



**PASA Digital Administration
Working Group**

Produced in partnership with:



PASA Experts for Digital Admin

Transforming pensions administration:

The journey towards digitalisation

October 2023

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Acknowledgements

PASA is grateful to the authors of the Guidance and members of the PASA Digital Admin Working Group (DigWG) and their employers.

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1. Introduction

Digitalisation has become a prevalent trend across various sectors and industries. Pension schemes are experiencing a significant shift towards digitalisation; transitioning from traditional paper based processes to electronic systems for recordkeeping, data management and overall scheme administration. This transformation has the potential to revolutionise how schemes operate, providing greater efficiency, accessibility and accuracy.

This white paper provides a backdrop to the rest of the content in the series 'Transforming pensions administration: The journey towards digitalisation', exploring the digitalisation journey and offering guidance and recommendations on the best way to approach transformation.

2. The history of scheme and data digitalisation

The digitalisation and management of pension-related data has undergone a remarkable transformation. The evolution of technology, coupled with the need for more efficient and accessible pension administration has driven the gradual shift from manual, paper based processes to digital systems. This section explores the key milestones and developments in the history of scheme digitalisation.

The early years

In the early stages of scheme management, paper records were the norm. Administrators relied on physical files and documents to store and track critical information related to savers. This posed challenges in terms of data retrieval, storage capacity and administrative efficiency. The advent of computers and digital technology paved the way for significant advancements in scheme digitalisation.

During the 1980s and 1990s, computerised systems started to replace manual recordkeeping methods. Data was transformed into electronic formats, enabling administrators to store and access information more efficiently. Basic databases and spreadsheet applications were used to manage member records, calculate pension benefits and generate reports. While these systems provided improved data organisation and retrieval, they were often limited in functionality and scalability.

As technology continued to progress, the late 1990s and early 2000s witnessed the emergence of more sophisticated pension administration software. Software solutions offered comprehensive features for managing various aspects of schemes, including member enrolment, contribution collection and reporting, investment tracking and benefit calculations. The integration of these systems with payroll and human resources platforms further streamlined administrative processes.

The development of secure networks and the internet enabled the digitalisation of scheme data on a broader scale. Administrators began leveraging web based portals to enable pension savers to view balances, update personal information and access relevant documents. This self-service functionality empowered them with greater control and transparency over their pension benefits.

Bringing administration into the digital age

In more recent years, advancements in cloud computing technology have revolutionised the storage and accessibility of scheme data. Cloud-based solutions offer scalable and secure data storage, eliminating the need for costly on-premises infrastructure. Administrators can now access pension records from anywhere, facilitating remote work and improving operational efficiency. Moreover, cloud-based platforms enable seamless integration with other digital systems, such as customer relationship management (CRM) and data analytics tools, unlocking new possibilities for data driven decision making.

Digitalisation has brought increased emphasis on data security and privacy. As sensitive personal data is digitised and stored electronically, robust security measures have become essential. Strict compliance with data protection regulations, such as the General Data Protection Regulation (GDPR), has become a priority for administrators. The adoption of encryption, access controls and regular security audits help safeguard scheme data from unauthorised access and potential breaches.

The future

The future of digital administration holds immense potential for further transformation and innovation. With the continued advancements in technology, a trend towards more intelligent and automated systems is anticipated. Artificial intelligence (AI) and machine learning algorithms can play a significant role in streamlining administrative processes, improving accuracy and enhancing decision making. AI-powered chatbots and virtual assistants may become commonplace, offering instant support and guidance to savers.

The widespread adoption of cloud computing and data analytics will continue to drive real-time insights, enabling administrators to make more informed decisions and deliver personalised experiences. Overall, the future of digital administration promises increased efficiency, enhanced saver engagement and the potential for leveraging cutting edge technologies to address the evolving needs of savers.

3. Reluctance to digitise schemes

There are several reasons schemes are reluctant to digitise:

- **Complexity of legacy systems and processes:** Schemes are complex financial products with various rules and regulations. Digitising them can be challenging, as it requires creating a secure and robust digital infrastructure to handle complex calculations, ensure data privacy and comply with regulatory requirements
- **Data security and privacy concerns:** Pensions involve sensitive and personal financial information. There are concerns about the security of digital systems in safeguarding this information from cyber threats and unauthorised access. The fear of potential data breaches and identity theft has made some hesitant to fully embrace digitalisation

- **Trust:** Many individuals may have a traditional view of pensions, associating them with physical documents such as paper statements and forms. Moving to a fully digital system may erode some people's trust in the security and reliability of their pension provisions
- **Lack of digital literacy:** Not everyone is comfortable or familiar with digital technologies. Some savers may be less tech savvy, preferring traditional methods of managing their pensions. This lack of digital literacy can be a barrier to the widespread adoption of digitalised schemes
- **Cost implications:** The process of digitalising schemes often requires significant financial investments, including upgrading systems, implementing new technologies, and training staff. There may be concerns about the return on investment and the potential financial burden on pension providers and administrators

Despite these challenges, there's been a growing recognition of the benefits of digitalising, such as improved efficiency, accessibility and transparency. As technology advances and trust in digital systems increases, the adoption of digitalisation will likely increase.

Cultural transformation is key and digitalisation which enables and improves the user experience should be inclusive to all. Automated basic processes and quotations should be viewed as part of long term investment and adding value for savers, not as a cost. The traditional perception of fund management (income generation) vs pensions administration (cost to serve the saver), needs to be challenged and evolve.

Improving pension saver engagement and their retirement savings is part of wider industry challenge and plugging the financial education gap should shift to long term savings and financial planning for all.

Open Banking Data presents an opportunity for a single 'holistic' customer view with opportunities to encourage pension and investment saving. Proactively engaging savers in financial wellness while cross and upselling products which could help meet both their immediate and future needs.

4. What are the trends and themes driving digitalisation?

There are a number of recurring themes driving digitalisation:

- the desire to improve cost efficiency and reduce administration overheads while allowing skilled administrators to undertake value added, rather than repetitive and easily automated tasks. The current capacity crunch means it's important to keep skilled people engaged and in post, as well as attracting new talent
- reliance on completing tasks manually puts pressure on processes as the administration functions grows and inhibits scalability
- repetitive manual tasks have inherent accuracy risks, resulting in work being repeated unnecessarily and the risk of sending out incorrect information
- savers are becoming increasingly tech savvy and require effort to win their engagement. They want self-service and financial modelling apps. Paper benefit statements won't cut it anymore

- with the approach of pension dashboards, or with an eye on endgame/buyout, being digital starts to get all ducks in a row, and saves time and money in the longer term
- the move to paperless offices and home-working means no more thick envelopes stuffed with A4 paper which can be sent out electronically with e-signature requirements. This turns the 'paperwork' around more securely and efficiently
- providers are now thinking about testing the accuracy of their pension data as opposed to establishing data existence and reasonableness. Data accuracy is good for administration, valuations and for setting a dashboards matching policy

Learnings from financial technology (fintech)

Fintech advancements have had an incredible impact on pension digitalisation through:

- Application Programming Interface (API) – computers which speak to each other, set up properly let the APIs communicate directly
- Robotic process automation – like using macros in Excel, but on a much more intelligent scale
- Data portals – no more emailing data, more secure and preventing the flow of bad data

Using data for more accurate predictive modelling for pension planning

Data analytics can improve predictive and prescriptive forecasting processes allowing schemes to present better options to savers, leading to improved outcomes.

There are several benefits to using data analytics such as:

- fast evaluation
- present better options which can increase engagement
- it's completely neutral – no bias
- it's cost optimal
- combats fraud

5. New technologies

With the growth of master trusts and greater adoption of DC schemes; in part driven by auto enrolment and consolidation, it's become necessary to adopt more streamlined operating models to ensure a scheme is scalable, efficient and cost effective. As such, it's become common practice to use straight through processes (STP) where business processes would previously have been manual.

E-signatures and paperless

The industry has moved away from paper forms and is comfortable with e-signature solutions for Letters of Authorisation and dependant's pension benefit claims etc using services such as DocuSign and Signable. The cost of posting letters has also forced a transition to emailing benefit statements and other communications.

Payments and Investments

APIs have taken the place of the typical 'bank rec'. Services such as GoCardless and Stripe allow a provider to automate the collection, validation and importantly the reconciliation of payments in advance of purchasing funds. The same is true of investment instructions where the fax machine has been replaced by APIs which accept, confirm and price trades at the end of the day. This transition is a big cost saving in terms of employees needed to complete the same task while ensuring data integrity.

Interoperability and real time data

Savers now expect a digital experience and, in some circumstances, can move providers if expectations aren't met. Newer software solutions have been designed to be API ready and therefore provide a current user experience. Older legacy systems have had to adapt in order to match the same expectations, often choosing a hybrid model where a contemporary digital layer exchanges data with the underlying legacy system. Tools such as Robotic Process Automation (RPA) which scrape data from legacy systems to provide a more standard output have become popular in digital transformation projects where the budget doesn't permit a platform change. While this approach meets an objective, the downside is potentially losing the real-time data capability associated with a cloud native solution. It's important to balance long term and short term goals when investing in transformation projects.

AI, ML, LLMs and Blockchain

There's an increasing demand for greater access to customer data which has been transformed into a common set of definitions in a data warehouse. Tools such as Azure Data Factory or Snowflake have allowed pension providers to have a robust single customer view for Business Intelligence (BI) reporting and to expose the data via APIs as a common interface to a digital experience layer (also useful for dashboards). These data sets can be comprised of thousands or millions of rows of data, making it hard to ensure data integrity. Machine Learning (ML) is now widely adopted to assist with data integrity checks for common data standards or anomaly detection.

Large Language Models (LLMs) and ChatGPT are relatively new to the market and are finding use with customer servicing needs, reading out FAQs and helping reduce the number of inbound calls. However, the commodity is new and the pricing model for these tools can be cost prohibitive. Competition will drive down costs and see this area grow over time.

Blockchain has rather had its day. Logically the idea of adding and removing blocks of data (contributions or transfers) to a distributed ledger makes sense and can speed up processing times. Some outside the pensions industry have seen great success in reducing their internal processing times. But the coding frameworks are turbulent and exposed to the success or failure of virtual currency – which of late is being heavily scrutinised by regulators as weaknesses have been uncovered and large names collapsed.

6. Conclusion

Digitalisation stands as a testament to the ongoing technological revolution sweeping across various sectors. This paper has delved into the evolution of pension scheme digitalisation, its historical progression, challenges faced and the driving forces behind this transformative journey. As the digital era redefines the landscape of pension administration, several key takeaways emerge.

The historical narrative showcases a remarkable shift from paper-based record-keeping to intricate digital ecosystems. Pioneered by early computer systems, administrators have gradually harnessed technology to enhance efficiency and accessibility. The emergence of cloud computing, web-based portals and robust security measures have further elevated data management, saver engagement and administrative processes.

Despite these advancements, reluctance to fully embrace digitalisation persists. Complex legacy systems, data security concerns and the intrinsic need for trust present formidable challenges. Yet the benefits are undeniable. Improved efficiency, accuracy and transparency beckon, supported by the potential of AI and ML. As pensions continue their transformational journey, the adoption of digital solutions is poised to reshape the industry's landscape.

In the relentless pursuit of modernisation, schemes must navigate both challenges and opportunities. The PASA Digital Admin Working Group will explore these in more detail in our upcoming series of content. But one thing is abundantly clear; as we navigate this path, industry leaders, administrators and savers must collectively strive for a future which marries innovation with stability, ensuring schemes remain robust, efficient and poised to provide for generations to come.

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