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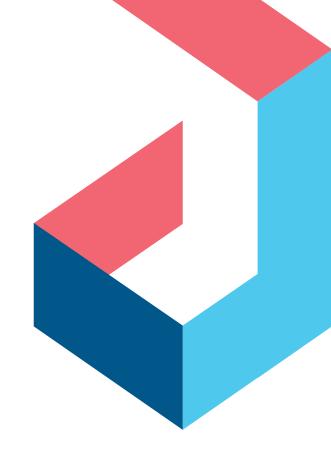
The architects of insurance data success

Actuaries and data scientists must collaborate to get maximum value from data sources

Actuaries and data scientists are central to the evolution of how the insurance industry uses data as an asset. But legacy differences in how these disciplines view data means a fresh perspective is needed on how they collaborate.

This paper explores:

The challenges carriers face in realizing full value from these often-conflated disciplines

The talent, tools, and techniques carriers need to systematically connect analytics-driven insights to people and processes

Insurance's new reality

In many respects, insurance hasn't changed in over 100 years: It's still a business based on making decisions by using data to analyze risk. What is changing at a faster rate than ever, however, is the volume of data that goes into those decisions – and how companies harness that data. Competitive insurance firms are evolving to systematically make use of data from all relevant sources. They're generating insights that affect operations as well as strategy. And they're making actionable intelligence available to a wide range of stakeholders. Those initiatives are at the heart of the industry's transformation.

How do actuaries and data scientists play better together?

True transformation has its challenges if actuaries and data scientists remain in their respective corners.

Genpact works with lots of insurance carriers. And while we've seen many try to blend actuarial and data science disciplines to deliver higher value-added insights, these efforts typically fail for three reasons:

- Actuaries, skeptical of this move, are slow to adjust
- Data scientists don't have actuarial-specific knowledge

- Inadequate and fragmented technical infrastructure makes it harder for them to work together

We've noticed a recurring theme: While actuaries and data scientists deliver real value independently, they often don't play well together. They don't take advantage of each other's respective strengths. To change that scenario – to make the whole greater than the sum of its parts – let's first consider what the whole should look like.

Reconciling the professionals

We believe that transforming and synchronizing actuarial work and data science into a single capability is key. Making that happen effectively, however, requires the following:

Talent: Insurers must have a clear, consolidated picture of how they deploy resources and how its teams interact

Tooling: Insurers must apply integrated, scalable, and insight-enriching technologies

Techniques: Insurers must embrace new ways of digitizing and analyzing data

When a company aligns its data, analytics, and insight generation to its strategic objectives, it can make the kind of systematic, proactive decisions that characterize forward-thinking insurers. But that means taking a hard look at existing conditions from a fresh perspective.

	Current state	Future state
	Two separate teams doing similar work but unable to synchronize efforts	Integrated actuarial and data science expertise eschewing legacy role definitions
Talent alignment	Actuarial • Data wrangling • Technical analysis • Business conclusions Data science	Modelling Business insights Reporting
Tooling	Standalone work products (e.g. MS Excel) with limited scalability and integrability	• Flexible and scalable open-source softwares • Sandbox for exploring new possible data sources • Advanced visualizations to drive self-service adoption
Techniques	Significant manual interventions and labor intensive activities	• Machine learning to accelerate feature selection and enhance predictions • Computational linguistics and computer vision to interpret unstructured data

Figure 1: Transforming actuaries and data scientists into a single capability

Why acting now is important

For insurance companies, internal cost and expense pressures are always mounting. Adverse selection is a constant risk, too. Customer demands shift as risk management needs evolve and modes of doing business change. To compete and win, insurers must evolve quickly. That means they must provide proactive, analytics-driven decision support for internal customers. While actuaries and data scientists are integral to realizing this vision, to deliver real value they must operate as a single cohesive entity.

How Genpact can help

To create that kind of cohesion, many firms are seeking help from external partners such as Genpact. We've worked with major regional and global insurance companies alike to transform actuarial and data science functions into strategic alliances. We've helped them uncover how new tools – such as AI, machine learning and other data sources – can enhance their value as a team. And we give them the right conditions to expose and explore new market niches and other trends to help firms be proactive.

We add value because we have the right skills, a suite of digital accelerators, and a global talent pool. That means companies see real business impact through our efforts – from newly efficient back-offices to delivering on priorities that drive revenue, profit, and customer satisfaction.

This point of view is authored by Tim King, lead solution architect, Insurance Analytics, Genpact

About Genpact

Genpact (NYSE: G) is a global professional services firm that makes business transformation real. We drive digital-led innovation and digitally-enabled intelligent operations for our clients, guided by our experience running thousands of processes for hundreds of Global Fortune 500 companies. We think with design, dream in digital, and solve problems with data and analytics. We obsess over operations and focus on the details – all 78,000+ of us. From New York to New Delhi and more than 20 countries in between, Genpact has the end-to-end expertise to connect every dot, reimagine every process, and reinvent companies' ways of working. We know that rethinking each step from start to finish will create better business outcomes. Whatever it is, we'll be there with you – putting data and digital to work to create bold, lasting results – because transformation happens here, at Genpact.com.

For additional information contact, insurance.solutions@genpact.com and visit, www.genpact.com/what-we-do/industries/insurance

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