The biggest barrier to actuarial system improvement is... actuaries?

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As insurers prepare for another round of system adaptation and process review with the introduction of IFRS 17, Andries Beukes shares his experience in modernising actuarial systems and discusses what role actuaries have in the success – and failure – of transformation projects

From the day the first life table sprang into existence, actuaries and insurance companies have been inseparable. The insurance industry has developed the actuarial profession as much as the profession has developed the industry and, for much of their shared history, it was impossible to imagine the one without the other.

Over the last 10 years, however, cracks have appeared in this previously solid union. In the past, actuaries not only developed the technical backbone of the insurance industry, they also provided strategic insights at management and board levels. Recently, however, actuaries have taken on a more compliance-focused role, diminishing their visibility at and value to higher levels of the organisation.

The new generation of actuaries has spent so much time turning handles and churning numbers that it is not equipped to contribute to the strategic and commercial goals of insurance companies. This is not optimal for the companies – which are paying expensive resources to do work that they are over- (or, in my opinion, often under-) qualified for – nor

for the actuaries themselves, who are not given a chance to develop their hard-earned skills nor reach their full potential.

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This phenomenon alone gives rise to the need for transformation projects in actuarial teams, but there is another relationship at play, the stunted development of which has resulted in untold frustration and inefficiency; actuaries and IT.

The world of actuarial and data technology is one of the few clunky relics still resisting the global technology boom. Also, actuaries are extremely resourceful in building their own ad-hoc solutions where technology fails them.

The combination has resulted, I believe, in a generation of under-utilised, over-protective actuaries who are too busy guarding their inefficient models and unwieldy data, to gain the experience required to meet the strategic needs of organisations.

Transformation is needed, both at the level of individual companies, but also in the actuarial culture. Yet we see, time and again, a reluctance from actuarial teams towards transformation projects. And, given the high rate of ultimate failure of these projects, perhaps this reluctance is justified.

But are there factors present in actuarial teams specifically that can make or break actuarial transformation projects?

The power of actuarial leadership

Perhaps due to their historically privileged position at insurance companies, actuaries tend to respond best to other actuaries. They will not trust data unless it has been checked by actuaries, they will not relinquish control of their models to non-actuaries and they most certainly will not buy into a significant change initiative unless it is being championed by an actuary in a leadership position.

Grudgingly cooperating with nagging consultants is not enough... actuarial leaders need to passionately believe in transformation projects

In many cases, actuaries in leadership positions do not take enough ownership of transformation projects. Even if they have had a hand in approving and providing budget for a project, I've seen time and again that actuarial leaders will step back once the project has commenced and expect the process consultants or project managers to make it a success. This will not work because, even at entry level, actuarial team members are inducted into a culture which, justifiably or not, respects actuarial authority to the exclusion of others.

Actuaries in leadership positions need to be visionary and proactive in order to inspire those who respect them. This kind of contagious enthusiasm can only be evoked when leaders themselves drive the project and make it their own. Grudgingly cooperating with nagging consultants is not enough. To achieve sustainable improvements and buy-in from everyone

involved, actuarial leaders need to passionately believe in transformation projects – and create the time and space for their teams to do the same.

Buy-in for change

Why do these projects struggle to get the buy-in from leaders and team members alike?

One reason is that actuaries are trained to be autonomous problem-solvers. Non-standard policy to be valued? We'll just whip up a manual adjustment in a spreadsheet. New regulation coming in? Let's squeeze the margins built into our monthly process to make sure we report on time. IT taking too long to upgrade the liability model? We'll just learn to code the new product ourselves and bolt it onto what we have.

This can-do attitude – and the trust placed in actuarial teams – may mean that they are not always aware of the inefficiencies and risks present in their processes and hence don't see the reason for transformation. In these cases, is it necessary and effective to manufacture a crisis to obtain buy-in? In other words, perhaps we need to induce a feeling of panic for actuaries to admit that they cannot do it all and hence become receptive to change.

Very few companies measure the simple KPIs that could be used to baseline the efficiency of operations

Lack of buy-in may also be explained by the need of actuaries to see a clear transition plan, including the projected long-term benefits, in a measurable, tangible format. But articulating a solid outcome is not always easy to do.

Actuaries know better than anyone that it is difficult to make predictions based on limited data. For a start, we need to know basic metrics of our current state to measure the success of any transformation project. But, in my experience, very few companies measure the simple KPIs that could be used to baseline the efficiency of operations.

How many runs failed during the previous production? How many hours does each step of the process take? How many different sources do we use for the same data? If we don't know where we are starting from, visualising a better state becomes challenging. Many actuaries sweep their inefficient processes under the carpet of "expert judgement". But teams need to start formalising their processes – however inefficient they may be – to give themselves the chance to see the potential benefits of change.

Mending the relationship

Qualifying as an actuary requires passing some of the toughest exams in the world, but fails to prepare students for practical life office work in a crucial way: there is a glaring neglect of IT training.

Andries Beukes, MBE International

Any actuarial student starting work will be thrown into the world of coding, runs, databases and shared drive disk space. But it's accepted that the IT knowledge required to operate often complex and resource-intensive models is something that can be picked up "on the job". And the distant, often strained, relationship between actuarial and IT departments leads to actuaries working relatively autonomously with limited IT support; bolting on tactical solutions – which may not be the most efficient or sustainable approach – as they see fit.

This might have worked in the past, when regulatory and reporting requirements in the industry were more stable and simpler. The last decade, however, has seen a surge of complex products and new reporting standards and regulatory requirements.

Actuaries feel that they can solve problems faster and more efficiently without IT support

The attitude of actuaries towards formal project management – i.e. seeing transformation projects as administrative burdens and obstacles to timely completion of their tasks – still prevails today. Actuaries feel that they can solve problems faster and more efficiently without IT support. But years of bad habits and lack of investment in actuarial IT infrastructure and relationships have resulted in a build-up of teetering solutions that are difficult to support and prone to deficiencies and errors.

It seems that actuarial transformation projects, of which the upgrade of IT systems and relationships is almost always a large part, are likely to fail until more investment is made into the relationship between actuaries and IT, or until actuaries formally become IT specialists themselves.

Actuaries versus technology

Over many years of being involved in transformation projects, I have observed that actuaries, specifically actuaries in back office and client service teams, are often reluctant to embrace new tools and techniques, preferring instead to stick to the old systems they know and trust, however inefficient and unsustainable they might be. Why is this the case?

Risk aversion is drilled into actuaries from the start of their education. Strict regulation governing the insurance industry – and the responsibility of protecting policyholders' assets – ensures that actuaries do not take any unnecessary risks in the workplace either. This extends to the use of the technology they use to do their jobs.

In defence of actuaries though, they may be unwilling to spend the money simply because they don't have it

Transformation projects may involve the introduction of new systems which promise to streamline computing requirements and automate manual processes. They may also propose the development of bespoke solutions.

Such claims and ideas are often met with mistrust, and actuarial teams are unwilling to invest in these solutions. Technology is expensive and in these cases the perceived benefits do not warrant the cost involved. Sometimes it only takes one success story to have a cascading effect throughout the industry, but nobody wants to be the first to take the plunge.

In defence of actuaries though, they may be unwilling to spend the money simply because they don't have it. Those who hold the purse strings, senior management, tend to see the actuarial back office purely as a reporting function, not really adding much value to the business. They may therefore be less willing to invest budget into these teams, due to the low perceived returns. This makes it difficult for the affected actuaries to add value, as their systems do not allow them to do so, and they find themselves in a Catch-22 situation.

Fear of being made redundant by computers may partly explain this desire to hold onto the past

Whoever the decision-makers may be, the fact is that at some point, it becomes risky not to invest in new technology. A lot of older software is not designed to cope with the volumes and complexities of today's insurance business, and processes characterised by manual adjustments and physical handovers are disasters just waiting to happen.

Fear of being made redundant by computers may partly explain this desire to hold onto the past, but, as the profile of the 'typical actuary' evolves, a new, forward-thinking generation of actuaries can use technology to propel the profession to greater heights, instead of diminishing it to what amounts to little more than human debuggers.

How to succeed?

Here are some of the practical lessons my team and I have learnt through years of involvement in a variety of successful transformation projects.

Create incentives for buy-in: Leaders need to accept that introducing a transformation project will affect their teams' KPIs. Employees have little incentive to complete tasks which do not directly contribute to their performance reviews. Including transformation-related objectives in performance discussions and hiring external resources to ensure that business as usual (BAU) work doesn't fall behind is one way of obtaining employee buy-in.

You can't measure what you don't manage: Benchmarking actuarial processes may not be as obvious as counting the number of widgets produced per hour, but it has to be done somehow in order to measure the outcome of any project. As highly-skilled professionals, actuaries enjoy a level of trust which has traditionally exempted them from having to complete detailed time sheets and record performance metrics. And if uprooting this tradition is not the answer, it may be worth investigating software solutions which can assist in performing such measurements automatically.

Outsource where it matters: Typically in transformation projects, contractors are brought in to help with the project work, leaving permanent employees to fulfil their BAU tasks. This approach results in contractors who are enthusiastic and knowledgeable about the new process and permanent staff, for whom the process was designed, with little know-how of, and even less interest in, sustaining it. Management might look at using contractors to assist with BAU work – it goes a long way to guaranteeing internal buy-in and retention of expertise after the contractors have left.

Optimise your existing tools: Too often, teams will embark on significant projects, or buy expensive technology when the systems they already had in place could have done the job just fine. They should rather invest in thorough training on what they already have; it often comes as a surprise just how much the application they have been using for years can actually do.

Andries Beukes is director for actuarial solutions at consultancy MBE International. He is a qualified actuary.