



HOW TO BENEFIT FROM AN ACTUARIAL PERSPECTIVE

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Jules Gribble
Principal, PFS Consulting

The actuarial ‘package’ is powerful, flexible, and broad based. It can add value in unique ways, in both established and new contexts. The breadth of actuarial training, together with its depth in key areas, provides a strong base, and the flexibility to transfer established skills into new situations or areas.

The actuarial approach

This article gives some insight into actuarial perspectives and approaches to problem solving. Users of actuarial services can gain insights into actuarial approaches and how they can provide value-adding outcomes.

The power of the actuarial approach, coupled with experience and pragmatism provides a strong basis for giving users timely, incisive, relevant, and reliable advice. This helps them make more informed business decisions.

We all know the future outcomes of our activities are uncertain and cannot be guaranteed in a world that is risky, complex, and evolving. Actuarial approaches embed a deep understanding of risks, their interactions, and the potential consequences

of risk events. They recognise the importance of appropriate and responsive governance and processes. The actuarial ethos recognises that experts need to understand information asymmetry when explaining their work and findings. It also reflects the responsibility of addressing public interest issues that may arise.

Moral and ethical obligations

While moral and ethical obligations may have ‘black letter’ law as a minimum base, they usually operate at a higher level. It is not only ‘what you could do’ but also ‘what you should do’. Globally, actuarial Codes of Conduct reflect this as well as the responsibility of actuaries to uphold these obligations. This is evidenced by many experienced actuaries having been in situations where their professional obligations have led them to refuse to carry out an instruction or decline a role.

We look at the specifics of the actuarial approach to distill a set of skills, unique to actuaries in aggregate, to explain why actuarial approaches can, perhaps uniquely, add value to those receiving advice that reflects those approaches.

CONTACT



JULES GRIBBLE
julesgribble@pfsconsulting.com.au
Phone: (02) 9225 6100



THE PROFESSION IN CONTEXT

The actuarial profession is small in size relative to other professions. Globally there are less than 100,000 fully qualified actuaries, and in Australia there are under 3,000 (although relative to all but a few well developed countries, we are actuarially 'dense'). To give this some context, globally there are millions of accountants, lawyers, or doctors.

The profession is well known in its more traditional areas of practice – insurance (life, general, and health) and superannuation. This is a historical consequence of the statutory actuarial roles required by legislation or regulation. The origins of the profession and its specialised skill sets lie in the development of participating whole of life insurance products in the United Kingdom in the 19th century.

The profession has long been global. In the last half century it has also grown and broadened its footprint, building on its established quantitative skills.

It has progressed from a traditional pricing and liability focus to exploiting the tools and opportunities of data analytics to harvest business insights. It has also expanded to understand asset risks, the importance of capital, managing the broader portfolio of risks required for enterprise wide risk management, and dealing with uncertainty across both financial and non-financial risks. At their core, actuaries are risk managers, albeit often with a focus on financial risks.

The actuarial toolkit

Actuaries are highly qualified, equipped with a wide range of skills, and required to meet rigorous standards of professional practice at all times. Success in multiple stringent exams is required to enter the profession and strong continuing professional development (CPD) requirements are in place to maintain the currency of knowledge throughout actuaries careers.

The skills and tools actuaries bring, which may have been developed in particular contexts, are widely applicable and transferrable. The breadth of actuarial training provides actuaries with the opportunity to view issues from multiple perspectives, find new applications for their existing tools, or have a good platform to build from in new circumstances.

ACTUARIAL PERSPECTIVE

A high-level Actuarial Value Proposition (AVP), which provides an overall vision for actuarial practices, is:

Actuarial value is delivered to a recipient of actuarial services when that recipient:

- Has their reasonable expectations met with unbiased advice on events that lead to uncertain outcomes;
- Has the advice effectively communicated in a way that supports the recipient making better-informed business decisions; and
- Has confidence that the advice provided has been arrived at by an individual who has sufficient education and experience to make that judgement and is bound by a code of professional conduct.

The underlined phrases in the AVP give the core components for overall success, all of which are needed. Failure of any link implies failure of the full chain. A 'use test', made by the user of the actuarial service, is embedded in the second bullet point. Implicit in this is the joint and interactive responsibility of the actuarial services providers and recipients of those services to make fair effort to make the process work.

For example, if the recipient does not understand a point, then there is an onus on them to seek clarification. There is an onus on the service providers to focus on the key matters, communicate the possible impacts of uncertainty, and place results succinctly in the appropriate business context.

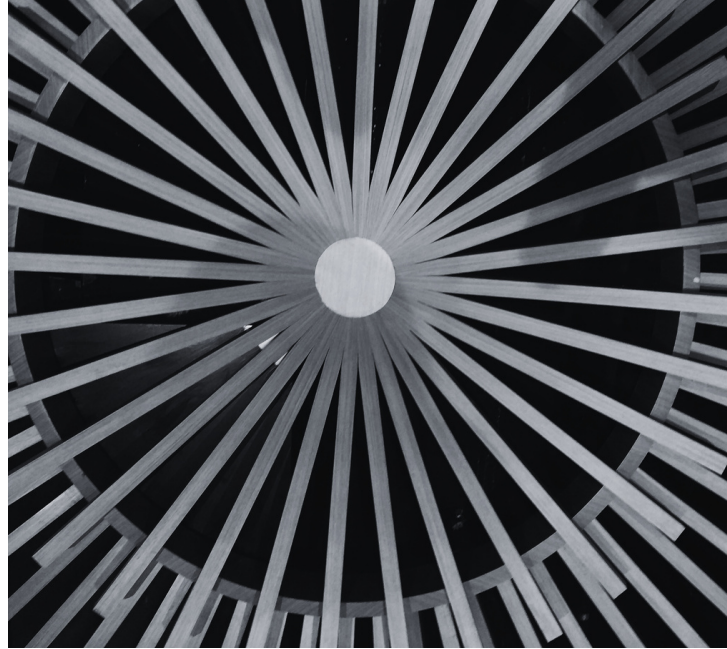
Actuaries can review a range of symptoms, assess the underlying disease, and then address it. It is not uncommon that projects begin by addressing some specific symptoms but these symptoms do not fully describe the underlying disease. This may be especially the case when supporting clients making and implementing business decisions in new and changing environments where history may not be a good predictor of the future. Accountability levels may be higher for decision makers than AI systems.

Earlier, we noted that the actuarial profession is small. Neither the profession, nor individual actuaries, can be all things to all people. An overall challenge is to clarify where the most value can be delivered. With their broad knowledge base and capacity to view challenges from multiple perspectives, actuaries are well placed to both manage technical work and also interpret its implications for business decision makers. That is, they can bridge the divide between the doers and the users by interpreting the work done in the context of the decisions to be made. This bridging or interpreter role is powerful and can add value to both parties. This value can be further enhanced when relevant experience is reflected.

BEST PRACTICE

There are multiple challenges involved with delivering on the AVP. The skills needed to successfully deliver the AVP are put into four complimentary families:

- **Technical:** Skills required to do work. Such as specify appropriate models, set assumptions, manage incomplete data, build and validate models, assess outcomes and their high level implications, and understand the impacts of uncertainty.
- **Workplace:** Skills required to make workplace contributions. Such as personal social capital, cultural fit, teamwork, working with other professions, leadership, presentation, and self-organisation.
- **Delivery:** Skills required to deliver results. Such as understand the audience and its needs, clarify key messages, effective communication skills, and manage expertise asymmetry.
- **Professional:** Skills required to put results into context. Such as manage the scope and resources for the task, reflect stakeholder interests, apply judgement, and abide by all professional and regulatory standards.



Despite the recent rise of artificial intelligence (ChatGPT and its friends), there remains a role for actuaries to apply their high level judgement in the face of uncertainty and reflecting a particular set of circumstances. This does not seek an 'average' response over a large historic database, rather it focuses on a tailored assessment at a specific time and place. Also, there may not be a single 'correct' response but a range of reasonable ones.

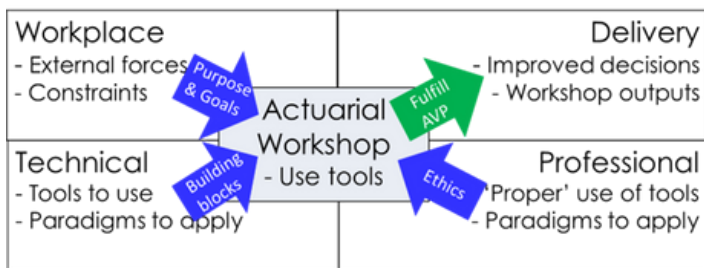
These families of skills are all required and their interactions need to be brought together. To use an analogy, it is one thing to have a pile of components and another to bring them together to produce a finished product. Think of building a house from its many parts.

Skills are presented in a transferable form. To say 'I can do a valuation' focuses on a specific output from the actuarial workshop. Listing the Technical skills noted above and then saying 'consequently, that means I can do valuations' focuses on the skills applied and their transferability rather than an outcome from their specific application. Actuaries that understand the transferability of their skills can add much greater value to users of their services.

Actuaries have the breadth and skills to bring their lists of components together to produce coherent, reliable, and robust outcomes. This happens in what can be called an 'actuarial workshop'. Many things go in as raw materials, are processed in structured ways, and then outcomes emerge and are delivered.



The Actuarial workshop

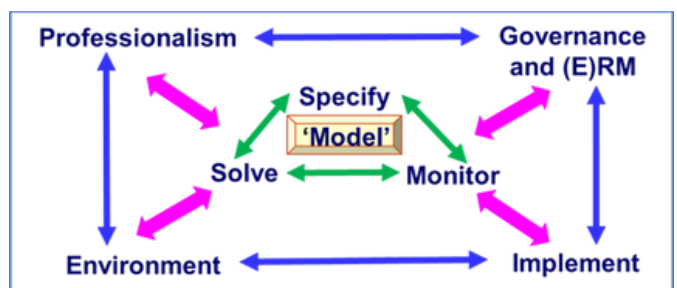


Reports outline the processes and assumptions used. They may serve a range of purposes such as providing insight and transparency on what was done and how it was done, satisfying supervisory or other governance requirements, or providing sufficient detail for the results to be reproduced. Actuarial workshops, like all specialist workshops, have their own cultures and practices which may be somewhat opaque to those not in the profession.

A level of trust that the actuarial workshop performs as intended is needed from users and to be earned by actuaries. We typically trust doctors, pilots, car mechanics, chefs, and many others to ply their skills in their workshops without needing or seeking to know the detailed specifics of what they do and how they do it. This type of trust should also apply for actuaries.

A core actuarial paradigm that supports much actuarial work and provides a process that actuaries use in many situations is the Actuarial Control Cycle. Central to this is that it is a cycle that is repeatedly applied, distinct from a linear process that comes to an end. It incorporates a technically focused Analytic Cycle embedded in and interacting with a more contextual Professional Cycle. These processes are a core part of the actuarial DNA and are embedded in actuarial work and the actuarial ethos.

The Actuarial Control Cycle with its component Analytic and Professional cycles.



Those familiar with Financial Condition Reports will recognise an Actuarial Control Cycle approach embedded in the legislation that requires these annual reports.



CONCLUSION

Actuaries are highly trained with a broad range of skills that can be applied in many situations, new and established. The range and depth of the actuarial toolkit suggests, when those tools are used in effective combinations, that higher level synergies and insights can be realised. Actuaries can view challenges from multiple perspectives and then apply their tools in sometimes new and flexible ways that reflect the needs of a specific situation.

Actuaries, and the actuarial profession, can add value by bridge the gap between the sometimes different worlds of those who generate technical results and those who make decisions based on how those results are interpreted.



IN SUMMARY

- The Actuarial Value Proposition provides a strategic approach
- An appropriately informed Actuarial workshop provides the ‘engine room’ for delivering results
- The Actuarial Control Cycle provides a means for managing the process, and
- The ‘use test’ of users of actuarial services making better informed business decisions provides a means of assessing success

ABOUT PFS

PFS Consulting is an actuarial and risk consultancy. It provides insight, foresight and oversight and always seeks to leave its clients better placed after engagement than they were before. One of the keys to PFS’s success is that its approach embodies some of the core actuarial perspectives and attributes outlined above.

CONTACT



JULES GRIBBLE
julesgribble@pfsconsulting.com.au
Phone: (02) 9225 6100