

Legacy modernization in insurance enables agility, AI readiness, and compliance by transforming core systems, data architecture, and operational models for competitive advantage and scalable innovation.

Legacy Modernization in the Insurance Industry: New Urgencies and Practical Approaches

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Questions posed by: Accenture and AWS

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Q. What does legacy modernization require in the context of modern insurance business practices?

A. Legacy modernization in insurance is no longer just a technological upgrade; it is a deliberate repositioning of the insurer's core capabilities to compete in an AI-driven, ecosystem-based market. In practical terms, this often means re-architecting the application landscape to take advantage of SaaS-based policy, claims, and billing platforms that can deliver agility without the long lead times of custom development. It may also involve shifting away from tightly coupled, monolithic systems toward API-first architectures that allow new capabilities, such as embedded distribution channels or on-demand product features, to be integrated quickly and with minimal disruption to the core.

Modernization also extends to operational efficiency. Moving off mainframe infrastructure and onto elastic cloud platforms reduces the cost to serve while enabling faster deployment cycles, real-time disaster recovery, and global scalability. For many insurers, this is paired with modernizing the analytics layer independently from the core systems. By upgrading analytics capabilities first through cloud-based data lakes or AI-ready data fabrics, for example, insurers can begin to capture early wins in pricing accuracy, customer targeting, and operational insight, even before fully addressing broader core system challenges. For example, if you look at the broader market acceptance, IDC's recent survey reveals that 29% of global insurers are actively engaged in legacy IT modernization, while 56% are working on modernization efforts but expect additional investment. Meanwhile, 11% of insurers have not yet embarked on modernization but plan to do so within the next 12–18 months. Similarly, the survey also reveals that 33% of insurers are currently working toward modernizing their core business processes, while 48% are working actively and simultaneously anticipating additional investment. Meanwhile, 13% of insurers are not yet working toward modernization efforts but plan to initiate them within the next 12–18 months.

Another important dimension is AI governance. As insurers scale predictive models across pricing, claims automation, and fraud detection, governance must be built into the architecture from the start. This means ensuring that models are explainable, auditable, and compliant by design, not as an afterthought. In this way, modernization becomes a strategic enabler of both innovation and control, allowing insurers to accelerate change while maintaining the trust of regulators, partners, and policyholders.

Q. What are the key factors prompting legacy modernization in today's insurance industry?

A. If you look at what's driving legacy modernization today, it really comes down to the insurance industry's growing need to enable smarter, risk-based pricing. Traditional actuarial models and batch-based legacy systems simply can't keep up with the shift toward personalized and usage-based insurance products. As insurers push to assess risk in real time using behavioral and contextual data, they're realizing that legacy systems aren't designed to process or respond to this kind of dynamic information. What modernization brings to the table is the ability to adopt cloud-native, modular architectures that support flexible, data-rich underwriting and pricing strategies. To put this into perspective, dynamic pricing strategies, aimed at optimizing product value and maximizing customer satisfaction, have emerged as a key driver for legacy modernization in the insurance industry. Notably, an IDC survey reveals that 33% of insurance companies identify this as a critical factor in executing customer engagement as a strategic business initiative.

In addition, AI and advanced analytics are absolutely central to this shift. Today's pricing models, for example, rely on high-frequency data from telematics, wearables, and IoT devices, which must be processed at scale and in near real time. That requires a robust cloud infrastructure and modern data pipelines. Embedded machine learning capabilities allow insurers to continuously refine pricing models, detect fraud or anomalies, and forecast claims with much greater precision. What we're seeing is that cloud-based ecosystems not only provide the scalability needed for this but also make it easier to connect with third-party data sources and insurtech partners, therefore speeding up innovation and improving customer segmentation.

On the regulatory front, there's rising scrutiny around algorithmic fairness, explainability, and audit trails. Legacy systems struggle here. Modern platforms offer the compliance flexibility that insurers need, whether it's governance workflows, model transparency, or real-time auditability. So, this isn't just about a tech uplift; it's a strategic enabler for pricing intelligence, agility, and future-ready compliance.

Q. What are the key barriers limiting insurers from accelerating legacy technology modernization?

A. One of the biggest challenges insurers face in modernizing legacy technology is the deep entanglement of these systems with their day-to-day operations. In many cases, core platforms have been heavily customized over decades to handle everything from product configuration to claims workflows. That level of dependency makes it difficult to simply lift and shift without introducing operational risk or business disruption. This complexity often results in a cautious, phased approach that can extend timelines and slow down the overall transformation momentum.

Another major barrier is data readiness. Legacy environments typically suffer from fragmented, inconsistent, and siloed data architectures. Before any modernization can take place, insurers need to address data quality, lineage, and integration challenges, especially if they aim to leverage AI for pricing or underwriting. Without clean, normalized, and accessible data, the value of any new platform, no matter how advanced it is, will be limited.

Finally, there's the cultural and organizational dimension. Many insurers still operate in traditional structures with limited digital fluency at the leadership or line-of-business level. The shift to agile, cloud-first, AI-powered systems isn't just a technical leap; it requires rethinking operating models, talent strategies, and even risk governance. Change management, legacy mindsets, and internal resistance can all act as friction points, making it harder for insurers to fully embrace modernization, even when the strategic intent is there.

Q. How would you guide insurers to overcome the challenges of modernization?

A. Insurers approaching legacy modernization must prioritize a phased, risk-aware strategy that aligns with clear business outcomes, such as smarter risk pricing, faster product launches, and enhanced regulatory responsiveness. Instead of a disruptive full core replacement, a modular approach targeting key domains such as pricing, claims, or policy administration, leveraging cloud-native microservices and API-first designs, allows incremental innovation without jeopardizing core operations. This method ensures quicker value realization and lowers operational risks during transformation.

A foundational element of this journey is establishing a cloud-native, unified data architecture that overcomes the fragmentation common in legacy environments. By implementing data lakehouses or federated data models, insurers can unify historical and real-time data to power AI-driven underwriting, pricing optimization, and regulatory compliance. Embedding explainability, auditability, and traceability into these data ecosystems enables responsible AI deployment while meeting increasing regulatory demands.

Beyond traditional ROI metrics, insurers need to reconsider modernization's value by asking critical business questions: Will modernization accelerate innovation in pricing and product development? Can data be monetized more securely and efficiently through ecosystem partnerships? Does a cloud-native platform reduce risk by enabling insurers to "fail fast" on pilots and scale successes quickly? Can analytics modernization deliver early benefits even before fully resolving legacy data challenges? Framing modernization this way shifts it from a technical project to a strategic enabler of agility, competitive advantage, and sustainable growth. Partnering with experienced cloud and consulting providers that offer accelerators, compliance-ready frameworks, and integration expertise further de-risks and expedites this journey.

Q. What final advice are you giving your client insurers about modernization?

A. Successful modernization requires viewing the journey as an ongoing, business-driven transformation rather than a onetime technology upgrade. Insurers should focus on initiatives that deliver clear, measurable value, whether enabling dynamic risk-based pricing, accelerating product innovation, or enhancing regulatory compliance. A modular, domain-

focused modernization strategy that enables incremental progress is preferable to a disruptive, large-scale system replacement.

Building a robust, cloud-native data foundation early in the process is critical. Without integrated, high-quality data and strong governance, advanced AI and automation efforts will struggle to achieve lasting impact. Embedding explainability, auditability, and compliance into the architecture from the outset ensures alignment with evolving regulatory standards.

Engaging with strategic partners and leveraging industry-specific platforms and accelerators can significantly reduce risk and speed delivery. Ultimately, modernization should be embraced as a continuous capability that enhances agility and resilience, positioning insurers to compete effectively in an increasingly digital and customer-centric market. The goal is to create a flexible and scalable digital core that supports ongoing innovation and operational excellence.

About the Analyst



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Surya Saha is research manager for IDC Financial Insights and is responsible for research in the banking, financial services, and insurance (BFSI) segment. His research covers insurance, banking and payments, blockchain technology, AI, digital transformation (DX), and other related emerging technology areas for the financial services industry.

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Insurers are under increasing pressure to deliver more personalized products, respond to market shifts faster, and meet rising regulatory demands. Achieving this requires more than a lift-and-shift approach — it calls for modernizing core systems, establishing a cloud-first foundation, and enhancing operational agility.

Accenture and AWS work with leading insurers to modernize mission-critical workloads, eliminating legacy bottlenecks, enabling AI-readiness, and building a foundation for scalable, automated, and resilient operations. This approach positions insurers to unlock the full value of cloud, accelerate innovation, and compete effectively. [Learn more.](#)

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