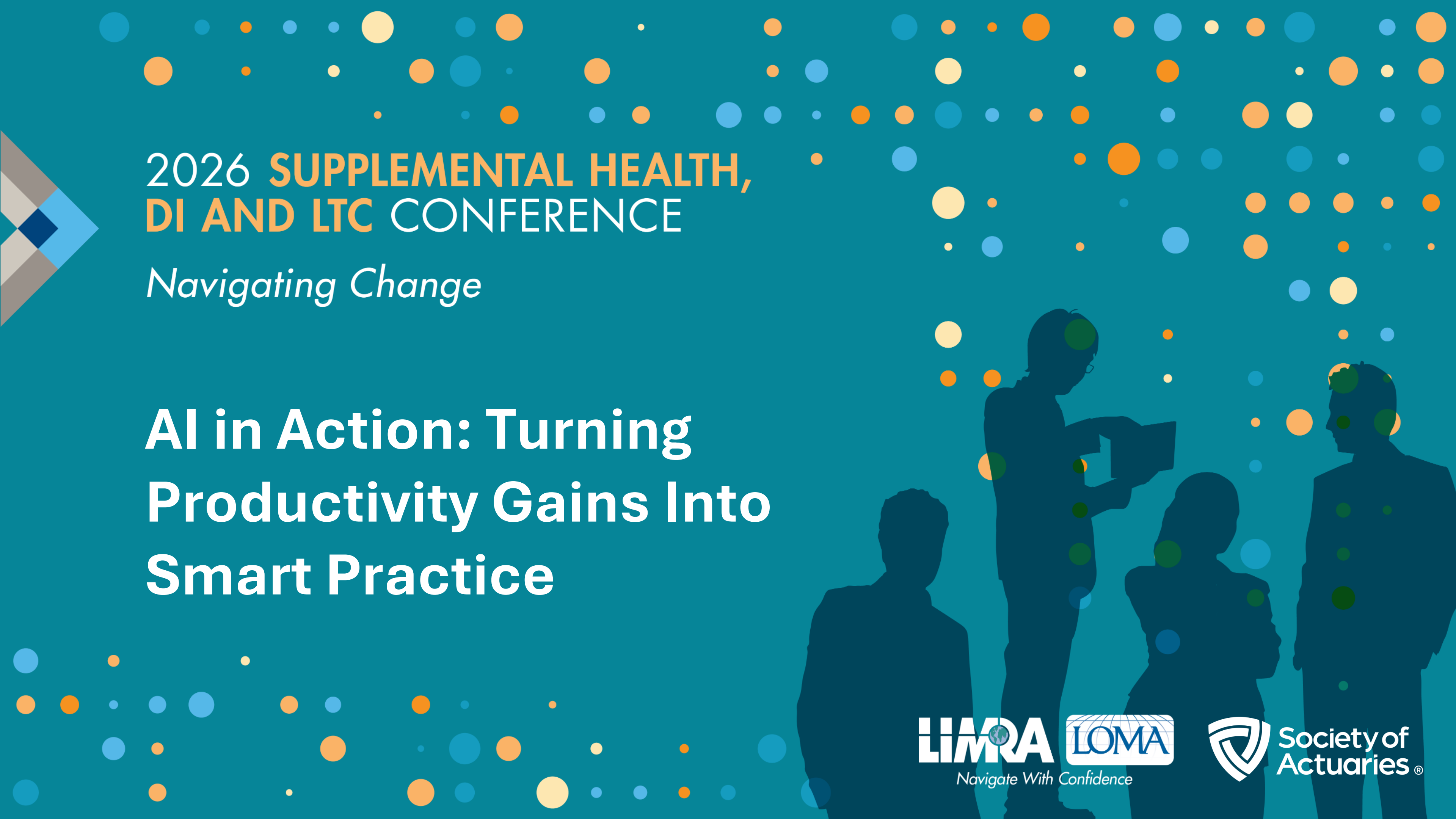




2026 SUPPLEMENTAL HEALTH, DI AND LTC CONFERENCE

Navigating Change

AI in Action: Turning Productivity Gains Into Smart Practice



Navigate With Confidence



**Society of
Actuaries®**





Jack Norby, FSA, MAAA

Director & Actuary
Trustmark Insurance



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Principal and Consulting Actuary
Milliman

Introduction & Agenda

- Every company in our industry is exploring how AI can create value
- Currently, most AI gains come from reduced “busy work”
- Consistently finding that AI is not a substitute for human judgment
 - Practical examples and best practices for safe, effective AI use
- Using the product lifecycle as a framework, we will focus on:
 - How AI can be used to enhance learning and accelerate execution
 - Understanding the risks and where things can go wrong
 - Practical examples and best practices for safe, effective AI use

Traditional Insurance Product Lifecycle

- For our purposes, the product lifecycle is separated into 6 stages:



Market Research & Business Case

AI Benefits: Improved Targeting and Stronger Concept

- Summarize large volume of curated data – internal or external, structured or unstructured
- Identify recurring themes and behavioral patterns
- Rapid concept generation and high-level modeling

AI Risks: Insufficient Validation and Analysis

- Basing decisions on biased or incomplete data (historical inequities, data gaps)
- Overreliance on backwards-looking patterns (structural shifts not accounted for)
- Poor assumptions leading to misleading projections

Practical Example – Market Research

MILLIMAN

ACTUARIAL & REGULATORY COMPLIANCE PRACTICE
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Weekly Market Intelligence Report

Supplemental Insurance Market Company and Product Updates
Period: July 07, 2026 – July 14, 2026 • 14 items • Generated July 14, 2026 at 08:37 AM

EXECUTIVE SUMMARY

This week saw significant regulatory and compliance developments, including major litigation against Allstate for claims underpayment, substantial ACA premium rate filings by Centene, and leadership changes at Genworth impacting governance disclosures. CMS finalized a modest Medicare Advantage payment increase for 2027, prompting insurers to warn of potential benefit reductions. Additionally, Cigna streamlined its compliance oversight structure, and MetLife filed for a notable pet insurance rate increase, signaling ongoing cost pressures across segments.

HIGH PRIORITY — ACTION / AWARENESS REQUIRED

- Principal to Acquire Beam Benefits, Expanding Dental and Vision Offerings (Life Insurers)
- Genworth Names Interim CEO Amid Health-Related Leave of Absence (Life Insurers)
- Allstate Sued by Oklahoma for Alleged Claims Underpayment Scheme (All)
- Swiss Re Forecasts Sharp Slowdown in Global Non-Life Premium Growth (Reinsurers)

PRODUCT DEVELOPMENTS

MEDIUM PRODUCT DEV LIFE INSURERS July 14, 2026

Mutual of Omaha Enhances Employer-Based Accident Insurance Product

Mutual of Omaha's Workplace Solutions division announced enhancements to its employer-based accident insurance, adding over 40 new benefits and expanding sports coverage to all insured members, including adults. The product update requires actuarial review for pricing and regulatory filings in states where accident insurance is rate-regulated. — [HR Tech Pulse](#)/a>

Products: accident insurance

MEDIUM PRODUCT DEV LIFE INSURERS July 8, 2026

Principal Expands Custody Solutions Program for Community Banks

Principal Financial Group expanded its Custody Solutions Program, targeting regional and community banks with institutional trust and custody services. This move broadens Principals institutional trust footprint and introduces new ERISA fiduciary obligations and updated custody agreement terms for compliance review. — [Market Minute](#)/a>

Products: group life insurance

LOW PRODUCT DEV ALL July 13, 2026

Ryan Specialty Launches Renewable Energy Practice and Appoints CEO



Practical Example – Market Research

Where's the AI?

- Human input – topics and companies of importance
- Google News (RSS) searches (1000+) via python
 - ✓ AI used to create application
- Perplexity (AI) used to vet the findings
- ChatGPT, etc. (AI) used to summarize the stories
- Perplexity (AI) direct links used to generate sources / links of truth
- Claude code, Codex (AI) etc. used to refine the script, format the email, etc.

AI Benefits: Optimized Benefit Structure and More Accurate Pricing

- Robust scenario and sensitivity testing
- Identify designs with best mix of customer value, sales potential, and profitability
- Better and more segmented assumptions

AI Risks: Complexity and Lack of Transparency

- Overly complicated products can turn off consumers
- Difficulties understanding and communicating modeled results
- Regulatory scrutiny and fairness concerns

Practical Example – Pricing Model



SAMPLE EXCEL PROMPT

Create an Excel pricing model for a Critical Illness insurance product.

Workbook Structure:

1. Inputs
2. Assumptions
3. Pricing Calculations
4. Scenario Testing
5. Dashboard

Inputs:

- Members
- Average Age
- Geographic Mix
- Product Option

Assumptions:

- Claim Incidence Rate
- Average Claim Amount
- Annual Persistency
- Expense Ratio
- Commission Rate
- Target Profit Margin

Calculations:

- Expected Claims
- Expected In-Force Members
- Expenses
- Required Premium
- Loss Ratio
- Profit Margin

Scenario Testing:

- Base Case
- Claim Incidence +10%
- Annual Persistency -5%
- Expenses +1%
- Combined Stress Scenario

Dashboard:

- Premium by Scenario
- Loss Ratio by Scenario
- Profit Margin by Scenario



Use named ranges, avoid hard-coded values, and document all formulas.



EXAMPLE OUTPUT: EXCEL PRICING MODEL

1. INPUTS

Item	Value
Members	100,000
Average Age	45
Geographic Mix	National
Product Option	Option 1

2. ASSUMPTIONS

Assumption	Value
Claim Incidence Rate	1.50%
Average Claim Amount	\$25,000
Annual Persistency	88%
Expense Ratio	15.0%
Commission Rate	10.0%
Target Profit Margin	10.0%



Annual Persistency (88%): Each year, 88% of policyholders remain in force.
Example: 100,000 members → Year 2: 88,000 → Year 3: 77,440 → Year 4: 68,147 (etc.)



3. PRICING CALCULATIONS

Item	Amount	Per Member
Expected Claims	\$52,500,000	\$525.00
Expenses	\$10,500,000	\$105.00
Commission	\$7,000,000	\$70.00
Total Cost	\$70,000,000	\$700.00
Required Premium	\$100,000,000	\$1,000.00
Loss Ratio	75.0%	
Profit Margin	10.0%	



4. SCENARIO TESTING

Scenario	Key Assumptions			Results		
	Claim Incidence (Multiplier)	Annual Persistency	Expense Ratio	Required Premium (Per Member)	Loss Ratio	Profit Margin
Base Case	1.00x	88%	15.0%	\$1,000	75.0%	10.0%
Claim Incidence +10%	1.10x	88%	15.0%	\$1,100	78.3%	10.0%
Annual Persistency -5%	1.00x	83%	15.0%	\$1,050	75.0%	10.0%
Expenses +1%	1.00x	88%	16.0%	\$1,010	75.0%	10.0%
Combined Stress Scenario	1.10x	83%	16.0%	\$1,183	79.8%	10.0%

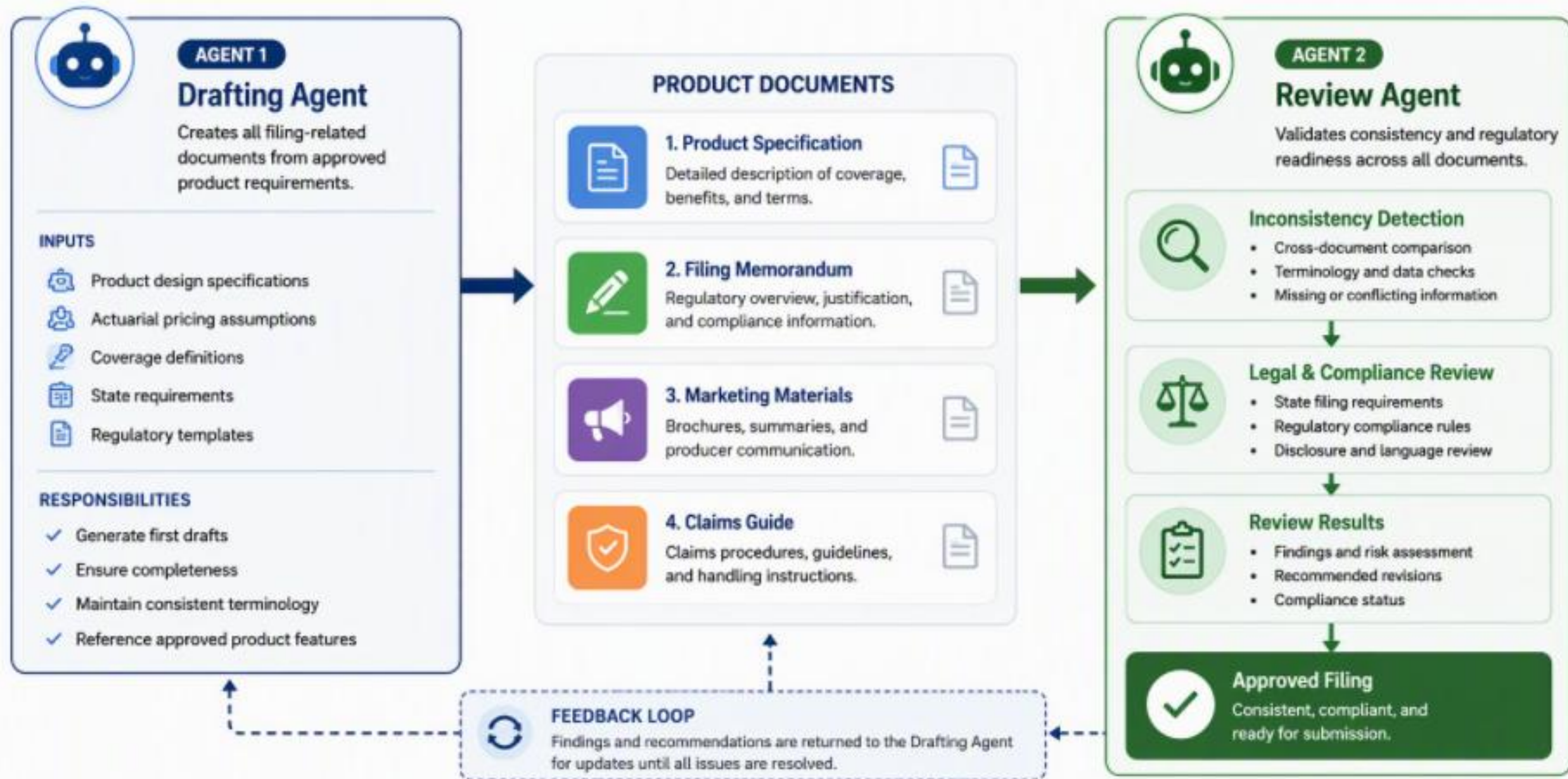
AI Benefits: Reduced Manual Work and Faster Filing Cycles

- Summarize and compare certificate language from publicly available filings
- Help with drafting policy forms, actuarial memos, etc. and ensuring consistency
- Monitoring regulatory changes, researching how to respond to objections

AI Risks: Hallucinations and Unintentional Non-Compliance

- Not checking for inconsistencies across forms, filings, and marketing materials
- AI does not reliably understand filing nuances, regulatory intent, company compliance standards, or state-specific insurance regulations

Practical Example – Dual AI Agents



Faster Speed-to-Market
Accelerate filing preparation and submission.



Fewer Filing Objections
Detect and resolve issues before submission.



Reduced Review Effort
Automate comparisons and compliance checks.



Improved Compliance
Ensure regulatory requirements are consistently met.

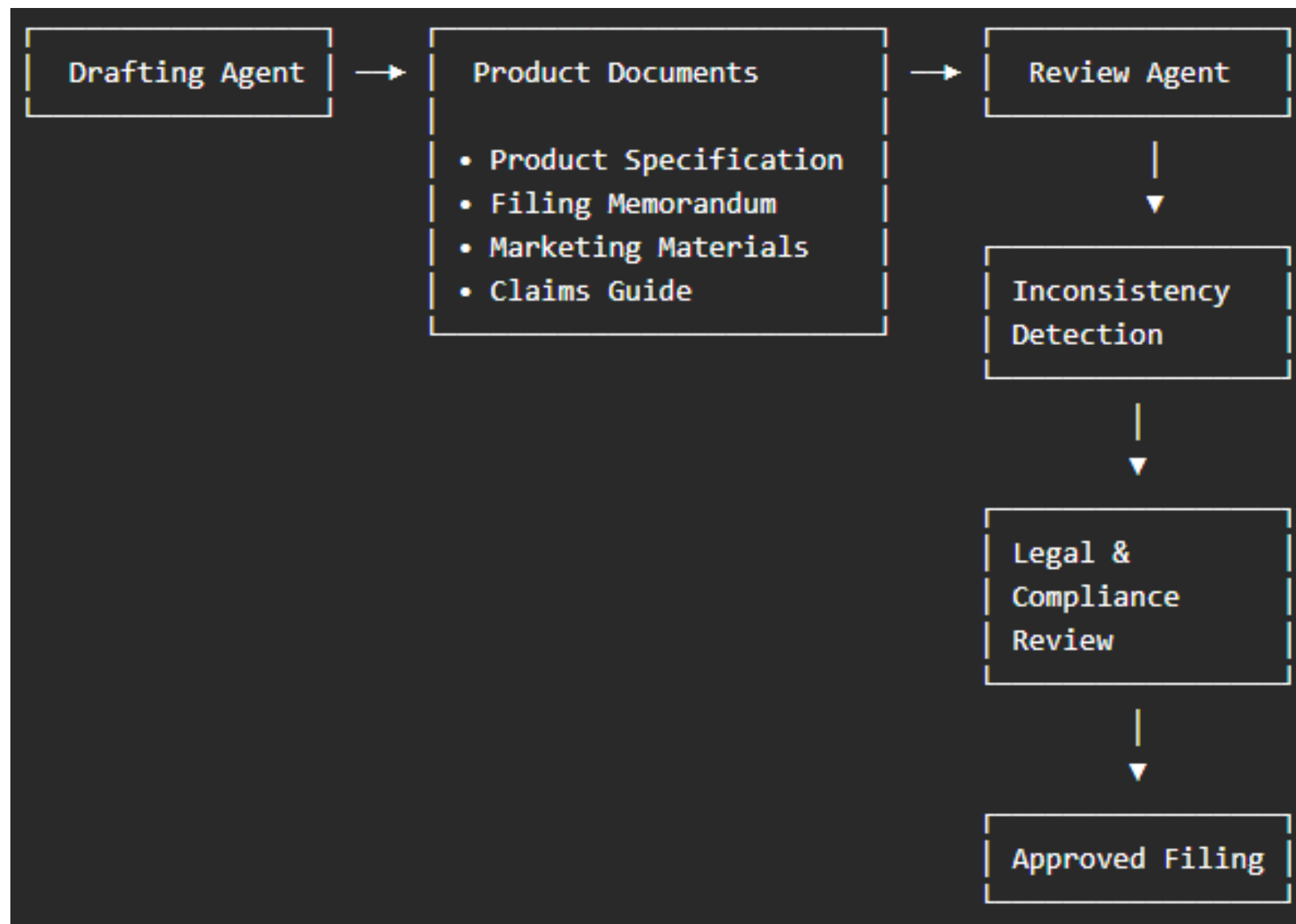


Better Governance
Full audit trail and traceability.

BUSINESS IMPACT



Practical Example – Dual AI Agents (No AI Tokens Left)



Issue Detected

Observation Stay Benefit

Master Policy: Covered after 20 hours

Certificate: Covered after 24 hours

Marketing Material: Covered after observation stay

Review Required

AI Benefits: Efficiency and Customization

- Lower admin costs through automation and workflow routing (data extraction, chatbots, etc.)
- Enhanced capabilities in billing, customer service, claims processing, and other areas
- Improved targeting, messaging, and enrollments

AI Risks: Integration Concerns and Value Drift

- Connecting AI to legacy systems is often difficult and presents safety/security risks
- Performance may deteriorate due to unexpected events and changing conditions
- Over-personalization can feel invasive and make customers uncomfortable

Practical Example – Personalization

Appropriate Personalization	Over-Personalization
"Hospital stays can create unexpected expenses."	"Based on your healthcare history, you're more likely to need hospitalization."
"Critical Illness coverage can provide financial support."	"Your demographic and prescription profile suggests elevated cancer risk."
"HDHP members may benefit from supplemental coverage."	"Your financial profile suggests vulnerability to large medical bills."

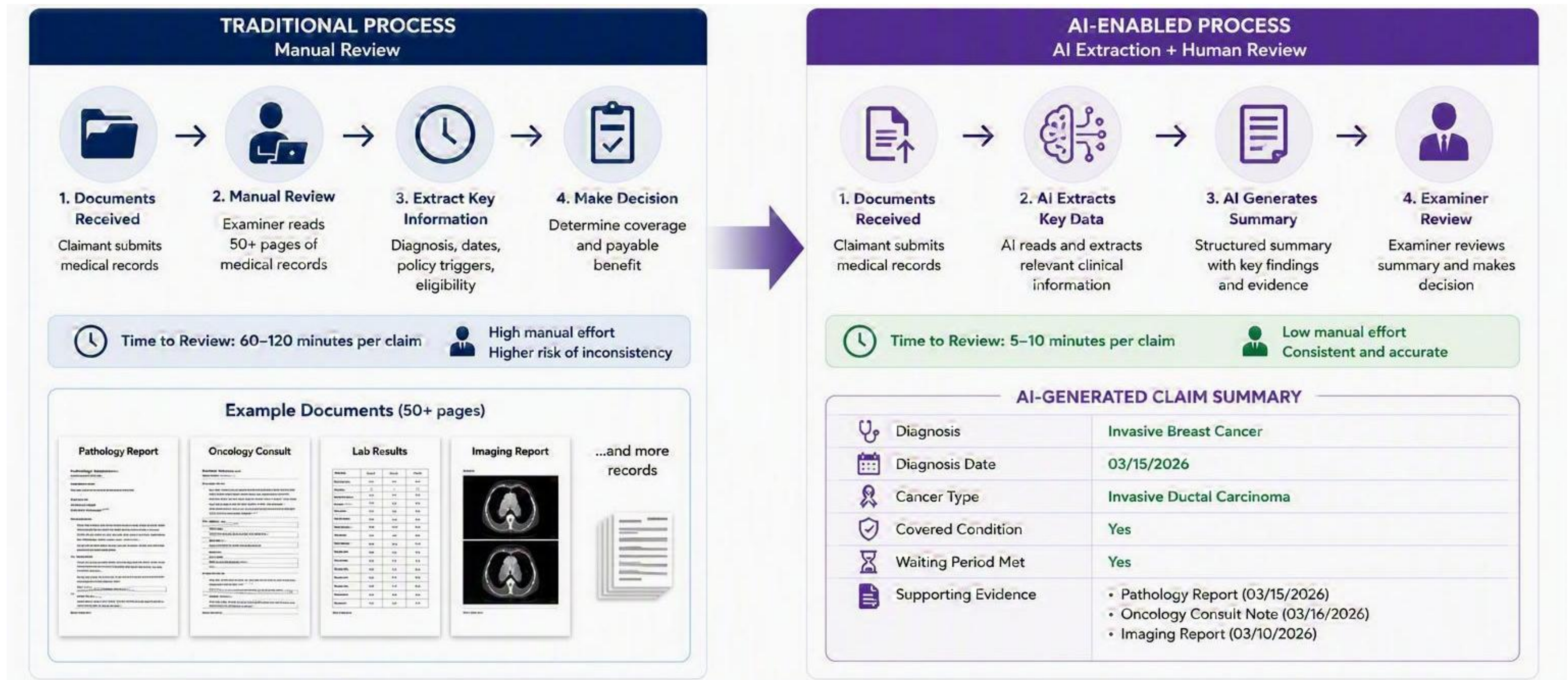
AI Benefits: Process Automation and Pattern Recognition

- Automatically identify low-risk applicants for immediate approval
- Extracting key information from hospital records and supporting documentation
- Improved ability to detect anti-selection and fraud/abuse

AI Risks: Fairness and Explainability

- Model produces disproportionately different outcomes for certain groups
- Black-box decision-making that is difficult to understand or justify
- Increased regulatory scrutiny and reduced customer trust

Practical Example – Medical Record Extraction



AI Benefits: Real-Time Data and Rapid Responses

- Continuous updates, automated insights
- Ability to query specific data using natural language
- Earlier identification of issues, faster course correction, shortened feedback loop

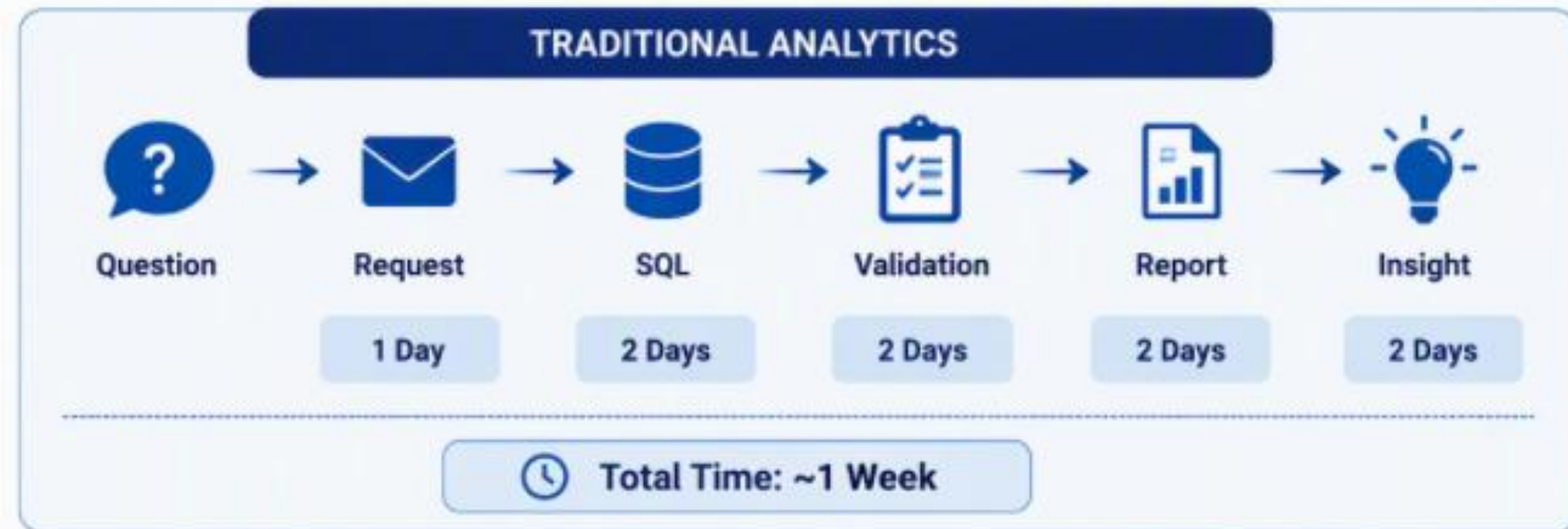
AI Risks: Over-Dependence and Excessive Reactivity

- Reduced critical thinking, accountability, and organizational expertise
- Signal vs Noise challenges – AI can be “too good” at finding patterns
- Constant changes can cause confusion, instability, and unnecessary complexity

Practical Example – Data Query

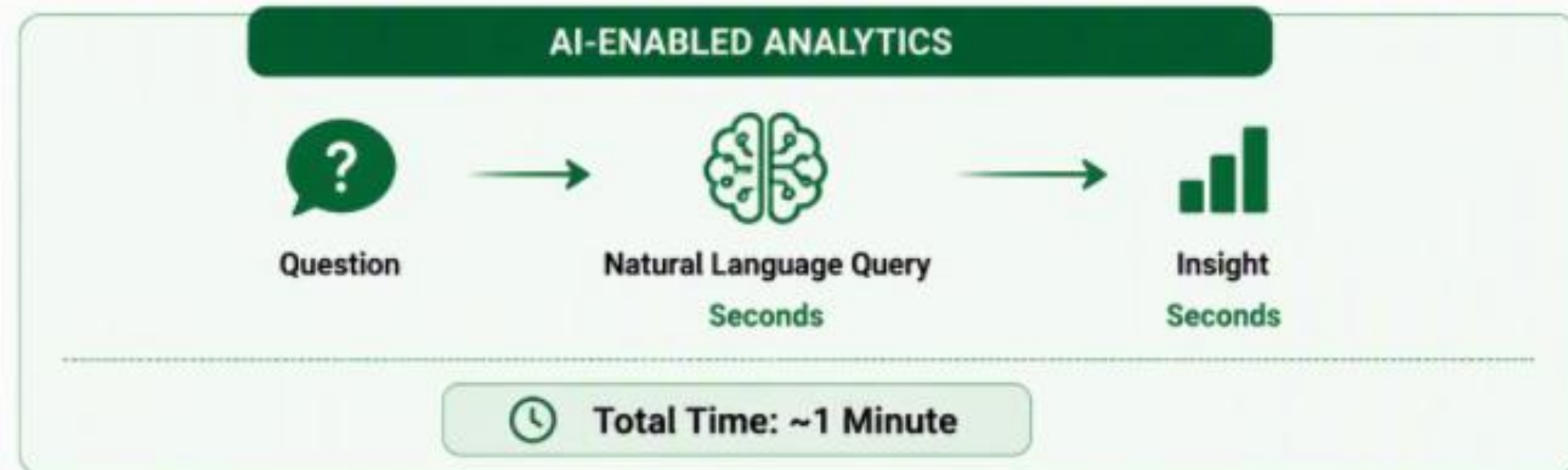
TRADITIONAL

“ Can someone build a report showing Hospital Indemnity observation-stay claims by age and employer size over the last two years?”



AI

“ Show me Hospital Indemnity observation-stay utilization over the last two years by age band and employer size.”



- ✓ **Much Faster**
From ~1 week to ~1 minute
- ✓ **Lower Effort**
No SQL, no back-and-forth, no waiting
- ✓ **Smarter Insights**
AI understands intent and delivers faster
- ✓ **More Time for Impact**
Analysts focus on decisions, not data retrieval

Summary



Best Practices & Conclusion

	1. HUMAN OVERSIGHT AI assists decisions; people remain accountable.	✓ Keep humans accountable for decisions ✓ Review important AI outputs before acting ✓ Challenge recommendations that don't make business sense
	2. DATA QUALITY Reliable data is the foundation of reliable AI.	✓ Use trusted data sources ✓ Verify data accuracy and completeness ✓ Establish clear data ownership
	3. AI TOOL SELECTION The right tool for the right task drives better outcomes.	✓ Match the AI tool to the task ✓ Consider accuracy, speed, cost, and risk when selecting tools ✓ Validate tools before adoption
	4. EFFECTIVE PROMPTING Clear instructions lead to better, more reliable results.	✓ Be specific about the objective ✓ Provide relevant context and constraints ✓ Use standardized prompts for recurring work
	5. EXPLAINABILITY & TRANSPARENCY AI should be understandable and its use should be clear.	✓ Understand the key drivers behind AI recommendations ✓ Document where and how AI was used ✓ Disclose AI involvement when appropriate
	6. COMPLIANCE & MONITORING Strong governance ensures ongoing compliance and performance.	✓ Maintain audit trails and approvals ✓ Follow regulatory and company policies ✓ Regularly monitor outcomes and model performance

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Module Option

**2026 Supplemental Health, DI,
& LTC Conference**
07/29/2026 - 07/31/2026
📍 Hyatt Regency Savannah

📅 Event Feed

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Agenda Option



**Welcome and General Session 1:
AI and Regulation: Where
Innovation Meets Oversight**
1:30 PM - 2:45 PM 07/29/2026 0.0 ★
📍 Harborside Ballroom (0 reviews)

📅 Add to Calendar

Details

Notes

Live Feed

Description

Artificial intelligence is rapidly transforming how insurers price, underwrite, adjudicate claims, and file products — but how are regulators responding? This session explores how state departments are evaluating AI-driven innovations today, where they're drawing cautionary lines, and what they

0.0 ★
(0 reviews)

Thank You

