

# AI IN INSURANCE

GenAI is moving insurance from  
rules-based to risk-based intelligence ➡



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# The US Insurance Industry Is Under Immense Pressure



## High Operational Complexity

- Insurance is one of the most data rich industries, yet it remains highly manual, and structurally inefficient.
- Insurers spend up to 60% of operational costs on manual processes.



## Unstructured Data With Untapped Value

- 80%+ of insurance data (e.g., emails, PDFs, adjuster notes, images) remains underutilized.
- Yet only 18% of insurers are using modern tech like AI to process it.



## Rising Customer Expectations

- Customers want real-time experience, personalized, omnichannel. Legacy systems simply can't keep up.
- 76% will readily switch providers for better digital experiences.



## Talent Constraints And Cost Pressures

- Aging workforce, declining adjuster supply, and pricing pressure are squeezing margins and capacity.
- 50% of the current workforce is expected to retire by 2036.

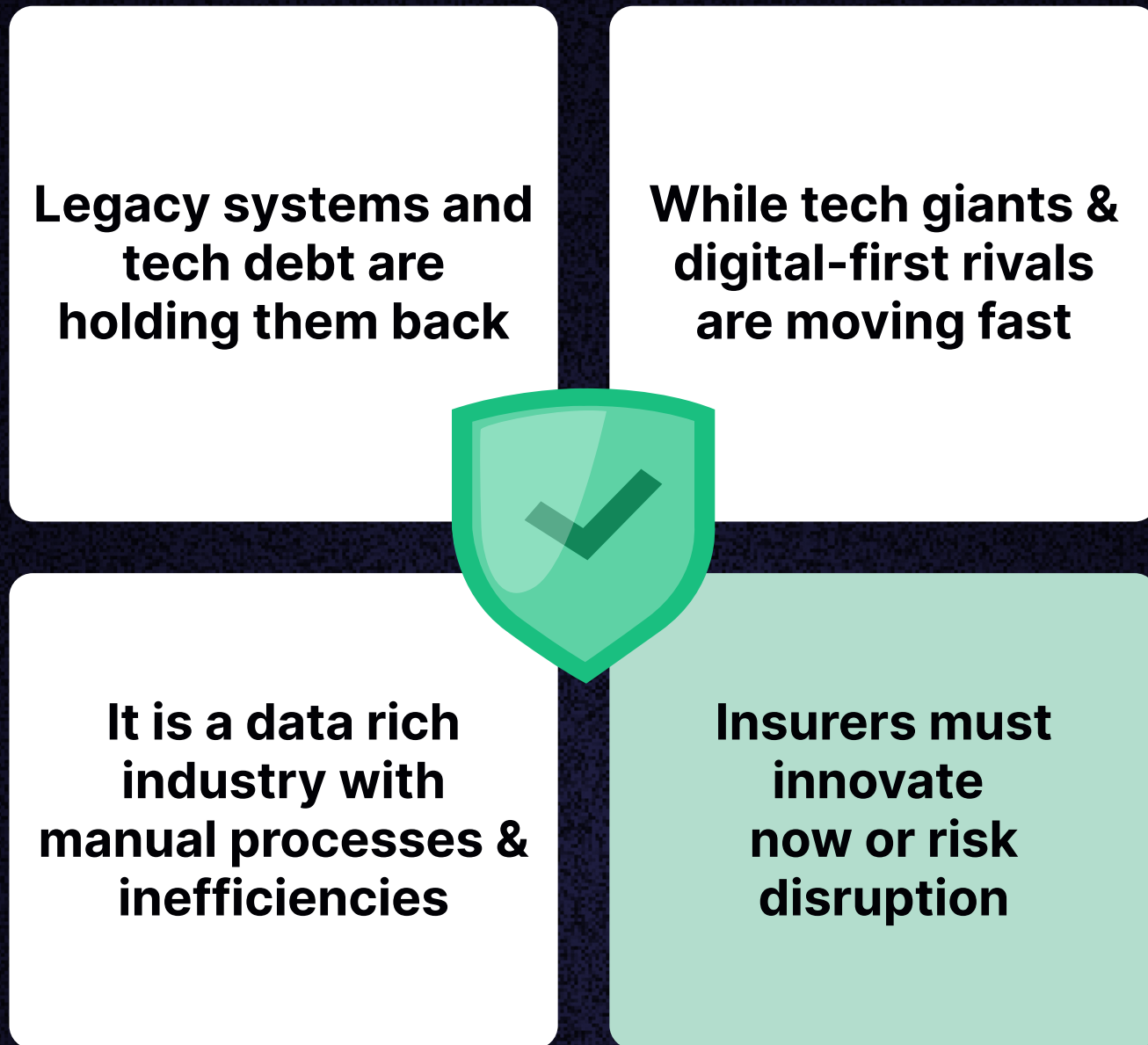
Sources: McKinsey, EY, IDC, Salesforce, US Bureau of Labor Statistics.

Insurers are underinvesting in R&D and are relying on an aging workforces to manage unstructured data with heavy manual processes.





# Why Insurance Needs AI



**77%** Of insurance leaders said they need to **rapidly adopt and have started investing in GenAI.**

Source: IBM Generative AI in the insurance industry.

AI will help insurance companies streamline operations, reduce costs, and deliver faster, more personalized customer experiences.

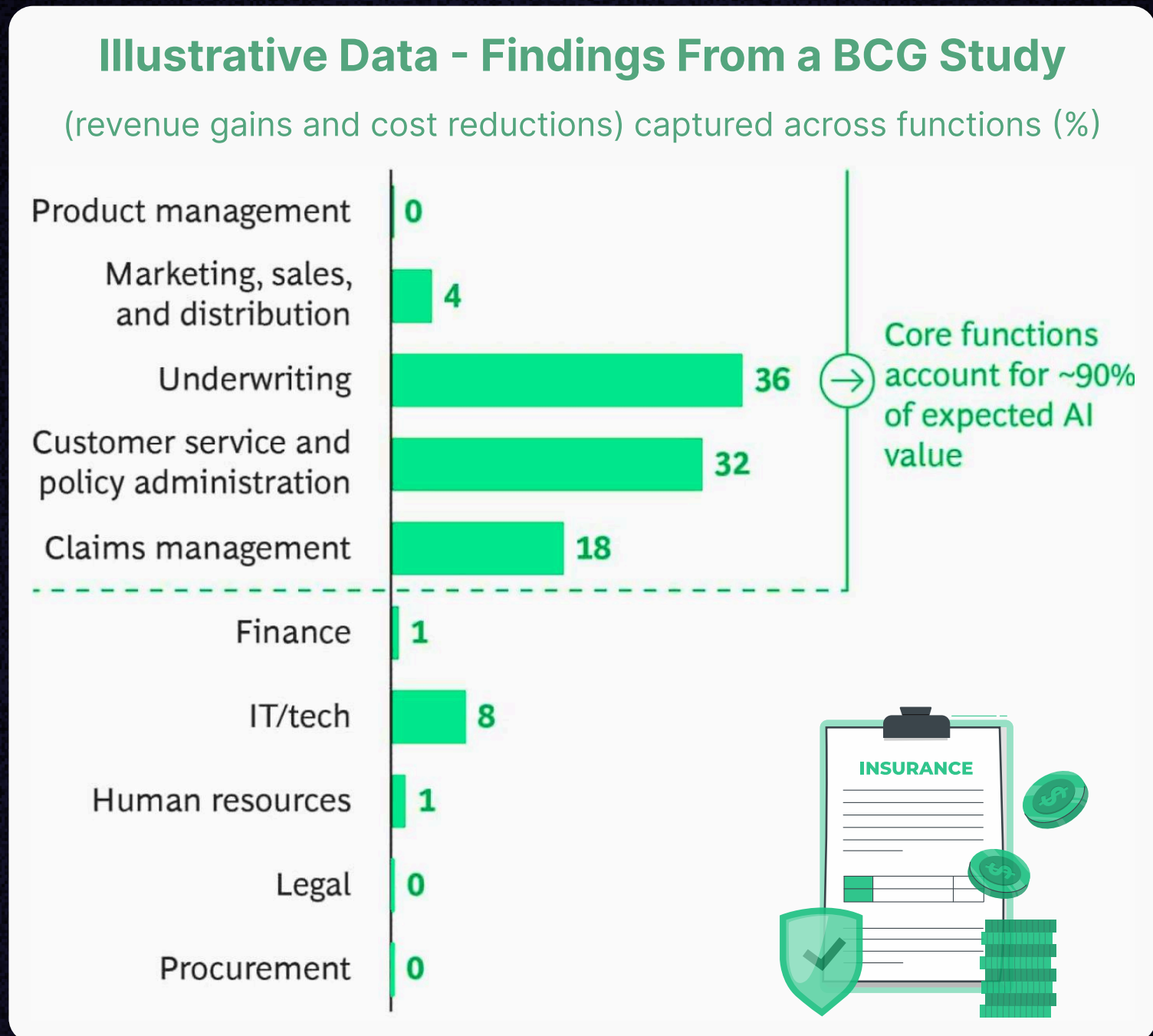


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# AI Can Add Value To Various Functions In Insurance



Sources: BCG Report - How Insurers Can Supercharge Their Strategy with AI.

## LET'S WALK YOU THROUGH 9 SPECIFIC USE CASES



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# 1. Underwriting In Insurance



**Peter Zaffino**  
CEO of AIG Insurance

"We're using AI to extract data, get more insights on every individual risk that we're going to underwrite in fraction of the time."



**ANTHROPIC**

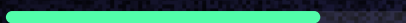
AIG (amongst the world's largest insurance companies) has partnered with Anthropic AI for claims & underwriting.

## Data Collection Accuracy

**75% → 90%**

Before

With AI



## Underwriting Efficiency

**+36%**

Improvement in  
commercial underwriting

## Loss Ratio Reduction

**~3pp**

Through richer  
data utilization



Another example is the Underwriter Guidance Tool, known as BRIAN at Allianz UK. BRIAN digests underwriting guides and allows underwriters to ask specific questions and receive concise, accurate responses.



Koop is underwriting for emerging risks like robotics, autonomy, and AI tools & targeting previously uninsurable tech categories with data-rich risk models. Enabling new markets (e.g., drones, autonomous vehicles, ML ops tools)

## AI-Augmented Underwriting

AIG reports 90% data accuracy with GenAI pilots, dramatically reducing underwriting time

## Unstructured Data Analysis

AI extracts insights from PDFs, imagery, and documents to inform pricing decisions

## GenAI Assistants

Firms like Swiss Re are piloting LLM-powered tools (e.g. Life Guide Scout) that underwriters can query in natural language.

## New Data and Products

AI enables usage-based and microinsurance models. For e.g., use climate-risk models from satellite imagery for refined risk profiles



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## 2. Claims In Insurance

**Up To 20%**

Of The Operational  
Cost Can Be Reduced

**And 50%**

Faster Processing



**70% of the simple claims  
can be resolved in real-time.**

For trickier claims, AI can automatically handle initial claim details, sorting papers, and quickly figuring out next steps.

**AI can spot suspicious  
claims humans might miss.**

It automates initial data extraction, document processing, and smart triaging, quickly flagging potential fraud and determining the next steps.



**CLARA**  
Analytics

One example is BHHC is leveraging CLARA's full AI-powered suite to streamline claims, reduce costs, with data-driven precision.

### **Copilot For Employees Processing The Claims**

#### **Guide Inquiries**

Answer claimant questions instantly

#### **Document Submission**

Streamline evidence collection

#### **Reduce Call Volume**

Improve service efficiency

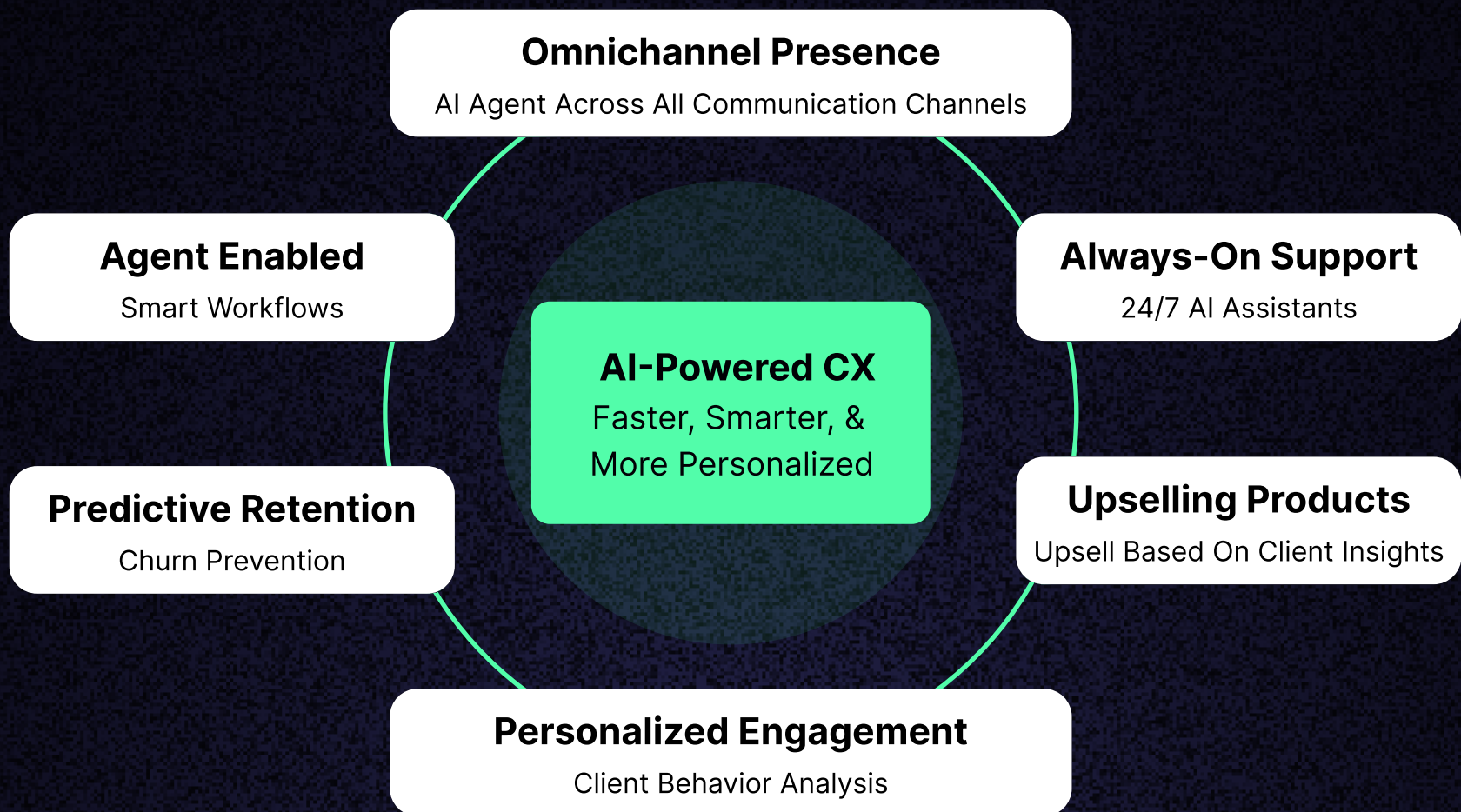


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# 3. Customer Experience



**85%**  
Faster Resolution

**30%**  
Renewal Rates

**48%**  
Higher NPS

From real-time assistance to intelligent policy management and seamless omnichannel journeys.

AI enables insurers to anticipate needs, reduce friction, and build deeper, more responsive relationships with customers.





## 4. Managing Risk



**Improve success and efficiency of risk evaluation processes**

- AI analyzes vast data from external events and customer information to price policies appropriately
- Minimizes unexpected claims through better risk assessment and evaluation
- Build foundation models for property insurance underwriting and claims investigation





# 5. Sales & Distribution

## Optimized Sales & Distribution

AI processes large volumes of unqualified leads.  
Qualify leads and guide customers through digital funnels

It can direct customers to the most suitable sales journey - fully digital, phone assisted, or in-person.

AI helps insurance agents capture  
all the data from their client interactions.

AI can reduce admin work for agents, letting them spend more time with clients and improving sales efficiency.

AI sales agents will play a key role,  
particularly in the upper stages of the sales funnel  
**(especially for direct writers)**

Other applications, which could be explored, include document generators/analyzers, call transcribers, and sentiment analyzers.





# 6. Fraud Detection



## Common Fraud Types

- False insurance claims, invented accidents
- Embellishing accident details and damages
- Falsified medical records and documentation
- Identity theft and misrepresentation



## AI Detection Methods

- Historical data comparison and analysis
- Pattern recognition in claim submissions
- Behavioral analysis and anomaly detection
- Real-time transaction monitoring

## Monitoring Capabilities

AI systems continuously analyze multiple data streams



### Transactions

Real-time monitoring



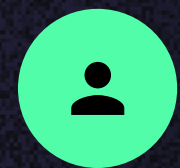
### Applications

Submission analysis



### APIs

System integration



### User Behavior

Pattern analysis

Sources: BCG Report - IBM AI In Insurance

AI-driven fraud detection software can monitor transactions, applications, APIs and user behavior to help organizations better prevent fraud or stop existing fraud in progress.



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# 7. Policy Administration



## Automated Data Entry

AI reads and extracts data from applications and endorsements.

## Real-Time Compliance Monitoring

Scan policies to detect regulatory risks or non-compliant language.

## Post-Issue Risk Intelligence

Review active policies to flag outdated limits or emerging exposures.

## Predictive Renewal & Lapse Alerts

Identify policies at risk of lapse and trigger outreach to retain customers.

## Automated Policy Changes

Process adjustments quickly and accurately with minimal human input.





# 8. Code Modernization



## Update Legacy Systems

- Many older insurers use outdated code (like Cobol).
- Generative AI helps modernize old IT systems, making new code compatible with existing tech.

## For Example

- One leading insurer, is using AI for its “smart migration” program.
- To transition more than 50% of its products from legacy to cloud - based architectures.

Other high-potential areas include software development, test automation, and IT service management.

With a growing number of **off-the-shelf AI solutions (like Amazon Q)**. Insurers can achieve rapid IT efficiency gains without having to build custom models from scratch.





# 9. New Product Development



## Optimize revenue from nontraditional products

- 60% of insurers predict nontraditional products will generate equal revenue to traditional ones
- Enables behavior-based insurance and differentiated risk environments
- AI tools help understand new environments and accurately price innovative policies





# Then AI Vs Now GenAI

Aspect	2017: Initial AI Efforts	2025+: Current Capabilities
AI Adoption Level	Heavy integration challenges (data quality, privacy) for existing ML models into workflows	~87% adoption; GenAI powered solutions are easy to configure, integrate and are better at understanding context
Customer Service	Chatbots for FAQs and 24/7 basic support	GenAI-driven assistants across channels, recommending policies like "Spotify"
Claims Processing	Early automation for form scanning; pilots for fraud detection	End-to-end claim automation using computer vision & ML; 50–70% time reduction
Underwriting & Pricing	Predictive analytics in use; IoT/telematics beginning adoption	Real-time, personalized risk models (usage-based insurance); underwriters supported by AI in real time
Fraud Detection	Machine learning trials to identify suspicious claims	AI flags 75% of fraudulent claims in real time, improves detection and optimizes payouts
Data & Analytics	Big data leveraged for risk & segmentation; IoT prototypes	Data lakehouses integrate structured & unstructured data, enabling real-time decisioning
GenAI & NLP	Basic NLP for forms and chatbots	GPT-4/DeepSeek-style models power summarization, complex Q&A, document insights
Regulation & Ethics	Main focus on data privacy, GDPR beginnings	Algorithmic fairness frameworks, explainable AI, specialized AI-chatbot liability insurance





# AI Strategy Playbook

## Data & Tech Modernization

Robust data foundation is essential. 52% of insurers cite poor data quality as the primary AI blocker.

- Centralize data architecture
- Migrate legacy to cloud
- Overcome technical debt
- Hybrid cloud architecture
- Modular AI platforms
- Improve data accessibility

## Fast Iteration Cycle

Pilot GenAI quickly, measure results, then scale. Push for near-term P&L impact.

Focus On Business Outcomes

## Talent & Culture

Train/Empower employees.

- Upskill existing staff
- Attract data scientists
- Foster AI-first culture
- Train AI co-workers

## Narrow Focus, Big Impact

Concentrate on high-value use cases for immediate P&L impact. Leading carriers invest heavily in core areas rather than scattering resources.

- Underwriting optimization
- Claims processing
- Customer service
- Sales acceleration





Whether you're an insurer or a vertical AI startup (or thinking of starting one).

**Reach out to us [here](#)**



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