PASA eAdmin Working Group

Jargon Buster Reference Guide

September 2021

eAdministration Jargon Buster

Acknowledgments

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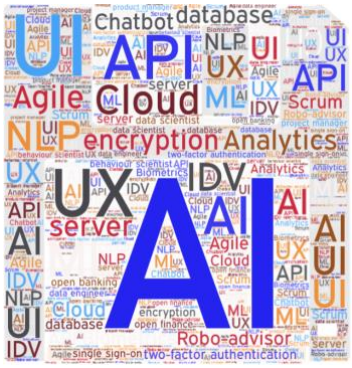


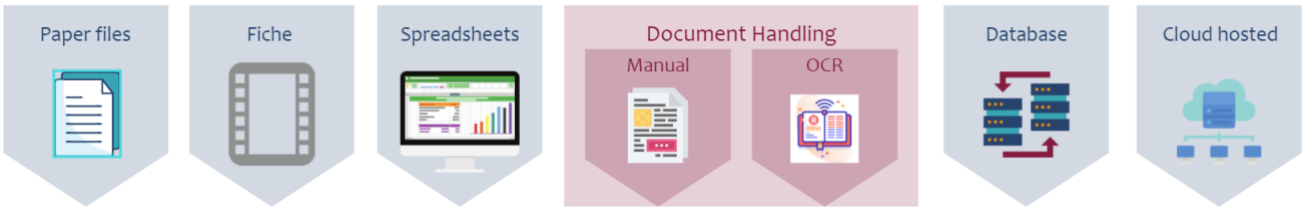
1. Introduction

Every sector has their own terms and jargon and the pension industry is no exception. Enhancing capabilities in pensions by leveraging technology requires an understanding of key technology and related skills and tools terms.

2. Data storage including Cloud

Why is it relevant to Pensions?

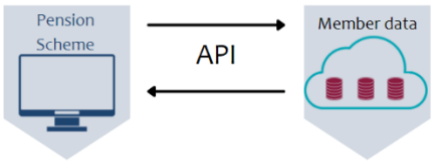
As described in our earlier paper, e-Admin Journey People and Technology Working Together, investing in Data Quality and Storage means you'll have a solid foundation on which to build/improve automated processes.



Cloud-hosted

Pension scheme data used to be hosted on dedicated servers which were effectively electronic filing cabinets. The easiest way to hold data is in on-line servers. This is often called the 'cloud', but basically the data is still hosted on a bank of remote physical servers.

Some of these cloud hosting services are big names such as Amazon Hosting (AWS) or Microsoft (Azure). They're accessed by API's, pipes connecting the data hosting service to the application wanting to use them.



Types of cloud hosting:

Infrastructure-as-a-service (IaaS): You pay a company for access to a server computer housed in their datacentre building. You're responsible for running the operating system software (e.g. Windows) and any application software running on it.

Platform-as-a-service (PaaS): In addition to the services provided by IaaS, the operating system is also provided and managed as part of the contract. You're responsible for any application software (e.g. database software) you run on the server.

Software-as-a-service (SaaS): The provider runs the server and all software. You simply access the application running on it, usually via a web browser.

Database

Databases were initially 'flat files' displaying simple columns and rows to store data. But today databases are relational, allowing complex queries across multiple database tables and database sets. Databases are most used in pensions to hold member data. At a basic level it could be a spreadsheet. More typically it'll be a custom-built database, often hosted in the 'Cloud'.

Optical Character Recognition (OCR)

OCR enables different types of documents (such as scanned paper documents, PDF files or images captured by a digital camera) to be converted into editable and searchable data, which can be added to the member record.

Other resources

National Cyber Security Centre (NCSC) Glossary: https://www.ncsc.gov.uk/files/NCSC_glossary.pdf
Scottish Government Cloud Primer and Benefits of Cloud: https://www.gov.scot/publications/cloud-primer/
Accenture – Introduction to Cloud Computing: https://www.accenture.com/gb-en/insights/cloud-computing-index

3. Application Programming Interface (API)

Why is it relevant to pensions?

API's will be central to how the Pensions Dashboard will work. A 'find' message will travel via API carrying details about a member to all pension schemes enrolled in the project. A 'return' message will be sent back via API.

API

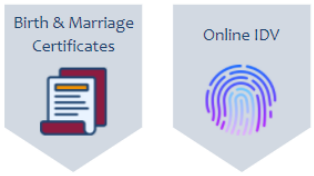
An API is a structured way to let two systems talk to each other. It's a mechanism to send and receive messages and exchange data.

For example, when you go onto a travel site, it may be linked to 10 other travel sites to find the best deal for you. When you input travel details like London, 2 nights, 1 Room, the request is sent to those 10 different travel sites via API. The 10 sites then each send back the deals they've found for you so you can choose the most appropriate.

4. Information Security and Digital Identity Verification (IDV)

Why is it relevant to Pensions?

It's now possible to dispense with certificates and use online services for IDV. There are commercial solutions already available enabling digital verification services and cross-checking identity (using a GDPR compliant data set for address histories, voter records, passport records, DVLA databases etc).



Applications (Apps)

An app is a program developed for smartphones or tablets running a mobile operating system, such as iOS or Android. Mobile apps can be installed from the App Store, Google Play, or the default application store installed on a mobile device

Source: https://www.computerhope.com/jargon/a/app.htm

Authenticator

Authenticator apps generate a one-time code to confirm it's you logging in to a website or service. They provide the second part of 'two-factor authentication' (2FA). See the explanation of two factor authentication below to find out more.

Biometrics

This is a term used to describe how unique personal characteristics can be used to validate an individual's identity. Smartphones have led the way on this, and some laptops now have this capability as well.

Typically the device can recognise a fingerprint, a face or even a voice. This style of IDV can be used to unlock a device, access an app, or even confirm a payment.

Some modern banking apps use biometrics to set up accounts, sign in and confirm payments.

Encryption

Encryption is a way to keep data safe when it's shared electronically. The data is scrambled when it's sent and can only be unscrambled by the intended recipient. That means if intercepted, it can't be easily read.

IDV

IDV is a necessary process which ensures a person's identity matches the one it's supposed to be. Digital identity providers perform biometric, document and database checks to verify documents are valid and haven't been forged or tampered with.

Quick Response (QR) codes

QR codes date back to the 1990's. They're like a two-dimensional bar code and most smartphones have the recognition software built into their camera apps.

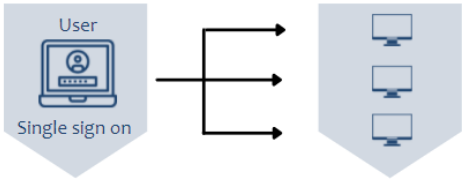
You may have encountered them during the lockdown if you've used the NHS app.

People can scan them with their smartphone to get to websites apps or content. They can also be personalised and used in place of a password or used for payments.

Single sign on

One aspect which creates friction when using websites is remembering usernames and passwords.

Single sign on allows a single username and password to be used to log in to a number of different websites or services.



For example, when you log onto your employer's IT infrastructure to use something like Teams or e-mail, your username and password can also be used to access 3rd party sites, such as the company pension website.

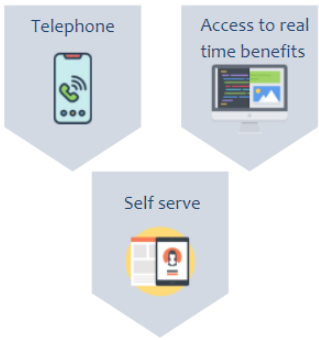
Two factor authentication

If you've logged onto a website recently you will almost certainly have experienced this process.

You enter your username and password. This triggers a security code, pushed as a text message or sometimes delivered to your e-mail account. You then enter the code as a second level of security to access the site in question.

5. User Experience and User Interface

Why is it relevant to pensions?



If a decision is made to invest in a member portal with the objective to drive engagement encouraging members to self-serve and update their personal details etc, the experience must be easy to use.

Communication with members is still predominantly paper-based. Creating member portals with engaging materials can address this issue, and useful information can be shared. As a first step personal or work emails email addresses should be obtained, followed by a migration to online benefit statements, payslips and modelling tools.

User Experience (UX)

UX is the interaction a member has when using a digital platform.

UX designers use wireframes, prototypes and user research to test any interaction a member has with their pension.

Some things which influence UX are:

- The steps users need to take to interact with their pension
- How long it takes users to locate what they need
- How useful and valuable their interaction is
- The thoughts and feelings users have while they're interacting
- User feelings about the overall experience

User Interface (UI)

UI is the specific product users interact with – i.e. the Member Portal.

6. AI, Machine Learning (ML), Chatbots and NLP

Why is it relevant to pensions?

For large schemes with large pensions management teams, rules can be set to direct queries to the relevant team to respond. With large data sets, trends can be predicted based on what has been observed/learned.

Digital identity products use AI and Machine Learning to validate identity documents.

Working with experts in the field of natural language processing (NLP) and chatbots, frequently asked questions can be automated to allow pension administrators to focus on more complex queries.

Artificial Intelligence (AI)

AI is broadly defined as systems being able to perform tasks which normally require human intelligence, such as visual perception, speech recognition, decision making, and translation between languages.

This is achieved through the machine actually 'learning', as opposed to simply regurgitating masses of dictionaries, for example. This can be either through a human 'teaching' it, such as through the inputting of processes, or, in the 'purist' definition of AI, the machine learning for itself.

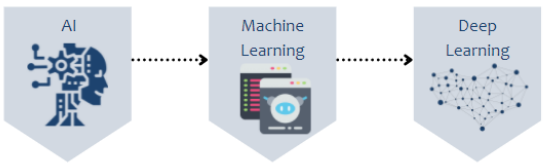
If you've ever used a chatbot then you've experienced the start of the AI food chain.

At its most rudimentary you can program something which will recognise key phrases and questions like "when do you open" or "I'd like a retirement quote". The system quickly runs out of steam however if you go off script.

At the other end of the scale technologies can analyse patterns and leverage trends and data to deliver outcomes.

Machine Learning and Deep Learning

Machine Learning (ML) is a subset of AI and uses algorithms (a process or set of rules to be followed in calculations or other problem-solving operations,) to read data, learn from this data, and make informed decisions based on what it has learned.



Fraud analytics and credit checks use ML, to learn typical behaviour and alert on anomalies.

Deep Learning (DL) structures algorithms in layers to create an 'artificial neural network' which can learn and make intelligent decisions on its own. This type of learning is the most broad and similar to human intelligence.

Chatbots/AI Assistants (e.g. Alexa, Google Home, Siri and Cortana)

Chatbots are computer programmes designed to simulate conversation with human users online. They can do simple things like take bank payment details over the phone. Voice recognition software has advanced in recent years. The limit of a chatbot is the responses and questions it has been programmed to understand, and creating a seamless handoff between the bot and the human when things get complex.

A well-designed chatbot can triage members, signpost them where to find further information and handle simple tasks, freeing up the administrators for more complex work.

Natural Language Processing (NLP)

NLP strives to build machines which understand and respond to text or voice data, responding with text or speech of their own—in much the same way humans do. There's a good chance you've interacted with NLP in the form of voice-operated GPS systems, digital assistants, speech-to-text dictation software, customer service chatbots, and other consumer conveniences. Chatbots use NLP.
(source: https://www.ibm.com/cloud/learn/natural-language-processing)

Robo-Adviser

Robo-advisers are digital platforms which provide automated, algorithm-driven financial planning services with moderate to minimal human intervention. A robo-advisor typically collects information from clients about their financial situation and future goals, then uses the data to offer advice and automatically invest client assets. (source: https://www.investopedia.com/terms/r/roboadvisor-roboadviser.asp)

7. Open Banking and Open Finance

Why is it relevant to pensions?

Up-to-date bank account data and verification of this data is key to the successful and timely delivery of all payments. With the advances made in open banking, most UK banks now validate a bank account belongs to the named individual and thereby reduces the risk of fraud.

The Pensions Dashboards will use open APIs and Covid-19 has accelerated the 'open everything' agenda which is growing beyond the confines of open banking and into the wider world of open finance.

The Open Banking Implementation Entity (OBIE)

Developed by the UK's Competition and Markets Authority (CMA) to create software standards and industry guidelines which drive competition and innovation in UK retail banking. This entity is governed by the CMA and funded by the UK's nine largest banks and building societies: Allied Irish Bank, Bank of Ireland, Barclays, Danske, HSBC, Lloyds Banking Group, Nationwide, RBS Group and Santander.

Open Banking:

Open banking is also known as 'open bank data'. Open banking is a banking practice which provides third-party financial service providers open access to consumer banking, transaction, and other financial data from banks and non-bank financial institutions through the use of APIs. Source: https://www.investopedia.com/terms/o/open-banking.asp

Source: https://www.openbanking.org.uk/about-us/

Open Finance:

Open Finance extends the principles of Open Banking. Financial data (such as mortgages, savings, pensions, insurance and consumer credit) could be opened up to trusted third party APIs if consumers agree. Open Banking already allows regulated websites and apps to access transaction data from bank accounts and payment services so people can 'move, manage and make more of your money' (openbanking.org.uk).

The FCA outlines their vision of Open Finance for consumers and businesses as follows:

- To gain access to a wider range of financial products/services
- To have greater control over their data
- To engage with their finances and empower better financial decisions
- The end goal is improved financial health driven by market innovation and competition.

Second Payment Services Directive (PSD2)

PSD_2 is a new piece of European legislation which came into force on 13 January 2018. It enables regulated third party providers, with a customer's consent, to access their bank account information and/or request payments. It aims to attract new providers and technology companies to enter the market and create more innovative services for customers.

8. Skills

Why is it relevant to pensions?

Introducing technology solutions to address specific member or operational issues requires different skills to pension subject matter experts. Developing member portals which will ensure members log in and engage with the content requires a good understanding on what they want and need.

Some examples of the data being monitored to help improve engagement are:

- General engagement data analytics, broken down into the cohorts split by gender, age, marital status, pension pot size/salary band, length of service
- Activity analysis following announcements or member communications
- Member portal engagement – tracking which areas of the portal get the most traction, how long consumers spend on the page and how they navigate
- Analysis of frequently asked questions to help drive improvements in communications

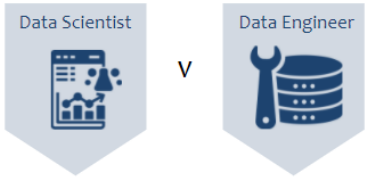
Behavioural insights and biases which can be used to engage members include:

- Combining pension information with other financial planning tools which will assist the member with planning for retirement
- Leveraging open banking and analysing spending trends can help inform future patterns and how this may impact the member
- Nudging members to take small actions to benefit their future financial health (e.g. encouraging consumers to increase their regular contributions by a small amount, demonstrating potential impact at retirement)

Behavioural Science

Behavioural science studies the way emotions, the environment, and social factors influence our decisions. Gaining a better understanding of members and what they'd like to see and do with their pensions, will help drive engagement with pensions firms.

Data Scientist v Data Engineer



Data Engineers are focused on building infrastructure and architecture for data generation. In contrast, data scientists are focused on advanced mathematics and statistical analysis on this generated data.

Product Manager

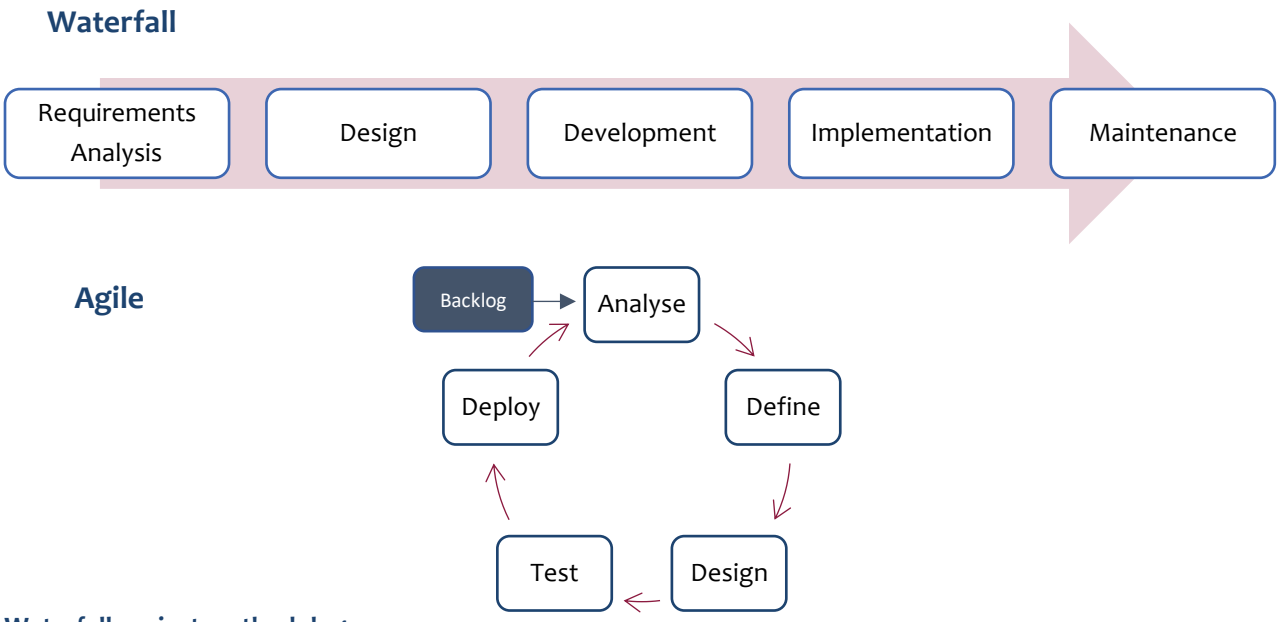
Product managers own the business strategy behind a product, specify its functional requirements, and generally manage the launch of features. Delivering a good digital experience requires specific skills in documenting user journeys, conducting focus groups and testing the member experience to ensure it's easy to use.

9. Project Methodology (Agile vs Waterfall) and System development lifecycle (Development vs UAT vs Penetration Testing)

Why is it relevant to pensions?

Integrating technology solutions into existing pensions processes is a project. Whether it's performed in-house or using an outsourced technology provider, it's important to understand the key project milestones and how the technology solution will be delivered.

There are two project methodologies – Waterfall and Agile



Waterfall project methodology

Waterfall project methodology is a sequential, linear process of project management. It consists of several discrete phases and no phase begins until the prior phase is complete – i.e. clear entry and exit criteria before moving to the next phase.

The stages are:

1. Requirements Analysis
2. Design
3. Development
4. Testing (SIT - System Integration Testing; UAT – User Acceptance Testing; Penetration Testing)
5. Implementation
6. Maintenance

Agile

Agile is a collaborative, cross-functional approach to completing work and requirements. Agile methods break projects into individual deliverable pieces over iterative periods. These 'time-boxed' phases are called 'sprints' and last just a few weeks. Once each sprint is completed, the feedback from the previous phase is used to plan the next.

Kanban and Scrum are two different agile strategies. Kanban is continuous and more fluid, whereas Scrum is based on short, structured work sprints.

Kanban

Kanban is all about visualising work, limiting work in progress, and maximising efficiency (or flow). Kanban teams focus on reducing the time it takes to take a project from start to finish. This is done by using a Kanban board and continuously improving flow of work.

Scrum

Scrum is a framework which helps teams work together. Much like a rugby team (where it gets its name) training for the big game, scrum encourages teams to learn through experiences, self-organise while working on a problem, and reflect on wins and losses to continuously improve.

Scrum Master

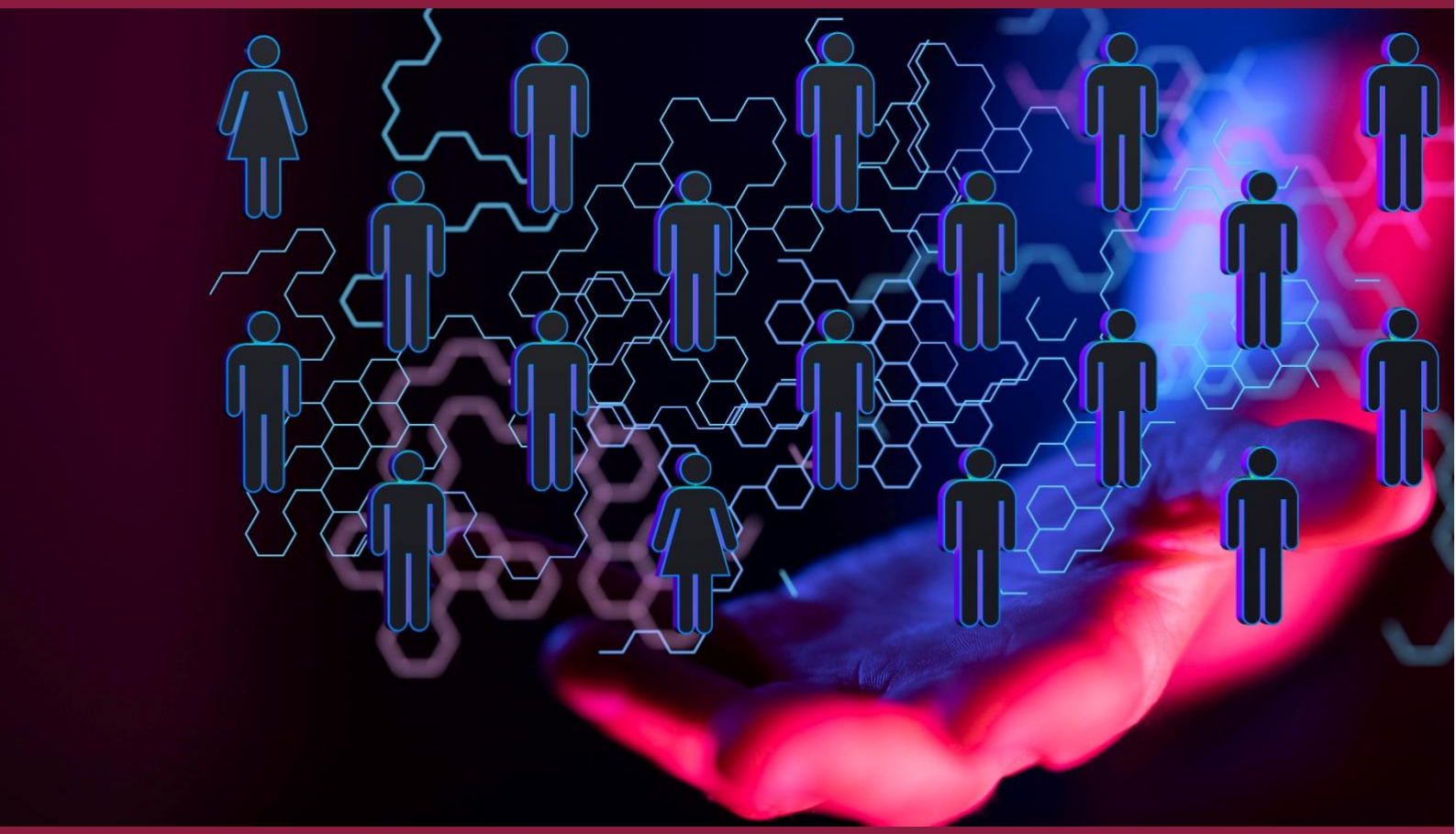
Scrum masters are the facilitators of scrum, focusing on the time-boxed iterations called sprints.

10. Conclusion

Now we've explained a number of the key technology terms the eAdministration Working Group will use in all papers going forward, we look forward to delivering further use cases on how people and technology can work together to enhance the member experience. Please contact us at info@pasa-uk.com with any questions or further definitions you would like added to the jargon buster.

PASA

assess | aspire | achieve



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