

# Insurance transformation

**Modernizing the actuarial function**



As the insurance industry continues to evolve at an unprecedented pace, firms are reviewing their front, middle and back-office functions to support growth strategies and deliver against business objectives. Insurance leaders acknowledge the important role of the actuarial function, as they look to improve processes, enhance risk strategies and deliver operational excellence.

The actuarial function is central to the insurance proposition. Actuaries not only allow insurers to properly assess and price policy risk, they also play a key role in helping insurance organizations manage their own enterprise risks and opportunities and optimize capital. Modernizing the actuarial function, therefore, should be a top priority for insurers.

## **Under pressure to modernize**

Demand for transformation in the actuarial function is growing. In part, this is about doing more with less. Much like other parts of the insurance organization, actuaries are under increasing pressure to become more efficient. That means spending less time on manual intervention, making greater use of automation and redirecting resources to areas that deliver greater value. It's about achieving faster, better and more efficient reporting at a lower cost.

At the same time, insurance organizations are asking their actuarial functions to become more effective. As the business moves into new areas and stakeholders start to demand new data points and insights, many business leaders want their actuaries to spend more time analyzing results and less time in developing it.

Leaders are looking to their actuaries to expand their support into evolving areas such as quantifying ESG risk, financial planning and analysis enhancements, artificial intelligence (AI) integration and identifying new market opportunities. Insurers want their actuaries to be delivering better insights, across a broader range of topics that are more aligned to the business.

The pressure on actuarial functions to modernize is also being driven by the organization's broader transformation objectives. Other key players in the actuarial value chain — finance, claims, product development and others — are already moving along the path to digital transformation and modernization. They expect their actuaries to be moving along with them. And that means transitioning to more standardized data, new systems of record and new end-to-end tools and processes.

Then there is the competitive pressure. Start-ups and emerging insurtechs have demonstrated that actuaries can serve as a key competitive advantage. These are players that pride themselves on customer-centricity, simplicity and efficient capital management. And they are taking all the latency out of the actuarial process in order to provide customers and potential customers with real-time insights, data and offers that are tailored to individuals. Traditional insurers are under increasing pressure to step up.

## **The right time to transform**

Actuarial functions have been down the transformation path before — with mixed success. Many expected the shift to IFRS17 and US GAAP Long-Duration Targeted Improvements (LDTI) to be the catalyst for transformation in the way that finance and actuarial functions managed, analyzed and shared data. And, while these implementations certainly changed the way most insurers calculate their actuarial-related balances on their financial statements, in part due to time pressures to develop these accounting changes, few have yet to achieve the type of change the business requires in order to thrive in the new environment.

The new accounting standards have certainly helped drive the agenda, but they have not yet delivered the end goal of transformation. The shift to IFRS17 and GAAP LDTI created a more standardized taxonomy, approach and process around financial data reporting at many insurance organizations. At the same time, many finance functions also started to move along on their own transformation journeys. And Chief Actuaries are now finding that the internal environment for transformation has become much more conducive to change. In addition, actuaries are key participants in the transformation journeys happening in other parts of the organization. For example, the replacement of legacy policy administration systems with more client-centric solutions, needs actuarial involvement to ensure that the new implementation properly captures what are often complex product features and reporting requirements.

“

**Actuaries hold a unique position within insurance companies. They understand financials, underwriting, product design, distribution channels and risk, while possessing the ability to tell a story. Now that they have largely achieved compliance with IFRS 17, Solvency II and other standards, they're at a pivotal stage where they can shift their attention to propelling the business forward and navigating their companies through the broad range of risks faced.”**

**Laura Gray**

Global Head of Actuarial, KPMG International and Partner  
KPMG in the US

In part, this is because the technologies and data that feed into the actuarial functions have evolved and matured. Digitization has enabled businesses to make data more accessible, manageable, and insightful. However, for many insurers there are still a number of steps required to better utilize data management capabilities. Data wrangling tools and data management processes have significantly reduced the heavy lifting on the left side of the process. And on the right side, data visualization technologies and techniques have made the outputs vastly more useful and meaningful.

The solution providers and ecosystem players have also matured. The reality is that many of the ‘first movers’ have already made significant progress in transforming their actuarial functions. The path to success is well mapped; unexpected challenges have now been identified and lessons have been learned; advisors —

like KPMG professionals — have developed robust tools and frameworks that help accelerate the pace and enhance adoption. This is the point where the ‘fast followers’ should feel comfortable stepping up.

Internal capacity for change has also become more robust. Insurance companies have learned how to transform with agility. They have developed change management capabilities and they have extensive experience managing transformation programs. At the same time, actuaries’ capacity for change has also grown. They have already moved from factor-based calculations to principle-based methodologies, and have been testing new tools and technologies within their existing processes. These teams have shifted their thinking to focus more on the business, and many actuaries are themselves keen to modernize their activities.



# Key considerations

KPMG professionals believe that transformation should be business-led, technology-enabled and outcomes-oriented. Our network of professionals have helped a wide range of different insurance organizations transform their actuarial functions. And, based on this work, here are five key considerations for getting started.



# Set your vision and align with the business strategy

The actuarial function is difficult to transform in small, isolated steps. It should be embedded within a wider finance transformation and aligned to the overall strategy of the business. Chief Actuaries should be thinking about what problems they are trying to solve for the business, and then looking at their role in the full end-to-end process and value chain to see how they can enable that future state operating model.

CFOs and Chief Actuaries should start by understanding why the transformation is important, how it influences organizational capital management, and what role their actuaries will play in driving the agenda forward. These leaders should also understand the role that data will play in driving a successful transformation. In part, it will be about capturing efficiencies and delivering agility to the business. But it should also be about the sustainability of the business model, enabling a better understanding of clients and their product requirements to become a competitive player in the market.

Yet the market is evolving rapidly; much is expected to change within the next five to ten years. And that means Chief Actuaries will likely want to build their vision with a

strong focus on operational sustainability and preparing foundations for the future. Leaders may want to start by creating a proof of concept to achieve buy-in from leadership and then evolving it as feedback and new inputs are received.

This will require CFOs and Chief Actuaries to engage stakeholders from across the organization early in the transformation journey — building support and collaborating on outcomes across multiple functions including finance, claims, product development, risk management and operations. IT should also be involved throughout the planning, design, and execution phases of the transformation journey. Key business priorities must be explored and understood, particularly issues such as ESG and cyber security.

Ultimately, the key is to be holistic in vision and bold with objectives. Consider the long-term strategy for the organization and how transformation of the actuarial function will support this. Focusing narrowly on a single technology, or bottlenecks in the process, may not deliver the value that the business requires.

## How can actuaries get organizations closer to the customer?

Actuaries can help insurance organizations unlock deep insights into their customers and enhance customer experiences. Actuaries are using enterprise data to better calculate customer lifetime value, thereby enabling the business to tailor their strategies based on value. Others have used their data science capabilities to more accurately segment their customer markets in order to shape their marketing efforts.

Making this a reality, however, will likely require four things to come together — perspective, data, skills and technology. Actuaries should understand what insights the business requires in order to drive their strategy; they will need the right data, skills and capabilities to help them unlock those insights; and they'll need the right technologies and tools to help the business visualize and understand the insights they are providing.

# Master the data

Recent regulatory changes, namely IFRS17 and US GAAP LDTI, have required more granular data from insurance organizations. And access to data is now becoming much more straightforward thanks to new technologies and approaches. The challenge today is ensuring that actuaries are getting the right data at the right time and in the right way to drive new and improved calculations and analysis.

On the input side, actuaries and finance functions should ensure they are tracking, understanding, and maintaining organizational data so they can not only keep up with reporting expectations, but also develop a better view on risk and potential variables. They also need greater visibility into their cross-functional data so they can spot and integrate data elements that might currently be underutilized. The ability to audit the data trail, supported by new data mining skillsets, data warehousing capabilities and access to data lakes will continue to be key.

Over the past few years, KPMG professionals have helped many CFOs and Chief Actuaries integrate their data across accounting and actuarial functions, to help their actuaries better forecast future events and estimate financial implications. That is enabling some actuaries to participate in the design of innovative products that target particular segments of the population using advanced analytics and data mining. It is also helping them to uncover new data variables that were previously unavailable to develop new ways of forecasting.

Yet, to achieve this level of sophistication, actuaries need tools and capabilities to properly interpret the data they have and communicate their findings back to the business. At the same time, insurers will want to provide their actuaries with access to an even richer stream of finance data in order to identify process inefficiencies and streamline workflows. It's important that a level of governance is adopted to be in compliance with regulatory requirements and standards.

**Actuaries are the key interface between the CFO and the wider business, with deep insight into profit, risk, underwriting and product design. These are people who have a keen understanding of the business and know how to use data science to unlock strategic insights. CFOs should really be asking how they can ensure they have the right data to deliver the kinds of insights that matter to the business."**

**Vjaceslavs Geveilers**  
Head of Actuarial in EMA and Partner  
KPMG in Germany



# Understand the technologies

Actuarial transformation must be business-led and tech-enabled. That means starting with the problem that leaders are trying to solve for the business and then selecting the relevant technologies that can help you solve those problems.

Some leaders are seeking to increase automation in order to enable actuaries to focus on more strategic analysis and business partnering. In this case, consider applying Robotic Process Automation tools which can facilitate communication between legacy systems, process relevant data and provide accurate reporting in areas like reserve calculation, product pricing and financial projections.

Or perhaps the challenge is that the infrastructure is too inflexible, the systems are outdated, and the organization is struggling to achieve value from a transformation. Insurers should consider looking at cloud-based and modular technologies that could help simplify and accelerate transformation through scalable infrastructure, services and applications.

The point is to continuously go back to the business needs, think about how these will evolve over time, and then select the right technologies to provide a long-term and sustainable solution based on the insights needed and the potential challenges to overcome.

At the same time, CFOs and Chief Actuaries are looking for more frequent reporting and results which is creating demand for technologies that can simplify and modernize the actuarial function, and increase the time that actuaries have to focus on value-added activities, such as analysis. Many are automating spreadsheets, consolidating multiple models and platforms, and re-designing (or replacing) legacy systems to improve speeds, reduce manual intervention and have better controls and governance across the process. Visualization tools are being implemented to better present results.

With nearly a quarter of insurance CEOs and CIOs reporting a strong desire to implement disruptive technologies<sup>1</sup>, actuaries may utilize emerging tools such as generative AI and predictive analytics to achieve the fullest potential in the current technology environment.

**“Today’s actuaries are working in a time of unprecedented technological and data analytics developments. To best serve their stakeholders, actuaries should embrace new tools and techniques, to provide faster and richer analysis, and position themselves as key advisors providing financial and business insights based on their deep understanding of insurance risk.”**

**Alison Rose**  
Partner, Life & Pensions Actuarial Practice  
KPMG Canada



# Transform the people

Actuaries love what they do. In fact, the job is frequently ranked amongst the most attractive in the world. Yet there is tight competition for actuaries — particularly those with the key business and communications skills needed in today's environment.

There is already a significant shortfall of this type of talent in the marketplace. According to US Bureau of Labor Statistics, demand for actuaries is going to grow by 24 percent between now and 2030<sup>2</sup>. That is leading actuaries to consider a range of other models including shared services, managed services, outsourcing and co-sourcing. With the introduction of simpler, automated and, in some cases AI-driven progress, there is an opportunity for the actuary function to expand focus beyond the current scope, and support

wider business priorities such as ESG, climate risk and non-traditional actuarial and insurance initiatives.

At the same time, CFOs and Chief Actuaries are placing particular focus on retaining and upskilling their current professionals while attracting new talent and new capabilities. Virtual and remote work are also being used to create a more attractive work environment for actuaries.

What is clear is that the new actuarial workforce seeks purpose in their roles. They want to deliver valuable and transformative insights to the business using the latest technology enablers. And they are looking at better ways to optimize what was previously manual and complex workflows.



**Actuaries love to solve problems and that can lead to them developing solutions where there are gaps that other areas have not managed, for example, reconciliations between systems. I find that developing digital solutions with the responsible areas, such as IT, can free up actuaries to focus on providing further insights to the business."**

**Briallen Cummings**

Partner  
KPMG Australia

<sup>2</sup> Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Actuaries. [www.bls.gov/ooh/math/actuaries.htm](http://www.bls.gov/ooh/math/actuaries.htm)

# Manage the change

One key challenge for CFOs and Chief Actuaries is in achieving sustainable transformation while successfully maintaining operations. That requires a clear transformation roadmap that outlines practical and incremental steps along the journey, supported by robust project management skills to ensure the program is delivered within timeframes and cost.

Gaining support from executives and the business will be critical. That means actuarial leaders should be seeking input and support from the developers, the leadership team alongside other consumers of actuarial insights across the wider organization, particularly from finance and IT.

Actuaries will also need to be encouraged along the journey. The reality is that things will change — traditional frameworks (and even some roles) might be replaced by newer and simpler solutions. Resistance to change

is human and a regular part of any transformation. The key will be in ensuring that the actuarial teams are involved and maintain their buy-in along the journey, and finding ways to identify and manage resistance when it emerges. Communication will be key throughout the process, and it's important to recognize, celebrate and share success stories.

Given that actuarial transformation initiatives are often multi-year journeys, actuarial leaders should encourage a culture of experimentation and adaptation. They will need to encourage skills and capability development while simultaneously integrating new operating models and ways of working to help ensure they are able to continuously meet the needs of the business while attracting and retaining new talent. And they will likely need contingency plans and regular reviews in order to avoid strategic drift in the transformation journey.



## Questions to consider before undertaking actuarial transformation:

- 1** Can you streamline and automate actuarial processes to reduce manual effort, increase accuracy and improve speed? Are you able to perform capital strategy and management activities at a frequency required by the business?
- 2** How could new technologies around cloud computing, AI and data management help to improve your actuarial operations and output?
- 3** Does the current actuarial operating models align with the needs of the business?
- 4** Are your financial controls governance frameworks robust enough to mitigate risk and ensure ongoing compliance with regulations?
- 5** Have lessons from other insurers who have gone through similar transformations been embedded into the strategy?

**The overarching approach of an organization's actuarial and finance functions to embracing change will likely play a key role establishing how successful the transformation is. Based on my experience with actuarial functions, those that set their mind on what they want to accomplish — rather than on what they had available — were more successful in implementing their transformation initiatives. Actuaries need to think creatively and embrace a culture of innovation in order to continue adding value to their organizations."**

**Kaushal Balanadu**  
Actuarial Director  
KPMG in the US





# Transformation never stops. Neither do we.

At KPMG we believe transformation starts with people. Our global network of experienced insurance professionals, which includes actuaries, provides clients with deep industry knowledge, actionable insights and implementation expertise, helping to realize the full potential of their people and technology, and working together to achieve successful transformation. Because when people and technology are in harmony, great things happen.

## **Making a world of difference**

KPMG people can help make all the difference on your transformation journey. Together we can help you to orient your business around the customer, enhance functions for a new era, manage enterprise risk and regulation for a safer future, rise to a new level of value creation, and create an environment for managing ongoing change.

KPMG professionals know what it takes to transform an insurance sector actuarial function. And KPMG firms have the tools and accelerators to help you reduce your risk and secure the value that you want from your transformation journey. Please contact your local KPMG member firm to discuss your transformation requirements.

# Local contacts

## Marios G. Lazarou

Board Member, Head of Advisory  
KPMG in Cyprus  
**E:** marios.lazarou@kpmg.com.cy

## Christoforos A. Evlavis

Board Member, Risk Consulting  
KPMG in Cyprus  
**E:** christoforos.evlavis@kpmg.com.cy

## Michael Aristides

Principal, Risk Consulting,  
Insurance Risk and Actuarial  
KPMG in Cyprus  
**E:** michael.aristides@kpmg.com.cy

## Nicosia

**T:** +357 22 209 000  
**F:** +357 22 678 200  
**E:** nicosia@kpmg.com.cy

## Limassol

**T:** +357 25 869 000  
**F:** +357 25 363 842  
**E:** limassol@kpmg.com.cy

## Larnaca

**T:** +357 24 200 000  
**F:** +357 24 200 200  
**E:** larnaca@kpmg.com.cy

## Paralimni

**T:** +357 23 820 080  
**F:** +357 23 820 084  
**E:** paralimni@kpmg.com.cy

## Paphos

**T:** +357 26 943 050  
**F:** +357 26 943 062  
**E:** paphos@kpmg.com.cy

## Polis Chrysochous

**T:** +357 26 322 098  
**F:** +357 26 322 722  
**E:** paphos@kpmg.com.cy

[www.kpmg.com.cy](http://www.kpmg.com.cy)



The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

© 2023 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

KPMG refers to the global organization or to one or more of the member firms of KPMG International Limited ("KPMG International"), each of which is a separate legal entity. KPMG International Limited is a private English company limited by guarantee and does not provide services to clients. For more detail about our structure please visit [kpmg.com/governance](http://kpmg.com/governance).

The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organization.

Designed by Evlueserve.

Publication name: Insurance transformation: Modernizing the actuarial function  
Publication number: 139140-G | Publication date: November 2023

# Contacts:

## **Frank Pfaffenzeller**

Global Head of Insurance  
KPMG International  
**E:** fpfaffenzeller@kpmg.com

## **Mark Longworth**

Global Head of Insurance Consulting,  
KPMG International and Partner  
KPMG in the UK  
**E:** mark.longworth@kpmg.co.uk

## **Alison Rose**

Partner, Life & Pensions Actuarial Practice  
KPMG Canada  
**E:** alisonrose@kpmg.ca

## **Briallen Cummings**

Partner  
KPMG Australia  
**E:** bcummings01@kpmg.com.au

## **Abhishek Kumar**

Head of Insurance in Hong Kong (SAR)  
and Partner  
KPMG China  
**E:** abhishek.kumar@kpmg.com

## **Laura Gray**

Global Head of Actuarial,  
KPMG International and Partner  
KPMG in the US  
**E:** lgray@kpmg.com

## **Vjaceslavs Geveilers**

Head of Actuarial in EMA and Partner  
KPMG in Germany  
**E:** vgeveilers@kpmg.com

## **Inge van Zon-Zeilstra**

Partner, Actuarial  
KPMG in the Netherlands  
**E:** vanzon-zeilstra.inge@kpmg.nl

## **Kaushal Balanadu**

Actuarial Director  
KPMG in the US  
**E:** kbalanadu@kpmg.com

Some or all of the services described herein may not be permissible  
for KPMG audit clients and their affiliates or related entities.

[kpmg.com](http://kpmg.com)



The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

© 2023 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

KPMG refers to the global organization or to one or more of the member firms of KPMG International Limited ("KPMG International"), each of which is a separate legal entity. KPMG International Limited is a private English company limited by guarantee and does not provide services to clients. For more detail about our structure please visit [kpmg.com/governance](http://kpmg.com/governance).

The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organization.

Designed by Evlueserve.

Publication name: Insurance transformation: Modernizing the actuarial function  
Publication number:139140-G | Publication date: November 2023