

22nd Current Issues in Retirement Benefits

Mumbai

29 August 2025

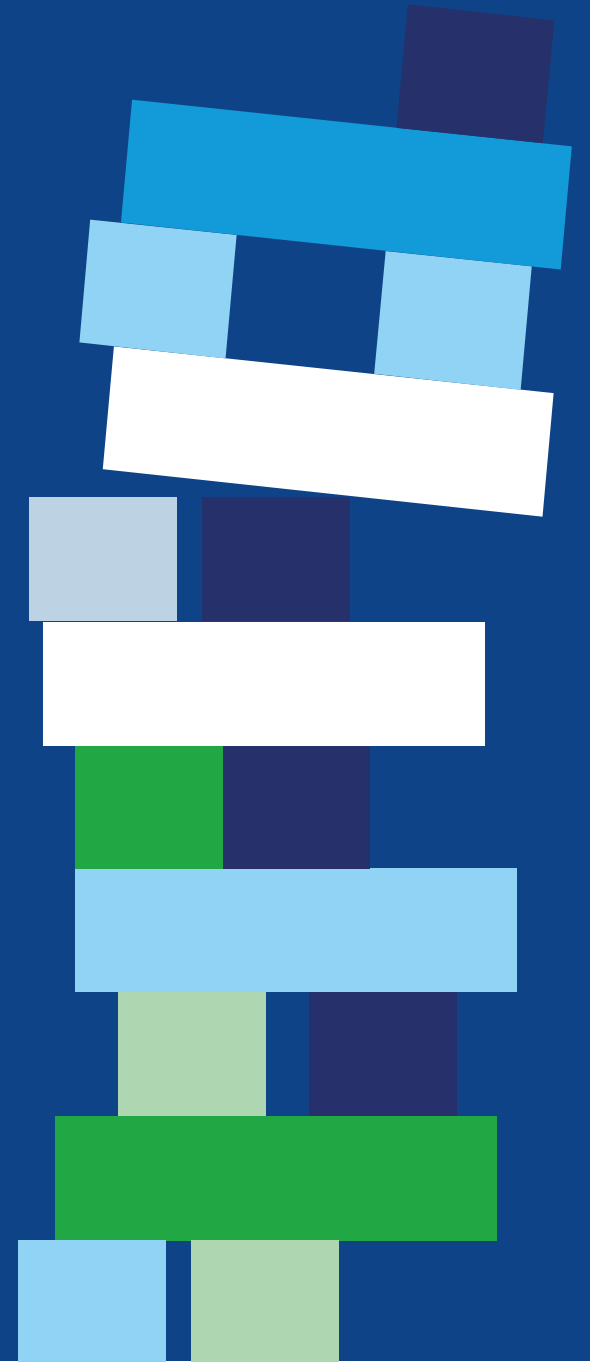
Technological advances in Employee Benefits

Joyson D'souza and Parshwa Gada



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Actuarial Operations



Actuarial Operations

18



Geographies supported

5,500+



Actuarial valuations per year

400+



Actuarial colleagues



Common challenges

- High data processing times
- Need for simple yet sophisticated valuation software
- Model benefits for various regions
- Client interface
- Standardised report generation
- Client and workflow management
- Meaningful management information

Our Technology Landscape



Data automation tool



Valuation software

- Two products
- Mix of in-house and licensed



Global reporting tool



Live client dashboards



Workflow & client management system

Over the years our tools and technology has evolved and **changed**.

Old

New

- Higher set-up effort
- Not linked to the market indices
- Lower re-usability
- Not easy to debug
- No client interface
- Fewer output formats

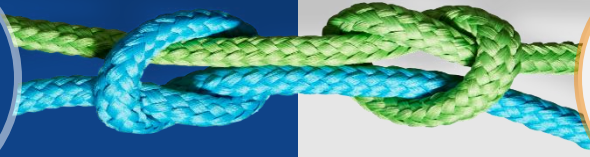
- Lower set-up effort
- Market linked
- Re-usable set-ups
- Simpler error messages
- Linked to live dashboard
- Detailed results
- Improved reporting

Data Automation Tool



Data Automation Tool

Challenges with data collation and processing



- 1 Inconsistent Data Formats
- 2 Comparison Difficulties
- 3 Manual Effort & Resource Intensive
- 4 Delays in Query Resolution
- 5 High Error Rates
- 6 Time-Consuming Processes

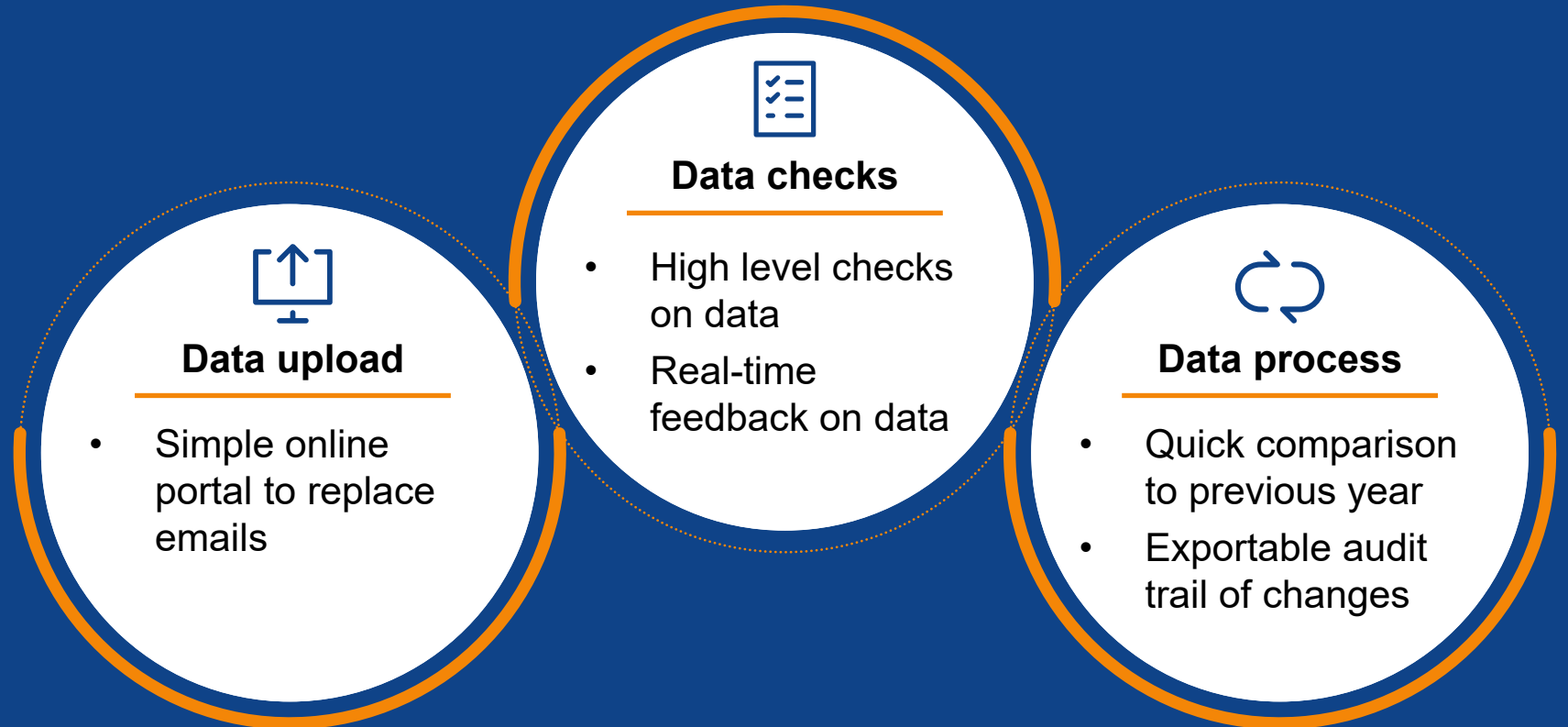
Solution – Automated data processing tool

- 1 Client Portal
- 2 User Portal

Client Portal



- One common portal across all geographies
- Intuitive interface
- Secure portal for sharing data
- Reduced effort for third party data administrators



User Portal



Every member matters	• Auto-combine from multiple sheets/files • Smart algorithms help match new and old data sets • Flag unexpected entries
Direct data adjustment	• Easy data corrections • Define additional checks
Reusable	• Copy set-ups • Stores manipulations, calculations and adjustments
Query resolution	• Generates a query file • Quick upload of responses
Reduce re-work effort	• Output is auto-updated for any change in source data
Data management	• Audit Trail • Stores all versions • Saves notes/comments

Valuation Software



03

Overview



In house developed

Model benefits of all geographies- USA, UK, Canada, Asia, etc.



Perform funding and accounting valuations

Capable to do Post Retiree Medical valuations



Future projections

Generate reports



Export to client dashboard

Key Features



Data

- Imports from data automation tool
- Stores historical member data
- Automated member reconciliation
- Data summaries



Valuation

- Model/update plan provisions
- Can store multi-year asset information and link to valuations
- Asset reconciliation
- Upload standard or bespoke assumption tables
- Perform Actuarial Gain/Loss analysis
- Generate benefit and liability numbers
- Code region- specific calculations



Reporting

- Generate Cashflows
- Various outputs
 - AoS
 - individual member liabilities
 - Tranche-wise liabilities
- Generates funding reports



Audit Trail

- Order of steps completed
- Relevant files can be saved (version history)
- Checklists and documentation
- Sign-offs recorded

Client Dashboard



Overview

- Share results with the clients
- Intuitive, sophisticated and includes a range of features
- Aid tracking and decision-making process
- Valuations can be either pushed through or set-up on the dashboard
- Useful in client meetings to test strategies



Key Features



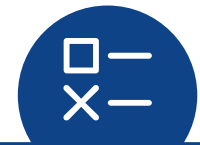
Can track multiple basis



Daily monitoring of
assets and liabilities

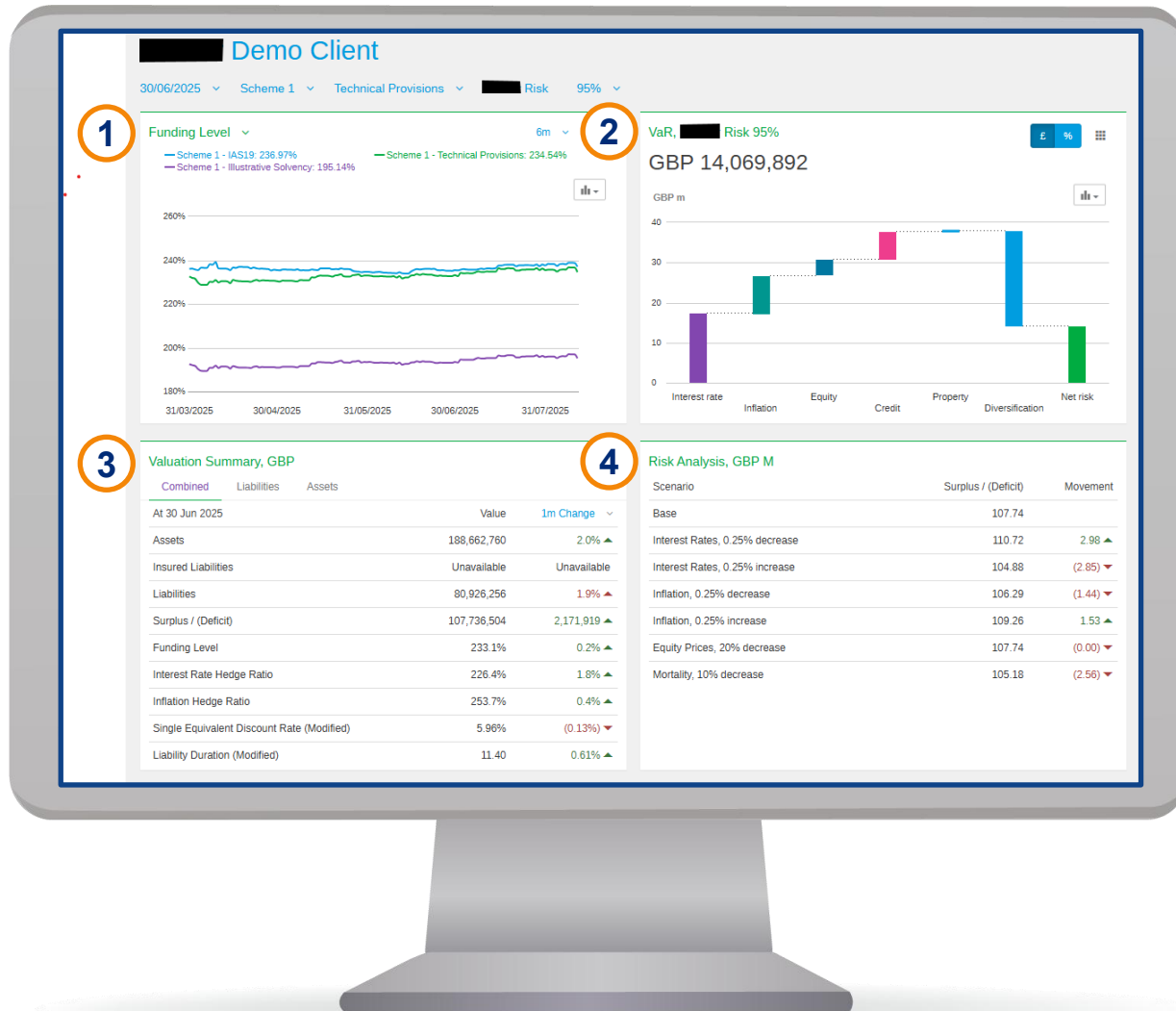


Risk Analysis



Scenario testing

Client Dashboard - Example



- 1 Funding position
 - Multiple Basis
 - Monthly or Daily

- 2 Value at Risk
 - 2000 scenarios
 - Impact on funding broken down across risks

- 3
 - Summary at the selected Date
 - Interest rate and Inflation hedge
 - SEDR and duration
 - Liability cashflows
 - Asset values by asset class

- 4 Sensitivities to:
 - Interest rate
 - Inflation
 - Mortality
 - Others

Some Functionalities



Scenario testing

- Sensitivity to change in assumptions
- Test strategies
- Estimate funding position



Recovery plan calculations

- Calculate recovery plan contributions
- Allows for:
 1. Irregular lumpsum payments
 2. Increasing contributions
 3. Asset outperformance



Asset liability modelling

- Project assets and liabilities
- Deterministic and stochastic scenarios
- Multi-year projections



Client triggers

- Define metrics
- Use metric to set triggers
- Stakeholders alerted
- Allows multiple triggers

Workflow & Client Management Tool



Workflow & Client Management



Benefits for managers



Client work requirements data



Team level capacity view



Task allocation & resource management



WIP, completed work & quality reports



Performance reporting KPI dashboard

Any questions

