Building sustainable GenAI ROI in insurance

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Many insurers are already exploring how generative AI (GenAI) can streamline operations and improve decision-making, whether by enhancing general productivity or through targeted applications, typically in underwriting, claims processing and customer engagement. Most of these initiatives remain in the experimental phase, with insurers testing the technology in controlled settings to gauge its potential before expanding it across the enterprise.
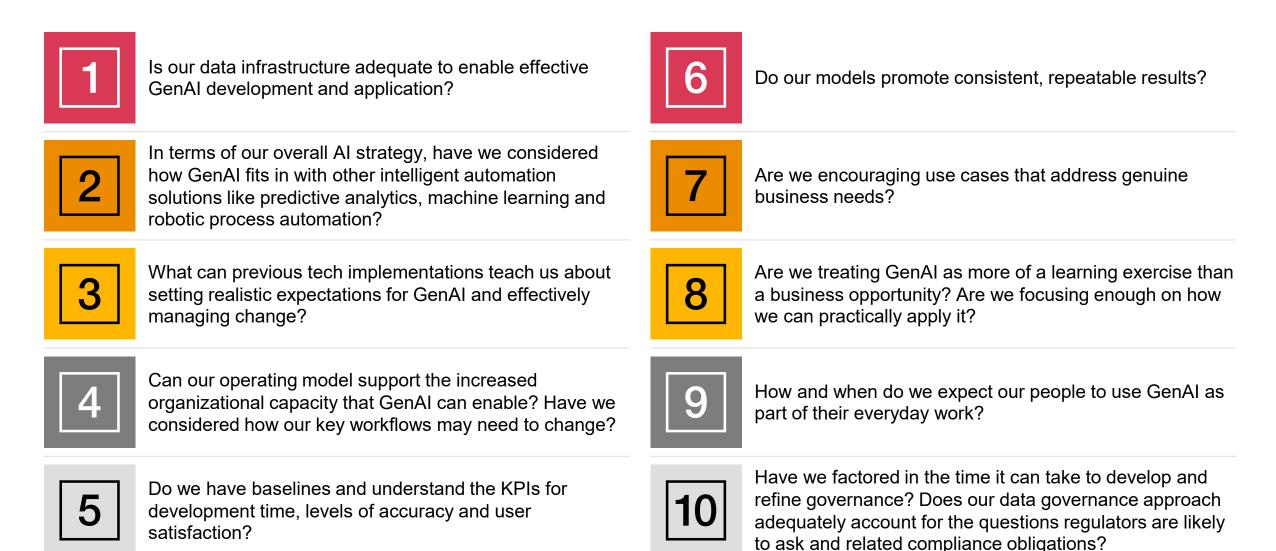
However — as has been the case with many new technologies — measurable return on investment (ROI) has been slow to materialize and insurers are struggling with how to reconcile their initial optimism with determining realistic returns.

While pilots serve as an essential testing ground to prove GenAI's viability and are stepping stones to broader adoption, their limited scale makes it difficult to assess their wider impact. They seldom produce significant financial returns, making it difficult to quantify short-term value. In fact, because carriers' traditional ROI models typically prioritize short-term financial gain relative to the cost of investment, they're unlikely to adequately capture GenAI's potential longer term value.

Accordingly, insurers should recalibrate the pace at which returns can materialize and how they measure them. As with any emerging technology, GenAI's true potential is most likely to come to fruition over time, especially when carriers thoughtfully implement it to support long-term growth and adaptability.

Ten questions to ask yourself when setting ROI expectations

1 Is our data infrastructure adequate to enable effective GenAI development and application?

2 In terms of our overall AI strategy, have we considered how GenAI fits in with other intelligent automation solutions like predictive analytics, machine learning and robotic process automation?

3 What can previous tech implementations teach us about setting realistic expectations for GenAI and effectively managing change?

4 Can our operating model support the increased organizational capacity that GenAI can enable? Have we considered how our key workflows may need to change?

5 Do we have baselines and understand the KPIs for development time, levels of accuracy and user satisfaction?

6 Do our models promote consistent, repeatable results?

7 Are we encouraging use cases that address genuine business needs?

8 Are we treating GenAI as more of a learning exercise than a business opportunity? Are we focusing enough on how we can practically apply it?

9 How and when do we expect our people to use GenAI as part of their everyday work?

10 Have we factored in the time it can take to develop and refine governance? Does our data governance approach adequately account for the questions regulators are likely to ask and related compliance obligations?

Obstacles to ROI

As is the case in many industries, carriers need to make a significant and time-consuming foundational investment to tangibly benefit from GenAI. For starters, users should develop and then enhance their understanding of the technology. There should be a clear, enterprise-wide plan for integrating the technology into everyday work, enhancing areas like product development, underwriting and claims management both as individual functions and how they work together. There's a related need for companies to improve organizational data literacy and governance processes and identify gaps, bias and other factors that could limit adoption of responsible GenAI. This is especially important in an industry that uses confidential, highly detailed customer information to assess risks and create products.

Insurers also face some industry-specific challenges that can significantly affect their GenAI development and use. There's a wide variety of statutory requirements, including the National Association of Insurance Commissioners (NAIC) model bulletin on insurers' use of AI systems, (which 11 states and Washington, DC have incorporated into their own bulletins), that can slow implementation of new technologies. Recent and evolving AI-specific regulations are further slowing widespread adoption as insurers and regulators alike navigate a complex technological landscape and evolving expectations for data accuracy and model governance.

Still, the biggest challenge by far is with data infrastructure and availability. GenAI's effectiveness hinges on its access to large volumes of high-quality data, but most insurers fall short in this area. Data is often trapped in silos and isn't readily accessible or of high enough quality for effective integration with GenAI applications. In addition, many carriers' data transfer capabilities aren't standardized or automated and there's often limited or only partial adherence to data standards across operations. Moreover, outdated legacy systems – which are the rule rather than the exception across the industry – are seldom compatible with modern data architecture, further complicating efforts to unify and leverage data across an organization. All this limits real-time integration of data from various departments into a single platform.

> **Insufficient data infrastructure and availability will limit ROI.**
> **But if you get them right for GenAI, then the rest of your tech initiatives should also benefit.**

Longer term ROI: GenAI's place in a broader tech and data strategy

For insurers, GenAI's potential ultimately depends on its place in a broader technology and data strategy. To effectively harness GenAI (as well as other innovations), you should first consider underpinning processes. Simply overlaying new technologies on outdated or ineffective workflows is unlikely to yield meaningful results. Without the technology to centralize data collection and standardize application, you're unlikely to drive scalable, long-term solutions that benefit more than just pockets of the business.

Moreover, GenAI is not a standalone solution. You can better realize its potential when it's part of a comprehensive AI strategy, working in concert with predictive analytics, machine learning, robotic process automation (RPA) and – most importantly – people. When leveraged properly, these technologies can boost each other's and human effectiveness, promoting greater efficiency, innovation and competitive advantage.

'Bionic' ROI: Humans and machines working together to meet customer needs

A life insurer is using GenAI-based software that applies natural language capabilities, machine learning and behavioral science principles to help call center agents improve their interactions with customers. The software assesses how calls are going in real time and lets agents know if they should alter their approach. In addition, using a complementary, web-based application, call center managers receive rankings in real time so they can intervene if a call score is low.

(Source: PwC research)

To capitalize on the increased organizational capacity that GenAI offers, carriers should reassess their operating models to confirm they can accommodate the evolving nature of work. As routine tasks are automated, roles will likely shift toward more strategic, analytical and high-value decision-making responsibilities. Say you're looking to GenAI to reduce routine administrative tasks, for instance. Are you also considering how to take advantage of increased organizational capacity? As a case in point, your underwriters could move from being responsible for a collection of line items to higher value portfolio management.

These shifts require defining and fulfilling new job responsibilities and workflows and, more foundationally, organizational readiness to enable change. Carriers should train and upskill employees to confidently use GenAI in their day-to-day tasks. By fostering a culture of trust and innovation in AI, carriers can enhance employee engagement and productivity over the long term.

Because this can take time to accomplish, you probably should rethink your approach to realizing value, acknowledging that GenAI's true potential is unlikely to be evident in traditional ROI calculations. We recommend expanding your focus beyond short-term financial gains to broader impacts on long-term strategic goals, including operational resilience, adaptability and scalability. In other words, you should approach GenAI as part of a foundational investment in technology and data that can fuel growth and innovation. You can of course continue to focus on measuring cost versus value, but you should establish just what that value is.
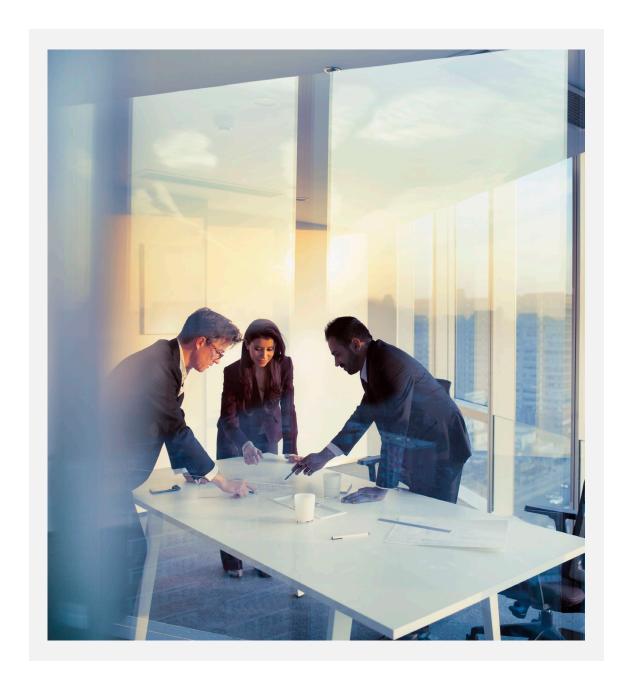
In the meantime, experimenting with early use cases and building reusable patterns can help you create a foundation for scalable solutions, laying the groundwork for more sophisticated use cases. To avoid dead-ends when integrating GenAI into operations, the results should serve broader business needs. And keep in mind that technology alone can't drive transformational change. As you establish use cases, it's important that developmental activity doesn't devolve just to your IT department. Tech functions focus more on technology than business outcomes. To avoid "over-architected" applications that may reflect the latest technical developments but neglect practical business objectives, end users should take an active role in developing and validating applications.

Underwriting and sales ROI: **Lowering costs and premiums while increasing operational efficiency**

An automotive insurer is using GenAI to analyze real-time driver data for automatic insurance pricing based on actual driving behavior. This has significantly reduced operational costs and improved application performance, resulting in higher profitability and lower premiums.

(Source: PwC research)

Understandably, you're likely to start by aiming for quick wins, probably with use cases specific to underwriting, claims and customer service. But you should bring those applications together sooner rather than later to serve a strategic, enterprise-wide purpose. Then, as GenAI integrates more deeply into core workflows, you can strengthen your operational resilience and agility, unlocking long-term strategic advantages that compound over time and help drive sustained growth and competitiveness.

Scalable ROI: Linking underwriting, claims and customer service

A commercial P&C carrier is using always on, multilingual GenAI-powered intelligent assistants that operate across channels to address risk appetite and underwriting queries. The bots summarize key exposures and generate insights using cited sources and databases. In the underwriting process, embedded smart tools assess and price risks. These tools also simplify back-office operations and claims management. With the added ability to immediately route repair requests to carrier partners, they also help carriers better serve customers, increasing their satisfaction and loyalty.

(Source: PwC research)

GenAI is not a standalone solution but part of a foundational investment in technology, data and people that can fuel future growth and innovation.

The importance of clear objectives and measurable KPIs

For insurers to effectively measure ROI from their GenAI initiatives, it's crucial to first define the strategic objectives behind each investment. GenAI adoption goals can vary widely, ranging from solving everyday problems by automating labor-intensive, manual tasks, enabling talent upskilling and facilitating sustainable growth at a lower cost point. Each objective requires its own key performance indicators (KPIs) to track progress and value.

Common insurer GenAI objectives		
Goal	**KPI focus areas**	**Example KPIs**
Achieving operational efficiency through automation of manual tasks.	• Average claims handling time savings • Efficiency gains • Process speed	• Reduction in processing time per task (e.g., claims processing time then being translated to the unit cost of a claim) • Decrease in manual operations error rates
Upskilling and workforce augmentation	• Human-AI collaboration • Skill development	• Number of employees adopting AI tools to enhance their everyday productivity • Time spent on AI-related upskilling programs • Improvement in employee performance post-training • Reduction in staff turnover due to improved job satisfaction

Cost avoidance and resource management	• Existing resources' ability to do more in the same amount of time or less
	  – Operational capacity improvements
	  – Cost-efficiency improvements
		• Growth in customer base without proportional growth in resources
		• Reduction in overtime or outsourcing expenses

To track ROI effectively, it's essential to establish clear KPIs for each objective, along with a plan that includes tollgates to measure progress at various stages of implementation. Regular evaluations against these KPIs can help you identify areas where GenAI initiatives are delivering value and where you should adjust to improve returns.

Contacts

Scott Froseth

Consulting principal, PwC US

Rima Safari

Consulting principal, PwC US

Marie Carr

Consulting principal, PwC US

Jim Quick

Insurance consulting leader, PwC US

PwC's Drew Ross also contributed to this report.