



A Q&A guide

Tool up to transform insurance risk management

Unlock the potential of new technologies for actuarial modeling



With a broader choice of modern tools at their fingertips, actuaries are in a stronger position to manage risk for their insurance business and put money to work. As technology continues to advance, FIS' insurance risk expert Andy MacLennan explains how to assemble the right – and the most cost-effective – tools for the job.



Q: What do today's actuaries want and need most from an actuarial modeling system?

A: Ideally, actuaries want to be able to strike a balance between making models faster and cheaper to run, and being able to access a wide range of rich, user-friendly features and capabilities.

That's not an easy equilibrium to achieve. On the one hand, building a huge, complex, looping formula might speed up your runtime. But on the other, it could be written in a language that's not widely adopted or well supported in your company, making it difficult to debug, understand and work with.

Ultimately, you need to choose the right vehicle for your particular modeling journey, whether it's a high-performance sports car, a reliable four-by-four, an economical city car or a robotaxi. With FIS® Insurance Risk Suite – Prophet, we aim to give you that choice on a single platform.

Q: How is modeling technology evolving to become more efficient and effective?

A: Continued advancements in technology are driving an increasingly sophisticated approach to risk modeling and management. And although the actuarial profession is intrinsically cautious, we see growing adoption of innovative solutions – not only to increase automation but also processing power and using AI to drive data management and analytics.

By transforming modeling operations in this way, actuaries are helping insurers reduce cost and risk, drive insight and scale up and down more rapidly to changing reporting

demands. It's all about having the right state-of-the-art tools at your disposal, for whatever you need to achieve for your business.

Q: What role specifically can AI and machine learning tools play in the transformation of actuarial modeling?

A: AI is already changing the landscape of actuarial systems. FIS® is embracing the transformation by enhancing our technology and creating complementary solutions, with a continued focus on ethics and compliance.

We see huge potential for AI and machine learning to radically change the way actuaries work, and are exploring a number of opportunities with our clients. Mainly, however, we're investigating how AI can help reduce actuarial labor costs – one of the largest costs of modeling – and make actuaries more efficient.

We're already introducing an AI assistant to Insurance Risk Suite – Prophet. This chatbot-style tool will be available 24/7 to respond rapidly to user queries – giving actuaries a more dynamic and efficient way to interact with and learn about our software and help them get around it more easily.

A predictive analytics solution, powered by machine learning, is also coming soon to the solution, so that users can rapidly predict future outcomes in the lifecycle of their policies.

The next evolution in the coming year will be the ability to generate model documentation from code using AI. This can significantly reduce the time and effort taken to meet compliance needs and provide useful insights into model structures.

Q: How can actuaries improve the power and performance of their modeling systems?

A: Computer chip technology is evolving fast to help actuaries reduce runtime and compute costs. Along with central processing units (CPUs), graphical processing units (GPUs) are increasingly demonstrating their suitability to power certain actuarial calculations and support high-performance calculations.

With both CPUs and GPUs having their own advantages, the key to optimizing data processing across your entire modeling operation is to have a broader choice of computational power options at your fingertips. That's why FIS will soon be introducing the ability to run modelling jobs on GPUs, as well as CPUs with optional advanced vector extensions (AVX).

As result, Insurance Risk Suite – Prophet users are able to process large volumes of simulations at high speed and meet tough reporting deadlines with minimal manual effort.

Q: Why are more insurers running actuarial models in the cloud?

A: Quite simply, cloud-native technology makes actuarial modeling solutions more scalable, secure and efficient for insurers. Software-as-a-service (SaaS) systems in particular help actuaries easily meet peaks in workload and create, analyze and store more granular data than ever – without wasting time and resources maintaining and upgrading software or scaling hardware to shifting computational requirements.

That said, the first generations of SaaS solutions aren't always as rich in features as on-premise applications. Rather than waiting for cloud technology to play catchup, FIS has launched a new solution – One Cloud from Insurance Risk Suite.

With One Cloud, insurers can join our journey to convert the industry to the agility and convenience of our SaaS solution. At the same time, they'll gain immediate access to the power and scale of our Managed Cloud Service – all in a single package.

Over time, we'll enrich the capabilities of the SaaS solution with automated, regular software releases. That way, it will ultimately offer the same, deep, end-to-end functionality as the Managed Cloud Service. Until then, however, clients can experience the best of both offerings seamlessly as one.

Q: Which tools will best help cut the costs of actuarial modeling?

A: It's less a question of which individual tools will cut your costs, and more about getting a complete, holistic view of what you spend on running and getting the best from your technology.

Compute costs, for example, make up just a small fraction of the cost of owning and using an actuarial modeling and risk management platform. Typically, the majority of your spend will be on people – the actuaries, risk managers and IT teams that help you put technology, and money, to work on a daily basis.

So, the priority will be to reduce your overall total cost of ownership. For that, you need powerful technology and holistic solutions designed to help you make savings in every aspect of your modeling operation.

Models may run faster and more cheaply if you build them in a certain language. But are they auditable, scalable and resilient? Are they easy to maintain and understand? And does your platform allow you to handle data securely and automate processes from end to end with APIs?



Insurance Risk Suite – Prophet meets all these requirements, and more, so you can not only improve model performance but also improve accuracy and control, minimize maintenance work and implementation risk, and store data more efficiently.

Plus, with expert support from FIS, you get all the tools you need to reduce expensive manual effort – and save your talented actuaries valuable time on building models, performing calculations and running IT.

Turbocharge insurance risk management with FIS. Contact us to learn how Insurance Risk Suite – Prophet can help you increase the efficiency and effectiveness of your actuarial modeling operation with state-of-the-art technology.



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Our **technology** powers the global economy across the money lifecycle.



Money at rest

Unlock seamless integration and human-centric digital experiences while ensuring efficiency, stability, and compliance as your business grows.



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