



Eight Ways to Power Your Digital Transformation with a Next-Generation Insurance Platform in the Cloud



The business imperative for digital transformation

Platform-based business models and strategies are driving the most profound global economic change since the Industrial Revolution. A platform is a business model that allows multiple participants (from producers to consumers) to connect to it, interacting with one another to create and exchange value.¹ Facebook, Airbnb, Uber, and Alibaba were all designed on platform business models.

It's not just tech and digital-born organizations that can use a platform model to accelerate both growth and profits. To stay competitive, insurers must break into the platform economy, developing new value-added services—and creating new sources of revenue by rethinking their traditional roles. And to do so, they need to combine digital technologies and cloud foundations.

The result will be a new generation of insurance applications that use mobility, data from Internet of Things (IoT) devices, and artificial intelligence (AI) to accelerate the product development and delivery of the rich, valuable digital experiences that today's customers expect. A successful insurance platform should easily connect insurers to new B2B and B2C ecosystems, opening up new channels and marketplaces. Cloud-based infrastructure and services can give insurers affordable, reliable, and scalable support for business applications and access to markets, while providing greater security and business continuity. And cloud-native design of insurance applications can give insurers further differentiated market agility—making the cloud a key enabler of the new digital insurance platform.

Insurance-specific challenges

To play in the digital economy, companies need to provide consistent, engaging customer experiences at each point in the customer journey, from the company website to social media to text and phone interactions. But because most legacy insurance systems weren't designed for digital connections, it can be challenging for insurers to offer customers the innovative, real-time digital experiences they expect—such as on-demand service, short-duration insurance coverage, and “photo-to-quote” or “photo-to-claims” processing.

Newer, more tech-savvy market entrants are using AI, machine learning, natural language technologies, and IoT data to improve customer interaction. They're perfecting bot interfaces to streamline applications and claims. And they're focused on the needs of the customer—a 180-degree shift from the industry's traditional policy-centric view. To compete, insurers must build digital-first business models that provide more value to customers and establish much higher levels of service, or find themselves out of business. Insurers that can supplement their deep industry expertise with the scalable

To remain competitive, **insurers must break into the platform economy**—and to do so, they need **innovative digital technologies** that **leverage a cloud foundation**.

¹ Tanguy Catlin, Johannes-Tobias Lorenz, Jahnavi Nandan, Shirish Sharma, and Andreas Waschto, “Insurance beyond digital: The rise of ecosystems and platforms.” McKinsey & Company, January 2018.

computing power of the modern cloud and a unified digital core will survive, and even thrive. Armed with this combination, they'll be positioned to create an engaging customer-centric experience by leveraging insights that drive both profitability and customer loyalty while operating more efficiently.

Becoming a digital insurer

To achieve the transformation to “digital insurer”—and to successfully operate in the emerging consumer and B2B ecosystems—insurers need to achieve two connected goals:

- Replace core systems with a next-generation digital insurance platform that provides a real-time, insight-driven interactive customer experience across multiple channels.
- Use a cloud environment to provide security, speed, and performance at lower cost and less risk.

A digital-ready insurance platform can accelerate innovation while reducing both risk and cost for insurers. Modern cloud architecture natively supports these new digital business models, offering insurers much greater agility, scalability, and performance.

Let's look at how next-generation, digital-ready insurance platforms power digital transformation in eight important ways:

- 1. Design and deliver exceptional digital experiences**
- 2. Accelerate time to value**
- 3. Design for the cloud**
- 4. Connect to new ecosystems**
- 5. Unify operations and analytics to power real-time user experiences**
- 6. Increase agility and scalability with infrastructure as code**
- 7. Meet security and business continuity requirements and AI**
- 8. Optimize the new world of data analytics**

Customer-centricity has been slow to take hold in the insurance industry:

56%

of insurance customers in mature global markets have had no interactions with their carriers in the last 18 months.

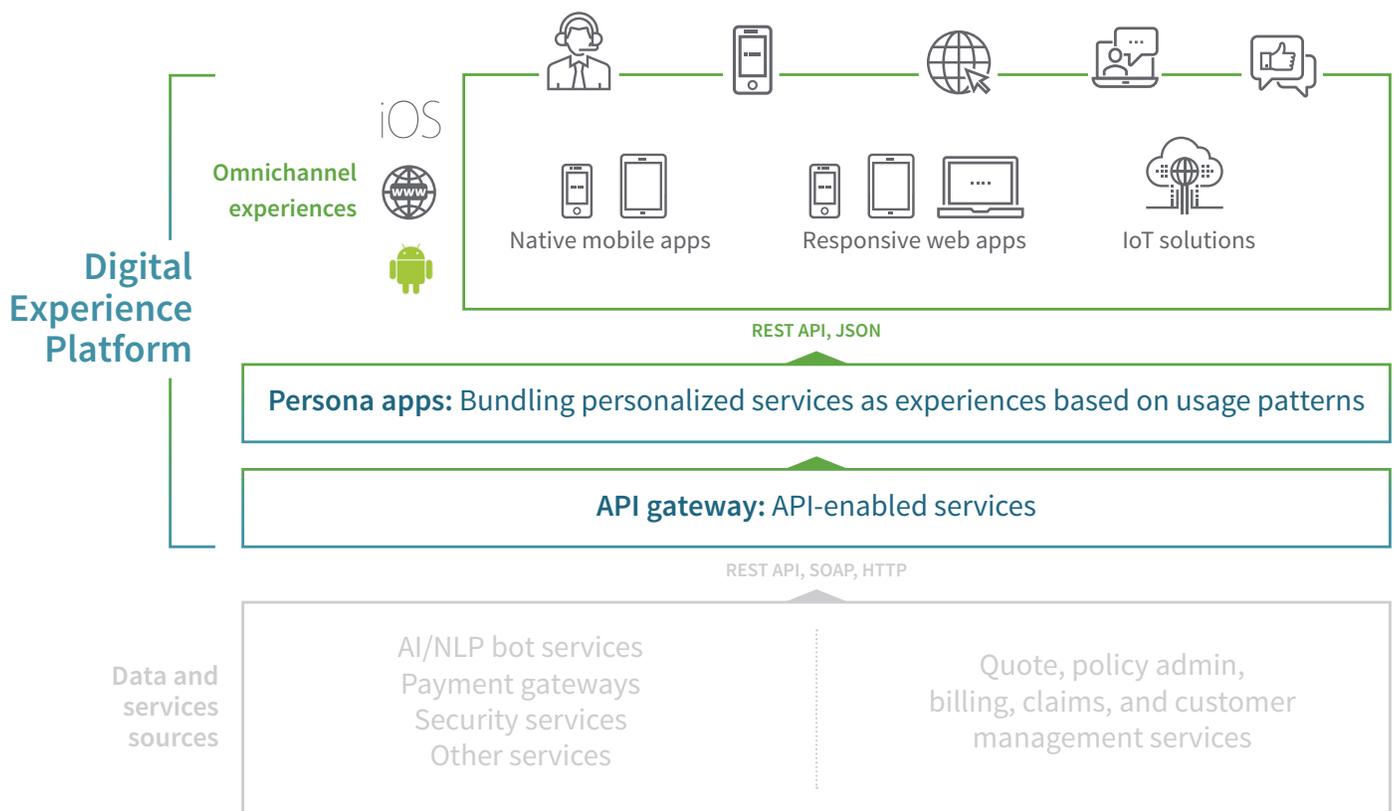
Source: EY Global Customer Insurance Survey

1. Design and deliver exceptional digital experiences.

Consumers expect the same quality experience with insurers that they enjoy with other brands and products. To deliver it, insurers need to put a priority on the ability to provide a consistent, high-quality customer experience, one that's tested, optimized, and authenticated across all mobile and web platforms and every customer interface, including phone, online, text, chat, virtual assistant, and social media. Persona-driven design of these experiences ensures the right capabilities for the right user.

To do this, insurers need a platform that will create and deliver digital experiences. For example, an application programming interface (API) gateway could provide API-based capabilities from core applications and third-party sources to persona-focused design applications. The result is the ability to produce an unlimited number of web and mobile apps and applets—for everything from customer self-service to claims adjusting and agent administration. A modern cloud provider can support this digital experience, giving insurers access to powerful AI cloud services for building chatbots and natural language processing.

With this combination, an insurer could let policyholders interact through their preferred digital channels—and begin to monitor digital signals for customer sentiment and insights that drive proactive engagement.



2. Accelerate time to value.

Today's consumers expect innovative products and offerings, including on-demand products with usage-based pricing and chatbot interfaces. To meet these expectations, insurers need a digital platform that allows them to quickly configure new products and continually extend the platform to meet client needs. A DevOps approach can help here, making it easier to propose, design, and test production versions. Rather than attempting to retool an entire application or system all at once, DevOps focuses on rapid and continuous deployment of a small number of changes. It empowers an insurer to truly adopt a practice of continuous integration and continuous delivery (CI/CD), where the development team works on multiple capabilities in parallel, tests and integrates their work more frequently (vs. saving up changes for a "big bang" upgrade), and releases software in shorter cycles. The result is higher-quality code and faster innovation, with lower overall implementation risk. Microservices—with their modular design, decentralized data management, and implicit tolerance for failure—fit well into the CI/CD process, further accelerating software delivery.

Furthermore, as insurers add new features and upgrade existing functionality, a cloud environment makes it easier to automate development and test cycles, minimizing downtime. Insurers can quickly deploy testing and development environments, rather than being limited by a single on-premises environment. Advanced cloud-based testing capabilities also let insurers quickly validate regression testing, realizing up to 75% time savings over traditional testing methods.²

In fact, a recent Celent report found that "cloud infrastructure contributes significantly to the two-thirds cost savings" identified when insurers adopted cloud, API, and microservices architecture along with DevOps, agile, and customer-centered design techniques to launch new products.³

An innovative insurer can roll out new functions to customers multiple times a month, instead of just a few times each year. And with the cloud provider handling encryption, resistance, and authentication, the insurer is free to focus on product innovation and customer service.

CUSTOMER STORY 01

Automated testing at CSAA Insurance Group

CSAA Insurance Group chose to automate testing in its modernized policy administration system with an EIS® testing framework on an AWS environment. The results:

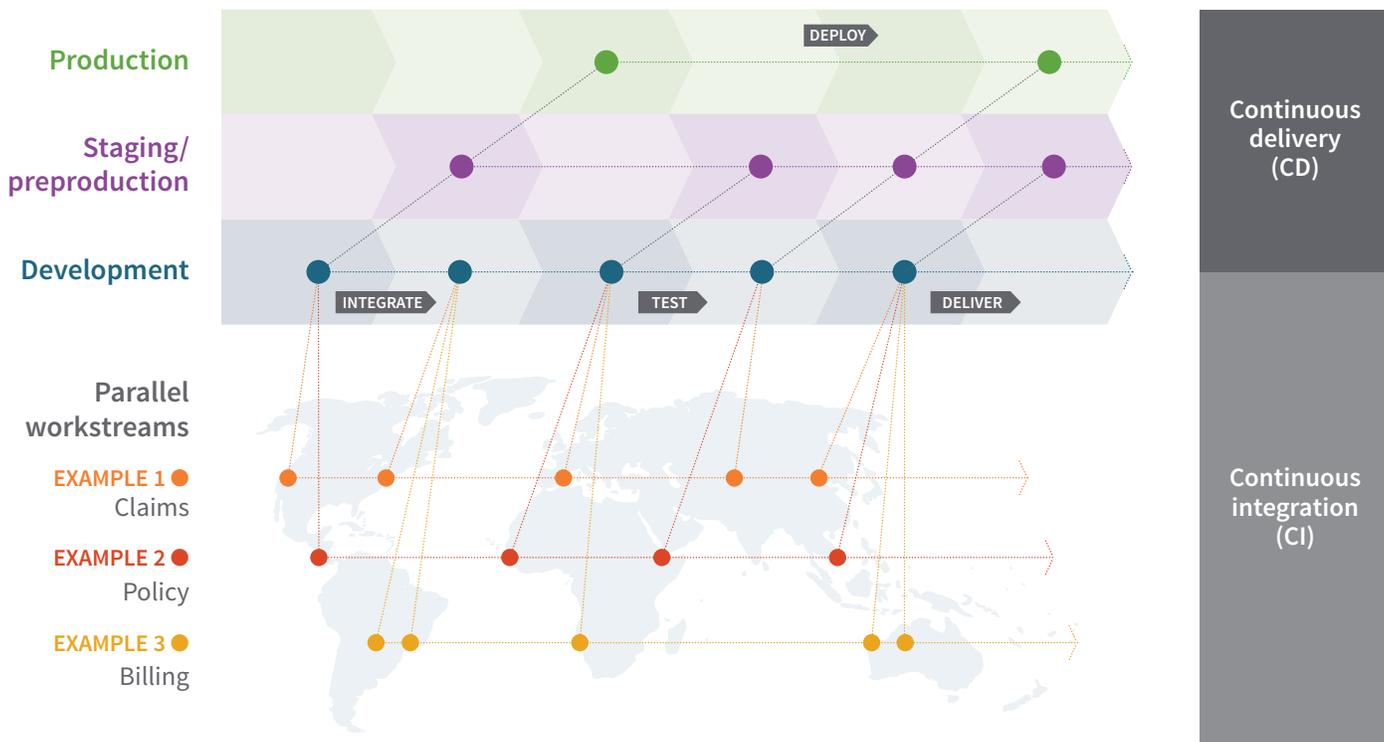
- 60% fewer production defects
- 75% reduction in full regression testing time
- 40% faster execution time
- 30% fewer environmental defects

The company estimates that the framework saved tens of millions of dollars, streamlined the core policy replacement program by at least a year, and sped the realization of benefits.⁴

^{2,4} *Automated Testing at CSAA Insurance Group: Improved quality and speed with EIS Group and AWS solution*, EIS Group, December 2017.

³ Michael Fitzgerald and Tom Scales, "The New Recipe That is Changing Insurance," Celent, February 2018.

Solution Delivery in the Cloud



CI/CD in the cloud enables global parallel development and testing, to provide frequent and faster delivery of user capabilities of a higher quality.

3. Design for the cloud.

A large number of insurers still rely on decades-old mainframe systems and legacy applications. Converting old code to run in the cloud can be complex and expensive, making it one of the biggest hurdles for modernization. To take full advantage of the cloud, insurers need software designed for it—a cloud-native architecture. This means swapping out specialized or tailored code (which essentially leads to tomorrow’s legacy systems) for a modular, agile, and interconnected system of digital capabilities and microservices that IT can create, reconfigure, or replace as needed.

Microservices is a software design approach that focuses on “smaller is better.” Critically, it mirrors the structure of the cloud. With microservices architecture, apps are built as a distributed collection of services, pairing perfectly with the distributed nature of the cloud. Historically, application architecture was approached in terms of component design—components were part of something larger and monolithic, with little inherent value on their own. In contrast, microservices, while not inherently part of a larger entity, create innate value and can still work within a larger context. By breaking business capability into smaller pieces, they make it easier to fine-tune the larger capability by replacing or upgrading only the relevant microservice.

Another advantage: Microservices are reusable. For example, a single bill generation module can be reused across lines of business, and even outside of insurance. Underlying microservices architecture is the rise of the “container” approach for lightweight delivery of microservices within the cloud.

Evolution to Cloud-Native Architecture

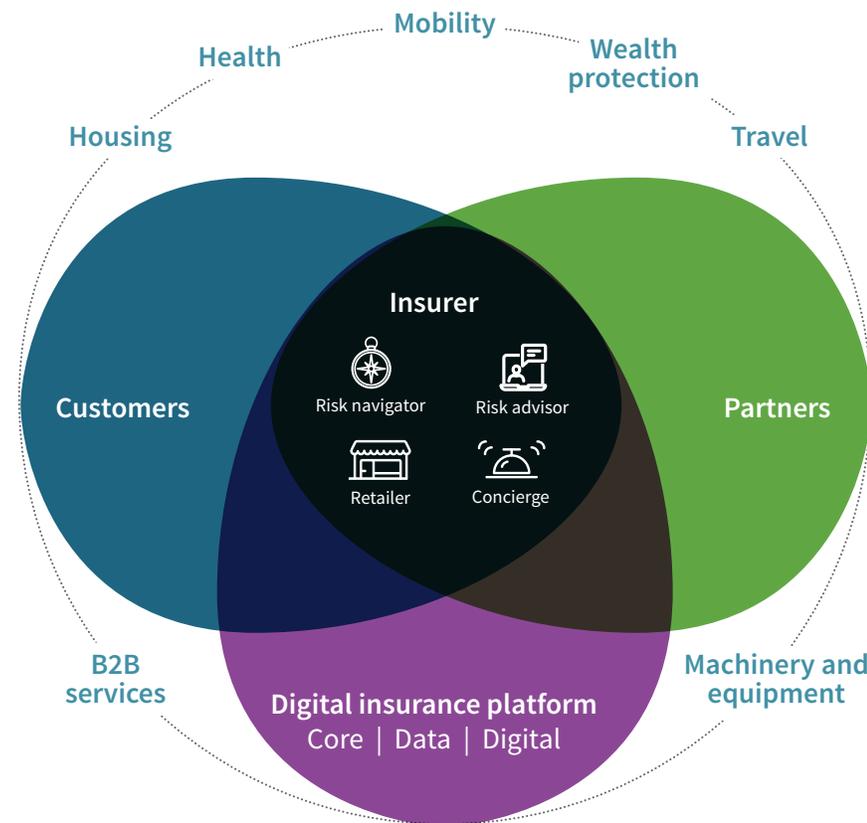


	Enterprise/Cloud Immigrant	Cloud-Native
Architecture	Layered/monolithic	Microservices
Updates	Infrequent (months)	Frequent (weeks/days)
Resiliency	Infrastructure redundancy	Resilient application architecture
Scalability	Static; expensive to scale	Elastic
Expertise required	High/expensive	Low/affordable

4. Connect to new ecosystems.

To stay competitive in the new platform economy, a company needs to structure itself around a customer-focused core and digital platform that can easily integrate with multiple business ecosystems—networks of organizations that include everyone from suppliers to customers. McKinsey predicts that as businesses become more and more interdependent within and across categories, traditional industry boundaries will be eclipsed by a set of massive, distinctive ecosystems clustered around fundamental human and organizational needs.

The firm predicts that by 2025, 12 major ecosystems will account for \$60 trillion in revenues, or roughly 30% of all global revenue.⁵ Insurers can play multiple roles in any of several ecosystems—including mobility, housing, health, wealth protection, and travel. The mobility ecosystem, for example, offers opportunities to expand into areas such as vehicle purchase and maintenance management, ridesharing/carpooling, traffic management, vehicle connectivity, and parking. Or insurers could orchestrate a risk-management ecosystem, made up of cloud providers, cybersecurity experts, and providers of anonymized customer data, to offer prevention and post-breach response services. In each of these cases, insurers could use APIs to “plug and unplug” capabilities—a solution that’s easier, faster, and less expensive than either developing capabilities in house or using third-party bespoke solutions.



Insurers can play multiple roles in several ecosystems, expanding distribution and growing revenue.

94%

of insurance executives agree that adopting a platform-based business model and engaging in ecosystems with digital partners are critical to their business.

Source: Accenture Insurance Vision 2017

⁵ Tanguy Catlin, Johannes-Tobias Lorenz, Jahnvi Nandan, Shirish Sharma, and Andreas Waschto, "Insurance beyond digital: The rise of ecosystems and platforms," McKinsey & Company, January 2018.

5. Unify operations and analytics to power real-time user experiences.

Today, most insurers want applications and data architectures that have the ability to support real-time engagement. But until insurers can fully address the lack of a unified core and digital platform—and the subsequent inability to deliver real-time analytics—the benefits of pursuing a more customer-focused business model are likely to be elusive.

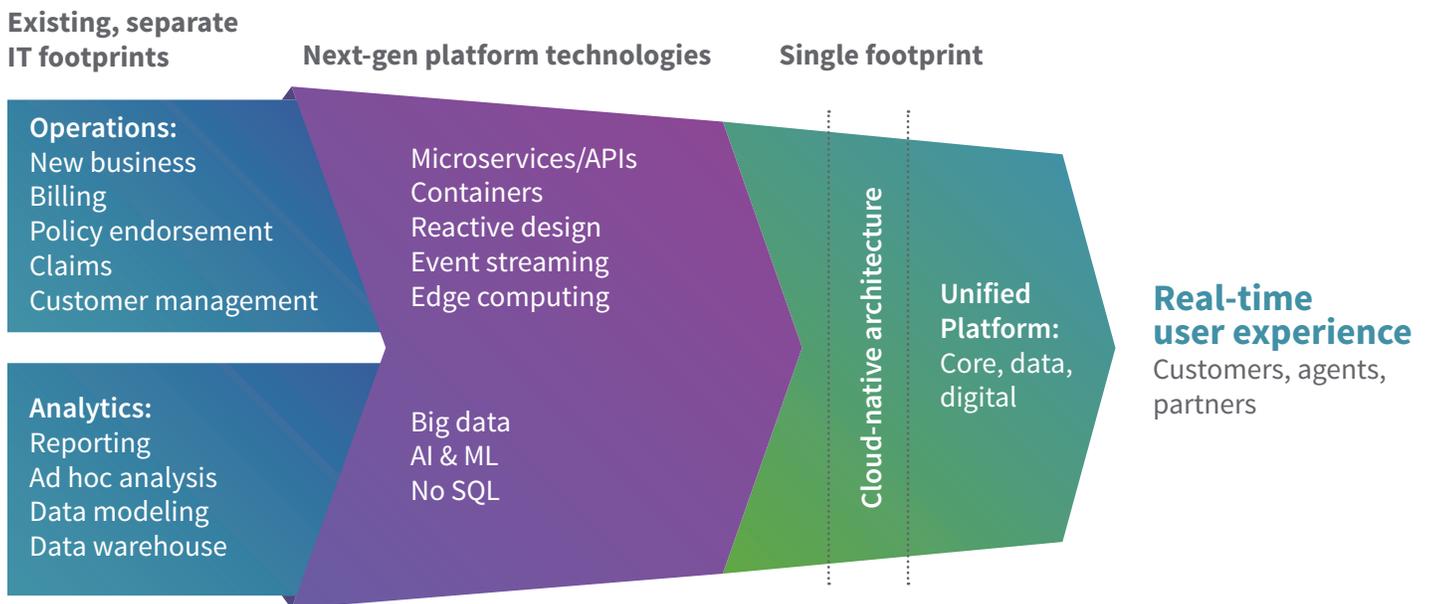
The separate footprints of operational and analytical systems creates a lag that hampers the ability to quickly gain advantage from analytical insights. Cloud-native architectures and new serverless cloud services can remove that gap, leading to integrated solutions, with no constraints on performance or data size, that could support the application of insights at point of sale or point of interaction. This is where the combination of new digital channels, event processing to include serverless technologies, and advanced analytics with AI and machine learning can enable the agility required for real-time interactions. With real-time insight, for example, an insurer can immediately identify a fraudulent claim, an imminent risk, or a timely product or service to offer to a policyholder.

Furthermore, traditional data warehouses can't support the bigger, broader datasets needed for digital transformation. Cloud-based infrastructure and services, in contrast, provide the rapid data flow and analysis needed to integrate complex data directly into each transaction.

CUSTOMER STORY 02

Liberty Mutual benefits from state-of-the-art business platform

Liberty Mutual chose EIS® Core Insurance Suite™ to help its benefits business unit speed time to market, reduce quote-to-issue time, and increase overall efficiency. Testing and deploying its core system on the AWS cloud yielded a 40% savings on infrastructure costs compared to traditional deployment methods.⁶



Moving from separate operations and analytics platforms to a unified platform supports real-time user experience.

⁶ Liberty Mutual Benefits leverages EIS Group for a strategic state-of-the-art single business platform, EIS Group, May 2017.

Pacific Life overcomes legacy hardware constraints

Pacific Life was looking for an agile platform that could scale to support the company's high-performance computing needs, including faster actuarial calculations to set pricing and create new products. On AWS, Pacific Life reduced capital investments and infrastructure costs, increased compliance and security capabilities, and accelerated go-to-market timelines for products and services. The company can now meet computing demands in minutes, not months.⁸

6. Increase agility and scalability with infrastructure as code.

Using a cloud environment, insurers can rapidly provision the exact infrastructure they need using code alone. IT no longer has to manage and provision the physical aspects of data centers, storage, and warehouses. Instead, developers can write a few scripts to build and provision the infrastructure they need, spending the time saved on improving product and service quality. It's easy, for example, to spin up a new development environment, or even a preconfigured core system instance. Infrastructure as code also allows developers to test new features and integrations without waiting for a fixed set of environments to become available. When testing is needed, scripts build a new environment, run the tests, and then shut it back down. You pay only for the time you actually need the environment.

A cloud architecture also allows insurers to manage only the infrastructure they need, when they need it. For example, an insurer may need up to 20 servers at peak hours, but only two servers at 2 AM. With flexible cloud deployment, it can use only the server space needed at any given time—quickly provisioning on the fly, and scaling as needed without overinvesting in hardware.

7. Meet security and business continuity requirements and AI.

Data security is headline news. Hackers are becoming more brazen, and regulators more strict. Insurance providers deal with some of the most sensitive medical and personal data out there, and must go to great lengths to protect it. Some insurers use SOC2 Type 2 accreditation to provide a third-party attestation and demonstrate competency in data security, confidentiality, availability, integrity, and privacy processing. But in many cases, those benefits can be obtained more quickly and affordably with a move to the cloud, where frequent server instance backups, data redundancy replication, and multi-region and multi-availability zone deployment architectures can easily secure both services and data. When a cloud provider makes a security enhancement for one customer, it can be made available to all customers, providing increased protection from global threats by raising the level of security to meet the most stringent requirements. According to a recent Novarica study, in 2016 fewer than 20% of insurers were using cloud computing anywhere in their technology infrastructures. Today, the estimate is more than 70%, with the majority considering cloud security a clear advantage.⁷

⁷ Novarica, *Cloud Adoption in Insurance: Trends and Issues*, March 2018.

⁸ *AWS Case Study: Pacific Life Insurance*, AWS.

8. Optimize the new world of data analytics and AI.

Traditional data analytics were based on the premise that carriers know what metrics they want to measure, and can set up structured processes to collect and report that data. But IoT data, for example, offers carriers massively larger, broader datasets, which can help insurers better understand both policyholders and risks. In addition, data lakes and AI and machine learning let carriers take new approaches to aggregating and analyzing both internal and external data—and identify new signals leading to greater insights into customer life events. Imagine the possibilities if a carrier could blend historical data, device data, signals from more frequent voice or chatbot interactions, and external and unstructured data. How much better could companies understand the life events of their policyholders and related insurance triggers? From those insights, could they optimize their product and channel strategies? What valuable, next-best-offer guidance could they give agents, brokers, and advisors?

Such new ways to identify digital signals can help insurers build better and more intimate views of each customer, anticipate needs, and offer the best product or service, at the right time through the right channel. Insurers can also analyze their underwriting assumptions to better price their products; use device and interaction data to recreate and review the claim environment; and control loss ratios, better assign blame, and detect fraud.

These scenarios require sophisticated but cost-efficient support for real-time streaming and analytics, cloud-based data storage and data lakes, petabyte-scale warehousing, business intelligence tools, and models running in machine learning—factors possible only in a powerful cloud data environment.

EIS Group and Amazon Web Services: Ready for the platform economy

To compete in the new platform economy, insurance businesses need modern core and digital platforms built on advanced cloud solutions. With an EIS digital insurance platform on AWS cloud infrastructure, insurers can enjoy a wide range of benefits:

- Increased business agility and innovation
- Modern experiences that attract next-generation policyholders
- Ongoing access to new digital technologies and ecosystems
- Faster deployment, easier maintenance, and smoother and more frequent business capability upgrades
- True elastic scalability in a secure, reliable environment—at a far lower cost

Unlike legacy insurance systems, the EIS platform is made for the digital-everywhere age. It moves carriers closer to their customers by unifying the entire insurance lifecycle; establishing a rich, holistic, and adaptive experience for customers; and allowing insurers to freely connect to existing and new ecosystems.

Experience Insight Core



PolicyCore
Policy administration, underwriting, and rating

BillingCore
Billing, finance, and commissions

ClaimCore
Claims evaluation, payment, and auto adjudication

CustomerCore
Campaigns and lead/opportunity management

EIS DXP
Digital experience platform

With AWS, insurers gain access to a market leader’s extensive resources and service offerings. Driven by the needs of innovative customers and partners in a wide range of industries, AWS makes leading-edge technology and advanced services, from security tools to voice recognition features, available to all its partners and customers. For insurers, that means the freedom to focus on product and service innovation, with direct benefits for both customers and the bottom line.

“Putting customers at the center of your business requires the speed and agility of modern core and digital systems supported by cloud infrastructure and services. With EIS Group’s digital insurance platform, insurers can take advantage of innovative services in the cloud as they become available—including identity-based security, IoT device data analysis, natural language services, data lakes, and artificial intelligence and machine learning. EIS Group customers can more quickly leverage data, configure new products for market, launch digital channels and listen and respond to their customers — helping them outpace industry disruption.”

— **Tony Jacob**
AWS Global Business Development Lead, Insurance

About EIS Group

EIS Group moves insurance carriers closer to their customers. Leading insurers use the EIS digital insurance platform to build and deliver fast, simple, engaging experiences across the entire insurance lifecycle—quoting, policy administration, billing, claims, and service. The cloud-enabled platform of core, experience, and insight solutions empowers insurers to innovate faster, reduce costs, and create competitive advantages. Headquartered in San Francisco, EIS Group powers digital insurance for property/casualty and benefits insurers of all sizes, worldwide.



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