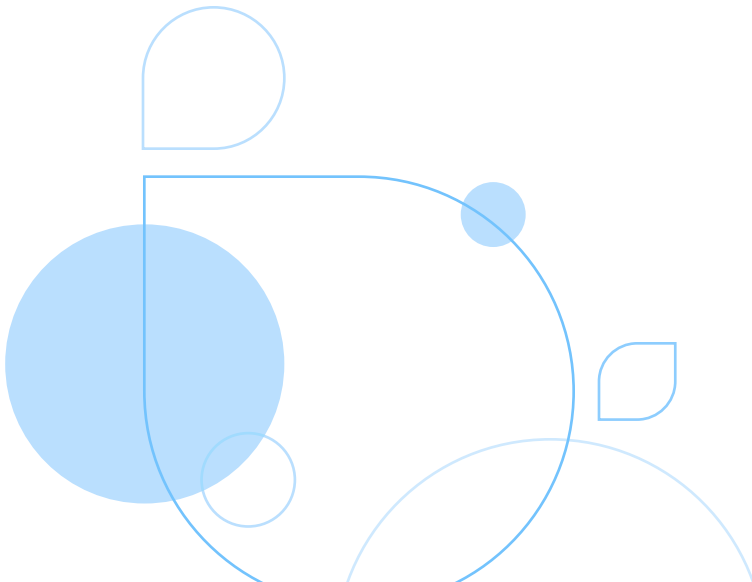# How to compete in the new era of customer-centric insurance

Adopt an agile pricing strategy that recognizes changing behavior and risk profiles

Contents

People are generating more data than ever, giving insurers new insights into customer behavior and risk profiles. This is transforming the industry and leading to innovative, customer-centric products. For those looking to compete or grow, the challenge is how to build and maintain a new breed of pricing models at scale using machine learning and advanced analytics.

A changing consumer landscape

People navigate their lives in radically different ways today compared to just a few years ago. The digital revolution continues to transform all aspects of how we live, work, socialize, communicate, travel and consume.

If you're starting a new job today, for example, it's less likely to involve a traditional nine-to-five routine. Flexible working is on the rise as technology makes it easier to be productive away from the office. The outlook for remote work is strong, with **54% of companies reporting** increases in the number of total full-time employees working remotely. **Estimates show** that 73% of all departments will have remote workers in the near future.

Today's workforce is also less dependent on a regular salary – and many don't look for this. Younger generations are often happy to move around and change jobs or professions. They're comfortable with a "portfolio career," where they work multiple jobs, have a side hustle to pursue a passion project or use the gig economy to supplement their income when needed.

According to Upwork, as many as 78% of all companies use remote freelancers. And 45% of the companies surveyed plan to hire more freelancers in the future, **according to Payoneer's Global Freelancer Insights Report**.

The generational shift to a more flexible lifestyle has brought a new perspective to two big life purchases: a house and a car. It used to be that getting a mortgage and owning your own vehicle went hand in hand with getting that first proper job. But today, many see these as liabilities rather than assets. Younger people can see ownership as a burden or a restriction, so they may be happier to rent, share and pay for services as they go.

Economics and market conditions are key underlying factors in this, but the shift has also been driven by the rise of mobile phones, always-on connectivity and app-based services like Uber, Deliveroo and Airbnb. People have embraced the flexibility and choice that these digital services enable with just a tap and a swipe. And this mode of accessing services has quickly become the default expectation – leading to the cross-industry mantra of digital transformation. Such expectations are why nearly all organizations have a strategy to modernize their operations.

The effects on the insurance industry run even deeper.

> People have embraced the flexibility and choice that digital services enable with just a tap and a swipe.

New expectations for insurers

There are several interlinking implications of the digital revolution for insurers – and all are imperative for thriving and surviving in a competitive market.

Keeping pace with new entrants that offer modern, Uber-like user experiences

As with virtually all customers today, insurance customers want their web or app interfaces to be easy to use. They also want meaningful self-service capabilities. And if they need to get in touch with their insurer, they want a unified experience without repeating information along the way.

Providing services and products that offer suitable coverage for changing behavior and risk profiles

Even the best user experience will count for nothing if you don't offer the right services at the start. As people pursue new work patterns, lifestyles and consumption models, they face different risks. As a result, they want and need new types of insurance. To meet these needs, consider offering:

Pay-as-you-go or pay-as-you-drive auto insurance – often used for situations such as borrowing a friend's car for the weekend.

Quick and easy replacement of essential life items (e.g., phone, laptop, headset).

Per-day professional indemnity and cybersecurity coverage for freelance and contract work.

Scooter insurance to cover periods as short as one hour (perfect for delivery drivers, for example).

Autonomous car insurance that covers loss or damage caused by operating system failures.

Rewarding customers for lower-risk behavior via fair pricing and other perks

To meet high customer expectations, insurers can provide:

- Health insurance plans (or "schemes") with lower premiums and other benefits to reward people who adopt a healthier lifestyle. You can use data from subsidized wearable devices to collect this information.
- "Black box" car insurance that lowers monthly premiums based on safe and responsible driving habits. For proof, use data recorded by vehicle telematics and GPS.
- Transparent prices at renewal time to reassure existing customers they're getting a fair and competitive deal.

New challenges to overcome

Beyond the balancing act of competing on price while optimizing profit, insurers and their pricing teams must meet customer demands for more adaptable and personalized policies. Insurers need to understand that as customers live more flexible lifestyles with different risk profiles, they're also seeking more innovative products with fair and transparent prices.

It's vital for insurers to get the nuances right, too, such as auto-renewals. While treating customers fairly and giving them the freedom to choose the best-priced policy, the onus is on insurers to ensure they don't knowingly leave customers exposed without insurance.

Building trust with customers allows insurers to factor in a broader set of data sources (e.g., location data, device information, real-time health stats) so they can build new pricing and risk models capable of responding to new customer expectations. This is what the new breed of digital-native insurers do so well. Traditional insurers that fail to adapt face an existential risk.

Market changes affecting insurers

Data science, pricing and IT teams striving to adapt to market changes in today's landscape must account for a variety of factors:

- Increasing competition (e.g., online comparison sites).

- New data sources that drive new pricing opportunities (e.g., from telematics and wearable devices).

- Changing customer attitudes that present risks to retention and loyalty.

- The rapid, pandemic-driven shift toward interacting with customers through digital channels.

Adapt model development – traditional methods can't keep pace

The model development life cycle many insurers follow has served the industry well for many years.

But the market is moving faster than ever before. Increased demand for innovative new product types, policy durations and pricing strategies is starting to expose inefficiencies in the development process – limiting the effectiveness of the resulting models. And it takes too long to prepare data, as insurers have increasing sources and variables to consider.
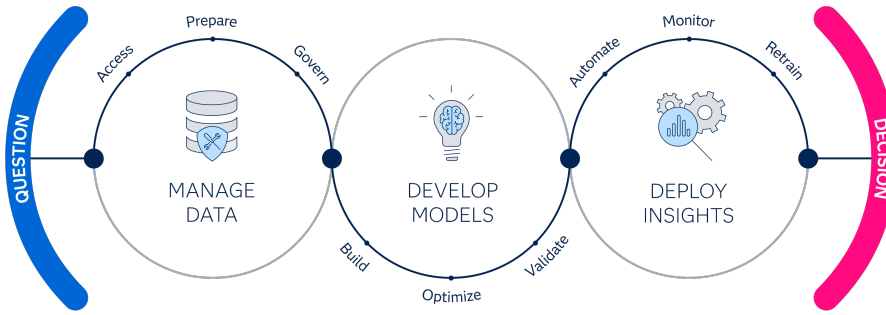
With SAS®, insurers can use a single AI and analytics platform to manage data, develop models and deploy insights.

For many insurers, the key steps in the modeling life cycle are fragmented, with inherent limitations on the volume of data and range of analytical techniques that can be applied. Meanwhile, competitors are seizing the benefits of machine learning and taking market share from those who don't respond and find their own edge.

As pressure increases on teams to better price risks and improve speed to market, they face hurdles at every step of the actuarial modeling life cycle.

Manage data access, preparation and governance (DataOps)

Fragmented and exploding data volumes raise more data quality issues and expose inefficiencies in data preparation processes. Skilled people spend a lot of time cleaning and preparing data manually, leaving less time to focus on high-value tasks like model development or deployment.

Data has always helped inform decisions and improve performance. But as data sets grow to an enormous scale – with new information from connected devices and digitally tracked behavior – it has become nearly impossible to clean and interrogate data manually.

Facing limitations in storage and processing power, insurers often resort to using data samples. Sampling, in turn, limits their ability to explore new analytic approaches or modeling techniques. This approach also raises the likelihood of losing access to valuable, unique insights. To get insights from data analytics faster, insurers can follow a DataOps approach that integrates data engineering, integration, quality, security and data privacy with operations.

Manage and scale models across the business (ModelOps)

Insurers need to look beyond linear models for pricing and recognize the ongoing efforts required for model maintenance. They need to explore a broader range of models and adopt a "champion challenger" approach to identify which models provide the appropriate level of accuracy. This needs to be done with solid governance throughout the process – from raw data collection through model selection, deployment and constant performance monitoring. Models developed in open source languages should also be encapsulated to maximize skills across the analytics community.

We need to become accustomed to working with larger, event-based data sets to help us explore new digital insights that give us a competitive advantage.
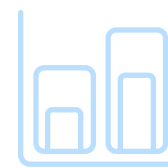
50%+ GAIN

Using SAS, a **German insurer** estimates a more than 50% gain in efficiency in the technical pricing process.

AI is one way that insurers can become more competitive and improve their processes. A large part of the pricing process can be automated through features linked to explainable and transparent AI – which frees valuable time for pricing teams to focus on value-added tasks.

Traditionally, once models were up and running, they were tracked and monitored manually. But as the number of models increases, this approach isn't sustainable for time-pressured teams. As regulators increase their watch over the industry to ensure fairness and transparency, insurers must find ways to automate model monitoring and retraining.

We've seen how insurers are under increasing pressure to bring new products to market quicker, as customers demand new and innovative insurance products to fit their changing lifestyles – and how this requires a more agile development process. Insurers also need to consider more granular risk segmentation, applying more models to more segments of customers to win more market share at the right price.

Using SAS® for actuarial transformation, insurers can:

- Improve time to market and boost business value with advanced pricing analytics.

- Optimize portfolio profitability with accurate renewals and acquisitions information.

- Ensure your intended price is delivered with price execution and governance capabilities.

- Consistently apply GLMs/GAMs to risks using embedded AI capabilities.

- Reduce silos, automate processes and facilitate collaboration among actuaries, finance and IT.

It's a challenge familiar to many other industries, where traditional companies are pursuing digital transformation to keep pace with start-up disruptors and tech giants that offer more personalized, modern, app-based services.

To keep up with all the demands, insurers need to send models as quickly as possible from the lab to validation and testing and then into deployment – while ensuring quality results. The aim is to operationalize analytics – that is, incorporate the results of models into pricing decisions – by fostering dynamic collaboration and improved productivity between teams. This type of approach, called ModelOps, enables teams to:

- Develop and deploy models smoothly and efficiently.
- Manage and scale models to meet demand.
- Monitor models continuously to spot and fix early signs of degradation.

Data

- Access any size, complexity or speed of data from trusted sources.

- Integrate the data and prepare it for analytics.

- Align your data with privacy and security standards.

Models

- Build models rapidly, with a deployment scenario in mind (to avoid rework).

- Manage and deploy models with ease – monitor and retrain models as they degrade.

- Use intuitive machine learning tools with programming language flexibility for all skill levels.
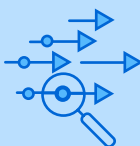
Governance

- Track data lineage from start to finish, staying prepared for governance and audit compliance.

- Gain transparency into how your models are built and tuned.

- Make decisions you can trust – and verify the value of results at any scale.

Enabling the last mile of analytics

To fully capitalize on today's environment, where hundreds of complex models are deployed and maintained, insurers need assurance that their efforts are driving real business results.

You need to know that all the complex rules and decisions you're deploying support the right outcomes – that the business accurately understands each customer's risk profile, that customers are offered the right coverage at the right price, and that they see you as an innovative and responsive provider.

This means getting the "last mile" of analytics right – by surfacing customer insights via APIs across your business systems so all teams can deliver the best possible service and experience. To help with this, SAS provides an end-to-end pricing solution with innovative, AI-based premium modeling.

Our solution helps reduce silos, automate processes and facilitate cross-departmental collaboration among actuaries, finance and IT. It includes data management (including data quality controls), modeling, deployment and integrated reporting capabilities. Through industry-leading analytics, SAS helps insurance companies boost the agility and accuracy of modeling so they can deliver real-time quotations based on customizable model parameters and decision factors.
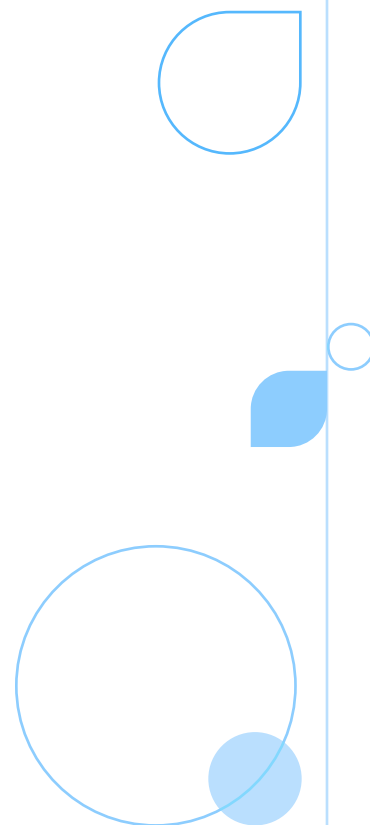
Make decisions faster (DecisionOps)

Only a small percentage of machine learning models ever go live. After actuaries and data scientists develop new models, the next challenge involves incorporating their results into pricing decisions.

Organizations that want to become true market leaders must be adept at deploying and managing tens or even hundreds of models – and then making decisions based on holistic market information. This needs to be done with full transparency into the premium (i.e., insurance rate) determination framework – that is, how models and business rules are integrated to determine the final price.

One way to accomplish this is by following an approach like the DevOps approach IT groups use when combining software development and IT operations to bring new services to market quickly. In a similar way, a DecisionOps approach can help you deploy analytical models and decision flows into your critical business systems quickly – for better, data-driven outcomes.

A new way to develop models

Data science teams have vast expertise and knowledge, but predicting risk more effectively and accurately requires a new approach to developing models. By moving away from Generalized Linear Models (GLMs) and toward Gradient Boosting Models (GBMs), insurers can make decisions that align closer to actual events – improving their profitability.

On top of that, having an end-to-end guided and governed process around premium modeling – from data preparation and modeling to automatic deployment and firmwide integrated reporting – will improve teams' efficiency. The result provides a choice of models with full guidance – including advanced ML models – and flexibility to adapt the models to local market conditions.

SAS combines models into a standardized format, no matter what coding language they were developed in – and our modular approach integrates with existing actuarial engines and tools. Through a shared space where various types of users can work together, teams can collaborate more closely and incorporate modeling results into pricing decisions. SAS provides transparency into how models are built and used – so you can make sure your data-driven decisions are explainable, fair and monitored for bias.

By setting clear rules based on data, insurers can make informed, responsible pricing decisions that are right for the business. These same pricing decisions can win customer trust and loyalty. This approach creates a strong foundation for evolving the insurance pricing (i.e., ratemaking) process. In turn, insurers can offer more competitive premium models and support new capabilities, such as real-time pricing and renewal optimization.

> By following a governed process, starting with data access and continuing through model management and retraining, insurers can keep models up-to-date and performing properly.

> The time needed to build hand-coded models and accommodate a range of programming languages results in being less responsive to market changes.

Three ways SAS can transform your pricing

1. New ratemaking capabilities – for more precise modeling

To help you build benchmarks and discover new variables quickly, insurers can use SAS Dynamic Actuarial Modeling – a visual modeling interface that accelerates the data exploration and discovery process. This allows you to blend traditional techniques like GLM with advanced machine learning capabilities (e.g., neural networks, gradient boosting and random forest) in a simple drag-and-drop interface. As a result, you can build prototype models rapidly – then quickly and accurately assess variables to be included in the premium model.

Benefits at a glance:

- Develop new premium models using machine learning.

- Bring premium model results into pricing decisions.

- Embed complex models for real-time pricing optimization.

- Optimize renewal pricing using a dedicated algorithm.

- Compare different scenarios in detail via an easy-to-use interface.

- Analyze unstructured text data to assess new types of risk.

2. Optimized renewal pricing – to get the most from existing portfolios

Setting the right renewal price for each customer profile to meet revenue and retention objectives requires a flexible, high-performance optimization engine. SAS can be deployed alongside your existing premium modeling engines – because integration is only needed at the data level.

Employees typically master the simple visual interface in less than a week – and there are multiple configuration options to explore. For example, one feature allows you to make granular comparisons between different scenarios with no limit on data size.
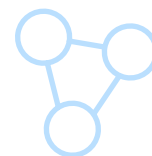
10-15% RETURN

RSA Canada implemented a rating model showing the cost of doing business or profitability for specific segments and risk groups, improving the accuracy of pricing models for a 10-15% return.

Chartis: SAS named an actuarial modeling and financial planning systems leader

Independent research firm Chartis declared **SAS a RiskTech Quadrant® Leader** in three categories for actuarial modeling and financial planning systems – including the risk and capital management category. The vendor analysis was based on the Chartis quadrant report *Actuarial Modeling and Financial Planning Systems, 2022: Market and Vendor Landscape*.

"Capital optimization and strategic asset allocation are key components of risk and capital management. SAS' platform enables its clients to perform capital requirement calculations at different levels of detail and aggregates risk capital across all risk types."

– Chartis Research

3. Real-time pricing capabilities – for agile premium model deployment

To bring complex premium models and real-time pricing to market quickly, you need a flexible underwriting engine that supports advanced decision making workflows.

With SAS, you can deploy premium models and underwriting policies directly from rate books into a decision flow, which can be tested by business users without recoding. To provide the right price at the right moment, SAS can also incorporate comparative market analysis services and online behavior variables. In turn, you can offer dynamic pricing and discount models.
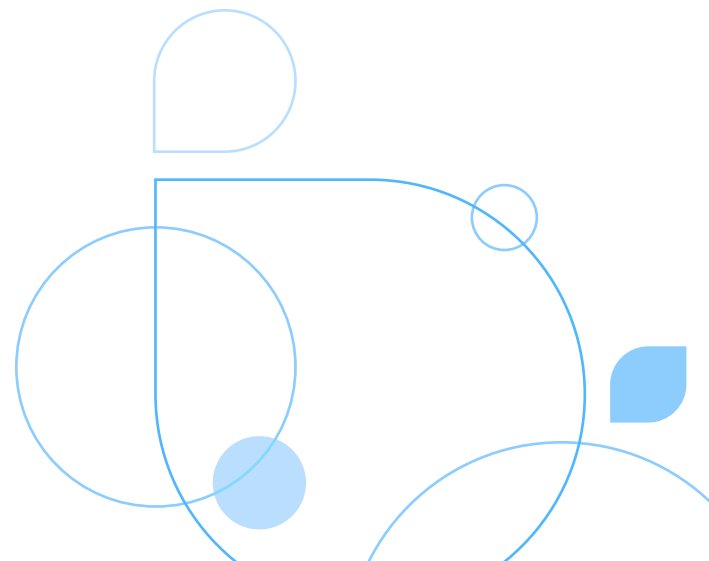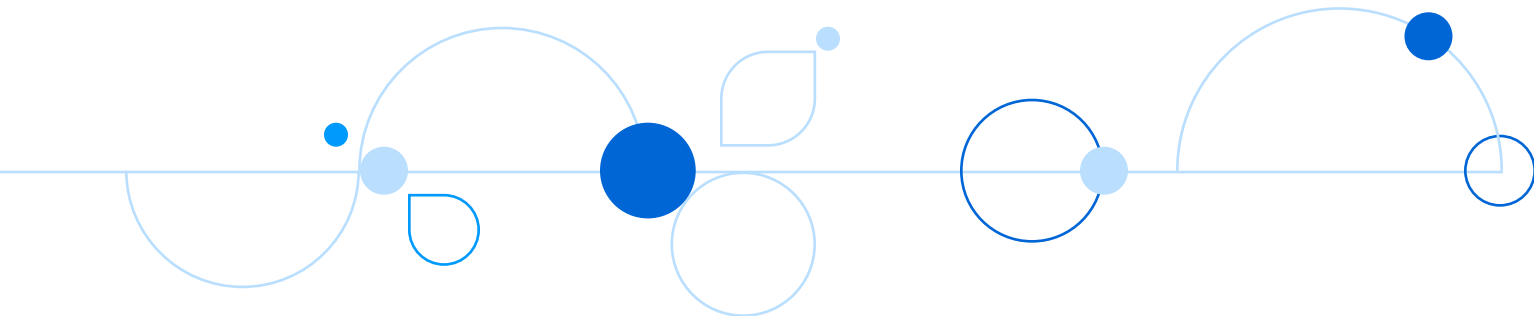
Caser Seguros

Caser Seguros is a Spanish insurer offering products that range from home and car insurance to health and life coverage. They operate in a price-competitive market with high rates of customer churn. Through SAS Customer Analytics for Insurance, used to refine their pricing strategy and policy models, we're helping them grow a loyal customer base.

"For us, the predictive capability of SAS is essential. It's vitally important for us to be prepared for churn and capable of launching retention initiatives quickly."

– **Ángel Marín**, Autos Technical Director

Key results to date:

Retention levels up
50%

Anticipated renewal profits up
3-5%

Pricing and underwriting decisions now made in
real time

Learn how SAS can help you create an agile, customer-centric pricing strategy.