

The power of data science

Ros Altmann, former UK pensions minister, has spoken of the need to “make pensions digital”. The Department of Work and Pensions’ Pensions Dashboard aims to do just that, by collecting and curating information about members’ multiple defined benefit (DB) and defined contribution (DC) pension pots in a single, digital location.



Stuart Murphy
Head of DC Client Management

Such initiatives are in response to the difficulties that members, scheme managers and trustees face when it comes to managing scheme and member data.

Many pension schemes store a large amount of static and individualised member data. This is difficult to access, incomplete or inconsistent, and stored in multiple formats – PDFs, spreadsheets and others. Schemes struggle to analyse their data, develop sample user personas, and make predictions about future trends and behaviours, let alone support members in improving their pension choices to improve outcomes.

This article explains the steps Legal & General has taken to alleviate the issues schemes and their members are facing through a cloud-based web platform which brings together member and scheme data into one place, with timely updates. The dashboard allows for an easy digital overview, but also presents opportunities for benchmarking and forward-looking projections of requirements to facilitate better retirement outcomes.

Our solution – a single location for your data

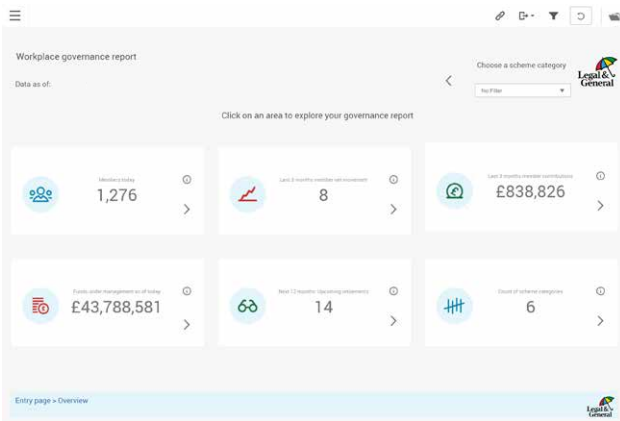
Legal & General have created a one-stop-shop in the form of a digital platform which provides a comprehensive overview of member and scheme data. The data is stored in the cloud. We have collected and cleansed vast quantities of client data to remove the noise, hone in on the key value and performance indicators that can enable data-driven decision making.

What is ‘cloud computing’?

‘Cloud computing’ involves renting digital storage from providers who are specialists in hosting, managing and processing data. The data is stored on servers which are accessed remotely via an internet connection, as opposed to being company-owned and located in-house. This improves data security and keeps costs low for end users.

What is ‘data science’?

‘Data science’ involves deriving trends from extremely large data sets, in order to create an insight into the present situations and develop projections about future needs, and to innovate. We continue to strive to be at the forefront of new developments in the data science space for workplace pensions and to drive business transformation with data.



The homepage display will include a breakdown of the key statistics including, for example, member contributions over the last three months, scheme assets under management, number of members, the percentage of users that are digitally active and net activity so far in the year and number of transfers and leavers.

For a deep-dive view, the tool offers data in dynamic chart and icon form – including contributions split by gender, age and region across the life of the scheme. However, the tool also has the capability for certain schemes to drill down to any given individual, including age, gender and postcode.

Our capabilities will be available in multiple formats, as an app, in browser view, and optimised for mobile, to enable our users to easily access data and make decisions on the go., using a single data source.

The display has been created with the end user in mind, to ensure ease of use. Rather than receiving paper reports each quarter, scheme managers and trustees will be able to see changes affecting the scheme on a weekly basis.

Information security

Data security and ethics are paramount in the development of these capabilities. We recognise that data ethics is an evolving area and that some companies have gone too far in using client information to retarget or profile clients. We believe it is a crucial aspect of scheme governance to act responsibly with member data. We have encrypted both member and scheme-level data, ensuring that only authorised users can read it. We have also anonymised the data on our systems, so that no identifying characteristics (such as name or address) are associated with members at an individual level.

Targeting and segmentation

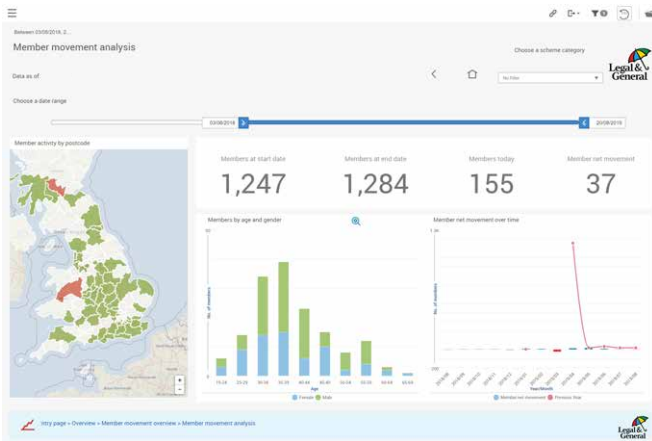
Putting data into a single consistent format allows us to build member personas, or profiles of what a typical member might require now and in the future. This allows us to slice data by member characteristics, and ultimately recognise trends among user groups. For example, a new CEO who has recently started contributing and an employee who has worked for five years may have a similar pot size, but will need customised advice for entirely different retirement requirements.

As the software will act as a 'neural network', constantly collecting useful data, it can ensure that new capabilities are developed to serve members whom it will benefit. For example, the help function will include a chatbot. If the same question is asked several times by the same persona type, detailed information can become available for members who fit that profile via a pop-up message, but not for others.

Flexibility is crucial. The infrastructure will allow certain schemes to upload their own data, including information not available to Legal & General, such as payroll information, to augment the platform's capabilities and build a more comprehensive profile of the scheme's users.

A potential application for this approach is making this platform available to members in order to maximise engagement. For example, members could be enabled to compare their own contribution rate against the average member who fits their demographic profile across all the schemes on the platform.





Ultimately, schemes can use ‘nudge economics’ in the form of pop-ups on the platform, suggestions delivered through the platform’s chat-bot, or guiding members towards relevant, freely available tips on our Financial Wellbeing site, to help members maximise their retirement outcomes.

The platform can give trustees valuable assistance in pension health-checks, including tracking how many members have changed their investments – a particular concern as they approach retirement. Another useful overview we can provide is how many have completed a nomination of beneficiary form, and how many are actively using the online ‘manage your account’ service.

This also allows us to target a specific cohort of members and track what actions they take, including if they have opened the email, and responded to the call-to-action.

Future-facing: the ability to aggregate data to derive trends

Previously we have relied on historic data, or management information (MI) in order to make management decisions. Our new data-driven approach allows us to use business intelligence, derived from machine learning and artificial intelligence insights, to make projections about the future.

The new platform can use the micro-data for each member pot to extrapolate to gain a clearer picture of forward-looking trends and scheme needs. For example, knowing at which point large numbers of members will be retiring can help schemes to structure members’ roll-down default and optional funds.

As the data available can be split by gender, region and contributions over time, we can gain a deeper insight into how schemes can boost engagement, and with which segments of their scheme population. Are men contributing less than women? Is there a north-south divide in the contribution rate? And how does this compare to our (participating) client-base as a whole? Is your scheme an outlier?

What affects contribution rates?

From our data, based on over 14,500 schemes and 3.4 million members

Age: older people pay in more to their pension on average

Gender: men contribute more on average

Location: contribution rates from southern regions of the UK are higher on average

Employment industry: IT, Finance and Banking workers contribute more when compared to Retail or Manufacturing employees

Legal & General Investment Management (LGIM) can also bring its own expertise to bear in the creation of external benchmarks which can be used to test various assumptions. LGIM already have deep insight into our own 3.4 million members, but we can supplement this with our own data to produce forward-looking scenario analysis.

Using proprietary macroeconomic research, we can feed in and extrapolate interest-rate projections, housing market demand data and other financial indicators, as well as demographic, retirement choices and other forecasts which are available using open-source code. This can be used to create external benchmarks based on different predictions, which can be used to estimate the average contributions required to meet these scenarios. Ultimately, this will give scheme managers the flexibility to test their scheme’s resilience against different outcomes, to future-proof member’s retirement pots

Did you know that data driven organisations are:

5x

More likely to be much faster at decision making

3x

More likely to be highly effective in executing decisions

2x

More likely to be a top quartile financial performer

Source: Bain Global 700 Company Diagnostic Survey 2017

Broader application

In an environment where trustees and scheme members are time-poor, data-rich, and finding underlying information a struggle to organise, we aim to deliver a clearer picture of your scheme, delivered through a regularly-updated, easy-to-use and clear platform.

We believe that the data science behind our platform has a broader application in helping to solve the issues that have hampered the creation of the DWP's Pensions Dashboard. Historically, data protection and security-conscious providers have been reluctant to provide data about their pension schemes to external parties. Our growing data engineering and data science capability has allowed us to take a leading role in a PPI-led initiative that aims to anonymise, blend and aggregate contributions data from all key pension providers. The aggregated data can be used to drive government policy with fact-based insights, rather than the assumption-driven analysis the wider market has traditionally relied upon.

Contact us

If you would like more information about how our platform can help you and your scheme, please get in touch with your LGIM sales representative.



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