



The future of automated underwriting





First, there was prefill: Given unique identifiers (business name and address) associated with a risk, a carrier can “prefill” an application. Underwriters don’t need to waste time surfing the web to collect information or asking follow-up questions of applicants and agents. Prefill can also help underwriters validate the accuracy of information on a business’s application.

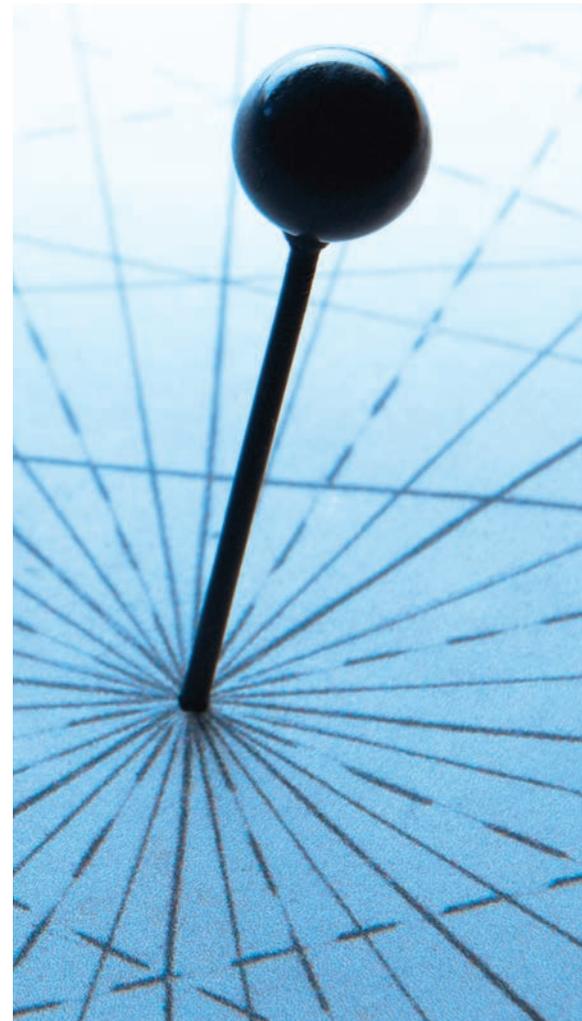
Second, there were “knockout questions”: Underwriters can perform immediate triage early in the application process based on answers to application questions and prefill. Knockout questions were designed to help reject certain risks automatically and save the underwriter from wasting time on risks they don’t want to cover.

Now, there’s automated underwriting, the next step in the future of insurance. Automated underwriting takes triage and knockout questions a step further to provide quotes based solely on prefill and/or applicant input. Some carriers refer to this as race-to-zero questions. Carriers ultimately can underwrite risks automatically just using prefill and not asking any questions

The twin challenges of speed and accuracy

The race-to-zero questions and automated underwriting are here now. Many carriers are already seeking best practices for how to underwrite a portion of their book automatically. Depending on a carrier’s appetite, underwriting guidelines, and competitive position, that portion could be a subset, a majority, or even the whole book. To implement automated underwriting effectively, carriers must leverage solid data and analytics quickly, with scale, and without compromising underwriting guidelines. Carriers must combat the twin challenges of speed and accuracy: Underwriters need reliable data, but agents and customers want things fast. Automated underwriting can help carriers meet expectations and still help shield businesses from the effects of poor data.

To reinforce that point, a recent ISO survey of independent agents in the small commercial market ranked accuracy, speed of quote, and ease of submitting an application the most important elements in dealing with a carrier—commission rate was a distant fourth. In fact, when asked if the agent would accept a lower commission rate in exchange for a flawless experience with a carrier, more than 39 percent indicated they would, especially if the responses to the application were reliably accurate and quickly delivered to the insurer.





For many carriers, this means that automated underwriting can be a powerful opportunity to address the needs of underwriters, agents, and customers. Automated underwriting can provide both the speed and reliable data necessary to help meet those twin challenges. Underwriters can better meet customer and agent expectations for speed without necessarily sacrificing suboptimal pricing, and they can access reliable data to set informed premiums while better avoiding losing business or covering bad risks.

What's necessary to achieve success with automated underwriting

A few years ago, automated underwriting was typically used only for personal auto and homeowners. Now, many personal lines executives are leading commercial lines initiatives to repurpose best practices and take advantage of leading technologies to implement automated underwriting. To be effective, carriers need to understand the following framework and master the intersection of data, analytics, workflow, and technology.

Data

Many in the industry are saying that “data is king; data is the new oil.” There’s no denying the importance of data; carriers need high-quality data, and that quality is critical to support automated underwriting. For every product developed, data assets must conform to the quality data framework: accurate, comprehensive, current.

Accurate

The data must be right. A carrier should never work with incorrect information; it could be better not to get any information at all. The accuracy of publicly available data is a topic of much debate. Sometimes it’s the right solution, such as the best practice in commercial auto underwriting to use department of motor vehicle registration records and motor vehicle violations. Those data sources tend to be accurate and actionable. Sometimes it’s not the right solution, as when carriers use tax assessor records and state registration filings with data standards that may vary among municipalities. That can create a significant variance in data quality for critical rating criteria

such as construction class and industry code. Also, state registration filings are typically self-reported, and many business owners aren't concerned with reporting correct industry codes and often fail to update the industry code if their business changes.

And getting the NAICS code correct for a general liability, BOP, workers' compensation, or commercial auto policy is critical.

Verisk data goes through a rigorous quality control process that often involves phone verification to help make sure business firmographic information is of the highest quality. Verisk has found that an effective way to help combat the unreliability of tax assessor data is with analytics that score the accuracy of municipalities, informing the reliability of such information.

Comprehensive

Traditionally, much third-party information used to underwrite commercial risks has come from public records, site inspections, and business databases. Each source has its place, and there are varying degrees of quality within each. The key criteria to evaluate a data vendor's comprehensiveness include:

- **Match rate:** Underwriters need a data return on as many requests as possible to support automation. Without data returns, you can't automate effectively.
- **Fill rate:** Each data return needs as much information as possible to make sure underwriters can invoke underwriting guidelines with consistency.
- **Support for multiple lines of business:** Many carriers write a lot of packaged policies, and it's valuable to work with a vendor that offers solutions for multiple lines. For example, Verisk is known for property data, but we've expanded to include casualty, auto, and automated loss histories, and we are building solutions for cyber.





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Within the past few years, some key technologies have emerged that can help increase the comprehensiveness of information available to us today:

- **Aerial imagery:** Aerial imagery harnesses machine learning to capture key roof and property characteristics, from roof material and condition to attractive nuisances like swimming pools and trampolines. Geomni, a Verisk business, has a fleet of more than 100 fixed-wing aircraft that constantly capture images of properties in the United States. Machine learning is then used to train algorithms that can extract data from these images, leading to actionable insights.
- **Internet of Things:** The Internet of Things (IoT) offers a wide range of possibilities for achieving comprehensive information. They include:
 - moving from risk proxies to actual and current data with better segmentation and less bucketing of risk groups and associated premium
 - getting a complete view of risk
 - addressing the entire insurance life cycle—analytics to support underwriting rules, data to help calculate premium with accuracy and confidence, access to updated analytics for policy monitoring, and proactive risk management and loss control delivered through one platform or provider
 - Verisk and the Verisk Data Exchange™ are working on the ability to write package policies entirely through IoT and telematics information for dynamic pricing.
- **Machine learning:** For automated underwriting, incremental data and analytics are often great opportunities to increase the number of risks that can be automatically written. Optical character recognition can digitize static text to automate processes that have traditionally required data reentry—which can take time and is prone to human error—including document verification and information transcription. Image processing can translate a picture or image, such as aerial images, into data. Other use cases include:
 - minimizing underwriting fraud through verification of applicant claims against public data (images, video, text)
 - forensic verification where applications may deliberately obfuscate websites and other public information
 - securing processes by authenticating images and documents
 - optimizing customer experience by offering recommendations on coverages

While machine learning technology is still relatively nascent, it's something to which Verisk devotes significant research and development resources.





Current

Risks tend to change over time, and automated underwriting often requires that decisions are made based on current information. Using Verisk as an example, maintaining currency on our ProMetrix® database of 3.7 million site-verified buildings starts with hundreds of field analysts across the country physically surveying buildings (onsite surveys are known as the gold standard for accuracy). We also incorporate aerial imagery, tax assessor data, and smart analytics to make sure property information is as accurate, comprehensive, and current as possible.

Analytics

Analytics are strongly supported by many actuaries and data scientists, and that helps to make high-quality data actionable. Customers are increasingly using analytics, such as our building relative hazard grading and measures of management competency (violation scores), to triage and apply credits and debits effectively. The key to developing effective analytics is to match modeling techniques to the business challenge. Analytics created for academic purposes are not typically actionable, and overly simplified analytics may not add much value. As solutions continue to evolve from the appropriate matching of technique with business need, we broadly bucket modeling techniques into three categories:

- **Metrics:** Metrics are measurements of actual performance over time as defined by one or a series of data points. Number of restaurant violations is an example of a useful metric.
- **Heuristics:** A derivative of metrics, heuristics are designed to create a proxy for a desired determination (for example, number of restaurant violations, normalized for type, size, and geography of a restaurant). This often creates a more actionable benchmark.
- **Models:** Based on known results, past histories, and predictive models, a model can determine that a certain number and type of restaurant violations can help predict future frequency and severity of claims.

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Workflow

Nearly 50 carriers have integrated their policy administration systems and underwriting workstations with Verisk's ProMetrix platform. For each of these engagements, we employ a standard onboarding process to help customers get up and running fast. We also work closely with business leaders to help them make the best use of our data assets. Every customer is unique, and while there are some generally understood best practices for workflow implementation, each carrier has its own distribution strategy, underwriting guidelines, and product niche.

An effective onboarding process must include deep dives into data and analytic assets—not only a review of data dictionaries but insights into how solutions can integrate into current and improved workflows. A few well-recognized best practices by some progressive carriers include:

- leveraging prefill as much as possible
- not asking questions that agents will only guess at
- optimizing workflow to qualify or disqualify applications rapidly

Technology

Of course, nothing can be automated effectively without the appropriate technology in place. There's a plethora of policy administration systems, underwriting workstations, agent portals, and so forth in the marketplace today. Implementations often require time, resources, and money. Some best practices to consider and strive for include:

- Ease of integration: Carriers need all the data, analytics, and workflow guidance possible to write each property/casualty policy. Integrating with just one data source with standard application programming interface (API) technology is an attractive feature to many carriers.
- Real-time interactivity: Agents and applicants don't want to wait. They tend to want immediate answers and often go elsewhere if a carrier needs to evaluate a simple risk manually or wait for data to be validated. Technology interaction must be in real time.
- Future scale, adaptability, microservices: The world of automated underwriting will likely continue to evolve with rapidly changing technology. To adapt and accommodate future scale, carriers will most likely need to leverage microservices that operate in a plug-and-play mechanism so customers can quickly innovate.

Conclusion

The race to zero questions is on. Automated underwriting is not just the wave of the future, it's something carriers need to begin navigating now. Solutions that can support data accuracy and speed of delivery are paramount to a carrier's success. But don't wait for the resources to come to you—seize the day and start working with a reliable data and analytics provider now. Verisk has the data, analytics, workflow, and technology to help you achieve success through automated underwriting.

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