



The perfect skillsets for imperfect datasets



As the world continues to go through a period of great uncertainty, talented actuaries trained in data analytics have become even more valuable to organisations and businesses. We spoke to **Actuaries Institute of Australia's Mr Jefferson Gibbs** and **Ms Elayne Grace** to find out what the institute is doing to make sure new and existing actuaries are equipped with the right tools for the job.

By Amir Sadiq

The last couple of years have seen the world go through immense change, thanks in large part to COVID-19, climate change and socioeconomic issues. The pandemic, in particular, has been a major source of uncertainty.

“There’s really scarce data on where we might be heading. We can reference the Spanish ‘flu but the impact on a modern, interconnected economy is really uncertain,” said Actuaries Institute of Australia president Jefferson Gibbs.

“In light of that uncertainty, actuaries are very busy at the moment helping organisations look to the future and we’re very adept at dealing with imperfect datasets because we recognise that it has to be a commercial resolution.”

“As hard as COVID-19 has hit the world, actuaries have a good skillset

to be able to deal with some of these issues, to understand them and help people try and make sensible decisions,” said CEO Elayne Grace.

She added that when the institute launched its Pandemic Resource Centre last year, it had over 80 volunteers looking to provide help in their areas of expertise to assist businesses, regulators and government bodies.

In the second half of 2020, the institute also launched research papers that looked at issues surrounding the rise of the gig economy, insurance affordability and the growing intergenerational equity gap.

Stick to their guns

Despite the changes they are facing, Mr Gibbs believes that actuaries do not need to change too much.

Instead, they simply need to continue doing what they are already very good at doing.

“The important thing is to be relevant and useful to the people we’re supporting. It’s about strategy, uncertainty and risk. It’s about doing the analysis that we think will help,” he said. “We may not be able to deliver the perfect model, but we’ll give you one that is the best in the time available, and we’ll discuss the uncertainty.”

Referencing natural disasters and climate change as well as hardening reinsurance rates and shrinking capacity, he noted that there is currently concern about the accuracy of Nat CAT modelling. With the uncertainty from COVID-19 thrown into the mix, the main change actuaries need to respond to is the demand from a

broader set of sectors requiring their expertise.

“We’re using more scenario modelling and stress testing because it’s not really a case of saying that the risk has increased by a certain percentage,” added Ms Grace.

She said actuaries need to consider what else companies can cope with. Actuaries must help corporates understand their risk level, where their margins are, and what capital they may need to support themselves.

Attracting fresh talent

With increasing demand for actuaries comes the need to ensure a steady stream of talent coming up through the ranks. To that end, the institute formed a young actuaries advisory board for its new, young members to give them a voice.

“It’s an additional avenue for them to participate in volunteer activity and for some of us less young actuaries, it gives us a point where we can focus on the feedback and input of that younger generation,” said Mr Gibbs. “We’re still in high demand and enrolment in university courses is high. But like any profession, we’re keen to attract talent.”

With much of the younger generation defining their career choice on life purpose, he said it is important for them to know that there are roles for them through the actuarial career in the sector of their choice, particularly in areas such as health modelling, social welfare benefit modelling, data analytics and risk management.

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want to make a difference,” said Ms Grace.

“We find that the areas we’re covering – whether it’s around affordability and availability, climate change or fairness and equity – really engages them to make sure they’re not just looking at it from a data analytics perspective, but a holistic perspective to make sure the market is working well and that it’s good for the community.”

Data analytics training

Data analytics has become a core part of most professions today and the institute has taken a three-pronged approach to make sure actuaries are well equipped to handle that.

The first is to bring it into university training at the actuarial level. Later this year the institute will be launching the fellowship subject in data analytics.


“It’s been fantastic because we’ve had to basically write the storyboard. What does that actually mean? What are the skill sets, the judgment skill sets that we want to actuaries to have?” said Ms Grace.

“And it’s also been great because it’s given us the opportunity to look for case studies. What we’re looking at is where do actuaries work when they’re in data analytics? And so, for example, that could be retail, it could be loyalty points schemes. It could also be work in the government sector where there’s a lot more heavy data analytics.”

The second prong is to create an environment that simulates real-world conditions. “Our actuarial educators have worked with people from the industry. We have developed a data analytics practice company, and they’ve worked very closely to make sure it’s real, it’s practical and it reflects the current industry,” she said. “We’re very excited to launch it in the second semester of this year and we think there’s going to be a lot of interest.”

And the third is to provide a way for current actuaries to brush up on their skills and get more involved in data analytics. The institute has launched a certificate in partnership with Macquarie University in data science.

“We’ve had some good interest in that. People signed up and we’ll definitely be running another one of those this year, and I that kicks off in March,” she said.

“There’s been quite a sense of urgency for us to deliver to that need, so we’re really pleased with the timetable we set for ourselves,” said Mr Gibbs. “COVID didn’t hold us back and we have a wonderful team that has carried on with that development and we’re on track to deliver in time with our original plans,” he said. 

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