Co-piloting Bulk Purchase Annuity (BPA) transactions

How AI and expert oversight are transforming the data journey in buy-ins and buy-outs

The acceleration of defined benefit schemes entering buy-in arrangements is a well-known fact, with over 500 whole scheme buy-ins since 2022. With improved funding levels and many schemes now operating with a surplus, the volume and pace of potential transactions continues to grow.

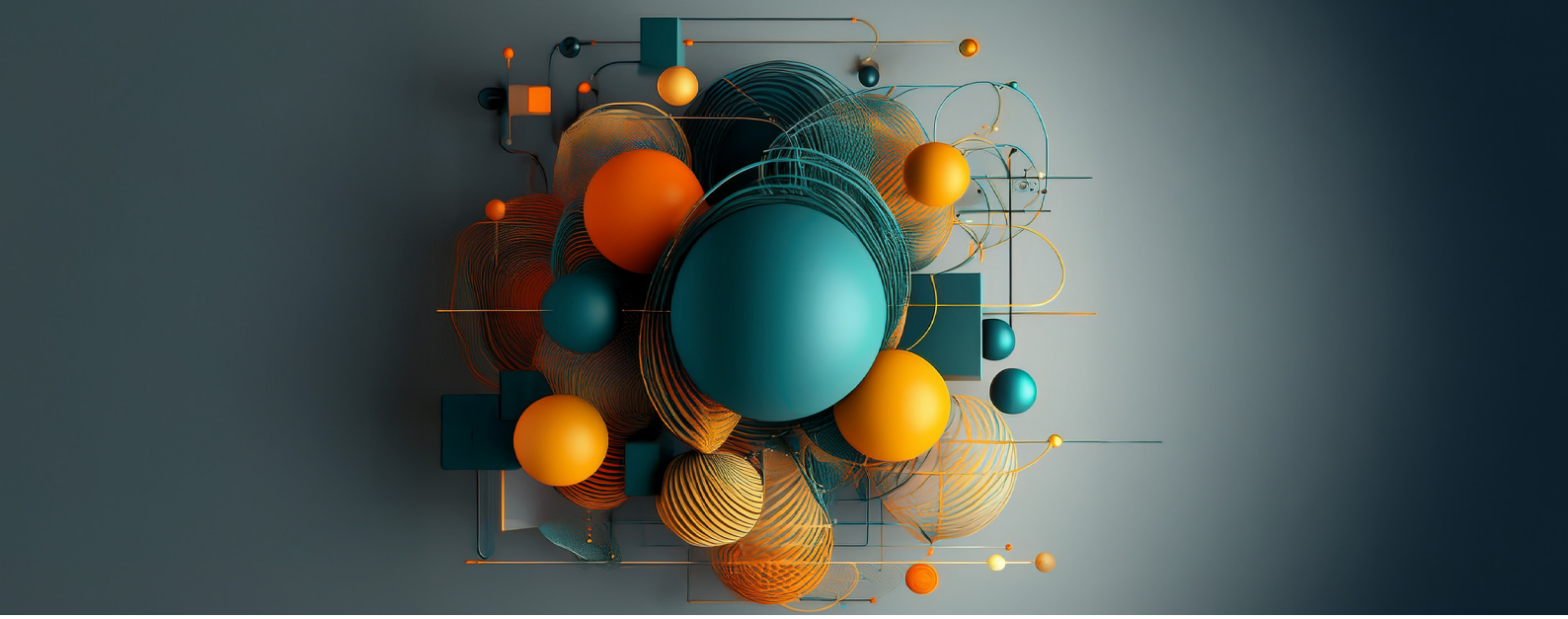
Despite the breadth and depth of expertise among bulk annuity insurers, pension schemes and advisers, these operations are still widely recognised for their complexity. This can cause transactions to drag on for years.

As explored in our recently published article *Ensuring a smooth buy-in/buy-out journey: The critical role of data quality*, we understand that high-quality, accurate data underpins every stage of a bulk annuity transaction from buy-in to buy-out. High quality data is essential for effective pricing, fair risk assessment and successful data migration. Without reliable and available data, bulk annuity transactions can face delays, pricing uncertainty, or even failure to transact.

AI in Bulk Purchase Annuity transactions

Generative AI is an exciting new technology that excels in understanding and transforming data, properties only enhanced by high quality data. The good news is that AI can be used not only to transform data more efficiently, but also to improve its quality. Now, AI is an emerging technology that should not be left entirely unsupervised. But by adopting a co-pilot approach, it can become a powerful tool that enhances human expertise, rather than replacing it. Furthermore, by building our AI solutions ourselves, Lumera can guarantee a compliant handling of any proprietary data. It will be secure and never leave the UK.

Our experience and expertise with BPA transactions, combined with our AI affinity, put Lumera in an excellent position to explore the application of AI within this field. This article will explore some possible applications of this technology, applications that are possible here and now, not sometime down the line.



Pricing data

Perhaps the first major milestone of a BPA transaction is to value the liabilities, and price the population to be insured. To calculate the price, insurers are dependent on accurate data in a standardised format. The source data, however, is never quite in the shape that is desired. Required data needs to be assessed for accuracy, mapped to a new format and eventually transformed, most often this is a largely manual process, from data mapping to script generation.

AI can be used to process raw pricing data, map it into a standardised format and eventually transform it, with human oversight and a few hands-on corrections. At Lumera we do this in two stages;

1. Intelligent column mapping

The BPA co-pilot can automatically recognise and align incoming column headers with Lumera's target scheme. Even when data sources use inconsistent naming conventions, the BPA co-pilot can identify most of the correct mappings by analysing patterns, semantics, and contextual clues. This reduces the reliance on manual configuration and ensures a consistent interpretation of diverse input formats. The results can be reviewed by the professional, who can also make minor adjustments as required, adjustments the co-pilot will learn from, increasing its accuracy for future transactions.

2. Data type standardisation and transformation

Once the columns are correctly mapped and verified by human oversight, the BPA co-pilot prepares to standardise and transform the data. This includes formatting numerical values, dates, and text fields according to Lumera's specifications, as well as validating content against consistency rules. The goal is to ensure that the data is not only structurally correct but also semantically aligned with Lumera's format requirements. The co-pilot will prepare scripts that are, once again, reviewed and adjusted, where needed, by the professional.

Throughout both stages, human oversight remains key. Specialists validate the AI generated mappings and transformations, address edge cases, and ensure that the final dataset meets the high standards required for successful BPA transactions. This co-pilot approach of automation and expert review drives both efficiency and quality.

Benefit specifications

Another major challenge in BPA transactions is the detailed review and processing of lengthy, complex and no-two-are-a-like benefit specification documents. Traditionally, these documents require extensive manual effort to interpret and cross-reference against pricing data, a risk driver for delays and inconsistencies. Just as with pricing data, Lumera has a 2-step approach;

1. Cross-checking against pricing data

The AI conducts an analysis of incoming benefit specification documents to verify their alignment with the associated pricing datasets. The BPA co-pilot rapidly identifies inconsistencies, gaps, or mismatches between the two sources, bringing them to the attention of the professional for review. This way we ensure that benefits are accurately reflected in pricing, reducing the risk of costly errors later on.

2. Transformation into standardised benefit specification format

Once validated, the BPA co-pilot proceeds to transform the benefit specifications, after a human review of the scripts, into our standardised format. This includes organising content into predefined sections, applying consistent terminology, and ensuring compatibility with downstream systems. The result is a clean, reliable, and predictable dataset that can be used further down the line in the BPA transaction.

Again, human oversight plays a crucial role. Experts review flagged discrepancies, validate the structured output, and ensure that the final documents meet Lumera's quality standards. By combining automation with expert review, BPA co-pilot not only improves accuracy but also significantly reduces the manual effort and time required to process complex benefit documentation.

To wrap it up

AI has huge potential to help complete BPA transactions. Used correctly, with human oversight and secure data integrity, it is a powerful tool to drive efficiency and quality for success. Furthermore, thanks to the nature of machine learning, it will only become better at it over time. With the correct supervision it will never deteriorate, it can be an employee for life. The applications described in this article are just the start, there are many more to come.

High quality data is at the very heart of any BPA transaction. At Lumera we know pensions data, administration and we know technology. By combining this expertise we are taking our services in the BPA field to the next level. If you are struggling with data quality and/or efficiently transforming it into a consumable format, our experts, augmented by our co-pilot, are here to help.

Contact us at Lumera for a smoother, more transparent BPA transaction.

About Lumera

Lumera is dedicated to the digital transformation of the European Life and Pensions industry. As insurtech innovators, we provide future-proof core technology for policy administration.

The Prudent Revolution is our mission – bridging technology and partnership to navigate the fastest, safest path through complex change for L&P providers.

We combine tech and industry expertise with relevant market experience to offer a broad range of consultancy and data services – from managing faultless legacy system migration to facilitating compelling end-user experiences.

Based in Stockholm, Lumera has significant presence with offices in the United Kingdom, the Netherlands, Norway, Sweden, India and Vietnam.

lumera.com