



SOCIETY OF ACTUARIES

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How to Select Actuarial Software

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In many ways, buying actuarial software is like buying a house. It is a major financial commitment and a difficult decision. You are going to be living with it, and paying for it for some time to come. It is a somewhat painful and expensive process to find, choose, buy and then make it livable. You will likely find unexpected problems that need to be fixed. There is only so much you can learn from the sales brochure and the walk-through. And you certainly can't completely trust the vendor or his sales agent! No wonder many actuaries put off the decision to change even when their current software is past its prime.

So how should you go about choosing new software that's right for you? However you decide to approach it, I suggest you keep the following two rules in mind: first, take the long-term view; and second, take the time to do it right.

A Critical Strategic Decision

You must put effort into finding a solution that will last and pay proper return on the investment of your time and resources in the investigation and the subsequent implementation required. It's not just a financial investment you are justifying. The choice of software will impact your ability to cope with changing demands and emerging risks, and your company's ability to introduce new products and support those new products with appropriate financial reporting and risk assessment tools. The productivity and the job satisfaction of your actuarial staff are at stake, and that will also drive the overall cost of the actuarial function for your firm and your ability to attract new staff when needed. Moreover, it will take substantial effort to make the transition.

Create a Long-Term Vision

When taking the long-term view, you should first drive a clear and appropriate definition of the needs to be addressed

by the software, and the corresponding criteria used for ranking alternatives available. When thinking of needs, don't restrict yourself to handling current reporting requirements and addressing current frustrations and bottlenecks, but also look longer term and try to imagine how actuarial functions are expected to change in the coming years. In fact, what you really need is a vision of how you want your actuarial function to work, and how the software used can make that vision real. Don't let your current frustrations impact your vision of a perfect solution.

Of course, your vision will have to consider the demands of pending changes in approaches to reserves and capital requirements with PBA, C3 Phase III and IFRS coming from different directions. These influences are not well defined in detail or timing, and many different interest groups are wading in on the discussions. So don't worry about the specific details of these future changes as much as the overall picture they paint. The only thing certain is that the actuary is likely to have to cope with new and changing requirements, and his or her software will have to be responsive to these changes.

Understand the True Need

In identifying business needs, do not fall into the trap of confusing the business need with the possible solution itself. This is particularly relevant to the need for responsive software and flexibility. Your ability to respond to changing needs by adapting your models is not equivalent to owning and maintaining the underlying code yourself. That's just one approach, and it may not make the most sense in the longer term. There is a range of options in terms of how much programming you will need to do, and who will be responsible for the code and its ongoing accuracy and functionality. Think about who is best suited to do this in the longer term.

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Most often, flexibility is required in the details of product design and assumptions. Less often, new reserve methods and actuarial calculations will be required. Occasionally, the fundamental system architecture and data flow will need to be revisited. Think about all these things, and how the total solution proposes to address them—who will do the work, and how that impacts your ability to adapt from a total solution point of view.

To assess alternative software solutions properly, you must keep an open mind. The approach taken by your existing vendor, and the experiences and challenges you have faced with your previous system or systems may not be comparable to what a different vendor's solution may offer. Jumping to conclusions without taking time to examine all the options carefully while applying a long-term perspective may result in a shortsighted decision you will ultimately regret.

Making an Informed Decision

This is where thoroughness comes in. Take the time to buttress opinion with supporting evidence. Test out any software you are seriously considering with a specific testing plan that addresses each of the long-term needs you have identified. Make sure competent and experienced staff lead the testing, and that they are allowed the time to devote to it so that sound assessments are reached. If you can't afford this commitment, think about hiring an objective consultant to assist with the project.

Yes, it is good to identify any functional shortcomings in terms of available reports or current methodologies supported. But keep in mind that such things as actuarial methods and specific report formats will constantly evolve. It is the fundamental software framework and the vendor competence and commitment to enhancing their product that in combination supports your ability to make those changes, to address new demands, and to implement new assumptions. These are much more important to you in the longer term.

Sometimes it is more difficult for end users of the software to approach software assessment with an open mind. Users by nature may resist change, fear the unknown or place undue weight on interface differences compared to underlying architectural issues. Users may find threats to their own roles when

a fundamental change in approach is required. That does not mean their needs are not important and that they should not be consulted. No change will be successful without buy-in at all levels, but the balance of a higher perspective and a long-term outlook that considers the company's overall financial interest and risk is needed in this important decision. It is important to consider the needs of each level within each functional area, but in the end it is senior management that must deal with business realities of missed deadlines, unexplainable results or shortsighted decisions if those decisions are based solely on gut reactions of end users.

Testing is important, but you only have the time and resources to test so much before making a decision. Verify the conclusions you reached, with and without testing, and any claims made by the vendor, by crosschecking the experience of current users of the software. How has the vendor support been? How have they dealt with requests for changes? How have the system implementation projects actually gone? Has the system lived up to the expectations, or is it about to be returned to the vendor?

A Long-Term Approach to All Issues

The actuary should also thoroughly look at the long-term prospects for the software and its vendor. How committed are they to actuarial software and its support versus other potential businesses? Will they continue to maintain and support this specific software offering or provide smooth upgrade paths to any new software offering? How much effort is involved in implementing a new release? What evidence is there to support statements they make on these issues? Again, check their references.

A long-term and comprehensive view should also be taken on the cost-benefit analysis and comparisons of alternatives. Up-front costs of each approach should include training, implementation support and consulting assistance, as well as vendor license costs. Initial costs should be amortized over a period the solution can be reasonably expected to last, and added to maintenance costs of all types. The expected lifetime of the software and its vendor should be considered in choosing that period. Above all, look for long-term value, not short-term costs.

A good home is where a family grows. Following the above two rules, the right actuarial software will allow your actuarial team to grow in professionalism and stature within the company. Instead of just producing numbers, you will provide value-added information indispensable in the running of a world class insurance company. ●



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