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Phoenix breathes new life into its actuarial systems

The UK closed-fund consolidator has replaced its myriad modelling systems with just one, in a huge three-year project that is said to have been on time and on budget. For Phoenix, the project was not only operationally necessary; it was a strategic imperative. *InsuranceERM* explains

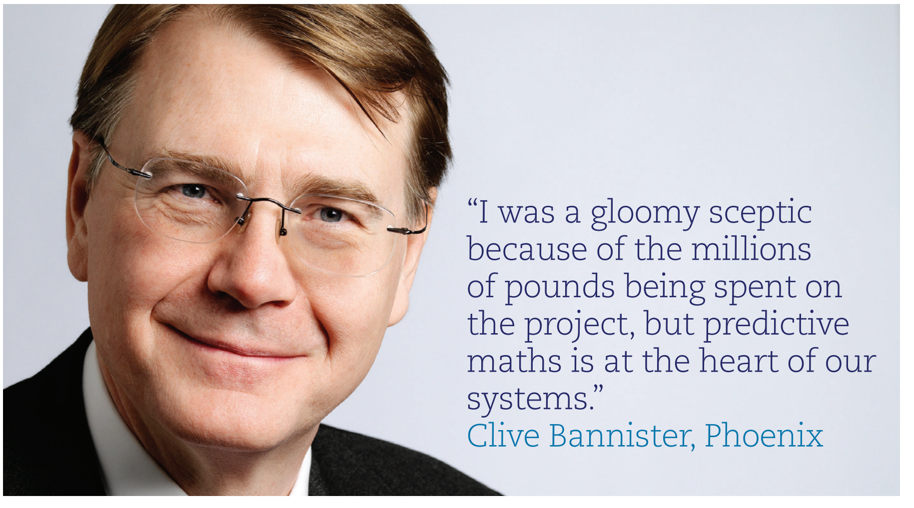
It's rare for a company to sing the praises of a supplier in front of other companies in the same sector.

But in May the Phoenix Group did just that for consulting and software firm Milliman. The chief executive and senior management joined Milliman representatives in front of an audience of other insurers to declare the success of Phoenix's three-year project to reduce its plethora of individual modelling systems and processes to one unified platform, Milliman's MG-ALFA.

The actuarial systems transformation (AST) project was begun in July 2010 and formally completed on 28 June 2013. Table 1 shows a snapshot of the project.

No wonder group chief executive Clive Bannister at the London presentation on 8 May stressed that the "before" position underlined "the strategic imperative for transformation." He said the business, with nearly £70bn ($107bn) of assets under management, had needed better management information systems.

However, he admitted that he had been initially lukewarm about AST when he joined Phoenix at the end of 2010 – after the project had been launched. He joked that it's a worry whenever words like



"systems" and "transformation" appear in the same sentence. "I was a gloomy sceptic because of the millions of pounds being spent on the project." But it was necessary: "Predictive maths is at the heart of our systems."

"Clive was nervous about our chance of success," revealed Mark Hutton, head of actuarial reporting at the group.

The root of the systems problem at Phoenix was the group's growth strategy which is based on acquiring companies with closed with-profit, non-profit and unit-linked funds. As Nick Watkins, head of non-profit and with-profit actuarial reporting says, "With every new fund, every new company that we acquired, [came] another process, another system, a different system, another way of doing things."

Table 1: Models used by Phoenix Group, before and after actuarial systems transformation

BEFORE	AFTER
52 Prophet systems (SunGard)	1 MG-ALFA system (Milliman)
23 MoSes systems (Towers Watson)	
2 ViP systems (now IBM Algo Financial Modeler)	

CRUNCHING ALL THE NUMBERS DOWN

Numbers Hutton quoted at the London presentation reveal the scale of the undertaking. More than 900 manual processes have been reduced to 44, fund-specific methodologies have been shrunk from hundreds to one, and the time taken to produce quarterly data for the UK's Individual Capital Adequacy Standards (ICAS) has been cut from four months to three days.

In the biggest fund, the Phoenix non-profit fund, Watkins explains that 26 models have been reduced to one. "That's a big enough change on its own without all of the other 20 funds being considered."

At the same time that the systems' transformation was in progress, the group itself was rationalising – from 13 UK life companies down to seven, and now to three: Phoenix Life, Phoenix Life Assurance Ltd and National Provident Life.

Phoenix needed to reduce the complexity in its business, says Bannister, and as a result of the AST, the group now has a single platform; it has converted fixed costs to variable; it has improved data quality and removed legacy issues such as multiple versions of different models which meant holding higher risk capital; and it is "acquisition-ready".

He explains that, "As a closed life business consolidator, Phoenix focuses on the efficient run-off of existing policies, maximising economies of scale and generating capital efficiencies through operational improvements." So operational efficiency is at the heart of the Phoenix business model.

Such thinking established the AST project as fundamental to Phoenix's future, which is why Bannister was keen to stress the progress that has been made over the past three years. He told his London audience that each product in the group now has a single model; fewer resources are required, allowing capital to be released; and operational risk has been reduced. This leaves Phoenix "better equipped for Solvency II and ICAS+."

It also allows Bannister to pursue the growth opportunities he sees. "There's £200bn of closed and quasi-closed with-profit and unit-linked funds out there," he said. "And the business won't be administered the same way in the next 30 years as it has been in the last 30 years."

PHOENIX'S TRANSFORMATIONAL VISION

Phoenix had decided to proceed with the AST project early in 2009, intending to replace all three main modelling systems. But as the plans were developed, it became clear that something much more than just replacing systems was needed. According to Darren Wathall, Phoenix's actuarial systems specialist, "Phoenix was looking for a car, but there were no cars out there, only components."

"We have far more data than we will ever use and it is making the reporting work a bit harder than it needs to be."
Mark Hutton, Phoenix

Phoenix started talking to Milliman in the summer of 2009. Milliman was eventually selected for the project from a final short-list of two, the clincher being eight weeks of twice-weekly meetings between Phoenix and the two vendors to clarify what the vendors could do for Phoenix.

What attracted Phoenix to Milliman was the functionality of MG-ALFA and working with Milliman people, according to Hutton.

"Over those 16 meetings, their vision changed," recalls Pat Renzi, MG-ALFA global practice leader at Milliman. "We saw that they wanted complete transformation, industrialisation and automation."

She is candid enough to admit that the transformation project was "more their vision than ours."

Despite the sheer scale of the project, Renzi says it was "on time and on budget. We agreed to a fixed price for the contract, and structured it such that there were clear incentives for both parties to deliver on schedule. This was necessary due to the Solvency II deadlines that were looming at the time we started."

The project has paid for itself in 18 months, according to Phoenix.

Ironically, the continuing delays in Solvency II implementation have meant that Milliman has had to add Solvency I capabilities to Phoenix's new platform to allow the group to use it before Solvency II comes into force.

HOSTING IN THE CLOUD

A key part of the transformation has been the total embrace of cloud computing. The entire system is hosted in the cloud using Microsoft Azure's platform-as-a-service.

"Private grids don't allow you to gear up to your peak demand," Hutton explains. "You get only about 5-10% utilisation from an on-premises grid." The cloud gives Phoenix "virtually unlimited IT resource capacity. It's been tested up to 50,000 processing units," he says.

He stresses: "We only pay for what we use. This allows us to match costs to income. Also costs can be allocated more easily to actual users, which keeps the actuaries under control."

All this has important implications for processing numbers for internal and regulatory purposes. The time taken to produce quarterly numbers has been reduced by 97.5%, according to Hutton. The person hours taken to produce the quarterly results have seen a 95% reduction.

The benefits, as Hutton sees them, include reserves and capital releases, expense reduction and expense matching. The latter gives the company more flexibility to scale the business up or down.

In addition, he says, the company has more confidence in the results produced by the number-crunching and it enjoys better allocation of resources, because actuaries are not needed to perform mundane tasks.

But such a project does make huge demands of management. In order to realise value, stresses Hutton, you have to manage the cultural shift, have a strong change appetite, maintain a strong and clear vision, set the ground rules early and keep your nerve.

DATA OVERLOAD

One area that didn't go quite as planned was the management of data for reporting, says Hutton. And this was mainly because Phoenix was developing its new platform as the shape of Solvency II was still evolving.

At the time, Phoenix could make a fair guess as to what the Solvency II methodologies for a market-consistent best estimate would be, recalls Hutton. But the reporting requirements were less clear. "QRTs [quantitative reporting templates] were a moving feast, the ORSA [own risk and solvency assessment] was a figment of the imagination and the FSR [financial stability report] was not even that.

"We therefore exported a very rich data set on the understanding that what the user would want would be in there somewhere. As a consequence, we have far more data than we will ever use and it is actually making the reporting work a bit harder than it needs to be."

ROLE OF ACTUARIES

Renzi, who has worked with actuarial systems for more than 30 years but isn't an actuary, says the actuaries' role in the whole modelling process had to be modified from production to analysis. In the insurance industry in general, she thinks there will be a move back to closed systems. "We shouldn't have actuaries tinkering with reporting systems," she observes. "With the complexity of regulations, actuaries have to focus on analysis rather than system development and execution."

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As a consolidator, Phoenix is driven by creating efficiencies, she notes. And the group culture is also "to shake things up," so pushing in a new direction is more natural for them than for most insurance companies.

Renzi has lived and breathed the Phoenix AST project for the past three years. The scale of the project required her moving her residence from Seattle to near Birmingham in the UK Midlands. With her Birmingham sojourn coming to an end, she's looking for new prospects. The success of the Phoenix project has sparked interest from medium-sized companies in the US, where Milliman is traditionally strong. The NAIC's ORSA project, proposed changes to IFRS and GAAP, and principles-based reserves are helping drive the interest, she says.